

GREENHOUSE GAS EMISSIONS REDUCTION FUND
Quarterly Progress Report Form

The first quarter grant report is due December 31, 2009.

1. Program Title (*as displayed in your proposal*)

Fraser NH LLC Steam Reduction Program

2. Program Type (*as listed in your proposal*)

This program will reuse hot air to reduce fossil fuel consumption and pursuant to Puc 2604.01 c. would fall under #5 “Energy efficiency related industrial process and control systems”.

3. Summary of work completed during this reporting period **August 19, 2009 through November 30, 2009.**

During the period from August 19, 2009 through November 30, 2009 the following work was completed:

- **Improve the Pocket Ventilation System on #11 Paper Machine to reuse hot air**
 - Engineering drawings (100% complete)
 - Open a hole in the roof over the #11PM
 - Install a roof curb and seal the roof
 - Install ductwork from the #11PM economizers to the roof opening (50% complete)
- **Improve the Pocket Ventilation System on #14 Paper Machine to reuse hot air**
 - Engineering drawings (100% complete)
 - Open a hole in the roof over the #14PM
 - Install a roof curb and seal the roof
 - Install ductwork from the #14PM economizers to the roof opening (50% complete)
- **Install hood Economizer on #19 Paper Machine to reuse hot air**
 - Fabricate and install new support steel for the economizer on the #19 paper machine room roof
 - Move the economizer from the #12 paper machine roof to the #19 paper machine roof
 - Install ductwork from the #19 paper machine exhaust
 - Install ductwork to the #19 paper machine make-up air system
 - Speed up the #19 paper machine exhaust fan to maintain the exhaust rate with the new static pressure system
- **Vacuum pump seal water reuse on #11 Paper Machine to reuse hot water**
 - Engineering drawings (90% complete)
 - Demolition and cleanup of the area (90% complete)
 - 8” Stainless Steel drainage header fabricated and installed (100% complete)
 - One each Stainless Steel floor drain and piping was fabricated and run to the drainage header (25% complete)
 - 1400 gallon collection tank installed (includes concrete housekeeping pad) (100% complete)
 - One used Goulds 3X4-13 model 3196 was overhauled, equipped with a mechanical seal and installed. (90% complete – needs to be aligned and coupled)
 - One used Tranter heat exchanger was removed from the Wausau mill in Groveton, NH and the frame installed on a concrete housekeeping pad. (40% complete – plates need to be installed)
 - One six inch butterfly valve was installed for level control on the bottom of the tank. (100% complete)
 - One temperature transmitter installed (50% complete – one more to be installed)
 - One 1-1/2” control ball valve installed for cooling water control (100% complete)
 - One used four inch mag flow meter was calibrated and installed after the pump. (90% complete)
 - 75% of the Stainless Steel 4 inch and 6 inch process piping was fabricated and installed

- 75% of the wiring and instrumentation was calibrated and installed
- Lighting was installed in the area (100% complete)

Deviation from the work plan - While reviewing the project scope with the paper machine superintendents there was concern over introducing the seal water back into the paper making process. The concern was that felt hairs from the uhle boxes would get into the general white water tank and then be used to make paper. This would cause defects in the paper. This concern was voiced even though an Albany Gravity Screen was part of the project. To allay their legitimate concerns the project scope was adjusted. The Albany Gravity Screen was removed from the project and a Tranter Plate and Frame heat exchanger was added to the project. Fortunately a used Tranter Plate and Frame heat exchanger was available at the closed Wausau Mill in Groveton, NH. This heat exchanger will allow the heat to be captured and put into the process without the vacuum pump seal water contacting the process. The original objectives of the project will be maintained for the original cost estimate.

- **Install a steam trap collection system on #19 Paper Machine Yankee Hood Air Heater to reuse condensate**

The Steam Trap Collection System for #19PM will not be started as there is already a collection system. This money will not be expended and will remain in the State of New Hampshire PUC's Greenhouse Gas Reduction Fund. After investigating this project in detail it was discovered that there was already a collection tank with level control in the basement doing exactly what had been proposed.

4. Summarize work to be completed next quarter: **December 1, 2009 – February 28, 2010.**
 - Complete ductwork from the #11PM economizers to the roof opening (100% complete)
 - Seal the duct to the roof curb

 - Complete ductwork from the #14PM economizers to the roof opening (100% complete)
 - Seal the duct to the roof curb

 - Fabricate and install new support steel for the economizer on the #19 paper machine room roof
 - Move the economizer from the #12 paper machine roof to the #19 paper machine roof
 - Install ductwork from the #19 paper machine exhaust
 - Install ductwork to the #19 paper machine make-up air system
 - Speed up the #19 paper machine exhaust fan to maintain the exhaust rate with the new static pressure requirements

The remainder of the vacuum pump project will be completed in December and includes the following:

- Three each Stainless Steel floor drains and piping fabricated and run to the drainage header
- Remaining temperature transmitter installed
- Remaining 25% of the Stainless Steel 4 inch and 6 inch process piping fabricated and installed
- Install the plates in the Tranter heat exchanger and squeeze to the design dimension
- Process controls wired to the I/O and the Experion DCS and programming complete
- Remaining 25% of the wiring and instrumentation calibrated and installed

5. Please document any jobs created.
6. Explain any obstacles encountered or any milestones not reached.
7. If applicable, in a section labeled *Beyond the Contract* (or some other well defined title), please report other activities, partnerships, funding or other synergies that have occurred as a result of this funding.
8. If applicable, please include brochures, workshop announcements, or other materials developed to promote your grant activities. Attachments (and other documentation) are appreciated.

9. Budget vs. Actual Expenditures: (if you have included this with your invoicing, there is no need to repeat for the quarterly report.) *Using the budget you submitted for the final approved grant proposal, please add a column and provide actual expenditures as well as match dollars for this quarter. (Save this worksheet for future reporting as we will want to see your quarterly expenditures as the project continues.)*