

Facility Name: **OFS Brightwave Solutions, Inc.**

City: Norcross

County: Gwinnett

AIRS #: 04-13-0135-00010

Application #: 15674/16539

Date SIP Application Received: 10/04/2004 and 12/19/2005

Date Title V Application Received: 12/19/2005

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

| <b>Program</b> | <b>Review Engineers</b> | <b>Review Managers</b> |
|----------------|-------------------------|------------------------|
| <b>SSPP</b>    | Wei-Wei Qiu             | Eric Cornwell          |
| <b>SSCP</b>    | Tammy Martiny           | James Eason            |
| <b>ISMP</b>    | Richard Taylor          | James Capp             |
| <b>TOXICS</b>  | n/a                     | n/a                    |

## **Introduction**

This narrative is being provided to assist the reader in understanding the content of the referenced SIP permit to construct and draft operating permit amendment. Complex issues and unusual items are explained in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Sections 391-3-1-.03(1) and 391-3-1-.03(10) of the Georgia Rules for Air Quality Control, (2) Part 70 of Chapter I of Title 40 of the Code of Federal Regulations, and (3) Title V of the Clean Air Act Amendments of 1990. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public comment period and EPA review process will be described in an addendum to this narrative.

**I. Facility Description**

A. Existing Permits

Table 1 below lists the current Title V permit, and all administrative amendments, minor and significant modifications to that permit, and 502(b)(10) attachments. Comments are listed in Table 2 below.

Table 1: Current Title V Permit and Amendments

| Permit/Amendment Number | Date of Issuance | Comments |    |
|-------------------------|------------------|----------|----|
|                         |                  | Yes      | No |
| 3357-135-0010-V-01-0    |                  |          | x  |

Table 2: Comments on Specific Permits

| Permit Number | Comments |
|---------------|----------|
| None          | N/A      |

B. Regulatory Status

1. PSD/NSR/RACT

This facility is a NSR major source because it has potential to emit more than 25 tons per year (tpy) of volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) respectively in the Atlanta “severe” ozone non-attainment area (NAA).

The current Title V operating permit No. 3357-135-0010-V-01-0 has annual operating time limits for the auxiliary cooling water pump engine and the diesel generators in Emission Unit Group EM01. These limits allow the engines involved to avoid NSR review and to be exempt from the NO<sub>x</sub> RACT requirements under Georgia Rules 391-3-1-.02(2)(yy) – “Emission of Nitrogen Oxides from Major Source” or 391-3-1-.02(2)(mmm) – “NO<sub>x</sub> Emissions from Stationary Gas Turbines and Stationary Engines Used to Generate Electricity.” This permit also limits the annual total NO<sub>x</sub> emissions from the existing boiler group BG02 to allow the three boilers with this group to avoid NSR review. This emission limit will be obsolete after the removal of all the existing boilers within boiler group BG02 after the proposed modification.

The 100 tpy SO<sub>2</sub> emission limit in current Title V operating permit No. 3357-135-0010-V-01-0 allows the facility as a whole to remain a minor source under NSR/PSD rules.

## 2. Title V Major Source Status by Pollutant

**Table 3: Title V Major Source Status**

| Pollutant        | Is the Pollutant Emitted? | If emitted, what is the facility's Title V status for the Pollutant? |                                   |                         |
|------------------|---------------------------|--|-----------------------------------|-------------------------|
|                  |                           | Major Source Status  | Major Source Requesting SM Status | Non-Major Source Status |
| PM               | ✓                         |  |                                   | ✓                       |
| PM <sub>10</sub> | ✓                         |  |                                   | ✓                       |
| SO <sub>2</sub>  | ✓                         |  |                                   | ✓                       |
| VOC              | ✓                         | ✓  |                                   |                         |
| NO <sub>x</sub>  | ✓                         | ✓  |                                   |                         |
| CO               | ✓                         |  |                                   | ✓                       |
| TRS              | N/A                       |  |                                   |                         |
| H <sub>2</sub> S | N/A                       |  |                                   |                         |
| Individual HAP   | ✓                         | ✓  |                                   |                         |
| Total HAPs       | ✓                         | ✓  |                                   |                         |

## II. Proposed Modification

### A. 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*”, 391-3-1-.02(2)(mmm) – “*NO<sub>x</sub> Emissions from Stationary Gas Turbines and Stationary Engines Used to Generate Electricity*” or Georgia Rule 391-3-1-.02(2)(rrr) – “*NO<sub>x</sub> Emissions from Small Fuel-Burning Equipment.*” The proposed RACT plan was then designated as Application No. 15674.

