

# Part 70 Operating Permit Amendment

Permit Amendment No.: 3357-135-0010-V-01-1 Effective Date: June 5, 2006

**Facility Name:** OFS Brightwave Solutions, Inc.  
2000 Northeast Expressway  
Norcross, Georgia 30071 Gwinnett County

**Mailing Address:** 2000 Northeast Expressway  
Norcross, Georgia 30071

**Parent/Holding Company:** OFS Brightwave, LLC.

**Facility AIRS Number:** 04-13-135-00010

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction permit for:

The installation and operation of a 9.9 MMBtu/hr hot water heater; the removal of existing boilers B001, B002, B003 and B004; and the establishment of annual operating time limits for certain existing diesel and natural gas engines

This Permit Amendment shall also serve as a final amendment to the Part 70 Permit unless objected to by the U.S. EPA or withdrawn by the Division. The Division will issue a letter when this Operating Permit amendment is finalized.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit Amendment and Permit No. 3357-135-0010-V-01-0. Unless modified or revoked, this Permit Amendment expires upon issuance of the next Part 70 Permit for this source.

This Permit Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 15674 dated September 30, 2004 and in Application No. 16539 dated December 6, 2005; any other applications upon which this Permit Amendment or Permit No. 3357-135-0010-V-01-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 15 pages, which pages are a part of this Permit Amendment, and which hereby become part of Permit No. 3357-135-0010-V-01-0.

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Director  
Environmental Protection Division

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**PART 1.0 FACILITY DESCRIPTION****1.3 Process Description of Modification**

On September 30, 2004, OFS Brightwave Solutions, Inc. (OFS) proposed a reasonably available control technology (RACT) plan for some of the existing NO<sub>x</sub> emission sources subject to Georgia Rules 391-3-1-.02(2)(yy) – “*Emissions of Nitrogen Oxides from Major Sources*” or 391-3-1-.02(2)(mmm) - “*NO<sub>x</sub> Emissions from Stationary Gas Turbines and Stationary Engines Used to Generate Electricity*”. The proposed RACT plan was then designated as Application No. 15674. In this application, the Permittee also proposed to limit the annual operating time for two existing diesel generators EG01 and EG02 such that they would be considered as "emergency generators" and thus not subject to the NO<sub>x</sub> emission limitation in Georgia Rule (mmm). The proposed RACT for these two diesel generators consists of the routine maintenance as specified by the equipment manufacturer and/or good maintenance practice. Because the existing diesel fire pump engine does not have a generator, it would be subject to Georgia Rule 391-3-1-.02(2)(yy). OFS proposed in the application No. 15674 to limit the annual operating time for this diesel engine such that its potential annual NO<sub>x</sub> emissions will be less than one ton per year, the de minimis level that makes the RACT requirements in Georgia Rule (yy) does not apply to this source.

On December 6, 2005, the company submitted Application No. 16539 proposing a modification to the same facility located at 2000 Northeast Expressway, Norcross, Georgia. The modification will involve the installation and operation of a 9.9 MMBtu/hr hot water heater. The hot water heater will burn natural gas normally and distillate fuel oil during curtailment of natural gas supply. This new emission unit will be subject to the RACT requirements of Georgia Rule 391-3-1-.02(2)(rrr) – “*NO<sub>x</sub> Emissions from Small Fuel-Burning Equipment.*” In this application OFS also proposed to remove the existing steam boiler Nos. B001, B002, B003 and B004 permanently from service.

