

AIR QUALITY GENERAL CONSTRUCTION PERMIT

PERMIT NUMBER: GCP-EMENG-2

Permit Name: Emergency Engine 2

Project Description: Construction of emergency engine(s).

Typical Standard Industrial Classification (SIC) Code: Various

Pursuant to Chapter 14 of the Nebraska Air Quality Regulations, the public has been notified by prominent advertisement of the proposed construction of air contaminant sources meeting the specific criteria of this general construction permit and the thirty (30) day period allowed for comments has elapsed. This general construction permit approves the construction of specific types of Emergency Engines. This permit document and the associated application make up the complete permit for the specific source identified in the application.

Compliance with this permit shall not be a defense to any enforcement action for violation of an ambient air quality standard. The permit holder, owner, and operator of the facility shall assure that the installation, operation, and maintenance of all equipment is in compliance with all of the conditions of this permit.

The undersigned issues this permit on behalf of the Director under the authority of Nebraska Administrative Code Title 129 – Nebraska Air Quality Regulations as amended July 6, 2015.

5/10/16

{ORIGINAL SIGNED}

Date

Shelley Schneider, Air Administrator
Air Quality Division

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 (A) Emergency Generator Engine(s)

 EP-ENGINES A-1

ABBREVIATIONS, SYMBOLS, and UNITS OF MEASURE

AP-42	Compilation of Air Pollutant Emission Factors, Volume I, Stationary Point and Area Sources	NAAQS	National Ambient Air Quality Standards
BACT	Best Available Control Technology	NDEQ	Nebraska Department of Environmental Quality
bhp	Brake Horsepower	NESHAP	National Emission Standards for Hazardous Air Pollutants
BMP	Best Management Practice	NO ₂	Nitrogen Dioxide
Btu	British Thermal Unit	NO _x	Nitrogen Oxides
bu	BusHEL	NSPS	New Source Performance Standard
CAA	Clean Air Act	NSR	New Source Review
CE	Control Equipment	PAL	Plant-wide Applicability Limit
CEM	Continuous Emissions Monitor	Pb	Lead (chemical abbreviation)
CEMS	Continuous Emissions Monitoring System	PbR	Permit-by-Rule
cf	Cubic feet	PEMS	Parametric Emissions Monitoring System
CFR	Code of Federal Regulations	PM	Particulate Matter
CO	Carbon Monoxide	PM ₁₀	Particulate Matter with and aerodynamic diameter equal to or less than 10 microns
CO ₂	Carbon Dioxide	PM _{2.5}	Particulate Matter with and aerodynamic diameter equal to or less than 2.5 microns
CO ₂ e	CO ₂ equivalent	ppb	Parts per Billion
CP	Construction Permit	ppm	Parts per Million
DGS	Distiller's Grains with Solubles	ppmv	Parts per Million by volume
DDGS	Dry Distillers Grains with Solubles	ppmvd	Parts per Million by volume, dry basis
dscf	Dry Standard Cubic Feet	PSD	Prevention of Significant Deterioration
dscfm	Dry Standard Cubic Feet per Minute	PTE	Potential to Emit
EMIS	Emergency Management Information System	RVP	Reid Vapor Pressure
EPA	Environmental Protection Agency	RATA	Relative Accuracy Test Audit
EQC	Environmental Quality Council	RMP	Risk Management Plan
EP	Emission Point	RTO	Regenerative Thermal Oxidizer
ESP	Electrostatic Precipitator	scf	Standard Cubic Feet
EU	Emission Unit	SIC	Standard Industrial Classification
FID	Facility Identification Number	SIP	State Implementation Plan
FDCP	Fugitive Dust Control Plan	SO ₂	Sulfur Dioxide
FGR	Flue Gas Recirculation	SO _x	Sulfur Oxides
FIP	Federal Implementation Plan	TDS	Total Dissolved Solids
FR	Federal Register	TO	Thermal Oxidizer
ft	Feet	TO/HRSG	Thermal Oxidizer with Heat Recovery Steam Generator
FTIR	Fourier Transform Infrared	tpy	Tons per year
GHGs	Greenhouse Gases	TRS	Total Reduced Sulfur
H ₂ S	Hydrogen Sulfide	TSP	Total Suspended Particulate Matter
HAP	Hazardous Air Pollutant	ULNB	Ultra Low-NO _x Burner
hp	Horsepower	UST	Underground Storage Tank
hr	Hour	UTM	Universal Transverse Mercator
lb	Pound	VHAP	Volatile Hazardous Air Pollutant
LDAR	Leak Detection and Repair	VMT	Vehicle Miles Traveled
LNB	Low-NO _x Burner	VOC	Volatile Organic Compound
LPG	Liquified Petroleum Gas	WDGS	Wet Distiller's Grains with Solubles
MACT	Maximum Achievable Control Technology		
Mgal	One Thousand gallons		
MMBtu	One Million British Thermal Units		
MMscf	One Million Standard Cubic Feet		
MSDS	Material Safety Data Sheet		
MW	Megawatt		

