MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
OPERATING PERMIT TECHNICAL REVIEW DOCUMENT #TRD4255-03

Air, Energy & Mining Division
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NorthWestern Energy
Dave Gates Generating Station at Mill Creek
NW¼ of Section 17 and the SW ¼ of Section 8, Township 4 North, Range 10 West
40 East Broadway Street
Butte, MT 59701

The following table summarizes the air quality programs testing, monitoring, and reporting requirements applicable to this facility.

Facility Compliance Requirements	Yes	No	Comments
Source Tests Required	X		Methods 5, 7, and 10, 18/25
Ambient Monitoring Required		X	
Continuous Opacity Monitoring System (COMS) Required		X	
Continuous Emissions Monitoring System (CEMS) Required	X		Oxides of nitrogen (NOx) and carbon monoxide (CO) CEMS
Schedule of Compliance Required		X	
Annual Compliance Certification and Semiannual Reporting Required	X		As Applicable
Monthly Reporting Required		X	
Quarterly Reporting Required		X	
Applicable Air Quality Programs			
ARM Subchapter 7 Montana Air Quality Permit (MAQP)	X		MAQP #4255-03
New Source Performance Standards (NSPS)	X		40 CFR 60, Subparts A, IIII, KKKK
National Emission Standards for Hazardous Air Pollutants (NESHAPS)		X	
Maximum Achievable Control Technology (MACT)	X		40 CFR 63, Subpart A, ZZZZ
Major New Source Review (NSR)		X	

Facility Compliance Requirements	Yes	No	Comments
Prevention of Significant Deterioration (PSD)		X	
Risk Management Plan Required (RMP)		X	
Acid Rain Title IV	X		40 CFR Part 72 through Part 78
Compliance Assurance Monitoring (CAM)	X		Appendix F of OP4255-03
State Implementation Plan (SIP)	X		General SIP

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SECTION I. GENERAL INFORMATION

A. Purpose

This document establishes the basis for the decisions made regarding the applicable requirements, monitoring plan, and compliance status of emissions units affected by the operating permit proposed for this facility. The document is intended for reference during review of the proposed permit by the Environmental Protection Agency (EPA) and the public. It is also intended to provide background information not included in the operating permit and to document issues that may become important during modifications or renewals of the permit. Conclusions in this document are based on information provided in the original application submitted by NorthWestern Energy (NWE) on August 22, 2008 with additional information submitted through December 10, 2008; a de minimis request received on July 26, 2010 and a subsequent permit modification application on October 29, 2010 with additional information submitted on October 29, 2010, November 1, 2010 and November 19, 2010; an administrative amendment request received on August 20, 2010; and the renewal application submitted on December 3, 2014.

B. Facility Location

NWE's facility also known as the Dave Gates Generating Station at Mill Creek (DGGS) is located near the intersection of MT-1 and County Road 273 approximately 3 miles southeast of Anaconda, Montana. The property lies within a 50-acre parcel in the NW¼ of Section 17 and the SW ¼ of Section 8, Township 4 North, Range 10 West in Deer Lodge County, Montana.

C. Facility Background Information

Montana Air Quality Permit History

On January 22, 2009, NWE was issued a final **Montana Air Quality Permit (MAQP**) **#4255-00**. NWE constructed and operates a facility equipped with up to four simple-cycle, dual fuel-fired generating units. Each generating unit consists of two aeroderivative combustion turbines and one electric generator rated at 49.6 megawatts (MW). The facility serves as a regulating resource to stabilize the transmission grid due to historical supply and load variations and the integration of non-dispatchable and unpredictable fluctuations from intermittent renewable resources, such as wind power. The facility's permitted combined net output is approximately 200-MW r for delivery to the existing power grid.

At the time of the original application, NWE proposed phased construction of the simple-cycle turbines along with other miscellaneous equipment, including: a 1,675-brake horsepower (bhp) emergency diesel generator, a 308.4-bhp emergency diesel fire pump, two above-ground 1,000,000-gallon diesel fuel tanks and two 10,000-gallon aqueous ammonia tanks. Emissions from the generating units are controlled utilizing water injection, selective catalytic reduction (SCR) and catalytic oxidation.

