

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF THE DIRECTOR

In the matter of administrative proceedings  
against **OAKWOOD HEALTHCARE, INC.,**  
**d/b/a BEAUMONT HOSPITAL – Dearborn,**  
a corporation organized under the laws of the  
State of Michigan and doing business at  
18101 Oakwood Boulevard in the City of  
Dearborn, County of Wayne, State of  
Michigan

AQD No. 2018-04  
SRN: J4912

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STIPULATION FOR ENTRY OF FINAL ORDER  
BY CONSENT

This proceeding resulted from allegations by the Michigan Department of Environmental Quality (MDEQ) Air Quality Division (AQD) against Oakwood Healthcare, Inc., d/b/a Beaumont Hospital – Dearborn (Company), a Michigan non-profit corporation, doing business at 18101 Oakwood Boulevard, Dearborn, Michigan, with State Registration Number (SRN) J4912. The MDEQ alleges that the Company is in violation of 40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60, Subpart Dc) and Permit to Install (PTI) 57-13. Specifically, the MDEQ alleges that the Company has installed two emergency generators, that based on the manufacturer's performance data emit nitrogen oxides (NOx) and carbon monoxide (CO) at rates that exceed the permit limits. The MDEQ also alleges the Company used an unpermitted fuel in three natural gas fired boilers identified as, FG-BOILERS5-7, failed to perform the initial and subsequent opacity tests for boiler identified as EU-00007, failed to maintain the fuel oil usage records for EU-00007, failed to submit opacity test data and excess emission reports, and failed to submit a timely application for a Renewable Operating Permit (ROP) or obtain an enforceable operating restriction to reduce the potential to emit below the major source threshold for sulfur dioxide, as cited in a Violation Notice dated November 23, 2016. The Company and MDEQ stipulate to the termination of this proceeding by entry of this Stipulation for Entry of a Final Order by Consent (Consent Order).

The Company and MDEQ stipulate as follows:

1. The Natural Resources and Environmental Protection Act, 1994 PA 451 (Act 451), MCL 324.101 *et seq.* is an act that controls pollution to protect the environment and natural resources in this State.

2. Article II, Pollution Control, Part 55 of Act 451 (Part 55), MCL 324.5501 *et seq.* provides for air pollution control regulations in this State.

3. The MDEQ was created as a principal department within the Executive Branch of the State of Michigan pursuant to Executive Order 2011-1 and has all statutory authority, powers, duties, functions and responsibilities to administer and enforce all provisions of Part 55.

4. The MDEQ Director has delegated authority to the Director of the AQD (AQD Director) to enter into this Consent Order.

5. The termination of this matter by a Consent Order pursuant to Section 5528 of Part 55 is proper and acceptable.

6. The Company and the MDEQ agree that the signing of this Consent Order is for settlement purposes only and does not constitute an admission by the Company that the law has been violated.

7. This Consent Order becomes effective on the date of execution (effective date of this Consent Order) by the AQD Director.

8. The Company shall achieve compliance with the aforementioned regulations in accordance with the requirements contained in this Consent Order.

#### COMPLIANCE PROGRAM AND IMPLEMENTATION SCHEDULE

9. On and after the effective date of this Consent Order, the Company shall comply with the conditions specified in PTI 57-13A, as amended, which is attached as Exhibit A.

#### SUPPLEMENTAL ENVIRONMENTAL PROJECT

10. In addition to the civil fine in this Consent Order for the violations alleged in the Violation Notice, the Company shall perform the Supplemental Environmental Project (SEP) described in Exhibit B, which is attached, incorporated by reference, and made an enforceable part of this Consent Order, and in accordance with the following terms and conditions below:

10.A. The total expenditure for the SEP shall not be less than \$120,839.00. All costs of the SEP shall be the responsibility of the Company. The Company certifies that any economic benefit, including tax abatement(s), tax credit(s), or similar tax relief, that the Company will realize as a result of the SEP is detailed in Exhibit B. If the actual expenditures for the

completed SEP totals less than \$120,839.00 then the Company shall pay to the MDEQ as a civil fine, within thirty (30) days of submission of the SEP certificate of completion required in subparagraph F. below, the difference between the actual expenditures and the minimum expenditure set forth above in this subparagraph A.

10.B. The plans included as Exhibit B contains schedules, including specific dates for the implementation of the SEP. The Company shall fully implement all aspects of the SEP within the specified schedules.

10.C. The Company certifies that the Company has not received, and is not presently negotiating to receive, a credit for the SEP as part of any other enforcement action or any grant from Michigan, U.S. Environmental Protection Agency (U.S. EPA) or any other entity. The Company also certifies that the Company will not seek tax benefits following completion of the SEP.

10.D. In the event the Company fails to fully and completely implement the SEP as provided herein to the reasonable satisfaction of the MDEQ, the MDEQ will provide written notice to the Company describing the nature of the deficiency. The Company shall have thirty (30) days from receipt of the notice to submit documentation to the AQD Detroit District Supervisor demonstrating that the deficiency has been corrected. In the event the deficiency is not corrected to the satisfaction of the MDEQ, the Company will be notified, and the Company shall be in violation of this Consent Order and required to pay a stipulated penalty of up to \$23,625.00 to the MDEQ within thirty (30) days of notification from the MDEQ. The amount of the stipulated penalty may be reduced or waived by the MDEQ if the Company made good faith and timely efforts to complete the project. Payment of stipulated penalties under the terms of this paragraph shall satisfy the Company's obligation to complete the SEP under this Consent Order. Payment of any stipulated penalty shall be made as outlined in paragraph 14.

10.E. The Company agrees that any public statement, oral or written, making reference to the SEP shall include the following language: "This project was undertaken in connection with the settlement of an enforcement action taken by the MDEQ for alleged violations of air quality law."

10.F. No later than thirty (30) days after the completion of all activities specified in Exhibit B, the Company shall submit written certification of completion of the SEP to the AQD Director demonstrating that all SEP activities specified in Exhibit B have been completed in accordance with the terms and conditions of this Consent Order and Exhibit B. The certification shall be accompanied by appropriate documentation (such as invoices, receipts, or tax statement) to verify the total expenditure made by the Company as a result of implementing the activities specified under Exhibit B. It shall be the sole determination of the MDEQ whether the Company has completely implemented the activities specified in Exhibit B of this Consent Order.