I. GENERAL CONDITIONS

- (A) Coverage granted under this permit is not transferable to another source or location. {Chapter 9}
- (B) Coverage under this permit does not relieve the owner or operator of the source from the responsibility to comply with all applicable portions of the Nebraska Air Quality Regulations and any other requirements under local, State, or Federal law. Any permit noncompliance shall constitute a violation of the Nebraska Environmental Protection Act and the Federal Clean Air Act, and is grounds for enforcement action or permit revocation. {Chapter 41 and Chapter 17, Section 011}
- (C) Application for review of plans or advice furnished by the Director will not relieve the owner or operator of legal compliance with any provision of these regulations, or prevent the Director from enforcing or implementing any provision of these regulations. {Chapter 37}
- (D) Any owner or operator who failed to submit any relevant facts or who submitted incorrect information in a general permit application shall, upon becoming aware of such failure or incorrect submittal, promptly reapply for coverage or submit a construction permit application under the provisions of Chapter 17. {Chapter 17, Sections 006, 007, and 008}
- (E) Approval to construct will become invalid if a continuous program of construction is not commenced within 18 months after the date of coverage granted by this general construction permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable period of time. {Chapter 17, Section 012}
- (F) The owner or operator shall allow the NDEQ, EPA or an authorized representative, upon presentation of credentials to: {Neb. Rev. Statute §81-1504}
- (1) Enter upon the owner or operator's premises at reasonable times where a source subject to this permit is located, emissions-related activity is conducted or records are kept, for the purpose of ensuring compliance with the permit or applicable requirements;
 - (2) Have access to and copy, at reasonable times, any records, for the purpose of ensuring compliance with the permit or applicable requirements;
 - (3) Inspect at reasonable times any facilities, pollution control equipment, including monitoring and air pollution control equipment, practices, or operations, for the purpose of ensuring compliance with the permit or applicable requirements;
 - (4) Sample or monitor at reasonable times substances or parameters for the purpose of ensuring compliance with the permit or applicable requirements.
- (G) When requested by the NDEQ, the owner or operator shall submit completed emission inventory forms for the preceding year to the NDEQ by March 31 of each year. {Chapter 6}
- (H) Open fires are prohibited except as allowed by Chapter 30.
- (I) Particulate Matter – General Requirements: {Chapter 32}
- (1) The owner or operator shall not cause or permit the handling, transporting or storage of any material in a manner, which allows particulate matter to become airborne in such

quantities and concentrations that it remains visible in the ambient air beyond the property line.

- (2) The owner or operator shall not cause or permit the construction, use, repair or demolition of a building, its appurtenances, a road, a driveway, or an open area without applying all reasonable measures to prevent particulate matter from becoming airborne and remaining visible beyond the property line. Such measures include, but are not limited to, paving or frequent cleaning of roads, driveways and parking lots; application of dust-free surfaces; application of water; and planting and maintenance of vegetative ground cover.
- (J) If and when the Director declares an air pollution episode as defined in Chapter 38, Section 003.01B, 003.01C, or 003.01D, the owner or operator shall immediately take all required actions listed in Title 129, Appendix I until the Director declares the air pollution episode terminated.
- (K) This permit may be revised (reopened and reissued) or revoked for cause in accordance with Title 129 and Nebraska Administrative Code Title 115 -Rules of Practice and Procedure. Conditions under which this permit will be revised or revoked for cause, include but are not limited to: {Chapter 15, Section 006}
- (1) A determination by the Director, or the Administrator of EPA that:
 - (a) the permit must be revised to ensure compliance with the applicable requirements;
 - (b) the permit contains a material mistake or that inaccurate statements were made in the emissions standards or other terms or conditions of the permit.
 - (2) A determination by the Director that the source or activity endangers human health or the environment and that the danger cannot be removed by a revision of the permit.
- (L) Coverage under this permit may be revoked for cause in accordance with Title 129 and Title 115. Conditions under which this permit will be revised or revoked for cause, include but are not limited to: {Title 129, Chapter 15, Section 006}
- (1) The existence at the source of unresolved noncompliance with applicable requirements or a term or condition of the permit, and refusal of the owner or operator to agree to an enforceable schedule of compliance to resolve the noncompliance;
 - (2) The failure of the owner or operator to pay a penalty owed pursuant to court order, stipulation and agreement, or order issued by the Administrator of the EPA; or
 - (3) The submittal by the owner or operator of false, incomplete, or misleading information to the NDEQ or EPA.

II. SPECIFIC CONDITIONS

- (A) The owner/operator of the source shall provide the following notifications to the NDEQ:
- (1) The date construction commenced as defined in Chapter 1. Notification shall be postmarked no later than 30 days after such date and include a summary description and whether the requirement to commence construction was met through: {Title 129, Chapter 17, Section 012}
 - (a) Initiating physical on-site construction activities of a permanent nature that meet the definition of “begin actual construction”, or
 - (b) Entering into binding agreements or contractual obligations. If this option is used, the notice shall also include a brief summary of each binding agreement or contractual obligation entered into, the date of the agreement or contract, and why it cannot be cancelled or modified without substantial loss to the owner or operator.
 - (2) The notification required in Condition II.(A)(1) shall also include an equipment list which must detail all equipment associated with the facility, including the corresponding maximum capacities and the model year of all equipment. {Title 129, Chapter 17, Sections 006, 007, and 008}
 - (3) The date on which the source first becomes operational, postmarked within 15 days after such date. {Chapter 7, Section 002.03}
- (B) Recordkeeping: Records of all measurements, results, inspections, and observations as required to ensure compliance with all applicable requirements shall be maintained on-site as follows:
- (1) All calculations and records required throughout this permit shall be completed no later than the fifteenth (15th) day of each calendar month and shall include all information through the previous calendar month, unless otherwise specified in this permit.
 - (2) All records required throughout this permit shall be kept for a minimum of five (5) years and shall be clear and readily accessible to NDEQ representatives, unless otherwise specified in this permit.
 - (3) Copies of all notifications, reports, test results, and plans.
 - (4) Calibration records for all operating parameter monitoring equipment.
 - (5) Operation and Maintenance manuals, or equivalent documentation, detailing proper operation and maintenance of all permitted emission units, required control equipment, and required monitoring equipment shall be kept for the life of the equipment.
 - (6) Records documenting equipment failures, malfunctions, or other variations, including date and time of occurrence, remedial action taken, and when corrections were made to each piece of permitted equipment, required control equipment, and required monitoring equipment.

