The State of New Hampshire
**Department of Environmental Services**
**Thomas S. Burack, Commissioner**

*Celebrating 25 years of protecting*
*New Hampshire's environment.*

October 24, 2012

Mr. William Dannhauer
Operations Manager
Kalwall Corporation, Bow – Flat Sheet Division
40 River Road
Bow, NH 03304

**RE: Inspection Report**

Dear Mr. Dannhauer:

The New Hampshire Department of Environmental Services, Air Resources Division ("DES") conducted a Full Compliance Evaluation at Kalwall Corporation, Flat Sheet Division, located at 40 River Road, Bow, NH on July 24, 2012. Enclosed is a copy of the Inspection Report for your records.

There were no deficiencies found during the inspection.

If you have any questions, please contact me by telephone at (603) 271-6797 or by email at Alan.Moulton@des.nh.gov or Greg Helve, Compliance Assessment Section Supervisor, at (603) 271-0650.

Sincerely,

Alan H. Moulton
Compliance Assessment Engineer
Air Resources Division

Enclosure: Inspection Report

cc: Town Manager, Town of Bow, 10 Grandview Road, Bow, NH 03304
Kathy Harvey, Environmental, Health, & Safety Manager, Robert R. Keller & Associates, Inc., 41 Union St., Manchester, NH 03103


# ON-SITE FULL COMPLIANCE EVALUATION

**Kalwall Corporation**
**Bow – Flat Sheet Division**
**40 River Road**
**Bow, New Hampshire 03304**
**Merrimack County**
**(603) 224-6881**

**AFS # 3301300051**

**Inspection Date: July 24, 2012**
**Final Report: October 24, 2012**

**Inspected and Report Prepared by:**

**New Hampshire Department of Environmental Services**
**Air Resources Division**
**29 Hazen Dr., P.O. Box 95**
**Concord, New Hampshire 03302-0095**

**Alan H. Moulton**
**Compliance Assessment Engineer**

## I. Inspection

On July 24, 2012, the New Hampshire Department of Environmental Services, Air Resources Division ("DES") conducted an inspection as part of our On-site Full Compliance Evaluation of Kalwall Corporation, Bow – Flat Sheet Division ("Kalwall"), located in Bow, NH. Kalwall was targeted for inspection based on DES inspection criteria, which requires that a major source with a Title V Permit be inspected once every two years. This inspection covered the period July 21, 2010 to July 24, 2012.

DES contacted Kalwall on July 16, 2012 to schedule a compliance inspection for July 24, 2012. This was the first day both parties had time available.

Inspection details:

- Inspection Date/Time: July 24, 2012, 9:00 AM
- Inspection Type: On-site Full Compliance Evaluation
- Inspected by: Alan Moulton, DES Compliance Assessment Engineer
  Benjamin Rollins, Intern
- Weather: Sunny and 75° to 85°F; wind: calm
- Source Contact(s): William Dannhauer, Operations Manager
  Kathleen Harvey, Environmental, Health, & Safety Manager, RR Keller and Associates
- Last inspection: July 21, 2010
  - Kalwall is operating a baghouse [filter house] in the line before the Regenerative Thermal Oxidizer ("RTO"). DES requested that Kalwall submit an ARD-2 form to DES providing information on the baghouse for inclusion into Permit TV-OP-027. The filter house is not considered a pollution control device since it is used to remove particulate from the gas stream that may damage the RTO.
  - Kalwall is operating a diesel powered fire pump that was not listed in the permit or as an insignificant device. DES requested that Kalwall submit an ARD-2 form to DES providing information on the fire pump for inclusion into Permit TV-OP-027. On August 20, 2010, Kalwall submitted to DES the required ARD-2 form.
  - Kalwall is not verifying the accuracy of the temperature monitor of the RTO twice each year, as required by Table 6, Item 14 of Permit TP-OP-027. On August 5, 2010, Kalwall submitted to DES a copy of the calibration procedure for the temperature monitor.
  - Kalwall has not included emissions from the fire pump in the annual emission statements. Kalwall included the emissions from the fire pump in the 2010 and 2011 annual emission statements.
  - Kalwall has not performed an evaluation based on the November 2009 issue of Env-A 1400. On August 20, 2010, Kalwall submitted to DES a revised Env-A 1400 air toxics compliance determination.
  - Kalwall should include in the title of the semi-annual report that the report contains Subpart SS and Subpart WWWW information. Kalwall is including this information in the semi-annual reports.
  - Kalwall is required to have a written Startup, Shutdown, and Malfunction Plan ("SSMP") per Table 5, Item 14 of Permit TV-OP-027. On September 17, 2010,

Kalwall submitted to DES a copy of the SSMP.