### GENERAL PROVISIONS

11. This Consent Order in no way affects the Company's responsibility to comply with any other applicable state and federal, or local laws or regulations, including without limitation, any amendments to the federal Clean Air Act, 42 USC 7401 *et seq.*, Act 451, Part 55 or their rules and regulations, or to the State Implementation Plan.

12. This Consent Order constitutes a civil settlement and satisfaction as to the resolution of the violations specifically addressed herein; however, it does not resolve any criminal action that may result from these same violations.

13. Within thirty (30) days after the effective date of this Consent Order, the Company shall pay to the General Fund of the State of Michigan, in the form of a check made payable to the "State of Michigan" and mailed to the Michigan Department of Environmental Quality, Accounting Services Division, Cashier's Office, P.O. Box 30657, Lansing, Michigan 48909-8157, a settlement amount of \$7,875.00 which includes AQD costs for investigation and enforcement. This total settlement amount shall be paid within thirty (30) days of the effective date of this Consent Order. To ensure proper credit, all payments made pursuant to this Consent Order shall include the "Payment Identification Number AQD40186" on the front of the check and/or in the cover letter with the payment. This settlement amount is in addition to any fees, taxes, or other fines that may be imposed on the Company by law.

14. On and after the effective date of this Consent Order, if the Company fails to comply with paragraph 9 of this Consent Order, the Company is subject to a stipulated fine of up to \$2,500.00 per violation. The amount of the stipulated fines imposed pursuant to this paragraph

shall be within the discretion of the MDEQ. Stipulated fines submitted under this Consent Order shall be by check, payable to the State of Michigan within thirty (30) days of written demand and shall be mailed to the Michigan Department of Environmental Quality, Accounting Services Division, Cashier's Office, PO Box 30657, Lansing, Michigan 48909-8157. To ensure proper credit, all payments shall include the "Payment Identification Number AQD40186-S" on the front of the check and/or in the cover letter with the payment. Payment of stipulated fines shall not alter or modify in any way the Company's obligation to comply with the terms and conditions of this Consent Order.

15. The AQD, at its discretion, may seek stipulated fines or statutory fines for any violation of this Consent Order which is also a violation of any provision of applicable federal and state law, rule, regulation, permit, or MDEQ administrative order. However, the AQD is precluded from seeking both a stipulated fine under this Consent Order and a statutory fine for the same violation.

16. To ensure timely payment of the settlement amount assessed in paragraph 13 and any stipulated fines assessed pursuant to paragraph 14 of this Consent Order, the Company shall pay an interest penalty to the State of Michigan each time it fails to make a complete or timely payment under this Consent Order. The interest payment shall be determined at a rate of interest that is equal to one percent (1%) plus the average interest rate paid at auctions of 5-year United States treasury notes during the six months immediately preceding July 1 and January 1, as certified by the state treasurer, compounded annually, and using the full increment of amount due as principal, calculated from the due date specified in this Consent Order until the date that delinquent payment is finally paid in full. Payment of an interest penalty by the Company shall be made to the State of Michigan in accordance with paragraph 13 of this Consent Order. Interest payments shall be applied first towards the most overdue amount or outstanding interest penalty owed by the Company before any remaining balance is applied to subsequent payment amount or interest penalty.

17. The Company agrees not to contest the legal basis for the settlement amount assessed pursuant to paragraph 13. The Company also agrees not to contest the legal basis for any stipulated fines assessed pursuant to paragraph 14 of this Consent Order but reserves the right to dispute in a court of competent jurisdiction the factual basis upon which a demand by

MDEQ of stipulated fines is made. In addition, the Company agrees that said fines have not been assessed by the MDEQ pursuant to Section 5529 of Part 55 and therefore are not reviewable under Section 5529 of Part 55.

18. This compliance program is not a variance subject to the 12-month limitation specified in Section 5538 of Part 55.

19. This Consent Order shall remain in full force and effect for a period of at least five (5) years. Thereafter, the Consent Order shall terminate only upon written notice of termination issued by the AQD Director. Prior to issuance of a written notice of termination, the Company shall submit a request, to the AQD Director at the Michigan Department of Environmental Quality, Air Quality Division, P.O. Box 30260, Lansing, Michigan 48909-7760, consisting of a written certification that the Company has fully complied with all the requirements of this Consent Order and has made all payments including all stipulated fines required by this Consent Order. Specifically, this certification shall include: (i) the date of compliance with each provision of the compliance program and the date any payments or stipulated fines were paid; (ii) a statement that all required information has been reported to the AQD Detroit District Supervisor; (iii) confirmation that all records required to be maintained pursuant to this Consent Order are being maintained at the facility; and, (iv) such information as may be requested by the AQD Director.

20. In the event the Company sells or transfers the facility, with SRN J4912, it shall advise any purchaser or transferee of the existence of this Consent Order in connection with such sale or transfer. Within thirty (30) calendar days, the Company shall also notify the AQD Detroit District Office Supervisor, in writing, of such sale or transfer, the identity and address of any purchaser or transferee, and confirm the fact that notice of this Consent Order has been given to the purchaser and/or transferee. As a condition of the sale, the Company must obtain the consent of the purchaser and/or transferee, in writing, to assume all of the obligations of this Consent Order. A copy of that agreement shall be forwarded to the AQD Detroit District Supervisor within thirty (30) days of assuming the obligations of this Consent Order.

21. Prior to the effective date of this Consent Order and pursuant to the requirements of Sections 5511 and 5528(3) of Part 55, the public was notified of a 30-day public comment period and was provided the opportunity for a public hearing.

22. Section 5530 of Part 55 may serve as a source of authority but not a limitation under which the Consent Order may be enforced. Further, Part 17 of Act 451 and all other applicable laws and any other legal basis or applicable statute may be used to enforce this Consent Order.

23. The Company hereby stipulates that entry of this Consent Order is a result of an action by MDEQ to resolve alleged violations of its facility located at 18101 Oakwood Boulevard, Dearborn, Michigan. The Company further stipulates that it will take all lawful actions necessary to fully comply with this Consent Order, even if the Company files for bankruptcy in the future. The Company will not seek discharge of the settlement amount and any stipulated fines imposed hereunder in any future bankruptcy proceedings, and the Company will take necessary steps to ensure that the settlement amount and any future stipulated fines are not discharged. The Company, during and after any future bankruptcy proceedings, will ensure that the settlement amount and any future stipulated fines remain an obligation to be paid in full by the Company to the extent allowed by applicable bankruptcy law.