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- (C) All permitted emission units, control equipment, and monitoring equipment shall be properly installed, operated, and maintained. {Chapter 34, Section 006 and Chapter 35 Sections 006.02 and 006.05}
- (D) When performance testing is required it shall be completed and submitted to the NDEQ as follows: {Chapter 34}
- (1) Performance tests shall be conducted while operating at maximum capacity (operating conditions producing the highest emissions or loading to the control device) within sixty (60) days after first reaching the maximum capacity, but not more than 180 days after the start-up of operations of each unit, unless otherwise specified by the NDEQ.
 - (2) Testing shall be conducted according to the methodologies found in Title 129, Chapter 34, Section 002, or other NDEQ approved methodologies.
 - (3) Performance tests shall be conducted for a minimum of three (3) one hour runs unless another run time is specified by the applicable Standard or as deemed appropriate by the NDEQ.
 - (4) The owner or operator of a source shall provide the NDEQ at least thirty (30) days written notice prior to testing to afford the NDEQ an opportunity to have an observer present. The owner or operator shall also provide the NDEQ with an emissions testing protocol at least thirty (30) days prior to testing. The NDEQ may, in writing, approve a notice of less than 30 days. If the testing is pursuant to an underlying requirement contained in a federal rule, the notice provisions of the underlying requirement apply.
 - (5) The owner or operator shall monitor and record the operating parameters for process and control equipment during the performance testing required in the permit.
 - (6) A written copy of the test results signed by the person conducting the test shall be provided to the NDEQ within sixty (60) days of completion of the test unless a different period is specified in the underlying requirements of an applicable Federal Rule and will, at a minimum, contain the following items:
 - (a) A description of the source's operating parameters (e.g. production rates, firing rates of combustion equipment, fuel usage, etc.), control equipment parameters (e.g. baghouse fan speeds, scrubber liquid flow rates, etc.), and ambient conditions (e.g. weather conditions, etc.) during testing.
 - (b) Copies of all data sheets from the test run(s).
 - (c) A description and explanation of any erroneous data or unusual circumstance(s) and the cause for such situation.
 - (d) A final conclusion section describing the outcome of the testing.
- (E) Any emissions due to malfunctions, unplanned shutdowns, and ensuing start-ups that are, or may be, in excess of applicable emission limits shall be reported to the NDEQ in writing and mailed within 48 hours of the beginning of each period of excess emissions. {Chapter 35, Sections 004 and 005}
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III.(A) Specific Conditions for Emergency Engine(s)(1) Permitted Emission Points:

The source is permitted to construct the emission points and associated emission units identified in the following table at the maximum capacity and using the fuel type listed:

Emission Point ID#	Emission Unit Description	Total Capacity (hp)	Permitted Fuel Type
EP-ENGINES	EU Emergency Engines	5,000	Diesel

(2) Emission Limitations and Testing Requirements:

- (a) The emission limitations of Title 129, Chapter 20, Section 002 and 004 apply to the emission points identified in Condition III.(A)(1); with the exception that Section 002 does not apply to any emission point subject to a more stringent requirement in 40 CFR Part 60 Subpart IIII. {Chapters 17 and 20}
- (b) The source shall comply with the applicable emission limitations and testing requirements as specified in 40 CFR Part 63 Subpart ZZZZ and 40 CFR Part 60 Subpart IIII. {Chapters 18 and 28}

(3) Operational and Monitoring Requirements and Limitations:

- (a) The combined maximum engine output of all emergency engines at the source covered under this permit shall not exceed 5,000 horsepower. {Chapter 17}
- (b) Each emergency engine covered under this permit shall be limited to 500 operating hours per any period of twelve (12) consecutive calendar months. At no time during the first eleven (11) months after startup shall the operation of any engine exceed 500 hours. {Chapter 17}
 - (i) Each emergency engine shall be equipped with a non-resettable hour meter to record the operating hours.
- (c) The emergency engines covered under this permit shall combust only diesel fuel (Number 2 Fuel Oil). {Chapter 17}
- (d) The source shall comply with the applicable operational and monitoring requirements and limitations as specified in 40 CFR Part 60 Subparts A and IIII and 40 CFR Part 63 Subparts A and ZZZZ. {Chapters 18 and 28}

