Exhibit DD

Specific Standards

Mist Resiliency Project
March 2024

Prepared for

Northwest Natural Gas

Prepared by

and

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Acronyms and Abbreviations

Btu	British thermal unit
CO_2	carbon dioxide
EFSC	Energy Facility Siting Council
hp	horsepower
MMscfd	million standard cubic feet per day
NMCS	North Mist Compressor Station
NWN	Northwest Natural Gas
OAR	Oregon Administrative Rules
Project	Mist Resiliency Project

1.0 Introduction

Northwest Natural Gas (NWN), the Certificate Holder, proposes to amend the Site Certificate for its underground natural gas storage facility at the Mist Resiliency Project (Project) in Columbia County, Oregon. Specific Standards Applicable to the Project

> *OAR 345-021-0010(1)(dd) If the proposed facility is a facility for which the Council has adopted specific standards, information about the facility providing evidence to support findings by the Council as required by the following rules:*
>
> *…*
>
> *OAR 345-021-0010(1)(dd)(B) For surface facilities related to underground gas storage reservoirs, OAR 345-024-0030, including information required by OAR 345-021-0020; and*
>
> *…*
>
> *OAR 345-021-0010(1)(dd)(D) For a fossil-fueled power plant or other facility that emits carbon dioxide, OAR 345-024-0500 to 345-024-0720, including the information required by OAR 345-021-0021.*

The Project is an amendment to an existing underground natural gas storage facility. Sections that follow describe the specific standards relevant to the Project per the requirements mentioned in Oregon Administrative Rules (OAR) 345-021-0010(1)(dd)(B) and (D).

2.0 OAR 345-024-0030 Public Health and Safety Standards for Surface Facilities Related to Underground Gas Storage Reservoirs

> *To issue a site certificate for a proposed surface facility related to an underground gas storage reservoir, the Council must make the following findings:*
>
> *(1) The proposed facility is located at distances in accordance with the schedule below from any existing permanent habitable dwelling:*
>
> *(a) Major facilities, such as compressor stations, stripping plants and main line dehydration stations — 700 feet.*

The nearest permanent habitable dwelling is over one mile (5,280 ft) from major facilities including Miller Station and NMCS (Figure DD-1).

> *(b) Minor facilities, such as offices, warehouses, equipment shops and odorant storage and injection equipment — 50 feet.*

The nearest permanent habitable dwelling is over 1 mile (5,280 ft) from minor facilities (Figure DD-1).

(c) Compressors rated less than 1,000 horsepower — 350 feet.

There are no compressors rated less than 1,000 horesepower in the Facility.

(d) Roads and road maintenance equipment housing — 50 feet.

No new roads will be constructed as part of the Project. The updated powerline will be placed within an existing private road; the nearest permanent habitable dwelling is over 500 feet from where this work will occur (Figure DD-1). Road maintenance equipment is not stored at the Facility.

(2) The applicant has developed a program using technology that is both practicable and reliable to monitor the facility to ensure the public health and safety.

The Facility operates under a wide array of regulations ensuring public health and safety, including regulations of the Pipeline and Hazardous Materials Safety Administration, Department of Transportation, and Public Utility Commission.

3.0 OAR 345-021-0020 Specific Application Requirements for Siting of Surface Facilities Related to Underground Gas Storage Reservoirs

In addition to the requirements of OAR 345-021-0010, in an application for a site certificate for a surface facility related to an underground storage reservoir, the applicant shall include the following information:

(1) The design rates of natural or synthetic gas injection or withdrawal;

NWN will develop the existing Crater, Medicine, Newton, and Stegosaur storage reservoirs, gas storage wells, associated well pad equipment, and transmission pipelines connecting the well pad locations to the North Mist Compressor Station (NMCS). These additions at NMCS will enable an increase of allowable throughput from 635 MMscfd to 835 MMscfd. See Table DD-1, with detail provided in Section 4.1.2.3 of the Division 27 document.

Table DD-1. Proposed Reservoir Development

Reservoir	Deliverability[1]	I/W Wells
Newton	50 – 100 MMSCFD	3
Stegosaur	15 -35 MMSCFD	1
Medicine	35 – 70 MMSCFD	2
Crater	15 -35 MMSCFD	1
1. These are estimates that will be confirmed during development		

(2) The compression horsepower required to operate at design injection or withdrawal rates;

A combination of existing and additional compression required to meet the development of new reservoirs and maintain deliverability of existing reservoirs will result in a total horsepower of 28,700 BHP.

(3) The fuel type of the compressor;

Compressors will be fueled by natural gas.

(4) The estimated carbon dioxide emissions from the compressor for the projected life of the facility; and

A summary of carbon dioxide emissions can be found in Section 5.

(5) The proposed location of all wells.

The proposed well locations are shown in Figure 2 of the Division 27 document.