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### PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

#### 3.1 Revised/Update Emission Units

Emission Unit Groups		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
BG02	Hot water generators B005 and B007	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(tt) 40 CFR 60 Subpart Dc PSD Avoidance for SO <sub>2</sub> 391-3-1-.02(2)(rrr)	3.2.2, 3.3.1, 3.3.2, 3.3.3, 3.4.3, 3.4.4, 3.4.17, 5.2.2, 5.2.3, 5.2.6, 5.3.1, 6.1.7b, 6.1.8, 6.2.2, 6.2.7, 6.2.8, 6.2.14, 6.2.15, 6.2.16, 6.2.18, 6.2.21	B05C B07C	Low NO <sub>x</sub> burners.
B008	9.9 Mmbtu/hr Hot Water Heater	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.02(2)(rrr)	2.1.2, 2.3.1, 3.4.4, 3.4.17, 3.4.18, 3.4.19, 5.2.2, 5.2.3, 5.3.1, 6.1.8, 6.2.4, 6.2.14, 6.2.16, 6.2.29	B008	Low NO <sub>x</sub> burners.
CPE1	Cooling Water Pump Engine	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(tt) PSD Avoidance for SO <sub>2</sub> Avoidance of 391-3-1-.02(2)(yy)	3.2.3, 3.4.5, 3.4.6, 5.2.2, 5.3.1, 6.1.7b, 6.2.9a, 6.2.10, 6.2.18, 6.2.19, 6.2.20, 6.2.21	None.	None.
N/A	200 HP Diesel Fire Pump Engine	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(tt) PSD Avoidance for SO <sub>2</sub> Avoidance of 391-3-1-.02(2)(yy)	2.1.1, 2.1.2, 2.3.1, 2.3.2, 3.2.14, 6.1.7, 6.1.8, 6.2.4, 6.2.15, 6.2.17, 6.2.18, 6.2.20, 6.2.22, 6.2.26, 6.2.27, 6.2.28	None	None
CVD1	MCVD deposition equipment	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) Georgia Air Toxics Guideline	3.2.10, 3.2.11, 3.4.13, 3.4.16, 4.2.11, 5.2.2a-d, 5.3.1, 6.1.7c	LAC3	Ionizing wet scrubber (WESP)
EM01	Emergency generators	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(tt) PSD Avoidance for SO <sub>2</sub> Avoidance of 391-3-1-.02(2)(yy)	3.2.4, 3.2.5, 3.4.5, 3.4.6, 5.2.2, 5.2.4, 5.3.1, 6.1.7b, 6.2.9b, 6.2.11, 6.2.17, 6.2.18, 6.2.19, 6.2.21	None.	None.
EG01	475 kW diesel Emergency generator	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) Avoidance of 391-3-1-.02(2)(mmm) emission limitation	3.2.12, 3.4.5, 3.4.6, 5.2.4, 5.3.1, 6.1.8, 6.2.26, 6.2.27, 6.2.28	None.	None.
EG02	594 kW diesel Emergency generator	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) Avoidance of 391-3-1-.02(2)(mmm) emission limitation	3.2.13, 3.4.5, 3.4.6, 5.2.4, 5.3.1, 6.1.8, 6.2.26, 6.2.27, 6.2.28	None.	None.
FC02	Fiber coloring equipment	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(tt)	3.4.8, 3.4.15, 3.4.16, 6.1.7b, 6.2.3b	None.	None.
FC01	Fiber coloring equipment	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(tt)	3.4.8, 3.4.15, 3.4.16, 6.1.7b, 6.2.3b	None.	None.
FDT1	Fiber draw towers	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(tt)	3.4.7, 3.4.14, 3.4.16, 6.1.7b, 6.2.3a	None.	None.
FRA1	Fiber ribbon assembly lines	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(tt)	3.4.9, 3.4.10, 3.4.15, 3.4.16, 4.2.13, 5.2.1, 5.3.1, 6.1.7b-c, 6.2.3c	RC01- RC09	Catalytic oxidizers
FRA2	Fiber ribbon assembly lines	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(tt)	3.4.9, 3.4.10, 3.4.15, 3.4.16, 4.2.13, 5.2.1, 5.3.1, 6.1.7b-c, 6.2.3c	RC11- RC29	Catalytic oxidizers
FRA3	Fiber ribbon assembly lines	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(tt)	3.4.10, 3.4.15, 3.4.16, 4.2.14, 5.2.1, 5.3.1, 6.1.7c	RC30- RC39	Catalytic oxidizers