The undersigned certifies that he/she is fully authorized by the Company to enter into this Consent Order and to execute and legally bind the Company to it.

**OAKWOOD HEALTHCARE, INC., d/b/a BEAUMONT HOSPITAL – DEARBORN**

Jane E. Jordan, SVP and General Counsel

Print Name and Title

Jane E. Jordan Date: 13 April 2018  
Signature

The above signatory subscribed and sworn to before me this 13 day of April, 2018.

Kathryn Suma  
Notary Public Signature

Kathryn Suma  
Notary Public Printed Name

My Commission Expires: 6-19-2020

Approved as to Content:

Mary Ann Dolehanty  
Mary Ann Dolehanty, Director  
AIR QUALITY DIVISION  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

Dated: 5/7/2018

Approved as to Form:

Neil Gordon  
Neil Gordon, Section Head  
ENVIRONMENTAL REGULATION SECTION  
ENVIRONMENT, NATURAL RESOURCES,  
AND AGRICULTURE DIVISION  
DEPARTMENT OF ATTORNEY GENERAL

Dated: 5/2/2018

FINAL ORDER

The Director of the Air Quality Division having had opportunity to review the Consent Order and having been delegated authority to enter into Consent Orders by the Director of the Michigan Department of Environmental Quality pursuant to the provisions of Part 55 of Act 451 and otherwise being fully advised on the premises,

HAS HEREBY ORDERED that the Consent Order is approved and shall be entered in the record of the MDEQ as a Final Order.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

  
\_\_\_\_\_  
Mary Ann Dolehanty, Director  
Air Quality Division

Effective Date: 5/7/2018

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

December 19, 2017

**PERMIT TO INSTALL  
57-13A**

**ISSUED TO**  
Beaumont Hospital - Dearborn

**LOCATED AT**  
18101 Oakwood Boulevard  
Dearborn, Michigan

**IN THE COUNTY OF**  
Wayne

**STATE REGISTRATION NUMBER**  
J4912

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: <b>September 1, 2017</b>	
DATE PERMIT TO INSTALL APPROVED: <b>December 19, 2017</b>	SIGNATURE: 
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

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**PERMIT TO INSTALL**

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### Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO <sub>2</sub> e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H <sub>2</sub> S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO <sub>x</sub>	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO <sub>2</sub>	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

\* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

**GENERAL CONDITIONS**

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

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11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

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### SPECIAL CONDITIONS

#### EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Emission Unit ID</b>	<b>Emission Unit Description (Process Equipment &amp; Control Devices)</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
EU00001	A 2,885 brake horsepower (bhp) diesel-fueled emergency reciprocating internal combustion engine manufactured in 2004.	2004	FG-EMGRICE1-2
EU00002	A 2,885 brake horsepower (bhp) diesel-fueled emergency reciprocating internal combustion engine manufactured in 2004.	2004	FG-EMGRICE1-2
EU00005	A 33.5 MMBtu/hr natural gas fired boiler.	1989	FG-BOILER5-7
EU00006	A 33.5 MMBtu/hr natural gas fired boiler.	1989	FG-BOILER5-7
EU00007	A 32.7 MMBtu/hr natural gas fired boiler.	2004	FG-BOILER5-7, FG-NSPSDc

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.

#### FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

<b>Flexible Group ID</b>	<b>Flexible Group Description</b>	<b>Associated Emission Unit IDs</b>
FG-EMGRICE1-2	Two 2,885 brake horsepower (bhp) diesel-fueled emergency engines manufactured in 2004.	EU00001, EU00002
FG-BOILER5-7	Two 33.5 and one 32.7 MMBtu/hr natural gas fired boilers.	EU00005, EU00006, EU00007
FG-NSPSDc	Small industrial, commercial, and institutional steam generating units subject to Standards of Performance NSPS Dc.	EU00007

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**The following conditions apply to: FG-EMGRICE1-2**

**DESCRIPTION:** Two 2,885 bhp diesel-fueled emergency engines manufactured in 2004.

**Flexible Group ID:** FG-EMGRICE1-2

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO <sub>x</sub>	31.6 tpy <sup>a</sup> (total for 2 engines)	12-month rolling time period as determined at the end of each calendar month	FG-EMGRICE1-2	SC VI.4	R 336.1205(3)

<sup>a</sup> NO<sub>x</sub> emissions based on an emission factor of 46.6 pounds NO<sub>x</sub>/100 gallons diesel fuel for each emergency engine.

**II. MATERIAL LIMITS**

1. The permittee shall burn only diesel fuel, in FG-EMGRICE1-2 with the maximum sulfur content of 15 ppm (0.0015 percent) by weight. **(R 336.1225, R 336.1702)**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate each engine in FG-EMGRICE1-2 for more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
2. The permittee shall install, maintain, and operate each engine in FG-EMGRICE1-2 according to the manufacturer written instructions, or procedures developed by the owner/operator and approved by the engine manufacturer, over the entire life of the engine. **(R 336.1225, R 336.1702, R 336.1912, 40 CFR 52.21(c) & (d))**

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall equip and maintain each engine in FG-EMGRICE1-2 with a non-resettable hours meter to track the operating hours. **(R 336.1205(1)(a) & (3))**
2. The nameplate capacity of each engine in FG-EMGRICE1-2 shall not exceed 2,885 bhp, as certified by the equipment manufacturer. **(R 336.1225, R 336.1702)**

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

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#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1225, R 336.1702, 40 CFR 52.21 (c) & (d))**
2. The permittee shall monitor and record, in a satisfactory manner, the hours of operation of FG-EMGRICE1-2 on a monthly and 12-month rolling time period basis. All records shall be kept on file and made available to the Department upon request. **(R 336.1205(1)(a) & (3))**
3. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in FG-EMGRICE1-2, demonstrating that the fuel sulfur content meets the requirement of SC II.1. The certification or test data shall include the name of the oil supplier or laboratory, and the sulfur content of the fuel oil. **(R 336.1205(1)(a) & (3))**
4. The permittee shall monitor and record, in a satisfactory manner, monthly NOx emission calculations for FG-EMGRICE1-2 on a monthly and 12-month rolling time period basis. All records shall be kept on file and made available to the Department upon request. **((R 336.1205(3))**