(4) Applicable NSPS, NESHAP, and MACT Requirements:

- (a) The emission units identified in Condition III.(A)(1) are subject to the applicable NESHAP requirements listed below:

Applicable Standard	Title	Rule Citation
NESHAP, Subpart A	General Provisions	Title 129, Chapter 28, Sec. <u>001.01</u> 40 CFR 63.1
NESHAP, Subpart <u>ZZZZ</u>	Stationary Reciprocating Internal Combustion Engines	Title 129, Chapter 28, Sec <u>001.88</u> 40 CFR 63.6580

- (b) The emission units identified in Condition III.(A)(1) may be subject to the applicable NSPS requirements listed below:

Applicable Standard	Title	Rule Citation
NSPS, Subpart A	General Provisions	Title 129, Chapter 18, Sec. <u>001.01</u> 40 CFR 60.1
NSPS, Subpart IIII	Stationary Compression Ignition Internal Combustion Engines	Title 129, Chapter 18, Sec. <u>001.76</u> 40 CFR 60.4200

(5) Reporting and Recordkeeping Requirements:

- (a) Records shall be kept demonstrating compliance with the emission standards of 40 CFR Part 60 Subpart IIII, if applicable.
- (b) The source shall maintain records documenting the maximum engine output capacity of each engine covered under this permit for the lifetime of the equipment.
- (c) The source shall record and maintain records documenting the hours of operation for each emergency engine covered under this permit for each calendar month and for each period of twelve (12) consecutive calendar months.
- (d) The source shall comply with the applicable reporting and recordkeeping requirements as specified in 40 CFR Part 63 Subparts A and ZZZZ and 40 CFR Part 60 Subparts A and IIII.



Typical Standard Industrial Classification Code: Various

Typical North American Industry Classification System Code: Various

DESCRIPTION OF GENERAL CONSTRUCTION PERMIT:

The Nebraska Department of Environmental Quality (NDEQ) has determined there are numerous similar sources in Nebraska that are subject to the same Federal and State regulatory requirements. Chapter 9 of Nebraska Administrative Code Title 129 – Air Quality Regulations allows the NDEQ to issue a general construction permit (GCP) for these sources. This GCP follows the applicable procedures of Chapters 9, 14, and 17 of Title 129. The owner of a source that qualifies for this GCP must apply to the NDEQ for coverage under the applicable terms of the GCP. Each application must include all information necessary to determine qualification for, and to ensure compliance with, the GCP.

The NDEQ will notify the applicant of the determination of coverage under this GCP for the source identified in the application. If the Director of the NDEQ denies coverage of the source under the GCP, the applicant may request an adjudicative hearing in accordance with the procedures established in Title 115 – Rules of Practice and Procedure. The NDEQ may issue coverage under a GCP to an individual source without repeating the notice and comment procedures required in Chapter 14 of Title 129. The NDEQ shall maintain a list of all sources covered by general permits, which shall be available for public review.

DESCRIPTION OF THE SOURCE GROUP:

This GCP allows the installation of a compression ignition (CI) reciprocating internal combustion engine(s) (RICE) fired exclusively by diesel fuel (#2 fuel oil) and limited to 500 annual hours of operation per engine. There are no engine manufacture date or emission rate certification restrictions for this GCP.

Coverage under this GCP may be granted to new facilities which consist only of the operations discussed above, or to existing facilities that plan to add emergency equipment. Operations at existing facilities may be covered by one or more additional permits.

TYPE AND QUANTITY OF AIR CONTAMINANT EMISSIONS ANTICIPATED:

Emissions result from the operation of the engine(s). Potential emissions were calculated using a combination of emission factors from the USEPA’s Compilation of Air Pollutant Emission Factors, 5th Edition, Volume 1 (AP-42) and 40 CFR Part 98. Potential emission calculations are shown in the fact sheet attachment. Within the restrictions listed above, an engine or group of engines for a source may be as large as 5,000 hp. Emission factors were based on AP-42 Chapter 3.3 for diesel engines less than 600 horsepower, for conservatism.

The maximum allowable potential to emit (PTE) for engines that can be covered by this GCP is displayed in the table below:

Regulated Pollutant	Project PTE (tons/year)
Particulate Matter (PM)	2.75
PM smaller than or equal to 10 microns (PM ₁₀)	2.75
PM smaller than or equal to 2.5 microns (PM _{2.5})	2.75
Sulfur Dioxide (SO ₂)	2.56
Oxides of Nitrogen (NO _x)	38.75
Carbon Monoxide (CO)	8.35
Volatile Organic Compounds (VOC)	3.14
Hazardous Air Pollutants (HAPs)	0.03

Regulated Pollutant	Project PTE (tons/year)
Greenhouse Gases (GHG):	
Mass Basis	1,427
CO ₂ e Basis	1.432

APPLICABLE REQUIREMENTS AND VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS:

Chapter 4 – Ambient Air Quality Standards:

Based on the limits in this GCP, the potential emissions of all regulated air pollutants from this permitting action are below the air dispersion modeling thresholds for which modeling is typically required, as established in the NDEQ modeling guidance document entitled *Atmospheric Dispersion Modeling Guidance for Permits* (September 2005). Based on the March 1, 2011 memo from Tyler Fox of the EPA to the Regional Air Division Directors, intermittent sources such as emergency engines are not required to model for 1-hour NO₂. As a result, the NDEQ does not expect emissions from projects covered under this GCP to cause or contribute to any violations of any ambient air quality standards.