On July 26, 2010, NWE submitted a de minimis request to the Department of Environmental Quality-Air Resources Management Bureau (Department) for the following equipment changes: 1) replace the 1675 bhp diesel-fired emergency generator with a 1528 bhp diesel-fired blackstart emergency generator; 2) replace the 308 bhp fire pump engine with a 282 bhp fire pump engine; 3) replace two above ground 1,000,000 gallon diesel fuel tanks with a two above ground 125,000

gallon diesel fuel tanks, and 4) replace two 10,000 gallon aqueous ammonia tanks with two 12,000 gallon (working volume) aqueous ammonia tanks. Additionally, NWE submitted information to update the location of the equipment listed from that submitted in the original application #4255-00. The Department was unable to make these changes pursuant to the de minimis rule, and therefore NWE submitted a permit application for modification on October 29, 2010, with additional information submitted on November 1, 2010; November 8, 2010; and November 19, 2010.

On August 20, 2010, NWE submitted a request to administratively amend MAQP #4255-00 to: 1) clarify the intent of the commissioning period; 2) clarify the number of generating units (phased in construction with up to four units) operating at MCGS; 3) clarify the hourly operational limit (720 hours/year/combustion turbine) while firing liquid fuels; and 4) include revisions to NWE's acid rain permit application. This permit action was assigned MAQP #4255-01; however, the permit was never finalized because the Department combined the administrative amendment with the permit modification application **MAQP #4255-02** replaced MAQP #4255-00.

On April 7, 2011, NWE contacted the Department to notify that the facility would be renamed to DGGS at Mill Creek rather than Mill Creek Generating Station (MCGS). The information submitted by NWE also included a request to change the designated responsible official from Dave Gates to William T. Rhoads.

On January 20, 2012, NWE submitted a permit application to request an extension for the construction of Unit #4. Originally MAQP #4255-02 allowed NWE phased in construction of up to four simple-cycle, dual fuel powered generating units each rated at 49.6 MW; however, NWE only completed three of the four units. Generally speaking, once an MAQP is issued, facilities have three years to construct. Because NWE did not construct the fourth unit within three years, NWE requested an extension on the construction of the fourth unit. In addition, the permit action updated rule references, permit format and the emissions inventory. **MAQP #4255-03** replaced MAQP #4255-02.

Also of note, the preconstruction authorization window of 3 years found in MAQP #4255-03 expired April 19, 2015. NWE does not intend to renew MAQP #4255-03 to extend the construction window for Unit #4.

Title V Operating Permit History

Operating Permit (OP) #OP4255-00 was issued final and effective on June 3, 2010.

On August 20, 2010, NWE submitted a request to administratively amend OP#4255-00 to: 1) clarify the intent of the commissioning period; 2) clarify the number of generating units (phased in construction with up to four units); 3) clarify the hourly operational limit (720 hours/year/combustion turbine) while firing liquid fuels; and 4) include revisions to NWE's acid rain permit application. This permit action was assigned Title V Operating Permit **#OP4255-01**; however, the permit was never finalized because the Department combined the administrative amendment with the permit modification listed below.

On April 7, 2011, NWE contacted the Department to notify of a facility name change and a change in responsible official. The facility was previously referred to as Mill Creek Generating Station (MCGS) and has since been named the Dave Gates Generating Station at Mill Creek. The responsible official changed from Dave Gates to William T. Rhoads. In addition to these changes, the Department updated rule references and the emission inventory to include the addition of Hazardous Air Pollutants (HAP) to the emission inventory. Title V Operating Permit **#OP4255-02** replaced Title V Operating Permit #OP4255-00.

D. Current Permit Action

On December 3, 2014, NWE submitted a complete application to renew OP#4255-02. In addition to updating language and rule references, the permit adds an alternate responsible official, Mary Gail Sullivan, and an alternate contact person, Jason Boeckel. Also of note, the preconstruction authorization window of 3 years found in MAQP #4255-03 expired April 19, 2015. NWE does not intend to renew MAQP #4255-03 to extend the construction window for Unit #4. As such, #OP4255-03 removes references to 4 units at NWE to accurately reflect the current state of the facility. Title V Operating Permit **#OP4255-03** replaces Title V Operating Permit #OP4255-02.

E. Taking and Damaging Analysis

House Bill (HB) 311, the Montana Private Property Assessment Act, requires analysis of every proposed state agency administrative rule, policy, permit condition or permit denial, pertaining to an environmental matter, to determine whether the state action constitutes a taking or damaging of private real property that requires compensation under the Montana or U.S. Constitution. As part of issuing an operating permit, the Department is required to complete a Taking and Damaging Checklist. As required by 2-10-101 through 2-10-105, Montana Code Annotated (MCA), the Department conducted the following private property taking and damaging assessment.