#### **VII. REPORTING**

NA

#### **VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/ Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV00001	16.0	18.0	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SV00002	16.0	18.0	R 336.1225, 40 CFR 52.21 (c) & (d)

#### **IX. OTHER REQUIREMENTS**

NA

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**The following conditions apply to: FG-BOILER5-7**

**DESCRIPTION:** Two 33.5 MMBtu/hr and one 32.7 MMBtu/hr natural gas-fired boilers.

**Emission Units:** EU-00005, EU-00006, EU-00007

**POLLUTION CONTROL EQUIPMENT:** Low NOx burner on EU-00007, to control NOx emissions.

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NOx	21.6 tpy <sup>a</sup> (total for all 3 boilers)	12-month rolling time period as determined at the end of each calendar month	FG-BOILER5-7	SC VI.4	R 336.1205(3)
2. CO	18.14 tpy <sup>b</sup> (total for all 3 boilers)	12-month rolling time period as determined at the end of each calendar month	FG-BOILER5-7	SC VI.5	R 336.1205(3)

<sup>a</sup> NOx emissions were based on an emission factor of 100 lbs NOx/MMscf of natural gas fuel and 20 lbs NOx/1,000 gallons of diesel fuel.  
<sup>b</sup> CO emissions were based on an emission factor of 84 lbs CO/MMscf of natural gas fuel and 5 lbs CO/1,000 gallons of diesel fuel.

**II. MATERIAL LIMITS**

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Natural Gas	432 million cubic feet per year	12-month rolling time period as determined at the end of each calendar month	FG-BOILER5-7	SC VI.2	R 336.1205(1)(a) & (3), R 336.1225, R 336.1702
2. Diesel Fuel	623,100 gallons per year	12-month rolling time period as determined at the end of each calendar month	FG-BOILER5-7	SC VI.3	R 336.1205(1)(a) & (3), R 336.1225, R 336.1702

3. The permittee shall burn only pipeline quality natural gas (with a maximum sulfur content of 2,000 grains per million scf) or diesel fuel (with the maximum sulfur content of 15 ppm (0.0015 percent) by weight), in FG-BOILER5-7. (R 336.1225, R 336.1702)

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall operate FG-BOILER5-7 in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during periods of startup, shutdown and malfunction. (R 336.1225, R 336.1702, R 336.1912, 40 CFR 52.21(c) & (d))

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2. The permittee shall only use diesel fuel, in FG-BOILER5-7 during periods of gas curtailment, gas supply interruption, startups, or periodic testing. Periodic testing shall not exceed combined total of 48 hours per calendar year. **(40 CFR 63.11195(e))**

#### **IV. DESIGN/EQUIPMENT PARAMETERS**

1. The heat input capacity shall not exceed a maximum of 33.5 million BTU per hour for each EU-00005 and EU-00006, and 32.7 million BTU per hour for EU-00007. **(R 336.1225, R 336.1702)**
2. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a device to monitor and record the fuel use for FG-BOILER5-7 on a monthly basis. **(R 336.1205(1)(a) & (3))**
3. The permittee shall operate EU-00007 with low NO<sub>x</sub> burners installed, maintained, and operated in a satisfactory manner. **(R 336.1205(1)(a) & (3))**

#### **V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Upon request from the district supervisor, the permittee shall verify NO<sub>x</sub> and CO emission rates from FG-BOILER5-7, by testing at owner's expense, in accordance with Department requirements or by providing documentation as required in SC VI.2. No less than 60 days prior to testing, the permittee must submit a complete stack-testing plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004)**

#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall complete all required calculations in a format acceptable and as described in Appendix 1, to the AQD District Supervisor, by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1225, R 336.1702, 40 CFR 52.21 (c) & (d))**
2. The permittee shall monitor and record, in a satisfactory manner, the natural gas fuel usage for FG-BOILER5-7 on a monthly and 12-month rolling time period basis. All records shall be kept on file and made available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702)**
3. The permittee shall monitor and record, in a satisfactory manner, the diesel fuel usage for FG-BOILER5-7 on a monthly and 12-month rolling time period basis. All records shall be kept on file and made available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702)**
4. The permittee shall monitor and record, in a satisfactory manner, monthly NO<sub>x</sub> emission calculations for FG-BOILER5-7 on a monthly and 12-month rolling time period basis. All records shall be kept on file and made available to the Department upon request. **(R 336.1205(3))**
5. The permittee shall monitor and record, in a satisfactory manner, monthly CO emission calculations for FG-BOILER5-7 on a monthly and 12-month rolling time period basis. All records shall be kept on file and made available to the Department upon request. **(R 336.1205(3))**
6. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in FG-BOILER5-7, demonstrating that the fuel sulfur content meets the requirement of SC II.3. The certification or test data shall include the name of the oil supplier or laboratory, and the sulfur content of the fuel oil. **(R 336.1205(3))**

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**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV00005, SV00006, SV00007 (combined into one stack)	48.0	104.0	R 336.1225, 40 CFR 52.21 (c) & (d)

**IX. OTHER REQUIREMENTS**

NA

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**The following conditions apply to: FG-NSPSDc**

**DESCRIPTION:** Small industrial, commercial, and institutional steam generating units subject to Standards of Performance NSPS Dc.

**Emission Units:** EU-00007

**POLLUTION CONTROL EQUIPMENT:** Low NOx burner to control NOx emissions.

**I. EMISSION LIMITS**

1. Visible emissions from FG-NSPSDc shall not exceed 20 percent opacity for a 6-minute average, except for one 6-minute period per hour of not more than 27 percent opacity except as specified in the federal Standards of Performance for New Stationary Sources, 40 CFR Part 60 Subparts A and SUBPART. **(40 CFR 60.43c(c) & (d))**

**II. MATERIAL LIMITS**

1. The permittee shall not burn diesel fuel with a sulfur content greater than 0.5 percent by weight, in FG-NSPSDc. **(40 CFR 60.42c(d))**