Chapters 5 and 7 – Operating Permit Requirements:

For the operating permit program, a major or Class I source is one that emits, or has the potential to emit, greater than or equal to 100 tons per year (tpy) of any criteria pollutant, 10 tpy of any individual HAP, 25 tpy of total HAPs, or 5 tpy of lead. A minor or Class II source is any facility which does not exceed the major source thresholds, but has actual emissions greater than one half of these thresholds.

Before issuance of coverage under this permit, the potential emissions from facilities may or may not exceed the major source thresholds. Many facilities covered under this GCP will not have other significant sources of air pollutants, and will therefore be a “No Permit Required – Synthetic Minor” or “No Permit Required – Natural Minor” source for the operating permit program because potential and actual emissions will be below the minor source thresholds after coverage is issued.

However, a facility with other sources of emissions, such as equipment covered by another construction permit, may exceed Class II or Class I thresholds for the operating permit program. Each facility covered by this GCP must determine if they are obligated to apply for an operating permit, or revise an existing operating permit, due to coverage under this general construction permit. Fugitive emissions may or may not need to be included when determining operating permit program applicability depending on whether the source is or isn’t one of the listed categories in Chapter 2, Section 002.

Chapter 17 – Construction Permit Requirements:

The source is required to obtain a construction permit because the potential emissions, prior to general construction permit coverage, exceed the thresholds of Chapter 17, Section 001.01.

The source-wide potential emissions including fugitives from the source, after issuance of coverage under this permit, falls into one of the following construction permit fee categories:

Category I (Fee \$250):

- Less than 50 tons per year of any listed air pollutant;
- Less than 2.5 tons per year of any single HAP; or
- Less than 10 tons per year of any combination of HAPs

Category II (Fee \$1,500):

- 50 tons or more but less than 100 tons per year of any listed air pollutant;
- 2.5 tons or more but less than 10 tons per year of any single HAPs; or
- 10 tons or more but less than 25 tons per year of any combination of HAPs

Category III (Fee \$3,000):

100 tons or more per year of any listed air pollutant;
10 tons or more per year of any single HAP; or
25 tons or more per year of any combination of HAPs

Therefore, the source must submit a fee to obtain coverage under this GCP, in accordance with Chapter 17, Section 003.01 and Chapter 9. The NDEQ does not consider PM a regulated pollutant when determining the fee for a construction permit.

Chapter 18 – New Source Performance Standards (NSPS):

The emergency engines this GCP covers will all be CI internal combustion engines (ICE). Depending on the date of installation and model year of the engine(s), they may be subject to NSPS Subpart III. Any source subject to an NSPS is also subject to NSPS Subpart A. If a source is not subject to any other NSPS subparts, the source will also not be subject to NSPS Subpart A. Please review any previous permitting history with the NDEQ to determine NSPS applicability. A brief description of Subparts A and III is provided below.

Subpart A – General Provisions:

NSPS Subpart A, adopted by reference in Title 129, Chapter 18, Section 001.01, applies to all units subject to an NSPS unless specifically stated otherwise in the rule. If the engine(s) covered under this GCP are subject to the requirements of any NSPS, they are therefore subject to the applicable requirements of this subpart. An existing source obtaining coverage under this GCP may be subject to other NSPS based on past construction. Please review the previous permitting history for the facility with the NDEQ to determine your applicability for NSPS Subpart A.

Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines:

This subpart, adopted by reference in Title 129, Chapter 18, Section 001.76, applies to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) of specific sizes manufactured after specific dates as detailed within the subpart. If an engine covered under this subpart was installed prior to July 11, 2005, that engine is not subject to this subpart. Engines installed on or after July 11, 2005 will be subject to NSPS Subpart III. Requirements under this subpart may include, but are not limited to, emissions limitations, testing requirements, recordkeeping, and reporting requirements. Requirements under this subpart are dependent upon the size, installation date, and use of the engine(s).

It is the source's obligation to comply with all applicable NSPS subparts and requirements regardless of their inclusion in this permitting action or Title 129. These rules are subject to change. Additional and updated information on all NSPS is on the NDEQ NSPS Notebook, which can be located by visiting the NDEQ website at <http://deq.ne.gov/>, and first selecting the "Air" tab, then the "Air Grants, Planning and Outreach Program" dropdown menu tab, then the "New Source Performance Standards (NSPS) Program" dropdown menu tab, and then select "New Source Performance Standards (NSPS) Program". Or alternately use the "Search NDEQ Web" search box on the upper right of the webpage and enter "New Source Performance Standards".

Chapter 19 – Prevention of Significant Deterioration (PSD):

If the source falls into one of the 28 categories listed in Title 129, Chapter 2, Section 008.01, a 100 ton per year PSD regulated pollutant threshold applies as described. Otherwise, a 250 ton per year PSD regulated pollutant threshold applies to the facility. Fugitive emissions may or may not need to be included when determining PSD applicability depending on if the source is or isn't one of the listed categories in Chapter 2, Section 002.