- Permit Number: TV-OP-027
  Issued: 2/10/06
  Significant Modification: 10/21/09
  Expired: 2/28/11

The purpose of the inspection was discussed as well as the rules pertaining to claims of confidentiality and facility safety concerns. Kalwall agreed to the inspection and authorized access to the facility. No material provided during the inspection was claimed as confidential.

During the tour of the facility, DES observed the Continuous Fiberglass Reinforced Plastic ("FRP") Lamination Line, which includes the following: resin mixing area; resin application area; wet-out area; and curing oven. DES also observed the fire pump engine. During the inspection, Kalwall was conducting the required stack testing on the Regenerative Thermal Oxidizer ("RTO").

No visual emissions or odors were detected outside the facility.

## II. Facility Description

Kalwall owns and operates a continuous lamination manufacturing process for making flat reinforced plastic (fiberglass) sheet or panels. Among the most common applications of the sheet product are construction panels, electrical insulating material, and glazing panels. The sheets may be opaque or translucent, flat or corrugated, depending on customer specifications. Additional uses include truck trailer paneling, refrigerator liners, sanitary paneling, solar collector covers, road signs, and other similar products.

The lamination manufacturing process proceeds without interruption, as long as raw materials are supplied to the feed end of the equipment. In practice, Kalwall "injects" resin into the applicator bath tank in 500 pound batches. Thus, the process is intermittent at Kalwall's facility.

Rolls of fiberglass roving are chopped and mechanically distributed on a carrier surface to produce a uniform mat. The mat is then fed into a resin applicator bath at a measured rate. Resin is gravity fed to the applicator bath from an elevated mixing tank area. In the resin applicator bath, the fiberglass mat is impregnated with resin, then run through a squeeze roll to remove excess resin. The squeeze roll further compacts the resin into the fiber bundles or mat, and also controls the sheet thickness. At this point a carrier film picks up the impregnated sheet and supports it from below. The production line continues with a second film applied from above to sandwich the resin-impregnated fiberglass between the two sheets.

The automated production line then passes through a heating zone of 190 to 250 degrees Fahrenheit. This step accelerates the chemical reaction, and cures and hardens the finished material. The resulting "fiberglass" sheet is flexible enough to be coiled in rolls. Kalwall's practice, however, is to allow the sheet stock to cool and cure thoroughly before stripping away

the carrier film. This practice reduces, if not eliminates, fugitive emissions of residual monomer from incompletely-cured product.

Kalwall operates a RTO to minimize emissions from the wet-out area of the production process. Kalwall also operates a filter house to remove fiberglass fibers from the air stream prior to the RTO. The filter house is used to minimize contamination of the RTO and is not considered an air pollution control device.

Kalwall operates a diesel powered fire pump as part of it fire protection system.

Kalwall operates in a 30,000 square-foot facility containing manufacturing space, office space, and warehousing. The facility currently operates three shifts per day, five days per week.

## III. Emission Unit Identification and Operating Conditions

Table 1 contains the permitted emission units and the reported operational and fuel use data for this inspection period.