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deny a fundamental attribute of ownership? (ex.: right to exclude others, disposal of property)
	X	4. Does the action deprive the owner of all economically viable uses of the property?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If no, go to (6)].
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property? (consider economic impact, investment-backed expectations, character of government action)
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally?
	X	7a. Is the impact of government action direct, peculiar, and significant?

YES	NO	
	X	7b. Has government action resulted in the property becoming practically inaccessible, waterlogged or flooded?
	X	7c. Has government action lowered property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?
	X	Takings or damaging implications? (Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b; the shaded areas)

Based on this analysis, the Department determined there are no taking or damaging implications associated with this permit action.

F. Compliance Designation

As of the date of issuance of the Draft Title V Operating Permit #OP4255-03, NWE notified the Department that Generating Unit #4 has not been constructed and there is no intention of renewing MAQP#4255-03 to extend the preconstruction authorization window. The Department also completed a Full Compliance Evaluation (FCE) for the periods from July 1, 2011 to March 5, 2013 and June 6, 2013 to June 12, 2015. Based upon the information gathered in the FCE reports, the Department had determined that NWE DGGS was in compliance with all applicable requirements of OP#4255-02 and MAQP#4255-03.

SECTION II. SUMMARY OF EMISSION UNITS

A. Facility Process Description

This facility, also known as DGGS, is located near the intersection of MT-1 and County Road 273 approximately 3 miles southeast of Anaconda, Montana. DGGS serves as NWE's regulating resource to maintain a balance between electrical loads (demand) and resources (supply) within NWE's Balancing Authority (BA) on a moment-to moment basis. NWE is required to maintain system frequency and minimize inadvertent energy transfers between adjacent BAs which is critical to the stability of the transmission grid. Keeping the system in balance at all times can be exacerbated by the addition of intermittent renewable resources such as wind generation.

In addition to the three simple-cycle generating units, other miscellaneous equipment includes: a 1528-bhp emergency diesel generator, a 282-bhp emergency diesel fired water pump, two above-ground 125,000-gallon diesel fuel tanks and two 12,000-gallon aqueous ammonia tanks. Emissions from the facility will be controlled utilizing water injection, SCR and catalytic oxidation.

NWE selected the rapid ramping simple-cycle FT8 Swiftpacs™ generating units from Pratt & Whitney. DGGS will utilize up to three generating units whereby each unit consists of a gas turbine flanked on each side of the common generator. These units are capable of operating at various loads and temperatures with the ability to respond rapidly to fluctuations in wind conditions. The FT8 Swiftpacs™ are ideal for offsetting continuous variation between system generation and system load.

The startup and shutdowns for the generating units are not typical as would be seen in other applications. This facility has various forms of both a cold start and "windmill" startup. As the name implies, a cold start is when a turbine begins operation from non-operational to fuel firing. As such, these units are capable of generating full capacity in less than 10 minutes from a cold start. Windmill operation, which is unique to these generating units, is when the one turbine is fully operational while the other spins freely or "windmills" without fuel. The system response to a windmill start, though rapid, is not immediate, and requires several minutes to reach peak control efficiencies. Therefore, no emission estimate distinctions are made in startup and shutdown emissions regarding cold or windmill starts.

DGGS needs to start and stop the turbines on a very routine basis, as much as, every 10 minutes depending on system demand and supply. In fact, normal operation for this facility would consist of approximately 40,000 startups and 40,000 shutdowns in any given year. Because the plant will not be operated at a continuously set load, emission limits were not based on full-load operation but rather represent the worse-case scenario based on the variable turbine loads, ambient temperatures and fuel types.

In general, a gas turbine is an internal combustion engine that operates with rotary rather than reciprocating motion. Within each combustion turbine unit, a mixture of compressed air and natural gas is fired in the combustor to produce compressed hot combustion gases. Expansion of these gases in the turbine rotates the turbine shaft that turns a generator to produce electricity.

For stationary applications, the hot combustion gases are directed through one or more fan-like turbine wheels to generate shaft horsepower. A simple cycle turbine is the most basic operating cycle of a gas turbine.

