

DEPARTMENT OF ENVIRONMENTAL CONSERVATION

AIR QUALITY CONTROL MINOR PERMIT

Permit AQ0486MSS02
Revises Conditions 1 and 2 of Permit AQ0486MSS01

Preliminary – July 7, 2010

The Alaska Department of Environmental Conservation (Department), under the authority of AS 46.14 and 18 AAC 50, issues Air Quality Control Minor Permit AQ0486MSS02 to the Permittee listed below.

Operator and Permittee: **Providence Health System-Washington Inc.**
506 Second Avenue, Suite 1200
Seattle, WA 98014-2329

Owner: Providence Health System-Washington Inc.

Stationary Source Providence Alaska Medical Center

Location: Latitude 60° 11' 19" North; Longitude 149° 49' 03" West

Physical Address: 3200 Providence Drive, Anchorage, Alaska 99519

Permit Contact: Dennis Hunt, Phone: (907) 261-5000

Project: Emergency Power Supply System

This permit authorizes the installation and operation of five diesel-fired generators and a gas-fired heater. The project is classified under 18 AAC 50.502(c)(3)(A)(iii). The permit also establishes an Owner Requested Limit (ORL) under 18 AAC 50.508(5) to avoid Prevention of Significant Deterioration (PSD) review under 18 AAC 50.306. The permit satisfies the obligation of the Permittee to obtain a minor permit under 18 AAC 50.

This permit authorizes the Permittee to operate under the terms and conditions of this permit, and as described in the original permit application and subsequent application supplements listed in Section 8 except as specified in this permit.

John F. Kuterbach
Manager, Air Permits Program

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Section 1. Permit Administration:

1. Minor Permit AQ0486MSS01 remains in effect except as revised in Minor Permit AQ0486MSS02.

Section 2. Emission Unit Inventory

2. Emission Units (EU) Authorization. The Permittee is authorized to install and operate the emission units listed in Table 1 per the terms and conditions of this permit.^{1, 2} Except as noted elsewhere in the permit, the information in Table 1 is for identification purposes only. The specific unit descriptions do not restrict the Permittee from replacing an emission unit identified in Table 1 with one of the same nominal rating and fuel type. The Permittee shall comply with all applicable provisions of AS 46.14 and 18 AAC 50 when installing a replacement emission unit, including any applicable minor or construction permit requirements.

Table 1 –Minor Permit Emission Unit Inventory

EUID	Description	Make/Model	Nominal Rating/Size	Fuel Type
EU37	Providence House Boiler	Aero BMK 2.0	2 MMBTU/hr	Natural Gas
EU38	MOBII Hub Boiler	Aero BMK 2.0	2 MMBTU/hr	Natural Gas
EU39	Tower S Emergency Generator	Cummings QSB7-G3	250 hp	Diesel
EU40	Tower S Boiler	Aero BMK 2.0	2 MMBTU/hr	Natural Gas
EU41	Child Care Building Boiler	Aero BMK 1.0	1 MMBTU/hr	Natural Gas
EU42	EPSS Generator 1	CAT D3516C	2,000 kW	Diesel
EU43	EPSS Generator 2	CAT D3516C	2,000 kW	Diesel
EU44	EPSS Generator 3	CAT D3516C	2,000 kW	Diesel
EU45	EPSS Generator 4	CAT D3516C	2,000 kW	Diesel
EU46	EPSS Generator 5	CAT D3516C	2,000 kW	Diesel
EU47	EPPS Heater	---	1.9 MMBTU/hr	Natural Gas

¹ The emission units listed in Table 1 are in addition to the emission units currently authorized under Table 1 of Minor Permit AQ0486MSS01.

² Emission units 37 through 41 are existing units installed subsequent to Minor Permit AQ0486MSS01. Emission Units 42 through 47 are new units authorized by Minor Permit AQ0486MSS02.

Section 3. Emission Fees

3. Conditions 1 and 2 of Minor Permit AQ0486MSS01, dated February 12, 2006 are rescinded and replaced with Conditions 4 and 5 of this minor permit.
4. **Assessable Emissions.** The Permittee shall pay to the Department an annual emission fee based on the stationary source's assessable emissions as determined by the Department under 18 AAC 50.410. The assessable emission fee rate is set out in 18 AAC 50.410(b). The Department will assess fees per ton of each air pollutant that the stationary source emits or has the potential to emit in quantities greater than 10 tons per year. The quantity for which fees will be assessed is the lesser of
 - 4.1 the stationary source's assessable potential to emit of 252 TPY; or
 - 4.2 the stationary source's projected annual rate of emissions that will occur from July 1st to the following June 30th, based upon actual annual emissions emitted during the most recent calendar year or another 12-month period approved in writing by the Department, when demonstrated by
 - a. an enforceable test method described in 18 AAC 50.220;
 - b. material balance calculations;
 - c. emission factors from EPA's publication AP-42, Vol. I, adopted by reference in 18 AAC 50.035; or
 - d. other methods and calculations approved by the Department.
5. **Assessable Emission Estimates.** Emission fees will be assessed as follows:
 - 5.1 no later than March 31st of each year, the Permittee may submit an estimate of the stationary source's assessable emissions to ADEC, Air Permits Program, ATTN: Assessable Emissions Estimate, 410 Willoughby Ave., Suite 303, Juneau, AK 99811-1800; the submittal must include all of the assumptions and calculations used to estimate the assessable emissions in sufficient detail so the Department can verify the estimates; or
 - 5.2 if no estimate is submitted on or before March 31st of each year, emission fees for the next fiscal year will be based on the potential to emit set forth in Condition 4.1.