**Table 1: Emission Unit Identification, Operating Restrictions and Fuel Usage Data**

| Emission Unit | Description | Permitted Operational Restrictions | Reported Operational & Fuel Usage Data |
|---|---|---|---|
| EU01 | Fiberglass Reinforced Plastic Lamination Process<br><br>Mfr: Kalwall<br>Installed: 1970 | Opacity: 20% | 2011:<br>3,433,272 lbs. resin<br>5,315.76 gal. acetone<br>2010:<br>3,336,136 lbs. resin<br>5,645.45 gal. acetone |
| EU02 | Fire Pump Engine<br><br>Caterpillar<br>Model #: 3208<br>Serial #: 03Z04769<br>Rating: 1.93 MMBtu/hr<br>235 hp<br>Fuel: #2 fuel oil or diesel fuel<br>Max. Design Fuel Flow Rate: 14.1 gal/hr<br>Installed: 1986 | Shall not exceed 500 hours of operation during any consecutive 12-month period.<br><br>Sulfur content of #2 fuel oil limited to 0.4% by weight.<br><br>Opacity: 20% | Total hours as of 7/24/12:<br>291.6 hrs<br><br>2011:<br>109 gal diesel fuel<br>26 hrs<br>2010:<br>145 gal diesel fuel<br>26 hrs |

Facility wide emissions for calendar years 2010-2011 are included in Table 2. Facility emissions

are calculated using the facility's raw material usage data, fuel usage data, and the EPA's AP-42 Emission Factors. The raw material usage data, fuel usage data and the facility emissions reported by Kalwall were confirmed during this inspection. During the inspection, DES discussed the use of current AP-42 emission factors in the annual emission reports. In its 2010 and 2011 annual emissions reports, Kalwall used the following emission factors for the following devices:

For the three industrial furnaces: (#2 fuel oil)

| | Kalwall used: | Kalwall should have used: |
|---|---|---|
| $SO_2$: | 142 lb/1,000 gal. | 56.8 lb/1,000 gal. |
| PM: | 2.5 lb/1,000 gal. | 0.40 lb/1,000 gal. |

For the 18 industrial process burners: (Propane gas)

| | Kalwall used: | Kalwall should have used: |
|---|---|---|
| NOx: | 7.50 lb/1,000 gal. | 13.0 lbs/1,000 gal. |
| $SO_2$: | 0.10 lb/1,000 gal. | 0.0185 lbs/1,000 gal. |
| CO: | 3.40 lb/1,000 gal. | 7.5 lbs/1,000 gal. |
| PM: | 1.85 lb/1,000 gal. | 0.2 lb/1,000 gal. |
| VOC: | 0.50 lb/1,000 gal. | 0.8 lb/1,000 gal. |

For the fire pump diesel engine: (diesel fuel)

| | Kalwall used: | Kalwall should have used: |
|---|---|---|
| NOx: | 487.72 lb/1,000 gal. | 488.01 lb/1,000 gal. |
| VOC: | 43.84 lb/1,000 gal. | 43.63 lb/1,000 gal. |

DES requested that Kalwall revise and resubmit the 2011 annual emissions report to DES. On August 7, 2012, DES received the revised 2011 annual emissions report, with the corrected emission factors. DES suggested that Kalwall review the emission factors used on an annual basis.

**Table 2: Facility-Wide Emissions**

| | Nitrogen Oxides (tpy) | Sulfur Dioxide (tpy) | Carbon Monoxide (tpy) | Particulate Matter -$PM_{10}$ (tpy) | VOCs (tpy) | HAPs/ RTAPs (tpy) |
|---|---|---|---|---|---|---|
| **Permitted Emission Limits** | -- | -- | -- | -- | **48.5** | See note 1. |
| 2011 | 1.40 | 0.46 | 0.75 | 0.02 | 0.77 | 17.54 |
| 2010 | 0.87 | 0.54 | 0.44 | 0.02 | 0.71 | 18.63 |

1 – Facility-wide HAP emissions are limited to less than 10 tons per year ("tpy") of any

individual HAP and less than 25 tpy of all HAPs combined.

## IV. Control Equipment

The devices and/or processes identified in Table 3 are considered air pollution control equipment or techniques for each identified emissions unit and are required to be operated at all times that the associated devices are operating in order to meet Permit conditions. Operation of the air pollution control equipment was verified during this inspection.

