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WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

**APPLICATION FOR NSR PERMIT
AND
TITLE V PERMIT REVISION
(OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOWN):

- CONSTRUCTION MODIFICATION RELOCATION
 CLASS I ADMINISTRATIVE UPDATE TEMPORARY
 CLASS II ADMINISTRATIVE UPDATE AFTER-THE-FACT

PLEASE CHECK TYPE OF 45CSR30 (TITLE V) REVISION (IF ANY):

- ADMINISTRATIVE AMENDMENT MINOR MODIFICATION
 SIGNIFICANT MODIFICATION

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant (as registered with the WV Secretary of State's Office): STAR Plastics, Inc.		2. Federal Employer ID No. (FEIN): 3 1 1 5 2 9 2 5 5	
3. Name of facility (if different from above): Same		4. The applicant is the: <input type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input checked="" type="checkbox"/> BOTH	
5A. Applicant's mailing address: PO Box 249 Ravenswood, WV 26184		5B. Facility's present physical address: 326 Jack D. Burlingame Dr. Millwood, WV 25262	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO ⇒ If YES, provide a copy of the Certificate of Incorporation/Organization/Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A . ⇒ If NO, provide a copy of the Certificate of Authority/Authority of L.L.C./Registration (one page) including any name change amendments or other Business Certificate as Attachment A .			
7. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the <i>proposed site</i> ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO ⇒ If YES, please explain: Applicant leases the space ⇒ If NO, you are not eligible for a permit for this source.			
9. Type of plant or facility (stationary source) to be constructed, modified, relocated, administratively updated or temporarily permitted (e.g., coal preparation plant, primary crusher, etc.): Combine STAR Plastics and Technology Plastics R13 permits and modify process throughputs to maintain minor source status.		10. North American Industry Classification System (NAICS) code for the facility: 424610	
11A. DAQ Plant ID No. (for existing facilities only): 0 3 5 - 0 0 0 3 9		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R13-2085E and R13-3147 for Technology Plastics, LLC (035-00054)	

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- ⇒ For **Modifications, Administrative Updates or Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- ⇒ For **Construction or Relocation permits**, please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

Follow State Route 2 south from Ravenswood to Millwood. Turn right onto Jack D. Burlingame Drive and follow to facility on the right.

12.B. New site address (if applicable):

NA

12C. Nearest city or town:

Millwood

12D. County:

Jackson

12.E. UTM Northing (KM): 4306.7

12F. UTM Easting (KM): 427.4

12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:

Combine the permits for STAR Plastics and Technology Plastics and reduce the design capacity of the facility.

14A. Provide the date of anticipated installation or change: Upon permit issuance

⇒ If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /

14B. Date of anticipated Start-Up if a permit is granted:

Immediately

14C. Provide a **Schedule** of the planned **Installation of/Change to and Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:

Hours Per Day 24 Days Per Week 7 Weeks Per Year 52

16. Is demolition or physical renovation at an existing facility involved? **YES** **NO**

17. **Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18. **Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (*if known*). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (*if known*). Provide this information as **Attachment D**.

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to **Plot Plan Guidance**).

⇒ Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F**.

23. Provide a **Process Description** as **Attachment G**.

⇒ Also describe and quantify to the extent possible all changes made to the facility since the last permit review (*if applicable*).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H**.

⇒ For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I**.

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J**.

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K**.

28. Check all applicable **Emissions Unit Data Sheets** listed below:

- | | | |
|--|--|--|
| <input type="checkbox"/> Bulk Liquid Transfer Operations | <input type="checkbox"/> Haul Road Emissions | <input type="checkbox"/> Quarry |
| <input type="checkbox"/> Chemical Processes | <input type="checkbox"/> Hot Mix Asphalt Plant | <input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities |
| <input type="checkbox"/> Concrete Batch Plant | <input type="checkbox"/> Incinerator | <input type="checkbox"/> Storage Tanks |
| <input type="checkbox"/> Grey Iron and Steel Foundry | <input type="checkbox"/> Indirect Heat Exchanger | |
| <input checked="" type="checkbox"/> General Emission Unit, specify plastic resin extruders | | |

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L**.