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Emission Unit Groups		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
TF04	Glass tube furnace	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) Georgia Air Toxics Guideline	3.2.6, 3.2.7, 3.4.11, 3.4.16, 4.2.3, 4.2.4, 5.2.1, 5.2.2, 5.3.1, 6.1.7c, 6.2.12, 6.2.13	TFC1 TFC2 TFC3	Thermal oxidizer Chlorine scrubber Carbon adsorber
TW02	Tube wash facility (RIT 1)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	3.4.12, 3.4.16, 5.2.2, 5.3.1, 6.1.7c	TWC2	Scrubber
TW03	Tube wash facility (RIT 2)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) Georgia Air Toxics Guideline	3.2.8, 3.4.12, 3.4.15, 4.2.5, 4.2.6, 5.2.2, 5.3.1, 6.1.7c	TWC3	Scrubber
VAD1	VAD deposition equipment	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(tt)	3.4.14, 3.4.16, 5.2.2a-d, 4.2.10, 4.2.12, 5.3.1, 6.1.7c	VAC1 VAC3	Ionizing wet scrubber Scrubber
VAD2	VAD deposition equipment	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(tt) Georgia Air Toxics Guideline Avoidance of Section 112(g)	3.2.10, 3.2.11, 3.4.14, 3.4.16, 4.2.8, 4.2.9, 5.2.2a-d, 4.2.12, 5.3.1, 6.1.7c	VAC4	Ionizing wet scrubber

\* Generally applicable requirements contained in this permit may also apply to emission units listed above.

Emission Unit Group Listing for OFS Brightwave Solutions			
Emission Unit Group	Emission Unit Group Name	Applicable Emission Unit ID Numbers	Comments
BG02	Boiler Group 2	B005, B007	Subject to 40 CFR 60 Subpart Dc.
CVD1	MCVD Deposition Equipment Group 1	L073 – L138	Chemical deposition process for production of glass rods.
EM01	Emergency Generator Group 1	EG03, EG04	
FC01	Fiber Coloring Group 1	Post draw coloring lines (PD01 - PD56)	UV curable materials used.
FC02	Fiber Coloring Group 2	Post draw coloring lines (PD57 - PD76)	
FDT1	Fiber Draw Tower Group 1	UT13, UT14, UT15, UT16, UT17, UT18, UT19, UT20, UT21, UT22, UT23, UT24, UT25, UT26, UT27, UT28, UT29, UT30, UT31, UT32, UT33, UT34, UT35, UT36	
FRA1	Fiber Ribbon Assembly Line Group 1	RL1, RL2, RL3, RL4, RL5, RL6, RL7, RL8, RL9	Includes ink jet printers and catalytic oxidizers are considered an inherent part of the ink jet printer.
FRA2	Fiber Ribbon Assembly Line Group 2	RL11, RL12, RL13, RL14, RL15, RL16, 2L17, RL18, RL19, RL20, RL21, RL22, RL23, RL24, RL25, RL26, RL27, RL28, RL29	Includes ink jet printers and catalytic oxidizers are considered an inherent part of the ink jet printer.
FRA3	Fiber Ribbon Assembly Line Group 3	RL30, RL31, RL32, RL33, RL34, RL35, RL36, RL37, RL38, RL39	Includes ink jet printers and catalytic oxidizers are considered an inherent part of the ink jet printer.
TF04	Glass Tube Furnace Process	None.	Furnaces used for purifying glass tube body of contaminants such as hydrogen and metal compounds.
TW02	Tube wash facility (RIT 1)	None.	Equipment for cleaning glass tubes and rods.
TW03	Tube wash facility (RIT 2)	None.	Equipment for cleaning glass tubes and rods.
VAD1	VAD Deposition Equipment Group 1	VA01, VA02	Produce glass rods.
VAD2	VAD Deposition Equipment Group 2	VA04, VA05	Produce glass rods.