4.0 Carbon Dioxide Emission Standards and Offsets for Nongenerating Energy Facilities

4.1 OAR 345-024-0620 – Standard for Nongenerating Energy Facilities

OAR 345-024-0620 To issue a site certificate for a nongenerating energy facility that emits carbon dioxide, the Council must find that the net carbon dioxide emissions rate of the proposed facility does not exceed 0.428 pounds of carbon dioxide per horsepower hour. The Council shall determine whether the carbon dioxide emissions standard is met as follows:

OAR 345-024-0620(1) The Council shall determine the gross carbon dioxide emissions that are reasonably likely to result from the operation of the proposed energy facility. The Council shall base such determination on the proposed design of the energy facility. In determining gross carbon dioxide emissions for a nongenerating facility, the Council shall calculate carbon dioxide emissions for a 30-year period unless the applicant requests, and the Council adopts in the site certificate, a different period. The Council shall determine gross carbon dioxide emissions based on its findings of the reasonably likely operation of the energy facility. The Council shall use a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel (higher heating value) and a rate of 161 pounds of carbon dioxide per million Btu of distillate fuel (higher heating value), if the applicant proposes to use such fuel. If the applicant proposes to use any other fossil fuel, the Council shall adopt by rule an appropriate carbon dioxide content rate for the fuel.

The NMCS will compress natural gas using three natural gas-fired, internal combustion engine-driven compressors. Each engine has a rated capacity of 2,750 horsepower (hp). A conservative estimate based on the injection and withdrawal cycle assumes three engines would operate at full load for 6,570 hours per year, each.

Calculated horsepower requirements are based on the injection and withdrawal assumptions and a conservative emissions assumption of three engines at full load and a maximum inlet air temperature of 100 degrees Fahrenheit. At these loading conditions, the fuel consumption rate for the proposed engines is 7,497 British thermal units (Btu) per brake horsepower-hour on a higher heating value basis. This set of assumptions is conservative over the 30-year time period for the carbon dioxide (CO_2) offset calculations. The following calculation is the expected cumulative CO_2 emissions for the engines for the 30 years:

$$\frac{19{,}710\ hours}{year} \times 30\ years \times \frac{20.6\ MMBtu}{hour} \times \frac{117\ lbs.CO_2}{MMBtu} \times \frac{ton}{2{,}000\ lbs.} = 713{,}155\ tons\ of\ CO_2$$

emissions maximum over a 30-year period.

Notes:

1. The manufacturer supplied data for the engine CO_2 emissions at 100º F range from 0.94 to 1.04 pounds per bhp-hr.
2. The 19,710 hours per year represent three engines operating at 6,570 hours per year each.

The following calculation uses the same operating assumptions to calculate the allowable CO_2 emissions based on 0.428 pounds of CO_2 per horsepower hour (hp-hr):

$$\frac{19{,}710\ hours}{year} \times 30\ years \times 2{,}750\ hp \times \frac{0.428\ lbs.CO_2}{hp-hr} \times \frac{ton}{2{,}000\ lbs.} = 347{,}980\ tons\ of\ CO_2$$

allowable under the standard.

Therefore, the remaining emissions reduction needed to meet the standard under a conservative estimate of maximum 30-year operations is:

$$713{,}155\ tons\ CO_2 - 347{,}980\ tons\ CO_2 = 365{,}175\ tons\ CO_2\ over\ 30\ years.$$

The Miller Station facility will compress natural gas using two natural gas-fired turbines. Each turbine has a rated capacity of 7,700 hp. A conservative estimate of the injection and withdrawal cycle was developed. Under this conservative operating assumption, the turbines would operate for a total of 6,570 hours per year.

Calculated horsepower requirements are based on the injection and withdrawal assumptions and a conservative emissions assumption of one turbine loaded at 7,700 HP and ambient temperatures of 50 degrees Fahrenheit. The fuel consumption rate for the proposed turbines at full load is 7,965 brake horsepower-hour, per turbine, on a higher heating value basis. This set of assumptions is conservative over the 30-year time period for the CO_2 offset calculations. The following calculation is the expected cumulative CO_2 emissions for 30 years:

$$\frac{6{,}570\ hours}{year} \times 30\ years \times \frac{61.3\ MMBtu}{hour} \times \frac{117\ lbs.CO_2}{MMBtu} \times \frac{ton}{2{,}000\ lbs.} = 707{,}162\ tons\ of\ CO_2$$

emissions maximum over a 30-year period.

The following calculation uses the same operating assumptions to calculate the allowable CO_2 emissions based on 0.428 pounds of CO_2 per hp-hr:

$$\frac{6{,}570\ hours}{year} \times 30\ years \times 7{,}700\ HP \times \frac{0.428\ lbs.CO_2}{hp-hr} \times \frac{ton}{2{,}000} = 324{,}781\ tons\ of\ CO_2$$

allowable under the standard.

