

INSPECTION REPORT
AIR POLLUTANT EMISSION SOURCES

FACILITY PGT Industries, LLC		DISTRICT SWSA		COUNTY Sarasota
ADDRESS 1070 Technology Drive Nokomis, Florida 34275 941-480-1600		CONTACT (S) Natalia Wolter, Environmental Health & Safety Manager [on vacation]		
AIRS ID# 1150131	PERMIT # 1150131-003-AF	EXPIRATION DATE May 17, 2014	ARMS ENTRY DATE February 11, 2010	
SOURCE DESCRIPTION Custom aluminum/glass window, door, and frame manufacturing facility. Synthetic Non-Title V facility. Note:				
NON-COMPLIANCE HISTORY None		DATE(S)	NOTES	
INSPECTION DATE 02/10/2010 ~ 2:00 p.m.		AUDIT TYPE INSII & FCS		COMPLIANCE STATUS IN-compliance
INSPECTION FINDINGS				
Emissions Unit	Description/Process/ Pollutants/Allowed Emissions	OBSERVATIONS		
EU 001 – Custom Aluminum/Glass Window, Door, and Frame Manufacturing Facility ONE EMISSION UNIT FOR THE ENTIRE FACILITY as emissions are limited based on VOC & HAP content of materials used throughout the facility. Maximum allowable emissions per any 12-consecutive month period are: Total VOC < 99.4 tpy Total HAP < 24.4 tpy Individual HAP < 9.4 tpy	Bldg 1. Main Plant ~362,500 sq. ft. Window and door line assembly; maintenance.	Aluminum extrusions are cut by rotary saws; inserted into hydraulic or pneumatic dies that punch, pierce, notch, or skive each piece so that hardware may be applied; and screwed together (if aluminum) or fused together via an electric heat plate (if vinyl). Hardware (hinges, rollers, weather-strips, latches, etc.) is then applied via a screw fastener. A silicone adhesive is applied to the vent/frame, and glass inserted. The units then receive a colonial grill, a decorative bead (to hide the silicone adhesive), a screen, and are cardboard packaged with a label. NOTE: In the “Glazing Process” DAWN dishwashing soap is used to clean the glass, other materials are used to clean the vent/frame and to seal the joints. <u>Main Plant Glass line:</u> Glass is scored and broken to proper dimensions. Glass that does not have to be tempered, heat strengthened, laminated, or insulated is washed and placed in a cart to be delivered to a window or door line. A butyl spacer is applied to insulated pieces and then a second piece of glass is applied to make a “sandwich”. The “sandwich” is then heat pressed (electric) to a temperature of ~125 degrees Fahrenheit to melt the butyl to the glass and compress the unit to the proper thickness. Insulated glass is delivered to a window or door line. <u>Main Plant Bead line:</u> Decorative bead is cut to length via a rotary saw or manual die. Beads are delivered to a window or door line. <u>Main Plant Grill Kit line:</u> Aluminum frame and muntin extrusions are placed into a multiprocessing machine that rotary cuts extrusions to length and pneumatically die fabricates pieces for assembly. Pieces are then screwed or pinned together to make a colonial grid. Grids are delivered to a window or door line. <u>Main Plant Screen line:</u> Coil stock is roll formed into the necessary frame shape. The roll former also cuts the frame pieces to the required length; plastic corner pieces are inserted to hold the frame together; and mesh is rolled into the frame using a piece of spline. Excess is trimmed. Screens are delivered to a window line. <u>Main Plant Injection Molding line:</u> Pellets of nylon are poured into a machine, melted (~450 degrees Fahrenheit), and pushed into a mold to form a part. The part is cooled and ejected into a container, manually separated, boxed and delivered to a window or door line. <u>Main Plant Maintenance line:</u> Racks/cart tables/or equipment is fabricated. Saws, drill presses, grinders, milling machines, lathes, wire EDM machines, and an Interstate marketing Corp. 14’ wide x 24’ long x 8 ‘ high paint booth are in this area. The surface grinder and paint booth have exhaust blowers and filters. The welding area has fans to draw away the fumes. Painting, staining, and coating operations are conducted in the paint spray booth. Emissions from such activities are captured, filtered through paper filter media*, and exhausted through a stack that exits through the facility roof 2’ above roofline. The stack height provides for adequate dispersion of the discharged VOC containing materials. The exhaust fan for the paint spray booth is also operated whenever any VOC generating activity is performed to assist in capture and discharge of materials which emit VOCs and/or objectionable odor(s). In addition, nearby doors and windows are closed, as necessary, to ensure that VOC containing materials and/or objectionable odors are captured by the exhaust systems. NOTE: There are a total of 20 filters in the paint spray booth which, typically, are changed every three (3) weeks or more often, if necessary.		