Emission Unit Listing for OFS Brightwave Solutions			
Emission Unit ID No.	Emission Unit Description	Applicable Emission Unit Groups	Comments
B005	Hot water generator	BG02	48 MMBtu/hr boiler. Installed in 1998. Has a low NO <sub>x</sub> burner (B05C).
B007	Hot water generator	BG02	10 MMBtu/hr to 48 MMBtu/hr boiler, inclusive. Installed in 1998. Has a low NO <sub>x</sub> burner (B07C).
B008	Hot water generator	B008	9.9 MMBtu/hr. Installed in 2006
CPE1	Cooling pump engine		
EG01	Emergency generator		Has an output of 475 kW. Installed before April 1, 2000. Fires diesel fuel.
EG02	Emergency generator		Has an output of 594 kW. Installed before April 1, 2000. Fires diesel fuel.

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Emission Unit Listing for OFS Brightwave Solutions			
Emission Unit ID No.	Emission Unit Description	Applicable Emission Unit Groups	Comments
EG03	Emergency generator	EM01	Has an output of 475 kW. Installed before April 1, 2000. Fires diesel fuel.
EG04	Emergency generator	EM01	Has an output of 594 kW. Installed before April 1, 2000. Fires diesel fuel.
L73-138	MCVD lathes	CVD1	.
PD01-PD56	Post draw coloring lines	FC01	
PD57-PD76	Post draw coloring lines	FC02	
RL01-RL09	Fiber draw ribbon lines	FRA1	
RL11-RL29	Fiber draw ribbon lines	FRA2	
RL30-RL39	Fiber draw ribbon lines	FRA3	
UT13-UT36	Ultra tall fiber draw towers	FDT1	
VA01	VAD deposition equipment	VAD1	Equipment for fabrication of glass soot boules for preform cores or jacket.
VA02	VAD consolidation furnaces	VAD1	Furnace used for fusing of the glass soot on core bodies and jacket bodies.

Air Pollution Control Device Listing for OFS Brightwave Solutions				
APCD ID No.	APCD Description	Applicable Emission Unit Groups	Applicable Emission Unit ID Number	Comments
B05C	Low NO <sub>x</sub> burner	BG02	B005	
B07C	Low NO <sub>x</sub> burner	BG02	B007	
CPC1	Chemical purification building scrubber	NA		Controls HCl emissions from MCVD SiCl <sub>4</sub> bulk storage tank venting.
LAC3	MCVD WESP scrubber	CVD1	L73 – L138	Controls acid mist emissions.
RC01-RC09	Catalytic oxidizers	FRA1	RL01-RL09	Oxidizers are considered an inherent part of ribbon line.
RC11-RC29	Catalytic oxidizers	FRA2	RL11-RL29	Oxidizers are considered an inherent part of ribbon line.
RC30-RC39	Catalytic oxidizers	FRA3	RL30-RL39	Oxidizers are considered an inherent part of ribbon line.
TFC1	Two-stage thermal oxidizer	None.	TF04	Controls process odors.
TFC2	Chlorine scrubber	None.	TF04	Controls Cl <sub>2</sub> emissions.
TFC3	Carbon adsorber	None.	TF04	Controls process odors (back-up to TF01).
TWC2	Wet scrubber	None.	TW02	Controls acid mist emissions.
TWC3	Wet scrubber	None.	TW03	Control acid mist emissions.
VAC1	Ionizing wet scrubber	VAD1	VA01, VA02	Controls HCl, HF, and Cl <sub>2</sub> emissions.
VAC3	VAD bulk supply scrubber	NA		Control HCl emissions from VAD SiCl <sub>4</sub> bulk storage tank venting. Back-up to VAC1.
VAC4	Ionizing wet scrubber	VAD2	VA04, VA05	Controls HCl, HF, and Cl <sub>2</sub> emissions.