Therefore, the remaining emissions reduction needed to meet the standard under a conservative estimate of maximum 30-year operations is:

$$707{,}162\ tons\ CO_2 - 324{,}781\ tons\ CO_2 = 382{,}381\ tons\ of\ CO_2\ over\ 30\ years.$$

> *OAR 345-024-0620(2) For any remaining emissions reduction necessary to meet the applicable standard, the applicant may elect to use any of the means described in OAR 345-024-0630 or any combination thereof. The Council shall determine the amount of carbon dioxide or other greenhouse gas emissions reduction that is reasonably likely to result from the applicant's offsets and whether the resulting net carbon dioxide emissions meet the applicable carbon dioxide emissions standard. The amount of greenhouse gas emissions means the pounds of carbon dioxide and the carbon dioxide equivalent of other greenhouse gases. For methane, one pound of methane is equivalent to 25 pounds of carbon dioxide. For nitrous oxide, one pound of nitrous oxide is equivalent to 298 pounds of carbon dioxide.*

NWN wishes to meet the applicable standard by means of OAR 345-024-0630(2) and OAR 345-024-0580 by providing offset funds at the rate of $4.27 for each ton of remaining CO_2 emissions reduction needed. For NMSC, this would result in a CO_2 offset fund of $1,559,297 ($365{,}175\ tons\ emission\ reduction \times \$4.27\ offset\ cost = \$1{,}559{,}297\ offset$). For Miller Station, this would result in a CO_2 offset fund of $1,632,766 ($382{,}381\ tones\ emission\ reduction \times \$4.27\ offset\ cost = \$1{,}632{,}766\ offset$).

> *OAR 345-024-0620 (3) If the applicant elects to comply with the standard using the means described in OAR 345-024-0630(1), the Council shall determine the amount of greenhouse gas emissions reduction that is reasonably likely to result from each of the proposed offsets. In making this determination, the Council shall not allow credit for offsets that have already been allocated or awarded credit for greenhouse gas emissions reduction in another regulatory setting. The fact that an applicant or other parties involved with an offset may derive benefits from the offset other than the reduction of greenhouse gas emissions is not, by itself, a basis for withholding credit for an offset. The Council shall base its determination of the amount of*

greenhouse gas emission reduction on the following criteria and as provided in OAR 345-024-0680:

(a) The degree of certainty that the predicted quantity of greenhouse gas emissions reduction will be achieved by the offset.

(b) The ability of the Council to determine the actual quantity of greenhouse gas emissions reduction resulting from the offset, taking into consideration any proposed measurement, monitoring and evaluation of mitigation measure performance.

(c) The extent to which the reduction of greenhouse gas emissions would occur in the absence of the offsets.

NWN does not elect to comply in this manner.

OAR 345-024-0620(4) Before beginning construction, the certificate holder shall notify the Department of Energy in writing of its final selection of an equipment manufacturer and shall submit a written design information report to the Department sufficient to verify the facility's designed rate of fuel use and its nominal capacity for each fuel type. In the site certificate, the Council may specify other information to be included in the report. The Department shall use the information the certificate holder provides in the report as the basis for calculating, according to the site certificate, the amount of greenhouse gas emissions reductions the certificate holder must provide under OAR 345-024-0630.

NWN will use Caterpillar 3608 Engines at NMSC and will use Taurus 60 Turbines at Miller Station. Site-specific technical data sheets are included at the end of this analysis as Attachment DD-1.

OAR 345-024-0620(5) In the site certificate, the Council shall specify the schedule by which the certificate holder shall provide offsets. In the schedule, the Council shall specify the amount and timing of offsets the certificate holder must provide to an offset credit account. In determining the amount and timing of offsets, the Council may consider the estimate of total offsets that may be required for the facility and the minimum amount of offsets needed for effective offset projects. The Department shall maintain the record of the offset credit account.

NWN assumes that the emission offset credit will be paid in a single installment.

4.2 OAR 345-024-0630 – Means of Compliance for Nongenerating Energy Facilities

OAR 345-024-0630 The applicant may elect to use any of the following means, or any combination thereof, to comply with the carbon dioxide emissions standard for nongenerating energy facilities:

OAR 345-024-0630(1) Implementing offset projects directly or through a third party, pursuant to OAR 345-024-0680. The Council may adopt site certificate conditions ensuring that the proposed offset projects are implemented by the date specified in the site certificate, but shall not require that predicted levels of avoidance, displacement or sequestration of greenhouse gas emissions be achieved.

NWN does not choose this method of compliance.

> *OAR 345-024-0630(2) Providing offset funds, directly or through a third party, in an amount deemed sufficient to produce the reduction in greenhouse gas emissions necessary to meet the applicable carbon dioxide emissions standard according to the schedule set forth pursuant to OAR 345-024-0620(5). The applicant or third party shall use the funds as specified in OAR 345-024-0710. The Council shall deem the payment of the monetary offset rate, pursuant to OAR 345-024-0580, to result in a reduction of one ton of carbon dioxide emissions. The Council shall determine the offset funds using the monetary offset rate and the level of emissions reduction required to meet the applicable standard. If the Council issues a site certificate based on this section, the Council may not adjust the amount of the offset funds based on the actual performance of offsets.*
>
> *OAR 345-024-0630(3) Any other means that the Council adopts by rule for demonstrating compliance with the carbon dioxide emissions standard.*

NWN will provide offset funds directly, as outlined in OAR 345-024-0630(2). The organization selected by NWN for receipt of the funds is National Climate Trust (Oregon Business Registration Number 455822-93). Proof of 501(c)(3) status for the organization is included at the end of Attachment DD-2. In addition to the offset funds, NWN will provide an additional amount to be included in the one-time payment of up to 10 percent of the first $500,000 offset fund amount and 4.286 percent of offset funds in excess of $500,000 (an additional $95,401 for NMSC and an additional $98,550 for Miller Station) if requested by the organization as specified in OAR 345-024-0710(4).