In this application, the Permittee 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) not applicable to this source.

The two existing hot water generators B005 and B007, which were permitted before May 1, 1999 and not modified on or after May 1, 1999, are not subject to Georgia Rule 391-3-1-.02(2)(lll) – “*NO<sub>x</sub> Emission from Fuel-Burning Equipment*”. Instead, they are subject to Georgia Rule 391-3-1-.02(2)(rrr).

On December 6, 2005, the company submitted Application No. 16539 proposing a modification to the facility. The modification will involve the installation and operation of a 9.9 MMBtu/hr hot water heater B008. The new 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 (rrr). In this application OFS also proposed to remove the existing steam boiler Nos. B001, B002, B003 and B004 permanently from service.

## B. Emissions Change

**Table 4: Emissions Change Due to Modification**

| <b>Pollutant</b> | <b>Is the Pollutant Emitted?</b> | <b>Net Actual Emissions Increase (Decrease) (tpy)</b> | <b>Net Potential Emissions Increase (Decrease) (tpy)</b> |
|------------------|----------------------------------|---|--|
| PM               | ✓                                | negligible  | negligible   |
| PM <sub>10</sub> | ✓                                | negligible  | negligible   |
| SO <sub>2</sub>  | ✓                                | negligible  | negligible   |
| VOC              | ✓                                | negligible  | negligible   |
| NO <sub>x</sub>  | ✓                                | <0.6  | 0.6  |
| CO               | ✓                                | <0.5  | <0.5   |
| TRS              | N/A                              |   |  |
| H <sub>2</sub> S | N/A                              |   |  |
| Individual HAP   | N/A                              |   |  |
| Total HAPs       | N/A                              |   |  |

## C. PSD/NSR Applicability

This facility is a NSR major source because it has potential to emit more than 25 tons per year (tpy) of volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) in the Atlanta ozone non-attainment area. This facility is a minor source for other criteria air pollutants. Any future facility modification causing any increases in criteria pollutant emissions will require a NSR applicability analyses to determine if the modification is major and thus subject to non-attainment area (NAA) permitting requirements under NSR and/or state regulations.

The existing Part 70 operating permit No. 3357-135-0010-V-01-0 contains a plant-wide annual NO<sub>x</sub> emission limit of 50 tpy. This emission limit was established previously to allow the facility as a whole to remain a minor source for NO<sub>x</sub> emissions. However, after the EPA 's reclassification of the Atlanta ozone non-attainment area, the major source threshold for NO<sub>x</sub> emission has been reduced to 25 tpy.

Because for the past several years the production at this facility has been either ceased or substantially below normal level due to business downturn, no efforts have been made to analyze the accumulated emission changes during the five year “contemporaneous” period.

**III. Facility Wide Requirements**

The modification does not involve or change any facility wide requirements.

A. Emission and Operating Caps:

None.

B. Applicable Rules and Regulations

None applicable.

C. Compliance Status

The application does not indicate any existing noncompliance issue.

D. Operational Flexibility

None applicable.

E. Permit Conditions

None applicable.

#### IV. Regulated Equipment Requirements

##### A. Brief Process Description

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*”, 391-3-1-.02(2)(mmm) - “*NO<sub>x</sub> Emissions from Stationary Gas Turbines and Stationary Engines Used to Generate Electricity*” or Georgia Rule 391-3-1-.02(2)(rrr) – “*NO<sub>x</sub> Emissions from Small Fuel-Burning Equipment.*” The proposed RACT plan was then designated as Application No. 15674.

In this application, the Permittee 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) not applicable to this source.

The two existing hot water generators B005 and B007, which were permitted before May 1, 1999 and not modified on or after May 1, 1999, are not subject to Georgia Rule 391-3-1-.02(2)(lll) – “*NO<sub>x</sub> Emission from Fuel-Burning Equipment*”. Instead, they are subject to Georgia Rule 391-3-1-.02(2)(rrr)– “*NO<sub>x</sub> Emissions from Small Fuel-Burning Equipment*”.

On December 6, 2005, the company submitted Application No. 16539 proposing a modification to the facility. The modification will involve the installation and operation of a 9.9 MMBtu/hr hot water heater B008. This new boiler will replace the existing boiler Nos. B001, B002, B003 and B004, as part of OFS' on-going effort to trim the excess production capability at this facility due to business downturn. The new 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). After the start-up of the new boiler, OFS proposed to remove the existing steam boiler Nos. B001, B002, B003 and B004 permanently from service.