Generally, the compressor draws in ambient air and compresses it to a pressure of up to 30 times the ambient pressure. The compressed air is then directed to the combustor section where fuel is introduced, ignited, and burned. The hot combustion gases are then diluted with additional cool air from the compressor section and directed to the turbine section. Energy is recovered in the turbine section in the form of shaft horsepower; typically greater than 50 percent of the horsepower is required to drive the internal compressor section. The balance of the recovered shaft energy is available to drive the external load unit. The compressor and turbine sections can be a single fan-like wheel assembly, but are usually made up of a series of stages. The compressor and turbine sections may be associated with one or several connecting shafts. In a single shaft gas turbine, all compressor and turbine stages are fixed to a single continuous shaft and operate at the same speed.

B. Emission Units and Pollution Control Device Identification

The emission units regulated by this permit are the following (Administrative Rules of Montana (ARM) 17.8.1211):

Emissions Unit ID	Description	Pollution Control Device/Practice
EU001	Pratt & Whitney Power Systems FT8 Swiftpac – Three simple cycle, dual-fuel powered generating units (each generating unit consist of two combustion turbines and a common generator rated at 49.6 MW)	Water injection, selective catalytic reduction (SCR) and catalytic oxidation
EU002	1528-bhp diesel-fired emergency generator	Operation limited to 500 hours per rolling 12-month period
EU003	282-bhp water pump	Operation limited to 500 hours per rolling 12-month period

C. Categorically Insignificant Sources/Activities

As defined in ARM 17.8.1201, "insignificant emissions unit" means (i) any activity or emissions unit located within a source that has a potential to emit less than 5 tons per year of any regulated pollutant; (ii) has a potential to emit less than 500 pounds per year of lead; (iii) has a potential to emit less than 500 pounds per year of hazardous air pollutants listed pursuant to Section 112(b) of the FCAA; and (iv) is not regulated by any applicable requirement, other than a generally applicable requirement that applies to all emission units subject to this subchapter. The following units constitute insignificant emitting units (IEU).

The following table of insignificant sources and/or activities that were provided by NWE.

Emissions Unit ID	Description
IEU01	Two above-ground 125000 gallon diesel fuel tanks
IEU02	Two 12000 gallon aqueous ammonia tanks
IEU03	Haul roads/Vehicle Traffic
IEU04	Facility Heaters

SECTION III. PERMIT CONDITIONS

A. Emission Limits and Standards

The Department determined that the following emission limits and conditions apply to EU001 – up to three simple cycle, dual fuel powered generating units each rated at 49.6 MW (each generating units consist of two combustion turbines and a common generator). Each simple cycle generating unit is required to have a minimum stack exhaust height of at least 90-feet from final grade. Emissions from EU001 are controlled by utilizing water injection, SCR, and catalytic oxidation on each generating unit to control NO_x, CO, and volatile organic compounds (VOCs).

1. The opacity limit was established in accordance with the provisions of ARM 17.8.304. The applicable opacity limit is less than or equal to 20% opacity.

2. NWE is required to control particulate matter (PM), PM with an aerodynamic diameter of 10 microns or less (PM_{10}), PM with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$) and sulfur dioxide (SO_2) emissions from each of the generating units by utilizing good combustion practices and only combusting low sulfur fuels.

3. NWE is required to control emissions of $PM/PM_{10}/PM_{2.5}$ from each generating unit not to exceed 7.30 pounds per hour (lb/hr) using natural gas and 19.30 lb/hr using ultra low sulfur fuel oil (#2) based on a 30-day rolling average, effective during all periods of operation, including startup and shutdown. These emission limits are based on ARM 17.8.752 determinations established by the Department.

4. NWE is required to control emissions of NO_x from each generating unit not to exceed 11.07 lb/hr using natural gas and 10.09 lb/hr using ultra low sulfur fuel oil (#2) based on a 30-day rolling average, effective during all periods of operation, including startup and shutdown. These emission limits are based on ARM 17.8.752 determinations established by the Department.

5. NWE is required to control emissions of CO from each generating unit not to exceed 10.78 lb/hr using natural gas and 9.83 lb/hr using ultra low sulfur fuel oil (#2) based on a 30-day rolling average, effective during all periods of operation, including startup and shutdown. These emission limits are based on ARM 17.8.752 determinations established by the Department.

6. NWE is required to control emissions of VOCs from each generating unit not to exceed 2.47 lb/hr using natural gas and 18.98 lb/hr using ultra low sulfur fuel oil (#2) based on a 30-day rolling average, effective during all periods of operation, including startup and shutdown. These emission limits are based on ARM 17.8.752 determinations established by the Department.