> *OAR 345-024-0630(4) Each year after beginning commercial operation, the certificate holder shall report to the Department of Energy data showing the amount and type of fossil fuels used by the facility and its horsepower-hours of operation. The Council shall specify in the site certificate how the Department shall use those data to calculate the gross carbon dioxide emissions from the facility during the report year and the net emissions in excess of the carbon dioxide emissions standard. The Department shall then subtract excess emissions from the offset credit account. The Council shall specify in the site certificate the minimum amount of offset credits that a certificate holder shall provide to establish the offset credit account. The Council may specify an amount of offset credits equal to the total offsets required for the facility. The Council shall specify the minimum amount of offset credits that a certificate holder must maintain in the account and the minimum amount of offset credits the certificate holder shall provide to replenish the account. The Department shall notify the certificate holder when it must replenish its offset credit account according to the conditions in the site certificate. The certificate holder shall maintain a positive balance in the offset credit account for 30 years, unless the Council specifies a different period in the site certificate.*

NWN recommends the use of the simple equations outlined above to determine compliance, using the actual annual horsepower-hours and actual annual million Btu of fuel consumption. NWN suggests establishing the offset account with a balance of 365,175 tons of CO_2 for NMSC and 382,381 tons of CO_2 for Miller Station. This is the projected 30-year offset for Project operations.

Given the relatively small amount of offset credits in comparison to a power plant, a single deposit with no future adjustments would be most practical in terms of the effort expended by the Oregon Energy Facility Siting Council (EFSC)and NWN for compliance.

> *OAR 345-024-0630(5) If the certificate holder is replenishing its offset credit account by meeting the monetary path payment requirement described in OAR 345-024-710, the certificate holder may replenish its offset credit account without amending the site certificate by using the calculation methodology detailed in conditions that the Council adopts in the site certificate.*

NWN suggests establishing the offset account with a balance of 365,175 tons of CO_2 for NMSC and 382,381 tons of CO_2 for Miller Station. This is the projected 30-year offset for Project operations. Given the relatively small amount of offset credits in comparison to a power plant, a single deposit with no future adjustments would be most practical in terms of the effort expended by EFSC and NWN for compliance.

> *OAR 345-024-0630(6) If the certificate holder proposes to replenish the offset credit account under OAR 345-024-0630(1), the Council may amend the site certificate conditions to ensure that the proposed offset projects are implemented.*

NWN does not wish to use this compliance method.

4.3 Conclusion

As described above, taking into account offsets, the net CO_2 emissions rate of the Project will not exceed 0.428 pounds of CO_2 per horsepower hour. The Project complies with the CO_2 standard for nongenerating energy facilities.

Figures

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Sorting Yard
Laydown Yards

North Mist Pipeline
Installed via Amendment 11

Newton
Well Pad

Stegosaur
Well Pad

Medicine
Well Pad

North Mist
Compressor Station
Expansion Area

North Mist Powerline
Installed via Amendment 11

Miller
Station
Laydown

Miller
Station

New Buried
Powerline
Alignment

Hwy 202
Laydown
Yard

Bark N Haul
Laydown Yard

Columbia
County

Clatskanie Mountain

Mist

1:40,000 WGS 1984 UTM Zone 10N 0 1 Miles NOT FOR CONSTRUCTION

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Mist Resiliency Project

Figure DD-1
Permanent Habitable Dwellings near the Project

COLUMBIA COUNTY, OREGON

- Site Boundary
- Miller Station (Existing)
- Previous Study Corridor
- Residence
- City/Town
- County Boundary
- US Highway
- State Highway

Project Infrastructure

- Medicine to Stegosaur Pipeline Route
- Newton to Stegosaur Pipeline Route
- Stegosaur to NMCS Expansion Pipeline Route
- Compressor station
- Laydown Yard
- Well Pad

TETRA TECH NW Natural

Reference Map

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Attachment DD-1. Site-specific Technical Data Sheets

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Taurus 60 Compressor Set

Specifications

Power	7700 hp
Heat Rate	7965 Btu/hp-hr
Exhaust Flow	171,690 lb/hr
Exhaust Temperature	950°F
Combustion System	SoLoNOx (DLE) Conventional

G3608

GAS ENGINE SITE SPECIFIC TECHNICAL DATA

CATERPILLAR®

GAS COMPRESSION APPLICATION

ENGINE SPEED (rpm):	1000
COMPRESSION RATIO:	7.6
AFTERCOOLER TYPE:	SCAC
AFTERCOOLER - STAGE 2 INLET (°F):	130
AFTERCOOLER - STAGE 1 INLET (°F):	174
JACKET WATER OUTLET (°F):	190
ASPIRATION:	TA
COOLING SYSTEM:	JW+1AC, OC+2AC
CONTROL SYSTEM:	ADEM4
EXHAUST MANIFOLD:	DRY
COMBUSTION:	LOW EMISSION
NOx EMISSION LEVEL (g/bhp-hr NOx):	0.3
SET POINT TIMING:	18