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

- | | | |
|--|---|--|
| <input type="checkbox"/> Absorption Systems | <input type="checkbox"/> Baghouse | <input type="checkbox"/> Flare |
| <input type="checkbox"/> Adsorption Systems | <input type="checkbox"/> Condenser | <input type="checkbox"/> Mechanical Collector |
| <input type="checkbox"/> Afterburner | <input type="checkbox"/> Electrostatic Precipitator | <input type="checkbox"/> Wet Collecting System |
| <input type="checkbox"/> Other Collectors, specify | | |

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M**.

30. Provide all **Supporting Emissions Calculations** as **Attachment N**, or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O**.

- Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and **Example Legal Advertisement** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33. **Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

- YES NO

- If **YES**, identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's **"Precautionary Notice - Claims of Confidentiality"** guidance found in the **General Instructions** as **Attachment Q**.

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

- | | |
|--|---|
| <input type="checkbox"/> Authority of Corporation or Other Business Entity | <input type="checkbox"/> Authority of Partnership |
| <input type="checkbox"/> Authority of Governmental Agency | <input type="checkbox"/> Authority of Limited Partnership |

Submit completed and signed **Authority Form** as **Attachment R**.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned **Responsible Official** / **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE  DATE: 1/23/15
(Please use blue ink) (Please use blue ink)

35B. Printed name of signee: Luke Schindler		35C. Title: Plant Manager
35D. E-mail: lschindler@sdrplastics.com	36E. Phone: 304-273-5326	36F. FAX: 304-273-5325
36A. Printed name of contact person (if different from above): Bryan McElvogue		36B. Title: Process Engineer
36C. E-mail: bmcelvogue@starplastics.com	36D. Phone: 304-273-5326	36E. FAX: 304-273-5325

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

<input checked="" type="checkbox"/> Attachment A: Business Certificate	<input type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet
<input checked="" type="checkbox"/> Attachment B: Map(s)	<input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s)
<input type="checkbox"/> Attachment C: Installation and Start Up Schedule	<input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s)
<input type="checkbox"/> Attachment D: Regulatory Discussion	<input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations
<input type="checkbox"/> Attachment E: Plot Plan	<input type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans
<input type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s)	<input checked="" type="checkbox"/> Attachment P: Public Notice
<input checked="" type="checkbox"/> Attachment G: Process Description	<input type="checkbox"/> Attachment Q: Business Confidential Claims
<input type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS)	<input type="checkbox"/> Attachment R: Authority Forms
<input checked="" type="checkbox"/> Attachment I: Emission Units Table	<input type="checkbox"/> Attachment S: Title V Permit Revision Information
<input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet	<input checked="" type="checkbox"/> Application Fee

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

Forward 1 copy of the application to the Title V Permitting Group and:

For Title V Administrative Amendments:

NSR permit writer should notify Title V permit writer of draft permit,

For Title V Minor Modifications:

Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,

NSR permit writer should notify Title V permit writer of draft permit.

For Title V Significant Modifications processed in parallel with NSR Permit revision:

NSR permit writer should notify a Title V permit writer of draft permit,

Public notice should reference both 45CSR13 and Title V permits,

EPA has 45 day review period of a draft permit.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT A
Business Certificate

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

**ISSUED TO:
STAR PLASTICS INC
PO BOX 249
RAVENSWOOD, WV 26164-0249**

BUSINESS REGISTRATION ACCOUNT NUMBER: 1026-1099

This certificate is issued on: 06/28/2010

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with W.Va. Code § 11-12.*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