7. NWE is required to control emissions of SO_x from each generating unit not to exceed 0.83 lb/hr using natural gas and 0.80 lb/hr using ultra low sulfur fuel oil (#2) based on a 30-day rolling average, effective during all periods of operation, including startup and shutdown. These emission limits are based on ARM 17.8.752 determinations established by the Department.

In addition to the above emission limits and conditions, the facility also has conditions and limitations that apply during the commissioning period. The commissioning period and the associated conditions and limitations only apply for a period of 16 weeks from initial startup of the generating unit, or when a new or refurbished combustion turbine is installed or re-installed at the facility. During the commissioning period, NWE is required to only combust pipeline quality natural gas or ultra-low sulfur (#2) fuel oil in the generating units, and to maintain and operate all equipment including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. The conditions and limitations that apply during the commissioning period are summarized, as follows:

1. NWE shall control PM/PM_{10}/$PM_{2.5}$ and SO_x emissions from each of the 49.6 MW dual fuel powered generating units by utilizing good combustion practices and only combusting low sulfur fuels.

2. During the commissioning period, NO_x emissions from the generating units shall not exceed 78.17 lb/hr based on a 1-hour average using natural gas and 84.64 lb/hr using ultra low sulfur fuel oil (#2) based on a 1-hour average. These emission limits were established in accordance with the provisions of ARM 17.8.749.

3. During the commissioning period, CO emissions from the generating units shall not exceed 58.98 lb/hr based on a 1-hour average using natural gas and 52.29 lb/hr using ultra low sulfur fuel oil (#2) based on a 1-hour average. These emission limits were established in accordance with the provisions of ARM 17.8.749.

4. During the commissioning period, VOC emissions from the generating units shall not exceed 2.47 lb/hr based on a 1-hour average using natural gas and 27.62 lb/hr using ultra low sulfur fuel oil (#2) based on a 1-hour average. These emission limits were established in accordance with the provisions of ARM 17.8.749.

5. During the commissioning period, PM/PM_{10}/PM_{25} emissions from the generating units shall not exceed 7.30 lb/hr based on a 1-hour average using natural gas and 19.30 lb/hr using ultra low sulfur fuel oil (#2) based on a 1-hour average. These emission limits were established in accordance with the provisions of ARM 17.8.749.

6. During the commissioning period, SO_2 emissions from the generating units shall not exceed 0.83 lb/hr based on a 1-hour average using natural gas and 0.80 lb/hr using ultra low sulfur fuel oil (#2) based on a 1-hour average. These emission limits were established in accordance with the provisions of ARM 17.8.749.

B. Monitoring Requirements

ARM 17.8.1212(1) requires that all monitoring and analysis procedures or test methods required under applicable requirements are contained in operating permits. In addition, when the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

The requirements for testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance do not require the permit to impose the same level of rigor for all emissions units. Furthermore, they do not require extensive testing or monitoring to assure compliance with the applicable requirements for emission units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. When compliance with the underlying applicable requirement for an insignificant emissions unit is not threatened by lack of regular monitoring and when periodic testing or monitoring is not otherwise required by the applicable requirement, the status quo (i.e., no monitoring) will meet the requirements of ARM 17.8.1212(1). Therefore, the permit does not include monitoring for insignificant emission units.

The permit includes periodic monitoring or recordkeeping for each applicable requirement. The information obtained from the monitoring and recordkeeping will be used by the permittee to periodically certify compliance with the emission limits and standards. However, the Department may request additional testing to determine compliance with the emission limits and standards.

C. Test Methods and Procedures

This operating permit along with MAQP #4255-03 requires NWE to test each generating unit for NO_x and CO concurrently, within 180 days of initial start-up to demonstrate compliance with the emission limitations in the permits. After the initial source test, additional testing shall be conducted annually. Compliance with the opacity limitations in this permit may be demonstrated by burning pipeline quality natural gas or ultra-low sulfur fuel oil only.

The operating permit may not require testing for all sources if routine monitoring is used to determine compliance, but the Department has the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntarily conduct compliance testing to confirm its compliance status.

D. Recordkeeping Requirements

The permittee is required to keep all records listed in the operating permit as a permanent business record for at least 5 years following the date of the generation of the record.