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Following issuance of the PTI, the facility shall conduct the initial opacity monitoring for FG-NSPSDc during the first scheduled fuel oil operation and shall comply with federal Standards of Performance for New Stationary Sources which require evaluation of visible emissions using Method 9 of appendix A-4 performance test, at owner's expense, in accordance with 40 CFR Part 60 Subparts A and Dc. Visible emission observation procedures must have prior approval by the AQD Technical Programs Unit and District Office. No less than ten (10) days prior to the anticipated test date, the permittee shall notify the AQD District Supervisor of the test date. If after the anticipated test date has been submitted, there is a delay in conducting the test, the permittee shall submit to the AQD District Supervisor notice of the new test date. This notification shall take place a minimum of three (3) days prior to the rescheduled test taking place. The permittee must submit a complete report of opacity observations to the AQD Technical Programs Unit and District Office within 30 days following the last date of the test. **(40 CFR Part 60 Subparts A & Dc, 40 CFR 60.45c(a)(8))**
2. The frequency of subsequent Method 9 of appendix A-4 performance tests will be determined by the opacity from the most recent test conducted in accordance with 40 CFR 60.47c(a)(1) and within the last 12 calendar months or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later. **40 CFR 60.47c(a)(1))**

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#### **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall monitor and record, in a satisfactory manner, the natural gas fuel usage for FG-NSPSDc on a monthly and 12-month rolling time period basis. All records shall be kept on file and made available to the Department upon request. **(40 CFR 60.48c(g)(3))**
2. The permittee shall monitor and record, in a satisfactory manner, the diesel fuel usage for FG-NSPSDc on a monthly and 12-month rolling time period basis. All records shall be kept on file and made available to the Department upon request. **(40 CFR 60.48c(g)(3))**
3. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in FG-NSPSDc, demonstrating that the fuel sulfur content meets the requirement of SC II.1. The certification or test data shall include the name of the oil supplier or laboratory, and the sulfur content of the fuel oil. **(40 CFR 60.48c(e)(11))**

#### **VII. REPORTING**

1. The permittee shall submit performance test data from the initial and subsequent performance tests. In addition to the applicable requirements of 40 CFR 60.7, the permittee shall submit excess emission reports for any excess emission that occur during the reporting period and maintain records according to the requirements of 60.48c(c)(1) through (3). **(40 CFR 60.48c(b) and 60.48c(c))**

#### **VIII. STACK/VENT RESTRICTIONS**

NA

#### **IX. OTHER REQUIREMENTS**

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Dc, as they apply to each emission unit. **(40 CFR Part 60 Subparts A & Dc)**

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## **APPENDIX 1 Emission Calculations**

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-EMGRICE1-2, FG-BOILER5-7, and FG-NSPSDc. The permittee shall use emission factors from vendor data or from source specific testing (if test data is available, use most recent test data), as available for each emission unit. The permittee shall use emission factors contained in the most recent AP-42 (Compilation of Air Pollutant Emission Factors) or FIRE (Factor Information Retrieval) database if vendor or testing data is not available. If emission factors from other sources are used, the permittee shall obtain the approval of the AQD District Supervisor before using the emission factors to calculate emissions. The permittee shall document the source of each emission factor used in the calculations.

### **Calculation for NOx Emissions from the emergency engines**

The following calculation for NOx emissions shall utilize the actual diesel fuel usage and the actual hours of operation.

#### Diesel Fuel

Pollutant = [(lbs/gal) x (gal/hr) x (hrs/month) x (1 ton/2000 lbs)] = tons of Pollutant per month

#### Where:

lbs/gal = Pollutant Emission Factor in pounds of pollutant per gallon of diesel fuel

gal/hr = Gallons per hour of diesel fuel burned in each engine

hrs/month = Actual hours each engine is operated per month while burning diesel fuel

### **Calculation for NOx & CO Emissions from the boilers**

The following calculation for NOx and CO emissions shall utilize the actual gas usage and the actual hours of operation.

#### Natural Gas Fuel

Pollutant = [(lbs/MMscf) x (scf/month) x (1 ton/2000 lbs)] = tons of Pollutant per month

#### Where:

lbs/MMscf = Pollutant Emission Factor in pounds of pollutant per million standard cubic feet

scf/month = Amount of natural gas fuel burned in each boiler per month

#### Diesel Fuel

Pollutant = [(lbs/gal) x (gal/hr) x (hrs/month) x (1 ton/2000 lbs)] = tons of Pollutant per month

#### Where:

lbs/gal = Pollutant Emission Factor in pounds of pollutant per gallon of diesel fuel

gal/hr = Gallons per hour of diesel fuel burned in each boiler

hrs/month = Actual hours each boiler is operated per month while burning diesel fuel



August 25, 2017

*Via Email*

Jason Wolf  
Enforcement Specialist  
Air Quality Division  
Michigan Department of Environmental Quality  
P.O. Box 30260  
Lansing, MI 48909-7760

**Re: Beaumont Hospital, Dearborn, SRN: J4912  
Notice of Enforcement dated January 23, 2017 and  
Notice of Violation, dated November 23, 2016  
Proposed Supplemental Environmental Project (SEP)**

Dear Mr. Wolf:

In accordance with our prior communications regarding the request of Oakwood Healthcare, Inc. d/b/a Beaumont Hospital, Dearborn ("Beaumont") to submit a proposed Supplemental Environmental Project ("SEP") relating to the above-noted Violation and Enforcement actions, we ask that the Michigan Department of Environmental Quality ("MDEQ") approve Beaumont's proposed SEP outlined below. As noted in the MDEQ Policy Documents re: SEPs, November 1997, as revised in April 2005, Number: 04-002, the SEP proposal is conditioned upon MDEQ and Beaumont reaching an agreement on the SEP language and other compliance provisions to resolve the violations alleged by MDEQ against Beaumont. The SEP submitted is part of an overall discussion regarding Consent Order language and the extent of fines and penalties.

**1. Name and Location of Entity Subject to the Enforcement Action**

Oakwood Healthcare, Inc. d/b/a Beaumont Hospital, Dearborn, is located at 18101 Oakwood Boulevard, Dearborn, Michigan ("Hospital").

**2. Regulatory Information**

MDEQ alleges that the Hospital is in violation of 40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60, Subpart Dc) and Permit to Install (PTI) 57-13. Specifically, the MDEQ alleges that the Company has installed two emergency generators that, based on the manufacturer's performance data, emit nitrogen oxides (NOx) and carbon monoxide (CO) at rates that exceed the permit limits. The MDEQ also alleges the Company used an unpermitted fuel in three natural gas fired boilers identified as, FG-BOILERS5-7, failed to perform the initial and subsequent opacity tests for the boiler identified as EU-00007, failed to maintain the fuel oil usage records for EU-

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00007, failed to submit opacity test data and excess emission reports, and failed to submit a timely application for a Renewable Operating Permit (ROP) or obtain an enforceable operating restriction to reduce the potential to emit below the major source threshold for sulfur dioxide, as cited in a Violation Notice dated November 23, 2016.

