MEMORANDUM

To: Dr. Eshetu Beshada
Cc: Rodney Badgley, Michael Bertram (AMEC)
Re: MB Approvals Branch request for additional information (letter dated Sept. 27, 2013)
Date: October 7, 2013

Dear Dr. Beshada,

Please accept the following information in response to your letter dated Sept. 27, 2013. If you require additional clarification please contact me.

Plasti-Fab manufactures sustainable insulation products for construction and home renovation markets. Our insulation products provide customers with energy saving solutions which in turn provide emissions reduction potential that reduce environmental impacts.

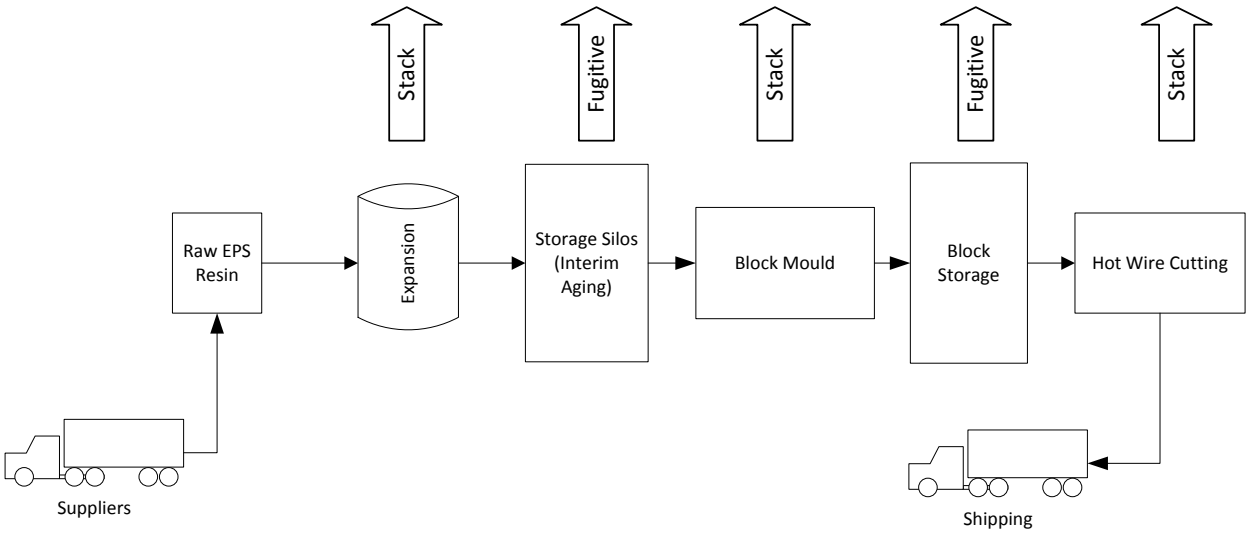
1. Description of Facility & Capacity

The plant manufactures material as per the demand of the market place which can fluctuate both year to year and seasonally with the construction market. The maximum capacity of the facility is 350,000 lbs. per month or 4,000,000 lbs. per year. Please see attached floor plan (pdf) showing plant layout and equipment location.

2. EPS Foam Process

Saturated steam is applied to EPS resin to expand (sometimes called “prefoam”) the material using a continuous expander. The blowing agent is contained within the raw EPS resin materials purchased from suppliers. The blowing agent is a VOC predominately n-pentane (CAS# 109-66-0). Following prefoaming the foamed beads are left to stabilize within mesh aging silos followed by air conveyance transfer to a block moulding machine for production of foam blocks. The blocks are aged for at least 3 days to stabilize the material, reduce moisture content and allow remaining VOC blowing agent to migrate out. The large blocks are then cut using electrically heated wires into desired sizes and thickness for construction and industrial applications. Finally the materials are packaged and shipped to customers (see process flow diagram next page).

Process flow diagram – showing VOC emission sources.



3. Luconyl dye Application

A small percentage of foam products are coloured with a water based dye at the prefoaming stage (see attached procedure). No potential emissions of dye are expected.