E. Reporting Requirements

Reporting requirements are included in the permit for each emissions unit and Section V of the operating permit "General Conditions" explains the reporting requirements. However, the permittee is required to submit semiannual and annual monitoring reports to the Department and to annually certify compliance with the applicable requirements contained in the permit. The reports must include a list of all emission limit and monitoring deviations, the reason for any deviation, and the corrective action taken as a result of any deviation.

F. Public Notice

In accordance with ARM 17.8.1232, a public notice was published in the Montana Standard newspaper on or before February 26, 2016. The Department provided a 30-day public comment period on the draft operating permit from February 26, 2016 to March 28, 2016. ARM 17.8.1232 requires the Department to keep a record of both comments and issues raised during the public participation process. The comments and issues received by March 28, 2016, will be summarized, along with the Department's responses, in the following table. All comments received during the public comment period will be promptly forwarded to NWE so they may have an opportunity to respond to these comments as well.

G. Draft Permit Comments

Summary of Public Comments

Person/Group Commenting	Comment	Department Response
None	No public comments	N/A

Summary of Permittee Comments

Permit Reference	Permittee Comment	Department Response
Section IV. Non-Applicable Requirements Table A. Facility-Wide (Page 22)	These rules are not applicable because the facility is not listed in the source category cited in the rules, does (**not**) have the emissions unit, or has not made changes that would trigger procedural requirements. (Seems to be missing "not"?)	The Department has corrected the error.
Appendix F Compliance Assurance Monitoring – Selective Catalytic Reduction for Nitrogen Oxides Control Section IV. Monitoring Approach Justification (Page F-4)	A: Background The ~~MCGS~~ **DGGS** facility is an electrical generation plant fired with pipeline natural gas and ultralow sulfur fuel oil. Each Pratt & Whitney Power Systems FT-8 SWIFTPAC simple cycle generating unit can produce approximately 50 MW of electricity. Three generating units are currently installed at the plant; ~~the permit allows up to four to be constructed.~~	The Department has corrected the error.

Permit Reference	Permittee Comment	Department Response
Appendix F Compliance Assurance Monitoring – Selective Catalytic Oxidation for Carbon Monoxide Control Section I.B.3(b) Monitoring Requirements (Page F-5)	b. Method ~~7~~**10** annually	The Department has corrected the error.
Appendix F Compliance Assurance Monitoring (CAM) Plan – Section IV. Monitoring Approach Justification (Page F-6)	The DGGS facility is an electrical generation plant fired with pipeline natural gas and ultralow sulfur fuel oil. Each Pratt & Whitney Power Systems FT-8 SWIFTPAC simple cycle generating unit can produce approximately 50 MW of electricity. Three generating units are currently installed at the plant; ~~the permit allows up to four to be constructed.~~	The Department has corrected the error.

Summary of EPA Comments

Permit Reference	EPA Comment	Department Response
None	No EPA comments received	N/A

SECTION IV. NON-APPLICABLE REQUIREMENT ANALYSIS

Section IV of the operating permit "Non-applicable Requirements" contains the requirements that NWE identified as non-applicable and for which a permit shield was granted. The following table summarizes the requirements that NWE identified as non-applicable but for which the Department did not grant a permit shield or disagreed with the applicability determination.

Requirements for which a Permit Shield Was Not Granted in the Operating Permit

Rule Citation		Reason
State	Federal	
ARM 17.8.130 ARM 17.8.142 ARM 17.8.510 ARM 17.8.763 ARM 17.8.806 ARM 17.8.807 ARM 17.8.808 ARM 17.8.825 ARM 17.8.826 ARM 17.8.1210-1215 ARM 17.8.1222 ARM 17.8.1223 ARM 17.8.1225 ARM 17.8.1228 ARM 17.8.1231	40 CFR 50 et seq. 40 CFR 51 et seq. 40 CFR 53 40 CFR 54 40 CFR 56 40 CFR 58	These rules contain requirements for regulatory authorities and not major sources; however, they are never shielded because they could be used as authority to impose specific requirements on a major source.
ARM 17.8.101 ARM 17.8.102 ARM 17.8.103 ARM 17.8.202 ARM 17.8.301 ARM 17.8.302 ARM 17.8.330 ARM 17.8.401 ARM 17.8.501 ARM 17.8.601 ARM 17.8.602 ARM 17.8.740 ARM 17.8.767 ARM 17.8.801 ARM 17.8.802 ARM 17.8.901 ARM 17.8.902 ARM 17.8.904 ARM 17.8.1001 ARM 17.8.1002 ARM 17.8.1004 ARM 17.8.1101 ARM 17.8.1201-1203		These rules consist of a statement of purpose, applicability statement, regulatory definitions or a statement of incorporation by reference. These types of rules do not have specific requirements associated with them.
ARM 120 et seq ARM 17.8.131 ARM 17.8.140 ARM 17.8.141		Procedural rules that have specific requirements that may become relevant to a major source during the permit span.

