Commonwealth of Kentucky
Division for Air Quality

PERMIT APPLICATION SUMMARY FORM

Completed by: Philip T. Jarobe

GENERAL INFORMATION:

Name:	Free-Flow Packaging International, Inc.
Address:	1 Graham Way Hopkinsville, Kentucky 42240
Date application received:	N/A
SIC/Source description:	3086, Plastic foam products
Source ID:	21-047-00099
Agency Interest:	37673
Activity:	APE20070002
Permit:	V-05-068 R1

APPLICATION TYPE/PERMIT ACTIVITY:

[ ] Initial issuance
[X] Permit modification
X Administrative
_ Minor
_ Significant
[ ] Permit renewal

[ ] General permit
[ ] Conditional major
[ ] Title V
[X] Synthetic minor
[ ] Operating
[X] Construction/operating

COMPLIANCE SUMMARY:

[ ] Source is out of compliance
[X] Compliance certification signed
[ ] Compliance schedule included

APPLICABLE REQUIREMENTS LIST:

[ ] NSR
[ ] PSD
[ ] Netted out of PSD/NSR
[ ] NSPS
[ ] NESHAPS
[ ] Not major modification per 401 KAR 51:001, 1(116)(b)
[X] SIP
[ ] Other

MISCELLANEOUS:

[ ] Acid rain source
[ ] Source subject to 112(r)
[ ] Source applied for federally enforceable emissions cap
[ ] Source provided terms for alternative operating scenarios
[ ] Source subject to a MACT standard
[ ] Source requested case-by-case 112(g) or (j) determination
[ ] Application proposes new control technology
[ ] Certified by responsible official
[ ] Diagrams or drawings included
[ ] Confidential business information (CBI) submitted in application
[ ] Pollution Prevention Measures
[ ] Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Emissions Potential of Existing Equipment (V-05-068)

Pollutant	Actual (tpy)	Potential (tpy)
VOC PE Foam	166	245
VOC Polystyrene	34	225

SOURCE DESCRIPTION:

Free Flow Packaging International (F P International), Incorporated produces foamed polyethylene and polystyrene sheets for packaging. In the polyethylene foam plant, polyethylene along with isobutane, ethane, and glycerol monostearate are used as the raw materials and are injected into the extruder. The extruded foamed polyethylene sheets go through the slit tube and winder. The wound foamed polyethylene sheets are stored in the warehouse. The bad sheets (approximately 8%) are reprocessed to get polyethylene resin. The major emissions from this process are VOC's (Isobutane). The source also has isobutane and ethane storage tanks. The isobutane tanks are pressurized tanks. The ethane tanks are tube trailers and are not filled on site. They are replaced as needed.

In the polystyrene loosefill plant, polystyrene is fed to an extruder where it is melted and pressurized and injected with a blowing agent mixture of isopentane and isobutane. As the material exits the extruder it creates a plastic foam which is then formed into a trademark "Figure 8" cross-section, cooled, and cut into finite pieces. The cut particles from the extrusion line are then passed through an expander where they are exposed to live steam. The particles are then held for several hours in the intermediate storage silos while additional expansion occurs. The particles are then put through a second expansion step in which they are again exposed to live steam. The expanded product is dried in the hot room, which is heated to approximately 140˚F. The product from the hot room is transferred to the warehouse where it is stored until it is packaged in fourteen cubic foot bags or loaded directly into bulk trailers for shipment.

ADMINISTATIVE PERMIT REVISION 1:

This revision changed the capacity values shown in the *Emission Unit Description* that were incorrect based on the renewal application. The emission factors were also changed to use the product produced as a basis instead of the blowing agent used.

EMISSIONS AND OPERATING CAPS DESCRIPTIONS:

The PE foam plant emissions shall not exceed 245 tons per year and the polystyrene plant emissions shall not exceed 225 tons per year to preclude applicability of 401 KAR 51:017, prevention of significant deterioration of air quality.

OPERATIONAL FLEXIBILITY:

The source is not restricted as to hours of operation or quantity of product produced while remaining within the caps above.