B. Equipment List for the Process

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; steam boilers B005 and B007 | 391-3-1-.02(2)(d)<br>391-3-1-.02(2)(g)<br>391-3-1-.02(2)(tt)<br>40 CFR 60 Subpart Dc<br>PSD Avoidance for SO <sub>2</sub><br>391-3-1-.02(2)(rrr) | 3.2.2, 3.3.1, 3.3.2, 3.3.3,<br>3.4.3, 3.4.4, 3.4.17, 5.2.2,<br>5.2.3, 5.2.6, 5.3.1, 6.1.7b,<br>6.1.8, 6.2.2, 6.2.7, 6.2.8,<br>6.2.14, 6.2.15, 6.2.16,<br>6.2.18, 6.2.21 | B05C<br>B07C                  | Low NO <sub>x</sub> burners.                             |
| B008                 | 9.9 Mmbtu/hr Hot Water Heater                     | 391-3-1-.02(2)(d)<br>391-3-1-.02(2)(g)<br>391-3-1-.02(2)(rrr)  | 2.1.2, 2.3.1, 3.4.4, 3.4.17,<br>3.4.18, 3.4.19, 5.2.2, 5.2.3,<br>5.3.1, 6.1.8, 6.2.4, 6.2.14,<br>6.2.16, 6.2.29   | B008                          | Low NO <sub>x</sub> burners.                             |
| CPE1                 | Cooling Water Pump Engine                         | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(g)<br>391-3-1-.02(2)(tt)<br>PSD Avoidance for SO <sub>2</sub><br>Avoidance of 391-3-1-.02(2)(yy)             | 3.2.3, 3.4.5, 3.4.6, 5.2.2,<br>5.3.1, 6.1.7b, 6.2.9a,<br>6.2.10, 6.2.18, 6.2.19,<br>6.2.20, 6.2.21  | None.                         | None.  |
| N/A                  | 200 HP Diesel Fire Pump Engine                    | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(g)<br>391-3-1-.02(2)(tt)<br>PSD Avoidance for SO <sub>2</sub><br>Avoidance of 391-3-1-.02(2)(yy)             | 2.1.1, 2.1.2, 2.3.1, 2.3.2,<br>3.2.14, 6.1.7, 6.1.8, 6.2.4,<br>6.2.15, 6.2.17, 6.2.18,<br>6.2.20, 6.2.22, 6.2.26,<br>6.2.27, 6.2.28                                     | None                          | None   |
| CVD1                 | MCVD deposition equipment                         | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)<br>Georgia Air Toxics Guideline   | 3.2.10, 3.2.11, 3.4.13,<br>3.4.16, 4.2.11, 5.2.2a-d,<br>5.3.1, 6.1.7c   | LAC3                          | Ionizing wet scrubber (WESP)                             |
| EM01                 | Emergency generators                              | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(g)<br>391-3-1-.02(2)(tt)<br>PSD Avoidance for SO <sub>2</sub><br>Avoidance of 391-3-1-.02(2)(yy)             | 3.2.4, 3.2.5, 3.4.5, 3.4.6,<br>5.2.2, 5.2.4, 5.3.1, 6.1.7b,<br>6.2.9b, 6.2.11, 6.2.17,<br>6.2.18, 6.2.19, 6.2.21  | None.                         | None.  |
| EG01                 | 475 kW diesel Emergency generator                 | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(g)<br>Avoidance of 391-3-1-.02(2)(mmm) emission limitation   | 3.2.12, 3.4.5, 3.4.6, 5.2.4,<br>5.3.1, 6.1.8, 6.2.26, 6.2.27,<br>6.2.28   | None.                         | None.  |
| EG02                 | 594 kW diesel Emergency generator                 | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(g)<br>Avoidance of 391-3-1-.02(2)(mmm) emission limitation   | 3.2.13, 3.4.5, 3.4.6, 5.2.4,<br>5.3.1, 6.1.8, 6.2.26, 6.2.27,<br>6.2.28   | None.                         | None.  |
| FC02                 | Fiber coloring equipment                          | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)<br>391-3-1-.02(2)(tt)   | 3.4.8, 3.4.15, 3.4.16,<br>6.1.7b, 6.2.3b  | None.                         | None.  |
| FC01                 | Fiber coloring equipment                          | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)<br>391-3-1-.02(2)(tt)   | 3.4.8, 3.4.15, 3.4.16,<br>6.1.7b, 6.2.3b  | None.                         | None.  |
| FDT1                 | Fiber draw towers                                 | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)<br>391-3-1-.02(2)(tt)   | 3.4.7, 3.4.14, 3.4.16,<br>6.1.7b, 6.2.3a  | None.                         | None.  |
| FRA1                 | Fiber ribbon assembly lines                       | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)<br>391-3-1-.02(2)(tt)   | 3.4.9, 3.4.10, 3.4.15,<br>3.4.16, 4.2.13, 5.2.1, 5.3.1,<br>6.1.7b-c, 6.2.3c   | RC01-<br>RC09                 | Catalytic oxidizers                                      |
| FRA2                 | Fiber ribbon assembly lines                       | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)<br>391-3-1-.02(2)(tt)   | 3.4.9, 3.4.10, 3.4.15,<br>3.4.16, 4.2.13, 5.2.1, 5.3.1,<br>6.1.7b-c, 6.2.3c   | RC11-<br>RC29                 | Catalytic oxidizers                                      |
| FRA3                 | Fiber ribbon assembly lines                       | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)<br>391-3-1-.02(2)(tt)   | 3.4.10, 3.4.15, 3.4.16,<br>4.2.14, 5.2.1, 5.3.1, 6.1.7c   | RC30-<br>RC39                 | Catalytic oxidizers                                      |
| TF04                 | Glass tube furnace                                | 391-3-1-.02(2)(e)<br>391-3-1-.02(2)(b)<br>Georgia Air Toxics Guideline   | 3.2.6, 3.2.7, 3.4.11, 3.4.16,<br>4.2.3, 4.2.4, 5.2.1, 5.2.2,<br>5.3.1, 6.1.7c, 6.2.12, 6.2.13   | TFC1<br>TFC2<br>TFC3          | Thermal oxidizer<br>Chlorine scrubber<br>Carbon adsorber |
| TW02                 | Tube wash facility (RIT 1)                        | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)   | 3.4.12, 3.4.16, 5.2.2, 5.3.1,<br>6.1.7c   | TWC2                          | Scrubber   |
| TW03                 | Tube wash facility (RIT 2)                        | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)<br>Georgia Air Toxics Guideline   | 3.2.8, 3.4.12, 3.4.15, 4.2.5,<br>4.2.6, 5.2.2, 5.3.1, 6.1.7c  | TWC3                          | Scrubber   |