**3. Project Name**

Replacement of interior fluorescent T8 lamps with LED lighting.

**4. Project Manager**

Richard Pointe, Interim Director  
Facilities Management  
Beaumont Hospital, Dearborn  
18101 Oakwood Boulevard  
Dearborn, MI 48124-4089  
Telephone: (248) 964-1077  
Email: [richard.pointe@beaumont.org](mailto:richard.pointe@beaumont.org)

**5. DEQ Contact Person**

None.

**6. Geographical Area to Benefit from the Project**

Southeast Michigan Air Basin, with specific work to be performed at Beaumont Hospital, Dearborn, located at 18101 Oakwood Boulevard, Dearborn, Michigan.

**7. SEP Categories**

This proposal for replacing interior fluorescent T8 lamps with LED lighting will reduce the energy footprint of the Hospital. LEDs reduce energy consumption by 30-40% as compared to comparable fluorescent lamps.<sup>1</sup> These energy savings allow this SEP to show achievement in the following SEP Categories:

- **Pollution Prevention:** This project is designed to substantially prevent the generation of greenhouse gases through more efficient use of electricity. McKinsey & Company estimates that LED lighting in commercial applications will have the potential to reduce greenhouse gas emissions 110 million tons by the

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<sup>1</sup> "Cost-Benefit Analysis and Emission Reduction of Energy Efficient Lighting at the Universiti Tenaga Nasional." Ganandran, G.S.B. et.al. Scientific World Journal (2014). Available through the US National Library of Medicine at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4123577/>

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year 2030.<sup>2</sup> In addition, the US EPA has determined that energy efficiency projects are appropriate SEPs since they displace the use of fossil fuels to provide energy.<sup>3</sup>

- Pollution Reduction: Energy efficiency projects reduce emissions associated with the reduced energy generation, including oxides of nitrogen (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), mercury (Hg) and other metals, carbon monoxide (CO), as well as carbon dioxide (CO<sub>2</sub>).<sup>4</sup>
- Public Health: Energy efficiency projects can achieve multi-media and multi-pollutant emission reductions and can enhance the localized air quality to the neighboring communities, which has both economic and public health benefits.<sup>5</sup>

## 8. Project Description

This SEP consists of replacement of general facility lighting fluorescent bulbs with LED lamps on six levels of the hospital, from the lower level, to the fifth floor. This will result in a replacement of 1,478 fixtures containing 3,188 lamps throughout the facility. The T8 fluorescent lamps being replaced during installation will be properly recycled by the third party installer as part of the project. Beaumont has determined the scope of this SEP to be 5.71 years, based on the manufacturer's description of its product, which is expected to have an operational life of 50,000 hours. Since the vast majority of the LEDs will be operating 24 hours per day, 7 days per week, 5.71 years is the average expected lifetime of the LEDs.

The installation will be performed by a third party vendor. Beaumont has requested and received multiple proposals to perform the retrofitting and installation but has not yet chosen a vendor, although the one-time costs provided in the Project Budget are based on the submitted proposals. These costs include \$44,432.70 to purchase the LED fixtures, \$72,422.00 in order to perform the installation work, and \$3,985.00 in disposal costs for the T8 fluorescent lamps being replaced.

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<sup>2</sup> McKinsey & Company and Conference Board (2007). *Reducing US Greenhouse Gas Emissions: How Much at What Cost?* Center on Globalization, Governance & Competitiveness, available at [http://cggc.duke.edu/environment/climatesolutions/greeneconomy\\_Ch1\\_LEDLighting.pdf](http://cggc.duke.edu/environment/climatesolutions/greeneconomy_Ch1_LEDLighting.pdf).

<sup>3</sup> See U.S. EPA Memorandum, "A Toolkit for States: Using Supplemental Environmental Projects (SEPs) to Promote Energy Efficiency (EE) and Renewable Efficiency (RE)", dated January 27, 2005.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

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There also are annual maintenance and warranty administration costs associated with this SEP. Beaumont has based its expected maintenance costs of \$16,510.00 on the budget prepared by a reputable third party vendor, which is attached here as Exhibit A1. This vendor estimated a failure rate of 10% per year, or 148 fixtures that need to be analyzed, repaired, or replaced annually. The maintenance costs are separate and apart from the warranty administration costs. The warranty covers LED fixture replacements for the first five years of this project, but not labor, and Beaumont also estimates it will take approximately 3 hours per fixture in order to request, process, receive, handle and store replacement LEDs from the manufacturer. This equates to approximately 441 hours of labor per year to facilitate the replacement of the LEDs. When calculated along with the average salary and overhead of the employees responsible for this task (\$43.12 hourly), the warranty administration costs total \$19,119.41 annually. Beaumont also will incur additional costs to replace LED fixtures once their warranty period expires after 5 years.

Beaumont expects annual savings of \$23,171.45 due to decreased electrical costs as a result of decreased electrical lighting power consumption after the installation of LEDs is completed. Beaumont also will apply for a one-time rebate benefit with its energy supplier as a result of installing more efficient LED lighting. This rebate is not guaranteed, but could provide a one-time credit on Beaumont's electrical bill of up to \$26,640.00 within the first calendar year depending on the energy savings gained as a result of the reduced consumption.

## **9. Expected Environmental Benefits**

The installation of LED lighting is expected to reduce overall energy usage due to increased energy efficiency. For ease of review, this SEP proposal discusses environmental benefits following the MDEQ format for a SEP Quality Rating contained in DEQ Policy and Procedures regarding SEPs.

**Public Benefit:** Decreased pollutants result from the decreased electrical generation required by increased lighting energy efficiency. This is a benefit to communities close to the energy-generating facilities, but also to all communities in the State as a result of decreased greenhouse gas emissions.