RATING STRATEGY:	STANDARD
RATING LEVEL:	CONTINUOUS
FUEL SYSTEM:	GAV WITH AIR FUEL RATIO CONTROL

SITE CONDITIONS:

FUEL:	Gas Analysis
FUEL PRESSURE RANGE(psia): (See note 1)	84.8-94.6
FUEL METHANE NUMBER:	77.9
FUEL LHV (Btu/scf):	983
ALTITUDE(ft):	1310
INLET AIR TEMPERATURE(°F):	100
STANDARD RATED POWER:	2750 bhp@1000rpm

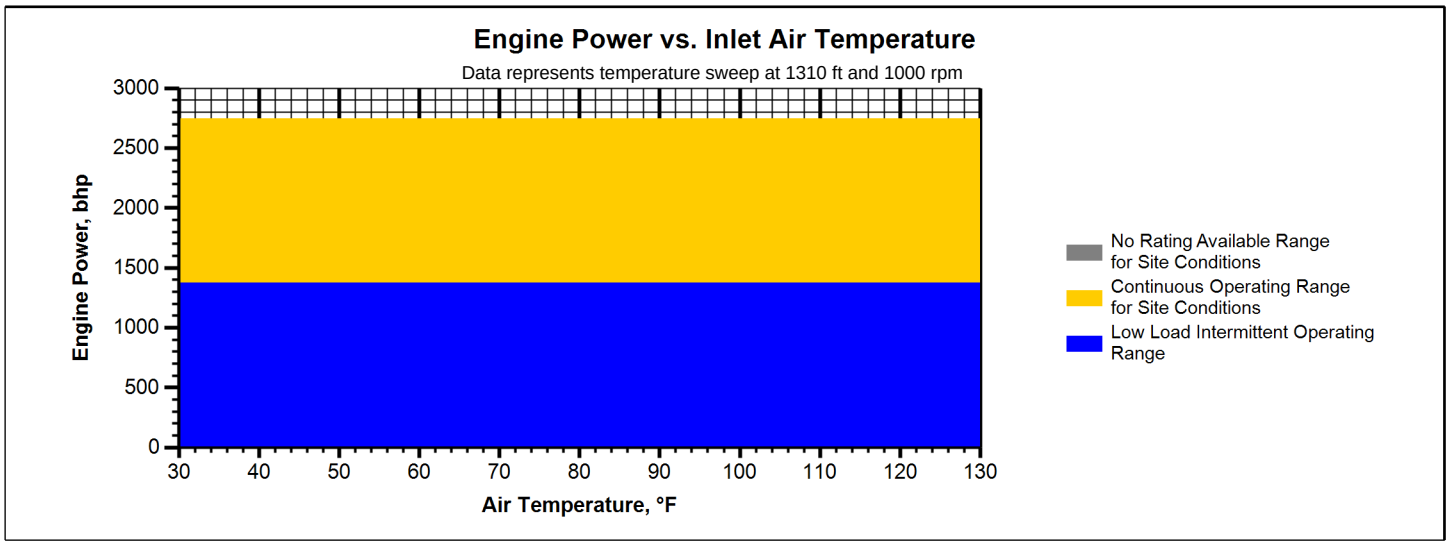
				MAXIMUM RATING	SITE RATING AT MAXIMUM INLET AIR TEMPERATURE		
RATING		**NOTES**	**LOAD**	**100%**	**100%**	**75%**	**50%**
ENGINE POWER	(WITHOUT FAN)	(2)	bhp	2750	2750	2063	1375
INLET AIR TEMPERATURE			°F	100	100	100	100
ENGINE DATA							
FUEL CONSUMPTION (LHV)		(3)	Btu/bhp-hr	6770	6770	7009	7476
FUEL CONSUMPTION (HHV)		(3)	Btu/bhp-hr	7497	7497	7762	8279
AIR FLOW (@inlet air temp, 14.7 psia)	(WET)	(4)(5)	ft3/min	7317	7317	5539	3760
AIR FLOW	(WET)	(4)(5)	lb/hr	31111	31111	23553	15987
FUEL FLOW (60°F, 14.7 psia)			scfm	316	316	245	174
INLET MANIFOLD PRESSURE		(6)	in Hg(abs)	118.9	118.9	89.4	61.3
EXHAUST TEMPERATURE - ENGINE OUTLET		(7)	°F	786	786	836	893
EXHAUST GAS FLOW (@engine outlet temp, 14.5 psia)	(WET)	(5)(8)	ft3/min	17329	17329	13659	9702
EXHAUST GAS MASS FLOW	(WET)	(5)(8)	lb/hr	31979	31979	24227	16467
EMISSIONS DATA - ENGINE OUT							
NOx (as NO2)		(9)(10)	g/bhp-hr	0.30	0.30	0.30	0.30
CO		(9)(10)	g/bhp-hr	2.18	2.18	2.18	2.18
THC (mol. wt. of 15.84)		(9)(10)	g/bhp-hr	2.70	2.70	2.87	2.96
NMHC (mol. wt. of 15.84)		(9)(10)	g/bhp-hr	0.46	0.46	0.49	0.50
NMNEHC (VOCs) (mol. wt. of 15.84)		(9)(10)(11)	g/bhp-hr	0.17	0.17	0.18	0.18
HCHO (Formaldehyde)		(9)(10)	g/bhp-hr	0.12	0.12	0.12	0.14
CO2		(9)(10)	g/bhp-hr	427	427	443	470
EXHAUST OXYGEN		(9)(12)	% DRY	11.5	11.5	11.2	10.8
HEAT REJECTION							
HEAT REJ. TO JACKET WATER (JW)		(13)	Btu/min	30036	30036	26142	21598
HEAT REJ. TO ATMOSPHERE		(13)	Btu/min	10792	10792	10976	11109
HEAT REJ. TO LUBE OIL (OC)		(13)	Btu/min	12507	12507	12383	11395
HEAT REJ. TO A/C - STAGE 1 (1AC)		(13)(14)	Btu/min	31771	31771	16412	5323
HEAT REJ. TO A/C - STAGE 2 (2AC)		(13)(14)	Btu/min	11724	11724	7155	3467
COOLING SYSTEM SIZING CRITERIA							
TOTAL JACKET WATER CIRCUIT (JW+1AC)		(14)(15)	Btu/min	66399			
TOTAL STAGE 2 AFTERCOOLER CIRCUIT (OC+2AC)		(14)(15)	Btu/min	27318			