\* Generally applicable requirements contained in this permit may also apply to emission units listed above.

### 3.2 Equipment Emission Caps and Operating Limits

3.2.1 [deleted]

#### New Conditions

3.2.12 The Permittee shall operate the stationary diesel generator EG01 (Emission Unit I.D. No. EG01) strictly as an emergency standby power source as defined by 391-3-1-.02(2)(mmm)4.(i) of Georgia Rules for Air Quality Control. The total operating time of the generator shall not exceed 200 hours during any period of twelve (12) consecutive months.  
[391-3-1-.02(2)(mmm)4(i)]

3.2.13 The Permittee shall operate the stationary diesel generator EG02 (Emission Unit I.D. EG02) strictly as an emergency standby power source as defined by 391-3-1-.02(2)(mmm)4.(i) of Georgia Rules for Air Quality Control. The total operating time of the generator shall not exceed 200 hours during any period of twelve (12) consecutive months.  
[391-3-1-.02(2)(mmm)4(i)]

3.2.14 The Permittee shall limit the potential NO<sub>x</sub> emissions (expressed as NO<sub>2</sub>) from the stationary diesel fire pump engine to no more than one ton per year, **or** operate the engine to no more that 280 hours during any period of twelve (12) consecutive months.  
[391-3-1-.02(2)(yy)4]

### 3.4 Equipment SIP Rule Standards

3.4.1 and 3.4.2 [deleted]

#### Modified Conditions

3.4.4 The sulfur content of any fuel combusted in each boiler in Emission Unit Group BG02 and in the new 9.9 MMBtu/hr hot water heater B008 shall not exceed 2.5 weight percent.  
[391-3-1-.02(2)(g)2]

3.4.5 The sulfur content of fuels combusted in engines in Emission Unit Group EM01, cooling pump engine CPE1, emergency diesel generator EG01, emergency diesel generator EG02, and diesel fire pump engine shall not exceed 2.5 weight percent.  
[391-3-1-.02(2)(g)2]

3.4.6 The Permittee shall not discharge, or cause the discharge, from each engine in Emission Unit Group EM01, cooling pump engine CPE1, emergency diesel generator EG01, emergency diesel generator EG02, and diesel fire pump engine, visible emissions the opacity of which is equal to or greater than forty (40) percent.  
[391-3-1-.02(2)(b)]

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### New Conditions

- 3.4.17 The Permittee shall meet the requirements of this condition during the operation of the existing hot water generators B005 and B007, and on and after the start-up of the operation of the new 9.9 MMBtu/hr hot water heater B008 (Emission ID. No. B008):  
[391-3-1-.02(2)(rrr)(iv) and (v)]
- a. Perform an annual tune-up no later than February 1 and no later than May 1 of each calendar year. The annual tune-up shall be performed using the manufacturer's recommended settings for reduced NO<sub>x</sub> emissions, or using a NO<sub>x</sub> analyzer so that NO<sub>x</sub> emissions are minimized in a manner consistent with good combustion practice and safe fuel-burning equipment operation.
  - b. Fire only natural gas, LPG or propane during the calendar months of May through September of each year.
  - c. Maintain records of all tune-ups required to be performed in accordance with this condition. These records shall indicate the date and time the tune-up was performed, state what burner settings were implemented to minimize NO<sub>x</sub> emissions and explain how those settings were determined. All documents and calculations used to determine reduced NO<sub>x</sub> fuel-burning equipment settings shall be kept as part of the turn-up, maintenance and adjustments records. All records required shall be retained available for inspection or submittal either in written or electronic form for at least five years from the date of record.
- 3.4.18 The Permittee shall not discharge, or cause the discharge, from the new 9.9 MMBtu/hr hot water heater B008, visible emissions the opacity of which is equal to or greater than twenty (20) percent except for one six minute period per hour of not more than twenty-seven (27) percent opacity.  
[391-3-1-.02(2)(b)]
- 3.4.19 The Permittee shall not discharge, or cause the discharge, from the new 9.9 MMBtu/hr hot water heater B008, particulate matter in amounts equal to or exceeding 0.5 pounds per million BTU heat input.  
[391-3-1-.02(2)(d)2(i)]