SIP CONSTRUCTION PERMIT AND TITLE V SIGNIFICANT MODIFICATION APPLICATION REVIEW

| Emission Unit Groups |                          | Specific Limitations/Requirements   |   | Air Pollution Control Devices |                                   |
|----------------------|--------------------------|---|---|-------------------------------|-----------------------------------|
| ID No.               | Description              | Applicable Requirements/Standards   | Corresponding Permit Conditions   | ID No.                        | Description                       |
| VAD1                 | VAD deposition equipment | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)<br>391-3-1-.02(2)(tt)  | 3.4.14, 3.4.16, 5.2.2a-d,<br>4.2.10, 4.2.12, 5.3.1, 6.1.7c                          | VAC1<br>VAC3                  | Ionizing wet scrubber<br>Scrubber |
| VAD2                 | VAD deposition equipment | 391-3-1-.02(2)(b)<br>391-3-1-.02(2)(e)<br>391-3-1-.02(2)(tt)<br>Georgia Air Toxics Guideline<br>Avoidance of Section 112(g) | 3.2.10, 3.2.11, 3.4.14,<br>3.4.16, 4.2.8, 4.2.9, 5.2.2a-d,<br>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.                               |
| 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                            |   |

| Emission Unit Listing for OFS Brightwave Solutions |                              |                                 |   |
|--|------------------------------|---------------------------------|---|
| Emission Unit ID No.                               | Emission Unit Description    | Applicable Emission Unit Groups | Comments  |
| 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.

### C. Equipment & Rule Applicability

#### Emission and Operating Caps –

This permit amendment will establish an annual operating time limit of 200 hours for each of the diesel generator Nos. EG01 and EG2 to allow them to qualify as “emergency generators” under Georgia Rule (mmm) and thus not to be subject to the NO<sub>x</sub> emission limitation of the rule.

This permit amendment will establish an annual operating time limit of 280 hours for the diesel fire pump engine to allow its potential NO<sub>x</sub> emissions to be less than one ton per year and thus not subject to the RACT requirements of Georgia Rule (yy).