**Table 3: Pollution Control Equipment Identification**

| Pollution Control Equipment ID | Description | Purpose | Emission Unit Controlled |
|---|---|---|---|
| PCE01 | Regenerative Thermal Oxidizer<br>CCM Group, LLC,<br>Model: 1300-M-95<br>Auxiliary Fuel: Propane | For control of HAPs | EU01 |

## V. Stack Criteria

Per Section III., Item B of Permit TV-OP-027, the following devices at the facility shall have exhaust stacks that discharge, without obstruction, and meet the criteria in Table 4:

**Table 4: Stack Criteria**

| Stack Number | Emission Unit or Pollution Control Equipment ID | Minimum Height (feet above ground surface) | Maximum Exit Diameter (feet) | Stack Orientation |
|---|---|---|---|---|
| 1 | Regenerative Thermal Oxidizer (PCE01) | 31 | 2.83 | Vertical |
| 2 | West Wall Fan | 16 | 3.0 | Horizontal |
| 3 | West Roof Fan | 27.9 | 4.65 | Vertical |
| 4 | See note 2. | -- | -- | -- |
| 5 | RTO By-pass | 31 | 2.83 | Vertical |

2 – At the time of this inspection, the Permit in effect listed Stack #4 as the East Roof Fan with a vertical height of 27.9 feet and a diameter of 4.65 feet. During this inspection, Kalwall

indicated that this fan and stack have not been used for at least two years. In the Permit DES issued to Kalwall on October 12, 2012, Stack #4 is the Recovery Room stack/vent, which has a height of 12 feet, a diameter of 1.5 feet, and a horizontal exit.

## VI. Compliance with Permitting Requirements

### CHAPTER Env-A 500 - Standards Applicable to Certain New or Modified Facilities and Sources of Hazardous Air Pollutants

Kalwall is not subject to the New Source Performance Standard ("NSPS") specified in Env-A 503.01, 40 CFR 60. The devices and processes that Kalwall have do not fall into any NSPS categories.

While this facility emits Hazardous Air Pollutants ("HAPs"), these HAPs are not regulated by 40 CFR 61, as incorporated in Env-A 504.01.

Kalwall is subject to the following National Emission Standards for Hazardous Air Pollutants ("NESHAP") for Source Categories specified in Env-A 505.01, 40 CFR 63.

40 CFR 63, Subpart WWWW, *NESHAP for Reinforced Plastic Composites Production.*

Kalwall was a major source of HAPs on April 6, 2003 and became subject to this subpart. Kalwall has chosen the option of using an add-on control device, the RTO, with a minimum destruction efficiency of 95% of the wet-out area emissions to show compliance. Kalwall demonstrated a destruction efficiency of 99% during stack testing in June 2007. On September 17, 2010, Kalwall submitted to DES a copy of the Startup, Shutdown, and Malfunction Plan required by this subpart. Reporting required by this subpart are included in Kalwall's Semi-Annual Permit Deviation and Monitoring Reports. Kalwall has demonstrated compliance with this subpart.

40 CFR 63, Subpart SS, *National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process.*

Kalwall is subject to this subpart for the monitoring, recordkeeping, and reporting requirements for the add-on control device, the RTO, as required by Subpart WWWW. Reporting requirements are included in Kalwall's Semi-Annual Permit Deviation and Monitoring Reports. Kalwall has demonstrated compliance with this subpart.

40 CFR 63, Subpart ZZZZ, *NESHAP for Stationary Reciprocating Internal Combustion Engines.*

Starting May 3, 2013, the fire pump engine at Kalwall must comply with the requirements of this subpart.

**CHAPTER Env-A 600 - Statewide Permit System**

Kalwall has the potential to exceed the Title V major source threshold, 10 tpy of any individual HAP or 25 tpy of any combination of HAPs. Therefore, it requires a Title V Operating Permit. On February 10, 2006, DES issued Title V Operating Permit TV-OP-027 to Kalwall. The Permit expired on February 28, 2011. On July 2, 2010, Kalwall filed with DES a timely renewal application for the Title V Permit.

**Env-A 606 – Air Pollution Dispersion Modeling Impact Analysis Requirements**

On May 14, 2009, ambient air modeling was performed by GZA for the uncontrolled emissions of styrene and methyl methacrylate ("MMA") exhausted through the RTO bypass stack, the West Roof fan and the West Wall fan. Kalwall was found to be in compliance with the 24-hr and annual air limits found in Env-A 1400, at that time.