**PART 4.0 REQUIREMENTS FOR TESTING**

**4.2 Specific Testing Requirements**

4.2.1 and 4.2.2 [deleted]

**PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)****5.2 Specific Monitoring Requirements**

5.2.5 [deleted]

Modified Conditions

5.2.2 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the following equipment. Data shall be recorded at the frequency specified below. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.  
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. through e. [unchanged]

f. Volume of natural gas (in million cubic feet) consumed by boilers B005, B007 and the 9.9 MMBtu/hr hot water heater B008. Volume shall be recorded monthly.

g. Volume of distillate fuel oil (in gallons) consumed by boilers B005, B007 and the 9.9 MMBtu/hr hot water heater B008. Volume shall be recorded monthly.

5.2.3 The Permittee shall monitor the sulfur content of the fuel oil burned in the boilers in Emission Unit Group BG02 and the 9.9 MMBtu/hr hot water heater B008 by either of the following methods:

a. Fuel oil receipts obtained from the fuel supplier certifying that the fuel oil is No. 1 or 2 as defined in ASTM D396 and contains less than or equal to 0.5 percent sulfur, by weight.

b. Analysis of the fuel oil conducted by methods of sampling and analysis which have been specified or approved by the Division which demonstrates that the fuel oil contains less than or equal to 0.5 percent sulfur, by weight, and meets the specifications for No. 1 or 2, as defined in ASTM D396.

For the purpose of demonstrating compliance multiple truckloads of fuel oil may constitute a single shipment, provided such trucks arrive at the facility in a contemporaneous manner.

[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), and 40 CFR 60.48c(f)1 for boilers in Emission Unit Group BG02 (boilers B004, B005, and B007)]

5.2.4 The Permittee shall monitor the sulfur content of fuel oil burned in Emission Unit Group EM01, emergency diesel generator EG01, emergency diesel generator EG02, and diesel fire pump engine by fuel oil receipts obtained from the fuel supplier certifying that the fuel oil contains less than or equal to 2.5 percent sulfur, by weight.  
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

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- 5.3.1 The Permittee shall, in accordance with the requirements of Condition 6.1.1 and 6.1.6 of this Permit, maintain records of all data and information required by Conditions 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6, and 5.2.7. Reports shall be submitted in accordance with the requirements of Condition No. 6.1.4 of this Permit.  
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

**PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS****6.1 General Record Keeping and Reporting Requirements**Modified Condition

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:

- a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)  
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

None required to be reported in accordance with Condition No. 6.1.4.

- b. Exceedances: (means for the purpose of this Condition and Condition No. 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

***Facility-Wide Requirements***

- i. and ii. [unchanged]

***Boilers***

- iii. [deleted]
- iv. Any time fuel oil combusted in boilers in Emission Unit Group BG02 exceeds 0.5% sulfur by weight.  
[391-3-1-.02(6)(b)1, 40 CFR 70.6(a)(3)(i), 391-3-1-.03(2)(c) and 40 CFR 60.42c(d)]

***Stationary IC Engines***

- v. through vii. [unchanged]

***VOC RACT Requirements***

- viii. through x. [unchanged]

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- c. Excursions: (means for the purpose of this Condition and Condition No. 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)  
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

### *Facility-Wide Requirements*

- i. [unchanged]

### *Tube Fabrication*

- ii. through vii. [unchanged]

### *Tube Washing*

- viii through xiii. [unchanged]

### *Chemical Deposition*

- xiv through xxxi. [unchanged]

### *Process Groups*

- i. [unchanged]

### New Condition

- 6.1.8 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:  
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

- a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

None required to be reported in accordance with Condition 6.1.4.