**Innovative:** LEDs are an emerging technology and while available, have a significantly higher cost of admission than existing alternatives (i.e. incandescent, fluorescent, compact fluorescent lamps). There is a significant upfront cost which is orders of magnitude higher than non-LED technology. This higher upfront cost acts as a significant barrier to entry for an organization to switch to LED lighting. Adoption of this technology at the Hospital by Beaumont will assist in its recognition and understanding of how to perform such projects with certainty of cost and may lead to greater adoption of LED lighting at additional hospitals in the Beaumont system.

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Pollution Prevention: See “public benefit,” above. To the extent that less electricity is required for the same lumen output there will be fewer local air emissions from power plants. In addition, the waste disposal footprint is less than with fluorescent tube technology.

Previously, the MDEQ has stated that “Mercury has been recognized as one of the primary pollutants of concern for Michigan. Even a very small amount of mercury in the environment can be converted to a form that builds up in the muscle tissue of fish and may ultimately reach your dinner table.” Mercury Awareness for Michigan Citizens.<sup>6</sup> The MDEQ states that mercury is toxic to the nervous system and to unborn children. *Id.* As indicated above, mercury emissions will be reduced by decreasing the energy demand. Moreover, in Mercury Awareness for Michigan Citizens, fluorescent lights are listed as source of mercury to the environment that can be controlled.<sup>7</sup>

In the MDEQ’s Mercury Strategy Staff Report, updated August 1, 2008,<sup>8</sup> the Mercury Strategy Workgroup (MSWG) identified 10 priority recommendations to the MDEQ to reduce the threat of mercury to human health and wildlife. Three of those recommendations arguably would be followed by granting this SEP. Those three are:

2) Reduce mercury releases from coal fired utility plants.

....

4) Continue to implement activities that phase out mercury-added products where viable alternatives exist.

....

8) Investigate and explore the development of a mechanism to ensure that Mercury collected or recovered in Michigan is used only for essential uses. Explore the current barriers regarding exportation of nonessential mercury uses to other states or countries.

With respect to the above, the first two recommendations are self-explanatory. With respect to the third recommendation, the publication states that this factor is concerned

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<sup>6</sup> “Merc Concern.” Michigan Department of Environmental Quality Environmental Assistance Center (April 2014), available at [https://www.michigan.gov/documents/deq/deq-ead-p2-mercury-mercbroc\\_447512\\_7.pdf](https://www.michigan.gov/documents/deq/deq-ead-p2-mercury-mercbroc_447512_7.pdf)

<sup>7</sup> *Id.*

<sup>8</sup> Mercury Strategy Staff Report: MDEQ’s Current Status and Recommended Future Activities Toward the Goal of Eliminating Anthropogenic Mercury Use and Releases in Michigan, updated August 1, 2008, available at <http://cdm16110.contentdm.oclc.org/cdm/ref/collection/p9006coll4/id/173414>

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with reducing the use of mercury-added products. Notably, the amount of mercury in a T8 lamp can range from at least 3.2 to 9.5 mg<sup>9</sup> and the current SEP involves the replacement of approximately 3,188 T8 lamps. At an average T8 lamp life of 20,000 hours, the current SEP would prevent approximately 10,200 mg to 30,200 mg of mercury from entering a landfill every 2.28 years. As a result, authorizing this SEP would be in-line with the MSWG's recommendations to the MDEQ, including the reduction of mercury from coal fired utility plants and phasing out mercury-added products.

Multi-media impact: The SEP will reduce emissions to more than one medium: (1) air pollutant emissions will be reduced from coal fired utility plants; and (2) mercury from the T8 fluorescent bulbs will no longer be sent to a landfill for disposal.

Environmental Justice: To the extent that energy efficiency is improved, fewer additional power plants may be required and this SEP may assist with environmental justice concerns associated with power plant siting.

Community Input: No known community input at this time.

## Project Budget

Beaumont is a domestic nonprofit corporation.

The costs related to the LED replacement are as follows:

- Useful life = 5.71 years, per the manufacturer specifications.
- Initial costs = \$44,432.70 (Fixtures)  
\$72,422.00 (Labor)  
\$3,985.00 (Disposal)
- Total initial costs = \$120,839.70
  - Capital costs = \$44,432.70 (Fixtures)
  - One-time, non-depreciable costs = \$72,422.00 (Installation Labor)  
\$3,985.00 (Disposal Costs)  
\$76,407.00 (Total)

<sup>9</sup> "Mercury Quantity in Lamps for General Lighting Applications." Osram Sylvania (December 2014), available at <https://assets.sylvania.com/assets/documents/Public%20Mercury%20Quantity%20in%20Lamps%20for%20General%20Light.1b882b8b-1f18-41d3-b4f8-539dcd204b1d.pdf>

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- Annual operational costs = \$16,510.00 (Annual Maintenance)  
\$19,119.41 (Warranty Administration)  
 \$35,629.41 (Annual Total)  
5.71 years x
- Total operational costs = \$203,443.94
- Replacement LED costs after warranty expiration for the remaining projected life of the project (0.71 years) = \$3,137.36
- **Total project costs = \$327,421.00**
- *Projected* annual electrical energy consumption savings = \$23,171.45  
5.71 years x
- *Projected* total lifetime electrical consumption savings = \$132,308.98
- *Potential* first year one-time rebate = \$26,640.00
- **Total project savings = \$158,948.98**
- **Total project costs = \$327,421.00 —**
- **Total net project costs = \$168,472.02**

## 10. Project Schedule

Estimates from third parties indicate that it will take approximately three weeks to retrofit 1,478 fixtures within the Hospital. This estimated timetable is unduly optimistic. If this Project is approved within the next two weeks, Beaumont intends to promptly select a vendor with the goal of installation and retrofit work commencing by August 14, 2017, and being completed by the end of November 2017. Maintenance and warranty administration activities will take place continuously over the previously stated 5.71 years life of the project.

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**11. Accounting**

Beaumont will account for all internal and external expenditures associated with the project. Invoices received and payments made from and to any third party working on the project will be identified and made available to MDEQ upon request.

**12. Reporting**

Beaumont will submit a project status report to the MDEQ following the completion of the LED installation work. The report will consist of a summary of the tasks completed, vendor receipts as well as photographs of the new lighting.

**13. Prior Commitments and/or Regulatory Requirements:**

No local, state or federal regulations or binding private commitments would require the implementation of this project or any part thereof.

**14. Certification of Expenditures**

Attached is a separate certification from Beaumont.