On December 30, 2011, as part of an Env-A 1400 compliance determination, emissions of acetone were modeled, by GZA, in conjunction with Structures Unlimited, Inc. and Keller Products, Inc., which are located on the same property, and were determined to be in compliance with the 24-hour and annual air limits found in Env-A 1400, at that time.

**Env-A 609 Title V Operating Permits**

**Env-A 609.04 Insignificant Activities**

Kalwall has identified eleven insignificant activities within Permit TV-OP-027. See attached list of current insignificant activities. Changes have occurred in the list of insignificant activities since the issuance of TV-OP-027. Emissions from the insignificant activities for 2010 and 2011 were included in the annual emission reports.

**Env-A 618 – Additional Requirements in Non-Attainment Areas and the New Hampshire Portion of the Northeast Ozone Transport Region**

Kalwall is an existing synthetic minor source for volatile organic compounds ("VOCs") and located in Merrimack County of New Hampshire. Merrimack County is classified as non-attainment of the ozone NAAQS. Kalwall accepted a permit emission limit of less than 48.5 tpy for VOC. Since the last inspection, DES is not aware of any modifications that would trigger additional NSR requirements.

**Env-A 619 – Prevention of Significant Deterioration ("PSD") of Air Quality Permit Requirements**

Kalwall is an existing minor source for PSD purposes and has not made any modifications that would make it subject to PSD.

## VII. Compliance with Permit Fee System

### CHAPTER Env-A 700 - Permit Fee System

### Env-A 705.04 – Payment of Emission-Based Fee

Emission-based fees are due no later than April 15th of the year following the emissions year.

Kalwall submitted timely payment of its emission-based fees for calendar years 2010 and 2011.

## VIII. Source Testing and Monitoring

### CHAPTER Env-A 800 - Testing and Monitoring Procedures

Kalwall is subject to several monitoring and/or testing requirements set forth in Table 6 of Permit TV-OP-027.

- Kalwall is required to conduct performance testing on the RTO once every five years.
  - The RTO was last tested on July 24-25, 2012. Test results are pending.

- Kalwall is required to:
  1. Annually inspect the Closed Vent System, record results, and repair any leaks discovered.
  2. Continuously monitor the RTO temperature and verify accuracy of the temperature monitor twice per year.

  - Kalwall performs periodic inspections on the Closed Vent System, checking for leaks. Inspections performed and any resulting maintenance required is recorded in paper files. On a monthly basis, Kalwall visually checks the position of the by-pass line valve to verify that the valve is in the non-diverting position. Records of these observations are maintained. Kalwall continuously monitors and electronically records the temperature of the RTO's combustion chamber. A review of the temperature records indicated that the RTO temperatures are within permit limits. Kalwall conducts the calibration on the temperature monitor twice per year and documents the activity. On an annual basis, Kalwall conducts a visual external integrity inspection of the RTO and documents each inspection. Kalwall demonstrated that it is conducting the required inspections and is documenting these activities in paper and electronic records.

## IX. Compliance with Recordkeeping and Reporting

### CHAPTER Env-A 900 - Owner or Operator Recordkeeping and Reporting Obligations

### Env-A 902 Availability of Records

Kalwall demonstrated that it maintains records for a minimum of five years through electronic and paper files.

### Env-A 903 General Recordkeeping Requirements

**Env-A 903.02 – General Recordkeeping Requirements for Process Operations**
(Eff. 4/21/07, Formerly Env-A 901.04, eff. 11/15/92)

Kalwall is required to maintain the following records for each process operation on a monthly basis.

- Hours of operation for each process; and,
- Quantity of raw materials containing VOCs or RTAPs.

Kalwall maintains records of monthly hours of operation for each process and quantity of raw materials used each month in electronic and paper files.

DES determined that Kalwall meets the requirements of this part.

**Env-A 903.03 – General Recordkeeping Requirements for Combustion Devices**

Kalwall is required to maintain the following records for each combustion device on a monthly basis.

- Amount of fuel consumed;
- Type of fuel consumed;
- For liquid fuels, documentation that the fuel meets state sulfur limits;
- Sulfur content of the gaseous fuel as percent sulfur by weight or in grains per 100 cubic feet of fuel; and,
- Hours of operation.