	Bldg. 2. Commercial Plant ~42,000 sq. ft. Commercial project window and door assembly.	Commercial products are done in this facility. (e.g., Premier View line which is Wingard w/ a vinyl frame). Specialized commercial products; small to large projects.
	Bldg. 3. Glass Plant ~82,000 sq. ft	Raw glass is delivered → cut in one of 2 glass cutters that use a rotary wheel to score the horizontal piece of glass. Minimal glass dust is vacuumed once/shift. Workers snap scored glass and place it in a cart → tempering. Glass taken out of cart and laser etched w/ logo, date, & code of glass. Glass goes to seamer in which 2 belts grind edge of glass to take sharp edge off. Particulate emissions vacuumed and bagged. Glass is then washed in an electric heated washer → 2 zone oven in which radiant heat elements increase temp. of glass and blow air on it to cool the glass. This changes the molecular structure of the glass to increase its strength. Laminating. Laser, seamer, glass washer → Laminating room to make glass into sandwich. Butyl spacer applied → electric Infra Red oven with a pitch roller press. The sandwiched glass is pressed to remove air bubbles and heated (~250 degrees Fahrenheit) to create a single unit. Unit is stacked on cart → one of 2 electric autoclaves that with temperature, time and pressure makes a good, strong bond between the laminate and glass. Glass unit comes out clear from the autoclave. Hand trimmed. Laminate. Laminated glass cutter, seamer in which belts grind sharp edges off. Score glass w/ IR heat element and pull pieces apart w/ little bar in machine. Maintenance area. Rotary saw, drill press, band saw and rotary grinder
	Bldg. 4. Former site of Fleet Maintenance	Moved to Triple Diamond Commerce Plaza. Fleet maintenance: oil changes, véhicule maintenance, tires, etc.
	Bldg. 5. Facilities Maintenance and Test Lab	Facilities Maintenance and Test Lab. Lab is physical testing of prototype windows and doors. Example of tests performed: (1) air cannon to shoot 9 lb 2' x 4' at window; (2) water wall in which water is sprayed at a certain pressure, window checked for leakage; (3) vacuum chamber powered by air and electric to simulate air forces, window checked for infiltration.
	OUTSIDE of PLANTS	~10,146 gallon horizontal, above ground Diesel Storage Tank (white, good condition) on east side of Main Plant. There is one pump for fueling their trucks. ~1,000 gallon horizontal above ground Propane storage tank to SE of diesel tank. Also, white, good condition.

COMMENTS

Main Plant continued. Facility has incorporated the use of a bag method to coat aluminum extrusions; they are able to create a finished product that looks like wood (color and grain appearance). The extrusion is placed inside of a bag pre-impregnated with the desired color -> oven where the bag clings to the extrusion thereby delivering the color and grain pattern -> out of oven -> cool & finish.

Facility has eliminated the use of IPA; they now use DAWN dishwashing soap to clean glass.

Vinyl Framed Window. Saws to cut miter cut on vinyl (e.g., 2 blades); particles swept and bagged. There are manual dies for fabrication → pieces are welded (4 -2 pt welders; 1 –4 pt welder). A 4 pt welder welds 4 corners at a time; electric heat plates push the pieces together and they become fused. Excess plastic from welding is removed in one of 2 cleaners in which a sharp edge pulls across the surface to scrape off excess pieces you do not want. Then pieces go to the hardware, weather stripping, and glazing lines.

Winguard Line. There are 4 automated saws, 4 manual saws, and all hydraulic dies for fabrication. Same processes as all of the other lines.

There exist ~ 46 saws throughout the building. Shavings are bagged and disposed of.

GOOD HOUSEKEEPING. Facility found IN-compliance.

Preliminary 2009 EAOR submittal #s are : ~19.64 tpy VOC ; ~1.61 tpy total HAPs ; and ~0.64 tpy Toluene.

INSPECTOR (S) NAME (S)

Susan Cameron, ESIII

SIGNATURE (S)

Susan Cameron

DATE

February 10, 2010