Section 4. Ambient Air Quality Protection Requirements

6. To protect the annual average NO₂ ambient air quality standard, the Permittee shall:

6.1 **Stack Configuration:**

- a. Remove within ninety days of permit issuance the rain cap on the exhaust stack for Emission Unit 3 authorized in Minor Permit AQ0486MSS01.
 - (i) Provide as-built drawings and photographs of the revised exhaust stack of Emission Unit 3 in the first operating report due under Condition 29 of Minor Permit AQ0486MSS01 within ninety days of completing the installation of Emission Units 42 through 46, but before operating any of them.
 - (ii) Maintain the exhaust stack of Emission Unit 3 as a vertical release without a rain cap.
- b. For Emission Units 42 through 46
 - (i) Install and maintain each exhaust stack as follows:
 - (A) A release height that equals or exceeds
 - (1) 53 feet above grade;
 - (2) seven feet above the generator building roof; and
 - (3) two feet above the highest portion (penthouse) of the generator building.
 - (B) Oriented at 60 degrees or more above the horizontal.
 - (ii) Provide as-built drawings and photographs of the exhaust stacks in the first operating report required under Condition 29 of Minor Permit AQ0486MSS01 that would be due after installation of the exhaust stacks.

6.2 **Operational Limits:**

- a. Comply with the existing owner requested limits currently described in Section 3 of Minor Permit AQ0486MSS01; and
- b. Comply with Condition 10.

Section 5. State Emission Standards

- 7. Visible Emissions.** The Permittee shall not cause or allow visible emissions, excluding condensed water vapor, emitted from the emission units listed in Table 1 to reduce visibility through the exhaust effluent by more than 20 percent averaged over any six consecutive minutes.
- 7.1 For EU42 through EU46, verify the initial compliance with Condition 7 as follows:
- a. Within 30 days after startup of EU42 through EU46, conduct a visible emissions source test on each emission unit in accordance with Reference Method 9. Use the form in Section 9 or another form previously approved by the Department to record data when conducting the Reference Method 9 source test.
 - b. Submit the results of the surveillance records to the Department within 30 days of completing the source test.
- 8. Particulate Matter.** The Permittee shall not cause or allow particulate matter (PM) from the emission units listed in Table 1 to exceed 0.05 grains per cubic foot of exhaust gas corrected to standard conditions and averaged over three hours.
- 9. Sulfur Compound Emissions.** The Permittee shall not cause or allow sulfur compound emissions, expressed as sulfur dioxide (SO₂), from an emission units listed in Table 1 to exceed 500 parts per million by volume (ppmv) averaged over three hours. Compliance with Condition 11.1 shall demonstrate compliance with condition 9.

Section 6. Owner Requested Limits (ORLs) to Avoid Classification

10. To avoid classification as a Prevention of Significant Deterioration (PSD) major stationary source under 18 AAC 50.306 for oxides of nitrogen (NO_x) emissions, the Permittee shall limit the total NO_x emissions from EU42 through EU47 to less than 250 tons per 12-month rolling period. For EU42 through EU46:
 - 10.1 Limit the combined hours of operation to no more than 2,400 hours per 12-month rolling period;
 - 10.2 Install, maintain and operate a dedicated metering device on each emission unit to measure hours of operation;
 - 10.3 At the end of each calendar month, record the monthly hours of operation for each emission unit ;
 - 10.4 At the end of each calendar month, calculate the total hours of operation for the 12-month rolling period by combining the hours of operation of each emission unit during the month with the monthly hours of operation of all the emission units from the previous 11 months.;
 - 10.5 Report the monthly hours of operation for each emission unit, and the combined hours of operation of all the units for the preceding consecutive 11 calendar months in the Operating Report described under Condition 29 of Minor Permit AQ0486MSS01.
 - 10.6 If the total hours of operation for the 12-month rolling period calculated in condition 14 exceed 2,400 hours, submit an excess emission report to the Department as described under condition 28 of Minor Permit AQ0486MSS01.
11. To avoid classification under 18 AAC 50.502(c)(3) for sulfur dioxide (SO₂) emissions, the Permittee shall limit the total SO₂ emissions from EU42 through EU47 to less than 10 tons per consecutive 12-month period as follows:
 - 11.1 Burn only diesel fuel with a sulfur content not exceeding 0.05 percent by weight in EU42 through EU46.
 - 11.2 Monitor compliance with Condition 11.1 by analyzing a representative sample of the fuel for each shipment to determine the sulfur content, measured in accordance with an appropriate methodology incorporated by reference within fuel specification standards ASTM D 396 92 or D 975 94, or an alternate method approved by the Department. Alternatively, the Permittee may keep a certified statement or receipt from the fuel supplier for each fuel shipment received that documents the fuel sulfur content.
 - 11.3 The Permittee shall certify in each operating report described under Condition 29 of Minor Permit AQ0486MSS01 whether or not each shipment of diesel fuel burned in EU42 through EU46 contained no more than 0.05 percent by weight sulfur.