Rule Citation		Reason
State	Federal	
ARM 17.8.403 ARM 17.8.511 ARM 17.8.514 ARM 17.8.515 ARM 17.8.611-615 ARM 17.8.743-748 ARM 17.8.762 ARM 17.8.764 ARM 17.8.765 ARM 17.8.804 ARM 17.8.805 ARM 17.8.828 ARM 17.8.905 ARM 17.8.906 ARM 17.8.1005-1007 ARM 17.8.1224 ARM 17.8.1226 ARM 17.8.1227		
ARM 17.8.204 ARM 17.8.749-756		These rules are always applicable to a major source and may contain specific requirements for compliance.
ARM 17.8.104 ARM 17.8.315 ARM 17.8.323		These rules are either repealed or reserved.
ARM 17.8.340		This source is an affected source under an NSPS (40 CFR 60, Subparts KKKK and IIII).
	40 CFR 52 et seq.	Rules that do not have specific requirements that are always relevant to a major source.
	40 CFR 60.9-12 40 CFR 60.14-19	These regulations may not be applicable to the source at this time; however, these regulations may become applicable during the life of the permit.
	40 CFR 60 Subpart Kb	This rule refers to a process, equipment or activity that may be used at this facility.
	40 CFR 60 Appendix C	Procedural rules that have specific requirements that may become relevant to a major source during the permit span.
	40 CFR 61 Subpart A	These regulations may not be applicable to the source at this time; however, these regulations may become applicable during the life of the permit.
	40 CFR 62	Rules that do not have specific requirements that are always relevant to a major source and should never be listed in the applicable requirements or non-applicable requirements.

Rule Citation		Reason
State	Federal	
	40 CFR 63, Appendices A - E 40 CFR 66 40 CFR 70	Rules that do not have specific requirements and may or may not be relevant to a major source.
	40 CFR 67 40 CFR 71 40 CFR 98 40 CFR 81	Rules that do not have specific requirements for major sources because they are requirements for EPA or state and local authorities.
	40 CFR 68 40 CFR 69	These regulations may not be applicable to the source at this time; however, these regulations may become applicable during the life of the permit.
	40 CFR 55 40 CFR 85 40 CFR 86 40 CFR 88-91 40 CFR 93-97	Not applicable under Title V.

SECTION V. FUTURE PERMIT CONSIDERATIONS

A. MACT Standards

The Department determined that the facility is subject to 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines because the facility has two emergency engines that are subject to this rule.

MACTs standards generally apply to a facility that is major for hazardous air pollutants (HAPs) and is defined as a stationary source that has the potential to emit more than 10 tons per year (tpy) of any individual listed HAPs or 25 tpy of the total combination of HAPs. The DGGS facility is not major for HAPs.

B. NESHAP Standards

The DGGS facility is not major for HAPs. Therefore, the Department is unaware of any NESHAPs that would apply to this facility.

C. NSPS Standards

NWE's generating units are considered NSPS affected facilities under 40 CFR Part 60 and are subject to the requirements of the following subparts: Subpart A – General Provisions and Subpart KKKK - Standards of Performance for Stationary Combustion Turbines. In addition, Subpart IIII - Standards of Performance for Stationary Compression Ignition (CI) Combustion Engines (ICE) applies to the emergency generator/engine and the emergency fire pump. Beyond those listed, the Department is unaware of any pending or future NSPS standards that may apply to this facility.

D. CAM Requirements

An emitting unit located at a Title V facility that meets the following criteria listed in ARM 17.8.1503 is subject to Subchapter 15 and must develop a CAM Plan for that unit:

- The emitting unit is subject to an emission limitation or standard for the applicable regulated air pollutant (unless the limitation or standard that is exempt under ARM 17.8.1503(2));
- The emitting unit uses a control device to achieve compliance with such limit; and
- The emitting unit has potential pre-control device emission of the applicable regulated air pollutant that is greater than major source thresholds.