- b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

- i. Any twelve consecutive month total hours of operation of the stationary diesel emergency generator EG01 (Emission Unit I.D. No. EG01) that exceed 200 hours.
  - ii. Any twelve consecutive month total hours of operation of the stationary diesel emergency generator EG02 (Emission Unit I.D. No. EG02) that exceed 200 hours.
  - iii. Any twelve consecutive month total hours of operation of the stationary diesel fire pump engine that exceed 280 hours or one ton per year.
  - iv. Any time fuel oil(s) combusted in the 9.9. MMBtu/hr hot water heater, emergency diesel generator EG01, emergency diesel generator EG02, or diesel fire pump engine exceeds 2.5% sulfur by weight.
- c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)
- i. Any instance of failure to comply with the RACT requirements specified in Condition 3.4.17.

**6.2 Specific Record Keeping and Reporting Requirements**

6.2.1, 6.2.5, and 6.2.6 [deleted]

Modified Conditions

- 6.2.4 The Permittee shall retain the following monthly records including calculations, fuel type, and heating value of applicable fuel (lb/MMcf or lb/gallon, whichever is applicable) for facility-wide equipment not specified in Condition 6.2.7:  
[Avoidance of 391-3-1-.02(2)(yy), 391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]
- a. The monthly fuel usage for each fuel-burning source;
  - b. The applicable AP-42 or other Division approved NO<sub>x</sub> emission factor for each fuel burning source;
  - c. The monthly NO<sub>x</sub> emissions for each fuel burning source;
  - d. The twelve month rolling total NO<sub>x</sub> emissions for each fuel burning source;

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6.2.14 The Permittee shall use the records of monthly NO<sub>x</sub> emissions required in Conditions 6.2.4, 6.2.8, 6.2.10, 6.2.11 and 6.2.13 to calculate the facility-wide monthly and twelve consecutive month total NO<sub>x</sub> emissions. The twelve consecutive month total shall be calculated each month by adding that month's NO<sub>x</sub> emissions to the monthly NO<sub>x</sub> emission from the previous eleven months. The Permittee shall notify the Division in writing if the NO<sub>x</sub> emissions for the facility exceed 4.17 tons during any calendar month or 50 tons during any twelve consecutive month period. This notification shall be postmarked by the thirtieth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the annual limit stated in Condition 2.1.1. Records of NO<sub>x</sub> emissions (including calculations) shall be kept available for inspection or submittal either in written or electronic form for a period of five years from the date of record. [391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

6.2.16 The Permittee shall calculate monthly SO<sub>2</sub> emissions from each boiler in Emission Unit Group BG02 and from the new 9.9 MMBtu/hr hot water heater B008 using the applicable SO<sub>2</sub> emission factor and fuel usage records for each month of boiler operation. Monthly SO<sub>2</sub> emissions shall be calculated using the following equation:

$$E = \frac{[(NG)(EF_{ng})] + [(OIL)(EF_{fo})]}{\left(\frac{2000 \text{ lb}}{\text{ton}}\right)}$$

Where:

E = Monthly SO<sub>2</sub> emissions (tons);  
NG = Monthly natural gas usage (in MMBtu heat input);  
EF<sub>ng</sub> = Applicable natural gas emission factor (0.0006 lb/MMBtu);  
OIL = Monthly fuel oil usage (in MMBtu heat input); and  
EF<sub>fo</sub> = Applicable distillate fuel oil emission factor (0.518 lb/MMBtu).

Records of monthly SO<sub>2</sub> emissions (including calculations) shall be kept available for inspection or submittal either in written or electronic form for a period of five years from the date of record.