4. VOC Emissions

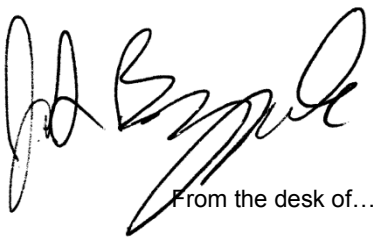
VOC's are emitted as both fugitive and stack emissions from the various stages (see process flow diagram above) of the process (see table below). There is no emission capture or control technology installed.

5. Quantity of Raw Materials on site

The maximum onsite inventory of EPS resin would be 132,000 lbs and maximum inventory of dye would be 120 kg.

VOC Emissions summary table (based on 2012 NPRI data report)

Process Stage	Source	Quantity	Unit	Percentage Loss at each stage
Pre-Expansion	Stack	18.4	tonne	31%
Silo Aging	Fugitive & Exhaust Fans	8.3	tonne	14%
Block Moulding	Stack	5.9	tonne	10%
Block Aging	Fugitive & Exhaust Fans	17.8	tonne	30%
Final Product	Remaining in product	8.9	tonne	15%
	Total Emissions	50.5	tonne	



From the desk of…

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220′-6 1/2″

P/U LOADING

TRAILERS
TRAILERS
TRAILERS
TRAILERS
TRAILERS
TRAILERS
TRAILERS
TRAILERS
TRAILERS TRAILERS

LOADING DOCK

WALL OUTSIDE O/H DOOR C/W OPENING MAN DOOR & MATERIAL HANDLING DOOR. CLOSE O/H DOOR FOR SECURITY.

WALLY SHIPPING/RECEIVING CHANGE TO O/H DOOR

56′-1 1/4″

O/H DOOR
TAPER
POLYWRAP SPACE
SLABBER
SPACE ROLLERS
BACK SUPPORT
DOWN CUTTER
TILT AREA
SAND BLK
PIVOT PT.

18 BILLETS ×18

DAVID MACHINE

NEW MAN DOOR

BILLET STORAGE CAPACITY = 623 (1,236,000 FBM)

CORNER CUTTER
Testing Station
Regrind Silo
PUCCS
MULCHER
SECONDARY
BIG WALLY
FINISHED WALLY AND SPECIAL CUTS STORAGE

99′-7 3/4″

COMPRESSER
AIR RECEIVER
WAREHOUSE TO WALLY OR MOULD TO WAREHOUSE
Bead Storage
Heating Boiler Room

STORAGE BIN #4
STORAGE BIN #8
STORAGE BIN #3
STORAGE BIN #7
STORAGE BIN #2
STORAGE BIN #6
STORAGE BIN #1
STORAGE BIN #5
8 BEAD STORAGE BINS

77′-1 1/2″

9 BILLETS
12 BILLETS
14 BILLETS
14 BILLETS
14 BILLETS
12 BILLETS
12 BILLETS
12 BILLETS
12 BILLETS
12 BILLETS
STORAGE BAG
STORAGE BAG

BLOCK TILTER
BLOCK TILTER
SHELVING
ACCUMULATOR
MDWTZ MOLD
CONTROL PANEL
MIXING BAG
MIXING BAG
BLOWER
BEDDRYER
PRE FOAMER
HOPPER
UP
SHIPPING OFFICE

Compressor ROOM
BOILER ROOM
ELECTRICIAL POWER ROOM
REGRIND ROOM

33′-7″
13′-2 3/4″
29′-8 1/2″
4′
16′-0 1/2″
41′-1 1/2″
24′
38′-7 1/4″

PLAN VIEW

PLASTI-FAB PLANT = 26,305 SQ/FT APPROX.

No.	REVISION DESCRIPTION	DATE	BY	CHKD	APPD
1	Added Heat Rooms	APR-01-00	GS		
2	Corrected Silo Numbering	MAY-22-01	GS		

Plasti-Fab™ EPS PRODUCT SOLUTIONS

PLANT OR PROJECT: WINNIPEG, MB

PLANT LAYOUT

2485 Day Street
Winnipeg, Manitoba R2C 2X5
Telephone (204) 222-3261
FAX (204) 222-8817

SCALE 1:300
DESIGN | DATE
DRAWN T.L. | DATE Jul 7/94
CHECKED | DATE
DRAWING No. DMPW001a | REV. 2