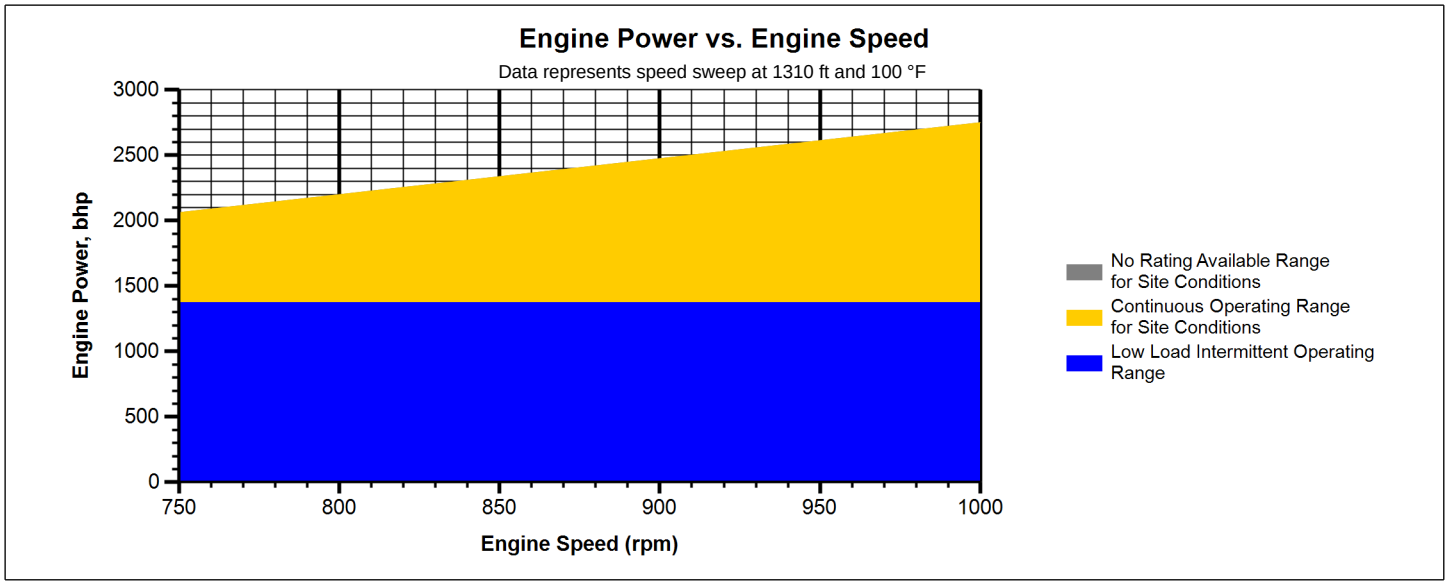
A cooling system safety factor of 0% has been added to the cooling system sizing criteria.