NWE is required to use catalytic oxidation for the control of both CO and VOC emissions. Since uncontrolled VOC emissions from the generating units are less than 100 tpy, the CAM rules are not applicable to VOC emissions. However, uncontrolled CO emissions from the generating units do exceed the applicable CAM threshold of 100 tpy. Additionally, NWE is required to control NOx emissions from the generating units using water injection and SCR, and the uncontrolled NOx emissions from the generating units exceed the applicable CAM threshold of 100 tpy. As such, NWE is subject to CAM requirements for CO and NO_x as the facility meets the criteria listed in ARM 17.8.1503. Pursuant to ARM 17.8.1509(1)(c), NWE submitted the required CAM plan with the OP#4255-02 permit renewal application.

E. Risk Management Plan

As of the date of this draft operating permit, this facility does not exceed the minimum threshold quantities for any regulated substance listed in 40 CFR Part 68.115 for any facility process. Consequently, this facility is not required to submit a Risk Management Plan.

If a facility has more than a threshold quantity of a regulated substance in a process, the facility must comply with 40 CFR 68 requirements no later than June 21, 1999; 3 years after the date on which a regulated substance is first listed under 40 CFR Part 68.130; or the date on which a regulated substance is first present in more than a threshold quantity in a process, whichever is later.

F. Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas Tailoring Rule

On May 7, 2010, EPA published the "light duty vehicle rule" (Docket # EPA-HQ-OAR- 2009-0472, 75 FR 25324) controlling greenhouse gas (GHG) emissions from mobile sources, whereby GHG became a pollutant subject to regulation under the Federal and Montana Clean Air Act(s). On June 3, 2010, EPA promulgated the GHG "Tailoring Rule" (Docket # EPA-HQ-OAR-2009-0517, 75 FR 31514) which modified 40 CFR Parts 51, 52, 70, and 71 to specify which facilities are subject to GHG permitting requirements and when such facilities become subject to regulation for GHG under the PSD and Title V programs.

Under the Tailoring Rule, any PSD action (either a new major stationary source or a major modification at a major stationary source) taken for a pollutant or pollutants other than GHG that was not final prior to January 2, 2011, would be subject to PSD permitting requirements for GHG if the GHG increases associated with that action were at or above 75,000 tpy of carbon dioxide equivalent (CO_2e). Similarly, if such action were taken, any resulting requirements would be subject to inclusion in the Title V Operating Permit. Facilities which hold Title V permits due to criteria pollutant emissions over 100 TPY would need to incorporate any GHG applicable requirements into their operating permits for any Title V action that would have a final decision occurring on or after January 2, 2011.

Starting on July 1, 2011, PSD permitting requirements would be triggered for modifications that were determined to be major under PSD based on GHG emissions alone, even if no other pollutant triggered a major modification. In addition, sources that are not considered PSD major sources based on criteria pollutant emissions would become subject to PSD review if their facility-wide potential emissions equaled or exceeded 100,000 TPY of CO_2e and 100 or 250 TPY of GHG on a mass basis depending on their listed status in ARM 17.8.801(22) and they undertook a permitting action with increases of 75,000 TPY or more of CO_2e and greater than 0 TPY of GHG on a mass basis. With respect to Title V, sources not currently holding a Title V permit that have potential facility-wide emissions equal to or exceeding 100,000 TPY of CO_2e and 100 TPY of GHG on a mass basis would be required to obtain a Title V Operating Permit.

The Supreme Court of the United States (SCOTUS), in its Utility Air Regulatory Group v. EPA decision on June 23, 2014, ruled that the Clean Air Act neither compels nor permits EPA to require a source to obtain a PSD or Title V permit on the sole basis of its potential emissions of GHG. SCOTUS also ruled that EPA lacked the authority to tailor the Clean Air Act's unambiguous numerical thresholds of 100 or 250 TPY to accommodate a CO_2e threshold of

100,000 TPY. SCOTUS upheld that EPA reasonably interpreted the Clean Air Act to require sources that would need PSD permits based on their emission of conventional pollutants to comply with BACT for GHG. As such, the Tailoring Rule has been rendered invalid and sources cannot become subject to PSD or Title V regulations based on GHG emissions alone. Sources that must undergo PSD permitting due to pollutant emissions other than PSD may still be required to comply with BACT for GHG emissions.