Kalwall maintains records of the monthly fuel consumption, fuel type, and sulfur content of the fuel used in each device in electronic and paper files. Kalwall has documentation that the sulfur content of the fuel oil and the propane used at the facility is below regulatory requirements.

DES determined that Kalwall meets the requirements of this part.

**Env-A 904 – VOC Emission Statements Recordkeeping Requirements**
(Eff. 4/21/07, Formerly Env-A 901.06, Eff. 11/15/92)

Env-A 904 is not in the EPA-approved State Implementation Plan ("SIP"); therefore, Env-A 901.06 applies.

Kalwall emits VOCs, thus it is subject to this part. Kalwall is maintaining the VOC records required by Table 7, Items #4 and #15 of Permit TV-OP-027 using electronic and paper files.

**Env-A 906 – Additional Recordkeeping Requirements**

Kalwall is required to maintain a consecutive 12-month rolling total of Facility-wide emissions of VOCs which shall include emissions from non-permitted devices, for the purpose of demonstrating that the total emissions of VOCs are below the permit limit of 48.5 tpy. Kalwall is maintaining the required production data on a monthly and annual basis using electronic and paper files. A review of the records indicated that the annual VOC emissions did not exceed the permitted emission limits.

**Env-A 907 – General Reporting Requirements**

The Full Compliance Evaluation Records Review is included in Appendix A to this report. The appendix lists all the reports that were received and reviewed in order to complete this compliance evaluation. The appendix includes a determination of each report's timeliness with regard to the required submittal date, and if the report was acceptable in terms of its content.

DES determined that the Kalwall meets the requirements of this part

**Env-A 908 – VOC Emission Statements Reporting Requirements**

Kalwall has actual VOC emissions. Therefore, it is required to submit annual VOC Emission Statements. Kalwall is submitting VOC Emissions Statements as part of its Annual Emissions reports.

DES determined that Kalwall meets the requirements of this part.

**Env-A 910 – Additional Reporting Requirements**

Reporting required by 40 CFR 63, Subpart WWWW and Subpart SS are included in Kalwall's Semi-Annual Permit Deviation and Monitoring Reports.

**Env-A 911 – Recordkeeping and Reporting Requirements for Permit Deviations**

Kalwall maintains records of the deviations occurring during the Facility operation and reports the deviations to DES. Deviations are summarized in the Annual Compliance Certification and in the Semi-Annual Permit Deviation and Monitoring reports.

During the inspection period, Kalwall did not have any deviations to report.

## X. Compliance with Reasonably Available Control Technology ("RACT")

**CHAPTER Env-A 1200 – Volatile Organic Compounds ("VOC") Reasonably Available Control Technology**
**(Formerly Prevention, Abatement, and Control of Stationary Source Air Pollution)**

Effective June 1, 2011, requirements in Env-A 1204 were superseded by Chapter Env-A 1200.

Kalwall is not subject to the requirements of this part. The VOC emissions from the source are limited to less than 50 tpy by a federally enforceable permit.

**CHAPTER Env-A 1300 – Nitrogen Oxides Reasonably Available Control Technology**

Effective October 31, 2010, requirements in Env-A 1211 were superseded by Chapter Env-A 1300.

Kalwall does not have the potential to emit oxides of nitrogen ("NOx") equaling or exceeding 50 tons during any consecutive 12-month period. .

The diesel fire pump at Kalwall is exempt from the NOx RACT provisions of Env-A 1211.11. The engine on this device operates less than 500 hours during any consecutive 12-month period and the engine has theoretical potential NOx emissions less than 25 tons per any consecutive 12-month period.

## XI. Compliance with Toxics Regulations

**CHAPTER Env-A 1400 – Regulated Toxic Air Pollutants ("RTAPs")**

Fuel burning devices using virgin fuels are exempt from an Env-A 1400 compliance determination.

Kalwall uses several RTAPs in its coating and saturation processes and other insignificant activities. RTAP emissions were reviewed in December 2011 in conjunction with the application for the renewal of the Title V permit. Results of this review indicated compliance with AALs.