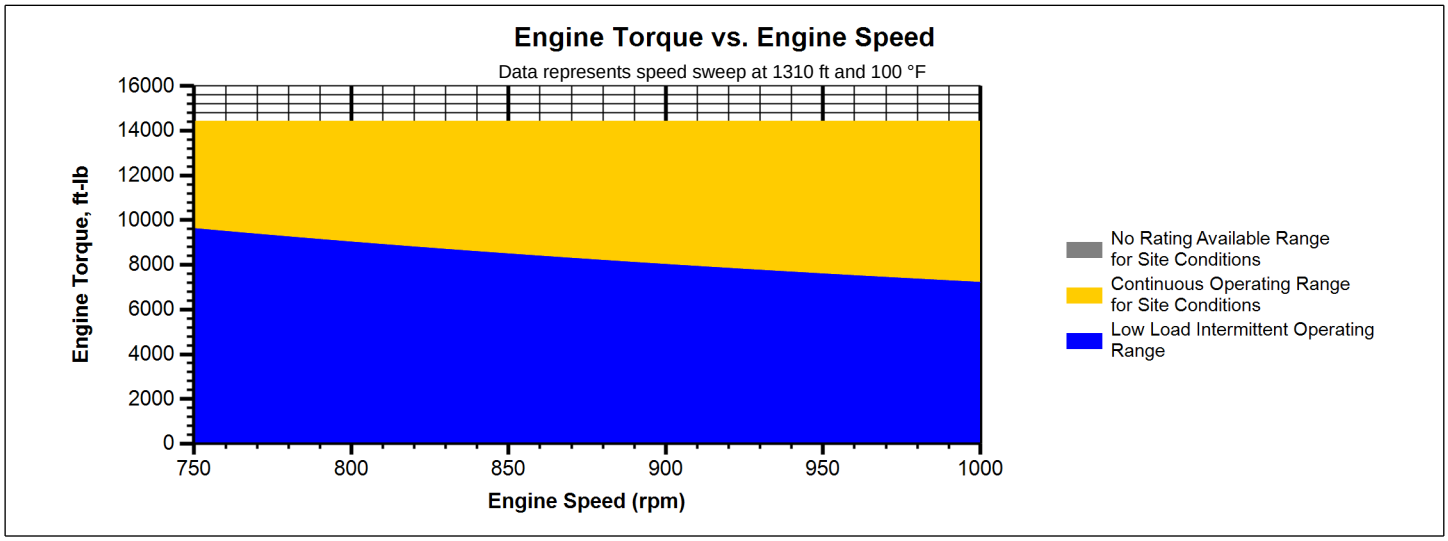
CONDITIONS AND DEFINITIONS

Engine rating obtained and presented in accordance with ISO 3046/1, adjusted for fuel, site altitude and site inlet air temperature. 100% rating at maximum inlet air temperature is the maximum engine capability for the specified fuel at site altitude and maximum site inlet air temperature. Maximum rating is the maximum capability at the specified aftercooler inlet temperature for the specified fuel at site altitude and reduced inlet air temperature. Refer to product O&M manual for details on additional lower load capability. No overload permitted at rating shown.

For notes information consult page three.







Note:
At site conditions of 1310 ft and 100°F inlet air temp., constant torque can be maintained down to 750 rpm. The minimum speed for loading at these conditions is 750 rpm.

NOTES:

1. Fuel pressure range specified is to the engine gas shutoff valve (GSOV). Additional fuel train components should be considered in pressure and flow calculations.

2. Engine rating is with two engine driven water pumps. Tolerance is ± 3% of full load.

3. Fuel consumption tolerance is ± 2.5% of full load data.

4. Air flow value is on a 'wet' basis. Flow is a nominal value with a tolerance of ± 5 %.

5. Inlet and Exhaust Restrictions must not exceed A&I limits based on full load flow rates from the standard technical data sheet.

6. Inlet manifold pressure is a nominal value with a tolerance of ± 5 %.

7. Exhaust temperature is a nominal value with a tolerance of (+)63°F, (-)54°F.

8. Exhaust flow value is on a "wet" basis. Flow is a nominal value with a tolerance of ± 6 %.

9. Emissions data is at engine exhaust flange prior to any after treatment.

10. Values listed are higher than nominal levels to allow for instrumentation, measurement, and engine-to-engine variations. They indicate the maximum values expected under steady state conditions. Fuel methane number cannot vary more than ± 3. THC, NMHC, and NMNEHC do not include aldehydes. An oxidation catalyst may be required to meet Federal, State or local CO or HC requirements.

11. VOCs - Volatile organic compounds as defined in US EPA 40 CFR 60, subpart JJJJ

12. Exhaust Oxygen level is the result of adjusting the engine to operate at the specified NOx level. Tolerance is ± 0.5.

13. Heat rejection values are nominal. Tolerances, based on treated water, are ± 10% for jacket water circuit, ± 50% for radiation, ± 20% for lube oil circuit, and ± 5% for aftercooler circuit.

14. Aftercooler heat rejection includes an aftercooler heat rejection factor for the site elevation and inlet air temperature specified. Aftercooler heat rejection values at part load are for reference only. Do not use part load data for heat exchanger sizing.