New and existing minor sources are not subject to any PSD requirements as part of this permit because the project PTE is below the PSD major source threshold. Existing major sources are not required to go through PSD review solely for the installation of emissions units as authorized by this GCP because the increase in emissions is below the PSD Significance thresholds found in Chapter 19, Section 010.

Chapter 20 – Particulate Matter Emissions:

Section 002 – Particulate Emissions from Combustion Sources: Some engines covered under this GCP may be subject to NSPS Subpart III. In accordance with Section 008, if the engine(s) at the source is subject to 40 CFR Part 60 Subpart III, which includes a PM emission limitation that is more stringent than the limitation provided in this chapter, the engine(s) is not subject to Section 002. The source will comply with this regulation by purchasing engine(s) certified by a manufacturer to comply with Subpart III, combusting only diesel fuel in each engine, and by properly operating and maintaining all emission units.

Some engines covered under this GCP are not subject to NSPS Subpart III. If an engine(s) is not subject to NSPS Subpart III, it is subject to the requirements of Chapter 20, Section 002. Particulate emission rates for the engine(s) were calculated using USEPA's Compilation of Air Pollutant Emission Factors, 5th Edition, Volume 1 (AP-42). The engine(s) covered under this GCP are not expected to violate the emissions limitations of this section. Detailed calculations can be found in the attachment to this fact sheet. The source will comply with this regulation by combusting only diesel fuel in each engine, and by properly operating and maintaining all equipment.

Section 004 – Opacity: No person may cause or allow emissions which are of an opacity equal to or greater than twenty percent (20%) as evaluated by an EPA-approved method, or recorded by a continuous opacity monitoring system operated and maintained pursuant to 40 CFR Part 60 Appendix B. The source will comply with this requirement by properly operating and maintaining equipment.

Chapter 27 – Hazardous Air Pollutants:

The equipment covered by this GCP is not subject to the requirements of this chapter because the proposed increase in PTE of any single HAP and total HAPs are less than the 2.5 and 10 tons per year thresholds listed in Section 002 of this chapter.

Chapter 28 – Hazardous Air Pollutant Emission Standards (NESHAPs):

The source is an area source of HAPs if the PTE for any single HAP is below 10 tons per year and the PTE for total HAPs is below 25 tons per year; otherwise, if the PTE exceeds those thresholds, the source is a major source of HAPs. Other requirements might become applicable based on source classification. The following NESHAPs apply to the source.

Subpart A – General Provisions: This subpart, adopted by reference in Title 129, Chapter 28, Section 001.01, applies to all sources subject to a NESHAP standard unless otherwise stated in the rule. The engine(s) covered under this GCP are subject to the requirements of NESHAP Subpart ZZZZ and therefore are subject to the requirements of this subpart.

Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines: This subpart, adopted by reference in Title 129, Chapter 28, Section 001.88, applies to existing, new, or reconstructed stationary reciprocating internal combustion engines (RICE) located at a major or area source of HAP emissions, excluding stationary RICE being tested at a stationary RICE test cell/stand. This subpart contains requirements based on engine size (hp), type of use (emergency or non-emergency), installation date (new or existing, as defined in the subpart), designation of facility (area or major source), and type of engine (spark-ignition or compression-ignition).

All engines covered under this GCP are subject to the requirements of Subpart ZZZZ. The requirements of this section may include, but are not limited to, emissions limitations, testing requirements, recordkeeping, and reporting requirements.

It is the source's obligation to comply with all applicable NESHAP subparts and requirements regardless of their inclusion in this permitting action or Title 129. These rules are subject to change. Additional and updated information on all NESHAP is on the NDEQ Air Toxics Notebook, which can be located by visiting the NDEQ website at <http://deq.ne.gov/>, and first selecting the "Air" tab, then the "Air Grants, Planning and Outreach Program" dropdown menu tab, then the "Air Toxics Program" dropdown menu tab, and then select

“Air Toxics Program”. Or alternately use the “Search NDEQ Web” search box on the upper right of the webpage and enter “Air Toxics”.

Permit conditions specific to the proposed permit are discussed as follows:

- II.(A) When a source undertakes a program of construction, reconstruction, or modification they are required to notify the NDEQ when they begin construction/reconstruction/modification and when the source or modification becomes operational. In addition, the NDEQ is requiring that the source submit an equipment list that includes the maximum rated capacity of each unit associated with the project as authorized by this GCP. These notifications help the NDEQ and source determine when an operating permit application (or revision to an existing operating permit) may be necessary and also whether some emission increases or decreases are within the contemporaneous period. This notification is either for initial operation of the source as a whole (if constructing a new source) or initial operation of the completed project (if modifying an existing source), not individual emission units. Individual emission units subject to specific NSPS or NESHAP standards may have additional notification requirements specific to those federal standards that are independent of this requirement. Startup of individual emission units (such as a boiler subject to an NSPS) does not necessarily mean the source or project has begun operations.
- II.(B) This condition contains general recordkeeping and reporting requirements that apply to all permitted emission units, control equipment, and monitoring devices. These requirements establish several things, including: a completion date when records must be completed, how long records need to be maintained, and identifying specific types of records that must be maintained. Records are required to be maintained to ensure compliance with all applicable requirements, specifically those required in this permit. However, additional recordkeeping requirements may be established in the future to better ensure compliance. Documentation detailing operation and maintenance can be operational and maintenance manuals provided by the manufacturer. If manufacturer manuals are not available, the owner or operator must develop a document containing proper operation and maintenance requirements for each permitted emission unit and piece of required control equipment.
- II.(C) This condition requires all permitted emissions units, control equipment, and monitoring equipment to be properly installed, operated, and maintained as required in Specific Condition II.(B)(5). Emission estimates for this permitting action are based on the requirement that all equipment be properly operated and maintained, and comply with the conditions of the permit and regulations.
- II.(D) General performance testing requirements. When performance testing is required, it is intended to demonstrate and ensure the source will be in compliance on a continuous basis. As such, testing is generally required to be conducted under conditions producing the highest emissions or loading to a control device. This typically is done at the maximum capacity, which at that level would not create an unsafe condition, and the facility will operate at that level at least some of the time. For a comprehensive evaluation on representative testing conditions, please review the NDEQ guidance on stack testing available on our web site or the national stack testing guidance document found on EPA’s web site. All performance tests required throughout this permit are required to be conducted in accordance with these conditions. The owner or operator must provide a testing protocol and written (i.e. hard copy, not electronic or verbal) notice prior to testing to ensure the NDEQ has the opportunity to witness the testing and review the proposed testing plan. Operating parameters are monitored and recorded to document the conditions under which the testing was conducted. The NDEQ may require additional testing if previous testing is not representative of current operations.
- II.(E) This condition requires any emissions resulting from equipment failures, malfunctions, or other variations in control or process equipment performance that are, or may be, in excess of the applicable emission control regulations to be reported to the NDEQ in accordance with Title 129, Chapter 35, Section 005. The NDEQ must be notified when excess emissions have, or may have

occurred along with the cause of the emissions in order to determine the appropriate response. These reports also assist with verifying proper operation and maintenance of process and control equipment.

III.(A) Specific Conditions for Emergency Engine(s)

- III.(A)(1) This condition permits the source to construct the applicable emergency engine(s) and specifies the maximum capacity and fuel type.
- III.(A)(2) The source is subject to, and must comply with, the requirements of Chapter 20, Section 004 and NESHAP Subpart ZZZZ. In accordance with Chapter 20, Section 008, the emission points are not subject to the requirements of Chapter 20, Section 002 if a more stringent NSPS limitation applies to the emission point. If the engine(s) covered under this GCP are subject to NSPS IIII, they are not subject to the limitations of Chapter 20, Section 002. If the engine(s) are not subject to NSPS Subpart IIII, then they are subject to Chapter 20, Section 002.
- III.(A)(3) The source is limited to a maximum engine output, aggregated over all engines covered under this GCP, of 5,000 hp. The emergency engines are subject to an annual restriction of 500 hours of operation for each engine for each period of 12 consecutive months. Hours of operation must be tracked with a non-resettable hour meter. All emergency engines are permitted to combust only Number 2 Fuel Oil (diesel fuel). The source may subject to the operational and monitoring requirements and limitations of NSPS Subparts A and IIII, and is subject to NESHAP Subparts A and ZZZZ.
- III.(A)(4) This condition identifies the applicable federal regulations that apply to the source.
- III.(A)(5) The source is required to maintain records on the maximum engine output for each engine for the lifetime of the engine. Hours of operation for each engine shall be logged on a monthly basis. The consecutive 12-month totals for the hours of operation must be calculated, updated monthly, and kept on file. The source is subject to the reporting and recordkeeping requirements of NESHAP Subparts A and ZZZZ, and may be subject to the reporting and recordkeeping requirements of NSPS Subparts A and IIII.

STATUTORY OR REGULATORY PROVISIONS ON WHICH PERMIT REQUIREMENTS ARE BASED:

Applicable regulations: Title 129 - Nebraska Air Quality Regulations as amended July 6, 2015.

PROCEDURES FOR FINAL DETERMINATION WITH RESPECT TO THE PROPOSED CONSTRUCTION PERMIT:

The public notice, as required under Title 129 Chapter 14, shall be published on Tuesday, April 5, 2016 in the Omaha World Herald newspaper and at <http://deq.ne.gov/> under "Public Notices". Persons or groups shall have 30 days from that issuance of public notice (ending May 4, 2016) to provide the NDEQ with any written comments concerning the proposed permit action and/or to request a public hearing, in accordance with Title 129 Chapter 14. If a public hearing is granted by the Director, there will be a notice of that meeting published at least 30 days prior to the hearing.

During the 30-day public comment period, persons requiring further information about the proposed permit should contact:

Andrew Klescewski
Construction Permitting Section
NDEQ Air Quality Division
(402) 471-2189

Prior to the end of the 30-day public comment period, persons wanting to submit written comments or a written request for a public hearing may contact the Air Quality Division at:

ndeq.airquality@nebraska.gov

David Graiver, P.E.
Construction Permitting Unit
NDEQ Air Quality Division
P.O. Box 98922
Lincoln, NE 68509-8922

If no public hearing is requested, the permit may be granted at the close of the 30-day comment period. If a public hearing is requested, the Director of the NDEQ may choose to extend the date on which the permit is to be granted until after that public hearing has been held.

Telephone inquiries may be made at:

(402) 471-2186

TDD users should call (800) 833-7352 and ask the relay operator to call the Department at (402) 471-2186.