We look forward to discussing these matters with you further.

Very truly yours,

FOLEY, BARON, METZGER & JUIP, PLLC



Richard S. Baron

Nicholas B. Andrew

Direct Dial: (734) 742-1855

Email: [rbaron@fbmlaw.com](mailto:rbaron@fbmlaw.com)

RSB/NBA/ceb

cc: Neil D. Gordon, Assistant Attorney General (via email)  
John Fragomeni, Vice President Support Services, Beaumont Health (via email)  
Matthew T. Ajluni, Beaumont Health Legal Affairs (via email)  
Richard Pointe, Interim Director – Facilities Management (via email)

**CERTIFICATION**

I, Richard Pointe, hereby certify that the proposed SEP for the replacement of existing T8 fluorescent lighting at Beaumont Hospital, Dearborn is solely attributable to the settlement of the current enforcement action and that no funding has been budgeted to the project prior to the approval of the project, nor is the proposed project funded by grants, donations, low interest loans, or other sources of funding, not attributable to the alleged violator's normal budgetary process, with the exception, as noted, of a potential energy savings rebate accounted for in the SEP. The proposed project is not being done, nor will receive credit, as part of an environmental incentive or awards program offered by local, state or federal government, industry, etc., with the exception, as noted, of a potential energy savings rebate accounted for in the SEP.

**Oakwood Healthcare, Inc.**

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Richard Pointe  
Interim Director – Facilities Management, Beaumont Hospital, Dearborn

# **Exhibit A1**

To: Beaumont Hospital, Dearborn.  
Attn: Matt Ronan, Facility Services Director

June 12, 2017  
FEC Est. 17-265

**Re: Lighting Maintenance Budget**

We are pleased to submit our budget proposal for the project referenced above in the amount of **\$16,510.00**.

Our proposal is based on the following assumptions:

- We did not find any published data on average failure rates for the Phillips LED Tubes.
- We do not keep statistical data on failure rates of LED tubes, ballast or fluorescent lamps.
- The general consensus is that a 10% failure rate is expected, this may seem high to you however don't forget you are keeping the original fluorescent ballast in place.
- We have no way of knowing how long the existing fluorescent ballast have been in service. If the fluorescent ballast fails the LED tubes will not work.
- LED Tubes don't work with every ballast on the market. Phillips is proud to say their LED tubes work with more ballast on the market than any other manufacturer, however they did not say they will work with every ballast. Over the years, plant operations has changed ballasts that have failed, you probably have multiple manufacturers of ballast installed.
- You may consider checking the existing ballast to make sure they are a Phillips approved ballast, this way you will know the tubes will work. If you look at the cost of replacing ballasts you will probably find it is cost effective to replace the entire fixture.

We have estimated a 10% failure rate annually. This means someone is addressing either a lamp or ballast failure for 10% of the total each year (147 fixtures). We have estimated half of the fixture failures are due to ballast and half due to the LED tubes.

Total estimated annual cost for lighting maintenance for the list of fixtures/lamps in your spread sheet (below) is \$16,510.00, not including the cost of lamps or ballast.

P.S. Before finishing this email to you, I received your email that Edna sent you, indicating 3 hours per lamp. This is extremely high, we would never estimate that much time. To replace a ballast and lamps in a fixture should not be more than 1 hour.

Hope this helps Matt. Feel free to call me to discuss further.

Length	4'	4'	4'	2'	2'	Hours ON
No. of Lamps	4	3	2	3	2	
Old Wattage	112	85	58	71	50	
New Wattage	60	45	30	29	19	
<b>LL</b>						
Dock			21			18
Warehouse			67			18
CSS		76	72		1	24
Corridors - North of Bridge			114			24
Corridors - FP			9			12
Pharmacy Storage		9				24
Pharmacy Office		17				24
Pharmacy		70				24
Bridge			4		8	24
Corridors - South of Bridge			21			24
<b>1st Floor</b>						
Cafeteria - Food Service		25	21			18
Cafeteria - Dining Area			163			24
Corridors - Near Cafeteria		9	66		2	24
Glass corridor			14			24
Welcome desk/ video wall				26		24
South patient tower corridor			32			24
South atrium					8	24
Fitzgerald Pavilion						24
<b>2nd Floor</b>						
Corridors - Near Lab			68		9	24
Lab			143		18	24
<b>3rd Floor, North</b>						
Nurses Station - North			13			24
Nurses Station - South			13			24
Elevator Lobby			10			24

North Hallway			7			24
South Hallway			7			24
East Hallway			8			12
West Hallway			8			24
West end area			5		4	7
Bridge			9			8
West Corridor			30			15.2
3rd Floor, South						
Corridors			42			24
4th Floor, North						
Nurses Station - North			13			24
Nurses Station - South			13			24
Elevator Lobby			10			0
North Hallway			7			24
South Hallway			7			12
East Hallway			8			12
West Hallway			8			24
West end area			5		4	7
Bridge			9			8
West Corridor			30			15.2
4th Floor, South						
Corridors			42			24
5th Floor						
Nurses Station - North			13			24
Nurses Station - South			13			24
Elevator Lobby			10			0
North Hallway			7			12
South Hallway			7			18
East Hallway			8			12
West Hallway			8			12
West end area			3		4	7
Total Fixtures	0	206	1188	26	58	
Total Lamps	0	618	2376	78	116	

We thank you for the opportunity to submit our proposal.

*Paul Ferguson*

# **Exhibit A2**

Below is a breakdown of the activities and costs associated with warranty administration for the planned LED Lighting Replacement.

	HR(s)	\$/hr		
Identify and access fixture to determine issue and point of failure	0.75	43.12	\$ 32.34	
Contact Contractor to schedule repairs	0.25	43.12	\$ 10.78	
Meet and escort contractor to problem location	0.5	43.12	\$ 21.56	
Validate contractor work has been completed / close work order	0.5	43.12	\$ 21.56	
Process warranty claim with manufacturer to obtain replacement part(s), track, follow up and receive items	1	43.12	\$ 43.12	
			<b>\$ 129.36</b>	<b>Est. Cost Per Fixture / Occurrence</b>

There are 1,478 fixtures being retrofitted. 10% each year are expected to experience some kind of failure, either minor or major which will fall under warranty work.

147.8 \* \$129.36 = \$19,119.41 in anticipated annual warranty administration costs