**Applicable Rules and Regulations -**

Georgia Rule 391-3-1-.02(2)(g) – “*Sulfur Dioxide*” limits the sulfur content of the fuel(s) to be used by the new hot water heater B008 to no more than 2.5% by weight. The water heater will burn natural gas normally and distillate fuel oil during curtailment of natural gas supply.

Georgia Rule 391-3-1-.02(2)(rrr) applies to the existing hot water generators B005 and B007 per 391-3-1-.02(2)(rrr)(iv), and the new 9.9 MMBtu/hr hot water heater B008 per 391-3-1-.02(2)(rrr)(v). This rule requires the Permittee to: (1) Perform annual tune-up on these water heater 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. (2) Fire only natural gas, LPG or propane during the calendar months of May through September of each year. And (3) 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.

The 280-hour annual operating time limit to be established by the permit amendment will allow the potential NO<sub>x</sub> emissions from the existing diesel fire pump engine to stay less than one ton per year. Therefore, the engine is subject to Georgia Rule (yy)4. which exempts the unit from the RACT requirements of the rule.

The 200-hour annual operating time limit to be established by the permit amendment for each of the two existing diesel generators No. EG01 and EG02 will allow these generators to qualify as “emergency generators” under Georgia Rule (mmm)4(i) which exempts both generators from the NO<sub>x</sub> emission limitation of the rule.

Georgia Rule 391-3-1-.02(2)(d) – “*Fuel Burning Equipment*” limits the PM and visible emissions from the new 9.9 MMBtu hot water heater to less than 0.5 pounds per million BTU heat input and less than twenty (20) percent except for one six minute period per hour of not more than twenty-seven (27) percent opacity respectively.

The new hot water heater B008 will not be subject to the NSPS standard 40 CFR Part 60, Subpart Dc because input heat capacity is below the applicable threshold of 10 MMBtu/hr. The water heater is not subject to the MACT standard 40 CFR Part 63, Subpart DDDDD or any requirements of 40 CFR Part 63, Subpart A because of its small capacity and the type of fuels used.

**D. Compliance Status**

The application does not indicate any existing noncompliance issue.

**E. Operational Flexibility**

Not applicable.

## F. Permit Conditions

Conditions 3.2.12 and 3.2.13 are added to establish the 200 hour annual operating time for each of the two existing diesel generator Nos. EG01 and EG02. This limit will allow these generators to qualify as “emergency generators” under Georgia Rule (mmm)4(i) which exempts both generators from the NO<sub>x</sub> emission limitation of Georgia Rule (mmm).

[391-3-1-.02(2)(mmm)4(i)]

Condition 3.2.14 is added to 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. This emission cap in turn limits the operation time to no more than 280 hours during any period of twelve (12) consecutive months based on the source specific NO<sub>x</sub> emission factor.

[391-3-1-.02(2)(yy)4]

Condition 3.4.4 in the current permit No. 3357-135-0010-V-01-0 is revised to include the reference to the new hot water heater B008 and to remove the reference to the Emission Group BG01 which is scheduled to be removed permanently from the service during the proposed modification. Burning only natural gas and distillate oils, the water heater is anticipated to comply with the 2.5% sulfur content limit in Georgia Rule (g).

[391-3-1-.02(2)(g)]

Conditions 3.4.5 and 3.4.6 in the current permit No. 3357-135-0010-V-01-0 are revised to include the references to the emergency diesel generators EG01, EG02, and the diesel fire pump engine.

[391-3-1-.02(2)(g)2 and 391-3-1-.02(2)(b)]

Condition 3.4.17 is added to establish the NO<sub>x</sub> emission RACT requirements of Georgia Rule (rrr) applicable to the existing hot water heaters B005 and B007, and to the new hot water heater B008. The Permittee is required to perform an annual tune-up on the water heaters to minimize NO<sub>x</sub> emissions no later than February 1 and no later than May 1 of each calendar year; fire only natural gas, LPG or propane during the calendar months of May through September of each year; and keep all the tune-up and maintenance records.

[391-3-1-.02(2)(rrr)]

Condition 3.4.18 is added to establish the visible emission limit of Georgia Rule (d) applicable to the new hot water heater B008. Burning only natural gas and distillate fuel oils, the water heater is anticipated to comply with this emission limit.