During this inspection, DES reminded Kalwall that Env-A 1400 was recently updated on June 1, 2012 and that the Permit requires Kalwall to determine its compliance with the new changes within 90 days or by September 1, 2012. On August 16, 2012, DES received a letter from Kalwall which stated that the Env-A 1400 compliance demonstration was reviewed and that no updates were required due to June 1, 2012 version of Env-A 1400. Kalwall is in compliance with the AALs.

## XII. Compliance with Process/Particulate/Opacity Regulations

### CHAPTER Env-A 1600 - Fuel Specifications

### Env-A 1603.01 – Applicable Liquid Fuels

Kalwall uses #2 fuel oil or diesel fuel in the fire pump engine.

### Env-A 1603.02 – Applicable Gaseous Fuels

Kalwall uses propane in its fuel burning devices.

### Env-A 1604.01 – Maximum Sulfur Content Allowable in Liquid Fuels

Env-A 1604.01 limit the sulfur content of the #2 fuel oil or diesel fuel used in the fire pump engine to 0.4% sulfur by weight. Kalwall provided written verification of the sulfur content of the #2 fuel oil fuel being used. Kalwall maintains documentation from the fuel supplier that the sulfur content of the #2 fuel oil or diesel fuel, as delivered, does not exceed state or federal standards for the fuel.

### Env-A 1605.01 – Maximum Sulfur Content Allowable in Gaseous Fuels

Env-A 1605 is not in the EPA-approved SIP; therefore, Env-A 402.03 applies.

Env-A 402.03 and Permit TV-OP-027 limits the sulfur content of propane to 5 grains of sulfur per 100 cubic feet of gas. Kalwall provided written verification of the sulfur content of the propane being used. Kalwall maintains documentation from the fuel supplier that the sulfur content of the propane, as delivered, does not exceed state or federal standards for the fuel.

### CHAPTER Env-A 2000 - Fuel Burning Devices

### Env-A 2002.02 – Visible Emission Standard for Fuel Burning Devices Installed After May 13, 1970

For this facility, Env-A 2002.02 limits the emissions from the fire pump engine subject to this part to 20% opacity. At the time of inspection, the fire pump engine was not in operation; therefore, opacity readings were not taken.

### Env-A 2002.08 – Particulate Emission Standards for Fuel Burning Devices Installed On or After January 1, 1985

Env-A 2002.08 limits the emissions of particulate matter ("PM") from the fire pump engine subject to this part to not exceed 0.30 lb/MMBtu. Compliance with PM emission standards for this fuel burning device can only be determined through PM stack testing which has not been required for this device, to date.

**CHAPTER Env-A 2100 – Particulate Matter and Visible Emissions Standards**

**Env-A 2102.03 & Env-A 2102.04 – Particulate Matter Emission Standards**

Applicable PM standards, based on specific requirements of Env-A 2102.03 and Env-A 2102.04, are dependant on the equipment type and the date of installation. The PM emission standards specified in Permit TV-OP-027 are established during the permitting process. Compliance with the PM emission standards for the process or manufacturing devices can only be determined through PM stack testing which has not been required for these devices, to date.

**Env-A 2103.02 – Visible Emission Standards**

For this facility, Env-A 2103.02 and Permit TV-OP-027 limit the emissions from the continuous fiberglass reinforced plastic lamination line subject to this part to 20% opacity. During the inspection, the visible emissions from the process stacks had an opacity less than 5%.

## XIII. Compliance with Applicable Federal Rules

**40 CFR 68 - Chemical Accident Prevention Provisions**

Storage of regulated chemicals at Kalwall is less than the applicable threshold quantities in 40 CFR 68. The facility is subject to the Purpose and General Duty clause of the 1990 Clean Air Act, Section 112r. Kalwall has developed the appropriate programs to satisfy Section 112r.

**40 CFR 70.6 (a)(3) Permit Content, Monitoring, Record Keeping, and Reporting Requirements**

Kalwall is meeting these Title V Permit requirements, see Appendix A.

## XIV. Enforcement History and Status

On January 5, 2012, DES issued a Notice of Past Violation ("NPV") to Kalwall. The NPV was to notify Kalwall of the violations discovered during the inspection on July 21, 2010 and subsequent file review. The violations are summarized here.