Attachments:
Fact Sheet Attachment

Fact Sheet Attachment

Facility Emissions Summary

Maximum Project Emissions (tons/year)													
Pollutant:	PM	PM ₁₀	PM _{2.5}	SO _x	NO _x	CO	VOC	CO ₂	CH ₄	N ₂ O	GHGs (Mass Basis)	GHGs (CO ₂ e Basis)	Total HAPs
Emergency Engine(s)	2.75	2.75	2.75	2.56	38.75	8.35	3.14	1,427	0.06	1.16E-02	1,427	1,432	0.03

Emission Unit Summary

Process Description	Emission Unit ID	Maximum Capacity	Fuel Type
Emergency Engine(s)	EU-ENGINES	5,000 hp	Diesel

Operation Parameters and Limitations

Maximum combined design capacity for emergency generator engines (hp) = 5,000
Maximum annual engine usage (hours) = 500

Fact Sheet Attachment

Diesel-Fired Emergency Generator Engine(s): EP-ENGINES

[A] Engine Output (hp)	5,000
[B] Engine Heat Input (MMBtu/hr) = [A] x 7,000 ^[1] / 1,000,000	35.00
[D] = [B] x [C] when [C] is lb/MMBtu	
[D] = [A] x [C] when [C] is lb/hp-hr	
[E] Operating Hours (hrs/yr) ^[2]	500
[F] = [D] x [E]/2000	

Pollutant	[C] Emission Factor	Emission Factor Source	[D] PTE (lbs/hr)	[F] PTE (tons/yr)
Particulate Matter ^[3]	2.20E-03 lb/hp-hr	Reference 1	11.00	2.75
Particulate Matter ≤ 10 μm	2.20E-03 lb/hp-hr	Reference 1	11.00	2.75
Particulate Matter ≤ 2.5 μm ^[3]	2.20E-03 lb/hp-hr	Reference 1	11.00	2.75
Sulfur Oxides	2.05E-03 lb/hp-hr	Reference 1	10.25	2.56
Nitrogen Oxides	3.10E-02 lb/hp-hr	Reference 1	155.00	38.75
Carbon Monoxide	6.68E-03 lb/hp-hr	Reference 1	33.40	8.35
Volatile Organic Compounds	2.51E-03 lb/hp-hr	Reference 1	12.57	3.14
Greenhouse Gases (GHGs)				
CO ₂	73.96 kg/MMBtu	Reference 2	5,707	1,427
CH ₄	3.00E-03 kg/MMBtu	Reference 3	0.23	5.79E-02
N ₂ O	6.00E-04 kg/MMBtu	Reference 3	4.63E-02	1.16E-02
GHGs (mass basis)			5,707	1,427
GHGs (CO ₂ e basis) ^[4]			5,726	1,432
Hazardous Air Pollutants				
Acetaldehyde	7.67E-04 lb/MMBtu	Reference 4	2.68E-02	6.71E-03
Acrolein	9.25E-05 lb/MMBtu	Reference 4	3.24E-03	8.09E-04
Benzene	9.33E-04 lb/MMBtu	Reference 4	3.27E-02	8.16E-03
1,3-Butadiene	3.91E-05 lb/MMBtu	Reference 4	1.37E-03	3.42E-04
Formaldehyde	1.18E-03 lb/MMBtu	Reference 4	4.13E-02	1.03E-02
Toluene	4.09E-04 lb/MMBtu	Reference 4	1.43E-02	3.58E-03
Xylene	2.85E-04 lb/MMBtu	Reference 4	9.98E-03	2.49E-03
Total PAH ^[4]	1.68E-04 lb/MMBtu	Reference 4	5.88E-03	1.47E-03
Total Hazardous Air Pollutants			0.14	3.39E-02

Reference 1: AP-42 Table 3.3-1 as published October 1996

Reference 2: 40 CFR 98 Table C-1 as published November 29, 2013

Reference 3: 40 CFR 98 Table C-2 as published November 29, 2013

Reference 4: AP-42 Table 3.3-2 as published October, 1996

^[1] 7,000 BTU/hp-hr taken from Reference 1

^[2] As limited by this General Permit

^[3] PM and PM_{2.5} are assumed to be equal to PM₁₀ for conservatism

^[3] 40 CFR 98 Table A-1 as published October 30, 2009

^[4] Polycyclic Aromatic Hydrocarbons

Fact Sheet Attachment

Particulate Matter (PM) Emissions for Emergency Backup Generator Engines:

Total Heat Input (MMBtu/hr)	Maximum Allowable Emissions of PM (lbs/MMBtu) ^[1]			
10 or less	0.6			
Between 10 and 10,000	$1.026/I^{0.233}$ Where I = Total Heat Input in MMBTU/hr			
10,000 or more	0.12			
Process Equipment				
Process Equipment	Engine Output (hp)	Heat Input (MMBtu/hr)	Chapter 20 PM Allowable (lbs/MMBtu) ^[2]	Unit PM Emission Rate (lbs/MMBtu)
EU-ENGINES	5,000	35.00	0.45	0.31

^[1] Title 129, Chapter 20, Section 002, Table 20-1

^[2] Does not apply if an engine is subject to a more stringent PM limitation in NSPS Subpart IIII