[391-3-1-.02(2)(d)]

Condition 3.4.19 is added to subject the new 9.9 MMBtu hot water heater to the PM emission limit of Georgia Rule (d). Burning only natural gas and distillate fuel oils, the water heater is anticipated to comply with this emission limit.

[391-3-1-.02(2)(d)]

Because the Permittee will remove all the boilers in the Emission Unit Group BG01 permanently during the modification, Conditions 3.2.1, 3.4.1 and 3.4.2 in the current permit No. 3357-135-0010-V-01-0 have been eliminated.

**V. Testing Requirements (with Associated Record Keeping and Reporting)**

The proposed modification does not invoke any new or change any existing testing requirements. Because the Permittee has fulfilled the requirements of Conditions 4.2.1 and 4.2.2 in the current permit No. 3357-135-0010-V-01-0, both conditions have been eliminated.

**VI. Monitoring Requirements (with Associated Record Keeping and Reporting)**

Conditions 5.2.2, 5.2.3 and 5.3.1 in the current permit No. 3357-135-0010-V-01-0 have been revised either to include the reference to the 9.9 MMBtu/hr hot water heater B008 or to eliminate the references or the condition links to the Emission Unit Group BG01 and boiler B004 which are scheduled to be removed permanently from the facility during the proposed modification.

Condition 5.2.4 in the current permit No. 3357-135-0010-V-01-0 has been revised to include references to emergency diesel generator EG01, emergency diesel generator EG02, and diesel fire pump engine.

Condition 5.2.5 in the current permit No. 3357-135-0010-V-01-0 has been eliminated because of the scheduled permanent removal of Emission Unit Group BG01.

## **VII. Other Record Keeping and Reporting Requirements**

Condition 6.1.7 in the current permit No. 3357-135-0010-V-01-0 is revised to eliminate the references to the Emission Unit Group BG01 and boiler B004 which are scheduled to be removed permanently from the facility as part of the proposed modification.

Condition 6.1.8 is added to specify the reporting requirements for exceedances or excursions required in Condition 6.1.4 which are applicable to the existing hot water generators B005 and B007, the new hot water heater B008, and/or to the diesel engines subject to the annual operating time limits established by this permit amendment.

Condition 6.2.1, 6.2.5 and 6.2.6 in the current permit No. 3357-135-0010-V-01-0 have been eliminated because of the scheduled permanent removal of Emission Unit Group BG01 during the proposed modification.

Condition 6.2.4 in the current permit No. 3357-135-0010-V-01-0 has been revised to eliminate the reference to Condition 6.2.5.

Condition 6.2.14 in the current permit No. 3357-135-0010-V-01-0 has been revised to eliminate the reference to Condition 6.2.6.

Condition 6.2.16 in the current permit No. 3357-135-0010-V-01-0 has been revised to eliminate the reference to the Emission Unit Group BG01 and to add the reference to the new hot water heater B008.

Condition 6.2.17 in the current permit No. 3357-135-0010-V-01-0 has been revised to include the reference to the diesel fire pump engine.

Condition 6.2.21 in the current permit No. 3357-135-0010-V-01-0 has been revised to eliminate the reference to the Emission Unit Group BG01.

Conditions 6.2.26, 6.2.27 and 6.2.28 are added to established the record keeping, compliance demonstration and reporting requirements with regard to the annual operating time limits in Conditions 3.2.12, 3.2.13 and 3.2.14 of this permit amendment. These conditions will make the newly established operating limits practically enforceable.

Conditions 6.2.29 and 6.2.30 are added to require the Permittee to notify the Division in writing the start-up of the new hot water heater B008 and the removal of boilers B001, B002, B003 and B004. The notification(s) will establish the time frame for the compliance with the new or revised record keeping, compliance determination and reporting conditions in this permit amendment.

**VIII. Specific Requirements**

A. Operational Flexibility

Not applicable.

B. Alternative Requirements

None applicable.

C. Insignificant Activities

None.

D. Temporary Sources

None.

E. Short-Term Activities

None.

F. Compliance Schedule/Progress Reports

None.

G. Emissions Trading

Not applicable.

H. Acid Rain Requirements

Not applicable.

I. Prevention of Accidental Releases

This modification does change the source's applicability.

J. Stratospheric Ozone Protection Requirements

This modification does change the source's applicability.

K. Pollution Prevention

Not applicable.

L. Specific Conditions

None.

**Addendum to Narrative**

The 30-day public review started on April 13, 2006 and ended on May 13, 2006. Comments were not received by the Division.