[PSD Avoidance – 40 CFR 52.21; 391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

6.2.17 The Permittee shall calculate monthly SO<sub>2</sub> emissions from each generator in Emission Unit Group EM01 and from the diesel fire pump engine using the applicable SO<sub>2</sub> emission factor and fuel usage records for each month of generator operation. Monthly SO<sub>2</sub> emissions shall be calculated using the following equation:

$$E = \frac{GH(EF_{fo}) \left(1.341 \frac{\text{hp}}{\text{kw}}\right)}{2000}$$

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Where:

E	=	Monthly SO <sub>2</sub> emissions (tons)
G	=	Generating capacity of diesel generator (kW);
H	=	Monthly hours of operation for diesel generator (hrs/month);
EF <sub>fo</sub>	=	Fuel oil emission factor (i.e., 2.05x10 <sup>-3</sup> lb SO <sub>2</sub> /hp-hr).

6.2.21 The Permittee shall submit a report of the following information for each semiannual period ending June 30 and December 31 of each year. The reports shall be postmarked by the 30th day following the end of the quarterly period (July 30 and January 30, respectively).

[PSD/NSR Avoidance – 40 CFR 52.21 and 40 CFR 60.7]

a. through d. [unchanged]

e. The rolling twelve-month total NO<sub>x</sub> emissions for boilers in Emission Unit Group BG02, on a combined basis, for each month in the semiannual reporting period.

f. Certification by a Responsible Official that all distillate fuel oil combusted in boilers in Emission Unit Group BG02 does not contain more than 0.5 percent sulfur by weight.

g. [unchanged]

### New Conditions

6.2.26 The Permittee shall maintain monthly operating records of the emergency diesel generators EG01, EG02 and the diesel fire pump engine, including operating hours. These records shall be kept available for inspection or submittal for five (5) years from the date of record.

[Avoidance of 391-3-1-.02(2)(mmm) emission limitation, Avoidance of 391-3-1-.02(2)(yy) requirements, 391-3-1-.02(6)(b)1. & 391-3-1-.03(10)(d)1.(i)]

6.2.27 The Permittee shall use the records required in Condition 6.2.26 to determine the total operating hours of each of the engines described in Condition 6.2.26 for each calendar month. The Permittee shall notify the Division in writing if any of the monthly total operating time exceed 1/12<sup>th</sup> of its corresponding limit in Condition 3.2.12, 3.2.13 or 3.2.14. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with operating time limit involved.

[Avoidance of 391-3-1-.02(2)(mmm) emission limitation, Avoidance of 391-3-1-.02(2)(yy) requirements, 391-3-1-.02(6)(b)1. & 391-3-1-.03(10)(d)1.(i)]

6.2.28 The Permittee shall use monthly operating time data required by Condition 6.2.27 to calculate monthly the 12 month rolling totals of the operating time for each of the engines specified in Condition 6.2.26 for each period of 12-consecutive months. Each 12-month rolling total operating time shall be included in the semiannual report specified in

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Condition 6.1.4. The Permittee shall notify the Division in writing if any of the 12 month rolling total operating time exceeds its corresponding limit in Condition 3.2.12, 3.2.13 or 3.2.14. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with the emission limit(s) as specified in Condition 3.2.12, 3.2.13 or 3.2.14.

[Avoidance of 391-3-1-.02(2)(mmm) emission limitation, Avoidance of 391-3-1-.02(2)(yy) requirements, 391-3-1-.02(6)(b)1. & 391-3-1-.03(10)(d)1.(i)]

6.2.29 The Permittee shall furnish the Division written notification of the date of the initial startup of the new 9.9 MMBtu/hr hot water heater B008 within fifteen (15) days after such date.  
[391-3-1-.03(2)(c)]

6.2.30 The Permittee shall furnish the Division written notification(s) of the date(s) of the permanent removal of the existing boilers B001, B002, B003 and B004 (Emission Unit ID. Nos. B001, B002, B003 and B004) within fifteen (15) days after such date(s).  
[391-3-1-.03(2)(c)]

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OFS Brightwave Solutions, Inc.

Permit No.: 3357-135-0010-V-01-1

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