15. Cooling system sizing criteria are maximum circuit heat rejection for the site, with applied tolerances.

GAS ENGINE SITE SPECIFIC TECHNICAL DATA
North Mist 2 Compressors

Constituent	Abbrev	Mole %	Norm
Water Vapor	H2O	0.0458	0.0463
Methane	CH4	90.5300	91.4392
Ethane	C2H6	6.6940	6.7612
Propane	C3H8	1.4980	1.5130
Isobutane	iso-C4H10	0.0190	0.0192
Norbutane	nor-C4H10	0.0190	0.0192
Isopentane	iso-C5H12	0.0400	0.0404
Norpentane	nor-C5H12	0.0300	0.0303
Hexane	C6H14	0.0199	0.0201
Heptane	C7H16	0.0000	0.0000
Nitrogen	N2	0.0400	0.0404
Carbon Dioxide	CO2	0.0700	0.0707
Hydrogen Sulfide	H2S	0.0000	0.0000
Carbon Monoxide	CO	0.0000	0.0000
Hydrogen	H2	0.0000	0.0000
Oxygen	O2	0.0000	0.0000
Helium	HE	0.0000	0.0000
Neopentane	neo-C5H12	0.0000	0.0000
Octane	C8H18	0.0000	0.0000
Nonane	C9H20	0.0000	0.0000
Ethylene	C2H4	0.0000	0.0000
Propylene	C3H6	0.0000	0.0000
TOTAL (Volume %)		99.0057	100.0000

Fuel Makeup:	Gas Analysis
Unit of Measure:	English

Calculated Fuel Properties

Caterpillar Methane Number:	77.9
Lower Heating Value (Btu/scf):	983
Higher Heating Value (Btu/scf):	1089
WOBBE Index (Btu/scf):	1265
THC: Free Inert Ratio:	898.64
Total % Inerts (% N2, CO2, He):	0.11%
RPC (%) (To 905 Btu/scf Fuel):	100%
Compressibility Factor:	0.998
Stoich A/F Ratio (Vol/Vol):	10.25
Stoich A/F Ratio (Mass/Mass):	16.95
Specific Gravity (Relative to Air):	0.605
Fuel Specific Heat Ratio (K):	1.303

CONDITIONS AND DEFINITIONS

Caterpillar Methane Number represents the knock resistance of a gaseous fuel. It should be used with the Caterpillar Fuel Usage Guide for the engine and rating to determine the rating for the fuel specified. A Fuel Usage Guide for each rating is included on page 2 of its standard technical data sheet.

RPC always applies to naturally aspirated (NA) engines, and turbocharged (TA or LE) engines only when they are derated for altitude and ambient site conditions.

Project specific technical data sheets generated by the Caterpillar Gas Engine Rating Pro program take the Caterpillar Methane Number and RPC into account when generating a site rating.

Fuel properties for Btu/scf calculations are at 60F and 14.696 psia.

Caterpillar shall have no liability in law or equity, for damages, consequently or otherwise, arising from use of program and related material or any part thereof.

FUEL LIQUIDS

Field gases, well head gases, and associated gases typically contain liquid water and heavy hydrocarbons entrained in the gas. To prevent detonation and severe damage to the engine, hydrocarbon liquids must not be allowed to enter the engine fuel system. To remove liquids, a liquid separator and coalescing filter are recommended, with an automatic drain and collection tank to prevent contamination of the ground in accordance with local codes and standards.

To avoid water condensation in the engine or fuel lines, limit the relative humidity of water in the fuel to 80% at the minimum fuel operating temperature.

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Attachment DD-2. National Climate Trust

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INTERNAL REVENUE SERVICE
P. O. BOX 2508
CINCINNATI, OH 45201

DEPARTMENT OF THE TREASURY

Date: DEC 15 2008

NATIONAL CLIMATE TRUST
C/O MILLER NASH LLP
WILLIAM S MANNE
111 SW FIFTH AVE STE 3400
PORTLAND, OR 97204

Employer Identification Number:
26-0760633
DLN:
17053176330038
Contact Person:
ANDREA SPECK ID# 95044
Contact Telephone Number:
(877) 829-5500
Accounting Period Ending:
December 31
Public Charity Status:
170(b)(1)(a)(vi)
Form 990 Required:
Yes
Effective Date of Exemption:
August 9, 2007
Contribution Deductibility:
Yes
Addendum Applies:
No

Dear Applicant:

We are pleased to inform you that upon review of your application for tax exempt status we have determined that you are exempt from Federal income tax under section 501(c)(3) of the Internal Revenue Code. Contributions to you are deductible under section 170 of the Code. You are also qualified to receive tax deductible bequests, devises, transfers or gifts under section 2055, 2106 or 2522 of the Code. Because this letter could help resolve any questions regarding your exempt status, you should keep it in your permanent records.

Organizations exempt under section 501(c)(3) of the Code are further classified as either public charities or private foundations. We determined that you are a public charity under the Code section(s) listed in the heading of this letter.

Please see enclosed Publication 4221-PC, Compliance Guide for 501(c)(3) Public Charities, for some helpful information about your responsibilities as an exempt organization.

We have sent a copy of this letter to your representative as indicated in your power of attorney.

Sincerely,

Robert Choi
Director, Exempt Organizations
Rulings and Agreements

Enclosures: Publication 4221-PC