- 11.4 The Permittee shall report as described under Condition 28 of Minor Permit AQ0486MSS01 if diesel fuel delivered to and burned in EU42 through EU46 contained more than 0.05 percent by weight sulfur.

Section 7. Standard Terms and Conditions

- 12.** The Permittee must comply with each permit term and condition. Noncompliance with a permit term or condition constitutes a violation of AS 46.14, 18 AAC 50, and, except for those terms or conditions designated in the permit as not federally enforceable, the Clean Air Act, and is grounds for
 - 12.1 an enforcement action; or
 - 12.2 permit termination, revocation and reissuance, or modification in accordance with AS 46.14.280.
- 13.** It is not a defense in an enforcement action to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or condition.
- 14.** Each permit term and condition is independent of the permit as a whole and remains valid regardless of a challenge to any other part of the permit.
- 15.** The permit may be modified, reopened, revoked and reissued, or terminated for cause. A request by the Permittee for modification, revocation and reissuance, or termination or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- 16.** The permit does not convey any property rights of any sort, nor any exclusive privilege.

Section 8. Permit Documentation

June 18, 2010 PAMC Consultant, Keith Quincey of Hoefler sends revised estimates for Emission Units 42 through 46 to the Department. The new estimates reflect not-to-exceed emission factors and 2,400 operation hours per year. The new estimates address the Department’s concerns about project emissions.

June 14, 2010 Upon Department’s request, PAMC Consultant, Keith Quincey from Hoefler Consultants, submitted additional emission unit characteristics of EU37 through EU41 to the Department by fax.

May 21, 2010 PAMC Consultant (Hoefler) sent a revised modeling analysis and memo to Krystin Bablinskas.

May 3, 2010 John Kuterbach, replied to PAMC’s April 22 letter and described actions required to expedite actions on the permit.

April 26, 2010 The Department sent an email to applicant’s consultant requesting explanations and clarifications relating to the air dispersion modeling for the project.

April 22, 2010 Micaela Jones, PAMC’s Regional Director of Real Estate & Development sent a letter to John Kuterbach, Manager of Air Permits Program of the Department, requesting the Department to expedite issuance of the permit.

January 11, 2010 Consultant explains ACMP review is not applicable to project location.

January 11, 2010 Kwame Agyei, permit writer of the Department, contacts project consultant by phone to inquire about ACMP checklist.

December 17, 2009 Department receives Providence Health Systems-Washington application.

Section 9. Visible Emissions Forms

Visible Emissions Field Data Sheet

Certified Observer: _____

Company & Facility: _____

Location: _____

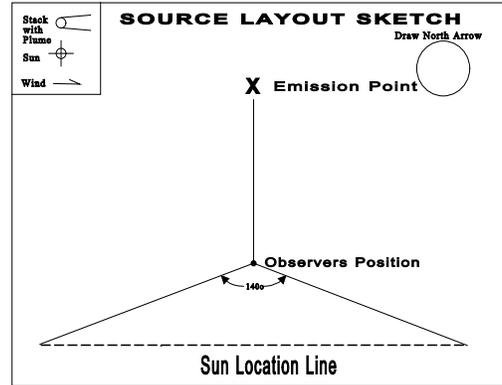
Test No.: _____ Date: _____

Source: _____

Production Rate/Operating Rate: _____

Unit Operating Hours: _____

Duration of Observation: _____



Clock Time	Initial				Final
Observer Location: Distance to discharge					
Direction from discharge					
Height of observer point					
Background Description:					
Weather Conditions: Wind direction					
Wind speed					
Ambient temperature					
Relative humidity					
Sky Conditions: (clear, overcast, % clouds, etc.)					
Plume Description: Color					
Distance Visible:					
Water Droplet Plume? (Attached or detached?)					
Other information:					