- DES determined that Kalwall had not been verifying the accuracy of the temperature monitor(s) of the RTO twice each year and had not been placing the probe of the reference device in the same location as that of the temperature monitor being tested. On August 20, 2010, DES received from Kalwall, as part of its Title V permit renewal application, a formal request for an alternative method of verifying the accuracy of the RTO temperature monitor(s) in accordance with Env-A 809.02. DES has reviewed the alternative method, approved it, and will incorporate the new method into the reissued Title V permit.

- DES determined that Kalwall had not demonstrated compliance with the AALs established in Env-A 1450 that were updated effective November of 2009. On August 20, 2010, DES received from Kalwall an updated Env-A 1400 compliance demonstration. DES reviewed the compliance demonstration and determined that Kalwall was in compliance with the requirements.
- DES determined that Kalwall did not have a written startup, shutdown, and malfunction plan ("SSMP") for the RTO. On September 17, 2010, DES received a written SSMP for the RTO from Kalwall, reviewed the plan, and determined that it met the requirements stated in 40 CFR 63.6(e)(3).

Based on Kalwall's corrective actions, as identified above, DES determined that further action was not required.

## XV. Conclusions & Recommendations

DES did not identify any deficiencies during this inspection.

Attachments: Appendix A – Full Compliance Evaluation Records Review.
Appendix B – List of Insignificant Activities

# Appendix A:
# Full Compliance Evaluation Records Review

**Facility:** **Kalwall Corporation, Flat Sheet Division**
**Date of FCE:** **July 24, 2012**
**Reviewer:** **Alan Moulton**

Annual Emission Reports (incl. NOx, VOC etc.):

| Reporting Period | When Rec'd | Timely Submission | Complete |
|---|---|---|---|
| 2011 | 3/26/12 | Yes | Yes |
| 2010 | 4/11/11 | Yes | Yes |

Annual Emissions-Based Fee Payments:

| Reporting Period | When Rec'd | Timely Submission |
|---|---|---|
| 2011 | 3/26/12 | Yes |
| 2010 | 4/11/11 | Yes |

TV Annual Compliance Certifications:

| Reporting Period | When Rec'd | Timely Submission | Complete |
|---|---|---|---|
| 2011 | 3/26/12 | Yes | Yes |
| 2010 | 4/11/11 | Yes | Yes |

TV Semi-Annual Permit Deviation and Monitoring Reports:

| Reporting Period | When Rec'd | Timely Submission | Complete |
|---|---|---|---|
| Jul – Dec 2011 | 1/18/12 | Yes | Yes |
| Jan – Jun 2011 | 7/07/11 | Yes | Yes |
| Jul – Dec 2010 | 1/28/11 | Yes | Yes |

Individual Permit Deviations Reports:

| Date | Duration | When Rec'd | Timely Submission | Complete |
|---|---|---|---|---|
| None. | | | | |

Quarterly Continuous Emission Monitoring Excess Emission Reports (CEM EERs): Not applicable.

CEM Audits (OPAs, CGAs, RAAs, RATAs): Not applicable.

Stack Tests:

| Stack Test Date | Device Tested | When Rec'd | Timely Submission | Complete |
|---|---|---|---|---|
| July 24-25, 2012 | RTO | 9/25/12 | Yes | Under Review. |

Other reports:

| Reporting Period | Report Type | When Rec'd | Timely Submission | Complete |
|---|---|---|---|---|
| Included in the SA/PDM Reports | Semi-Annual Subpart SS & WWWW Reports | See SA/PDM Reports above. | Yes | Yes |

# Appendix B:
# List of Insignificant Activities

- Customer sample preparation
- Storage tanks of such a size and vapor pressure as not to emit VOC or HAP
- Muffler furnace for lab-scale fire tests (0.075 MMBtu/hr)
- Two oil-fired heating furnaces (0.45 MMBtu/hr each unit)
- Four oil/gas-fired space heating air units (0.625 MMBtu/hr each unit)
- Eighteen gas-fired process production line burners (0.5 to 0.80 MMBtu/hr each unit). The number of burners in operation at any time varies depending on product requirements.
- Four make-up air gas-fired burners (0.5 MMBtu/hr each unit)