

DATE: November 10, 2015

TO: Tania Steele

FROM: Eshetu Beshada, Ph.D., P.Eng.
Environmental Engineer

SUBJECT: **Carlson Engineering Composites Inc. – Information for Public Registries**

Tania,

Please find attached the additional information provided related to the **Carlson Engineering Composites Inc.** file (5794.00) for distribution to the public registries. The document included is:

- November 10, 2015 letter from Derek Armstrong, 2 pages

2 pages total

Thank you.

Eshetu Beshada, Ph.D., P. Eng.



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November 10, 2015

Mr. Eshetu Beshada
Environmental Approvals
Conservation and Water Stewardship
123 Main St Suite 160 (Box 80)
Winnipeg, Manitoba, Canada
R3C 1A5

Dear Mr. Beshada,

This letter is to provide you further information as was the request received on November 2nd, please find the data below:

1st Comment:

No control of emission of styrene and VOC by pollution control device(s) is in place. Instead, Carlson Engineered Composites uses process changes to control emissions as described in the report. In comparison with open moulding, the use of light resin transfer moulding, also known as "closed moulding" has increased from 0% at the start-up of the company to approximately 60% at present, with a tendency of further increase where applicable. "Closed moulding" reduces emissions of styrene by more than 40% and of clean-up solvents by almost 90%.

Direct pollution control by add-on control devices, e.g., oxidizers or columns with activated carbon is not practiced in the industry because of the relatively low concentration of volatile pollutants in emission streams.

2nd Comment:

The following is a short description of the operation of the Acetone Recycling Unit (Finish Thompson's Solvent Recycling System, LS Series, Model LS - 55IIE):

- Spent acetone is collected in the plant in 19 L (5 gallon) containers and moved outside to the staging area in the immediate vicinity of the acetone distillation unit.
- The containers are emptied into a larger (170 L, 45 gallon) container inside the distillation unit enclosure through a fine mesh strainer.

10/10/2014

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- Acetone in the 190 L (45 gallon) container is transferred into the distillation unit using an air operated diaphragm pump for batch distillation.
- The distillation unit processes one 190 L (45 gallon) batch in approximately 8 h.
- Distilled acetone is condensed by a glycol heat exchanger located within the enclosure.
- Following the batch distillation, clean acetone is pumped into a 45 gallon drum.
- Required amounts of distilled and recovered acetone are ladled out of the 45 gallon drum into a pail for use inside the plant as required.
- Sludge and other residues from the distillation unit is collected in a disposable plastic bag at the bottom of the column and disposed off-site by a licenced hazardous waste management contractor
- Fugitive acetone vapour from the unit enclosure is discharged outside using a 600 CFM exhaust fan on the top of the enclosure. Exhausted air is replenished with fresh air supplied through a screened opening on the wall.

Physical dimensions of the unit are:

3.3 m (131 in.) width; 1.0 (40 in.) depth and 1.5 m (60 in.) height. It sits on a concrete pad equipped with a spill containment area in front of the unit.

More details on the units are provided in the Instruction Manual available for review on request.

Carlson Engineered Composites has obtained all the required approvals for the Acetone Recycling Unit and is in compliance with the health and safety regulations applicable to the unit.

Workers operating the unit are trained in-house as required.

Should you have any questions or concerns regarding this request please feel free to contact me.

Best Regards,

Derek Armstrong
Director of Human Resources,
Carlson Engineered Composites

10/10/2014

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