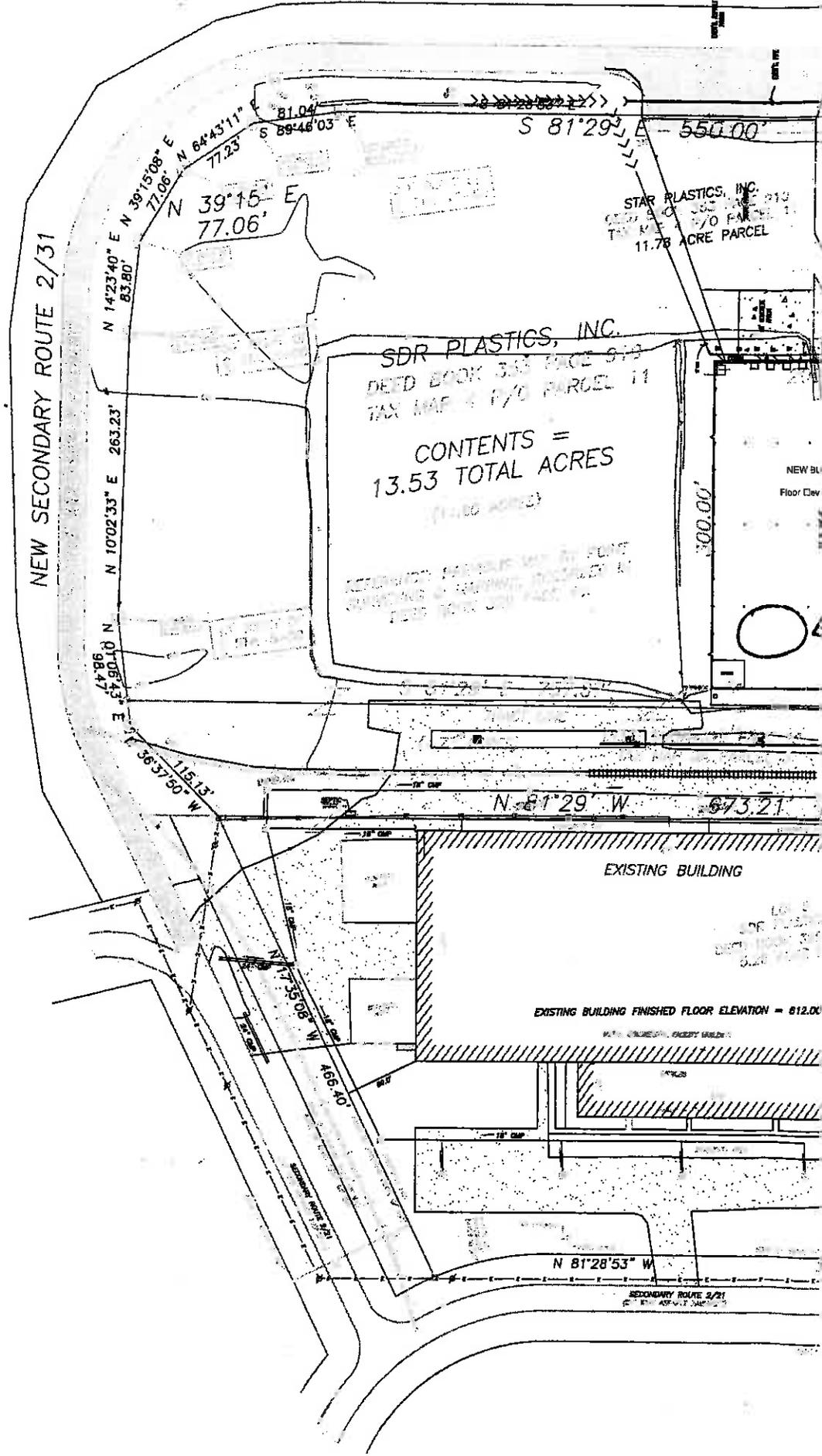
Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

**TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of
this certificate displayed at every job site within West Virginia.**

ATTACHMENT B

Map(s)

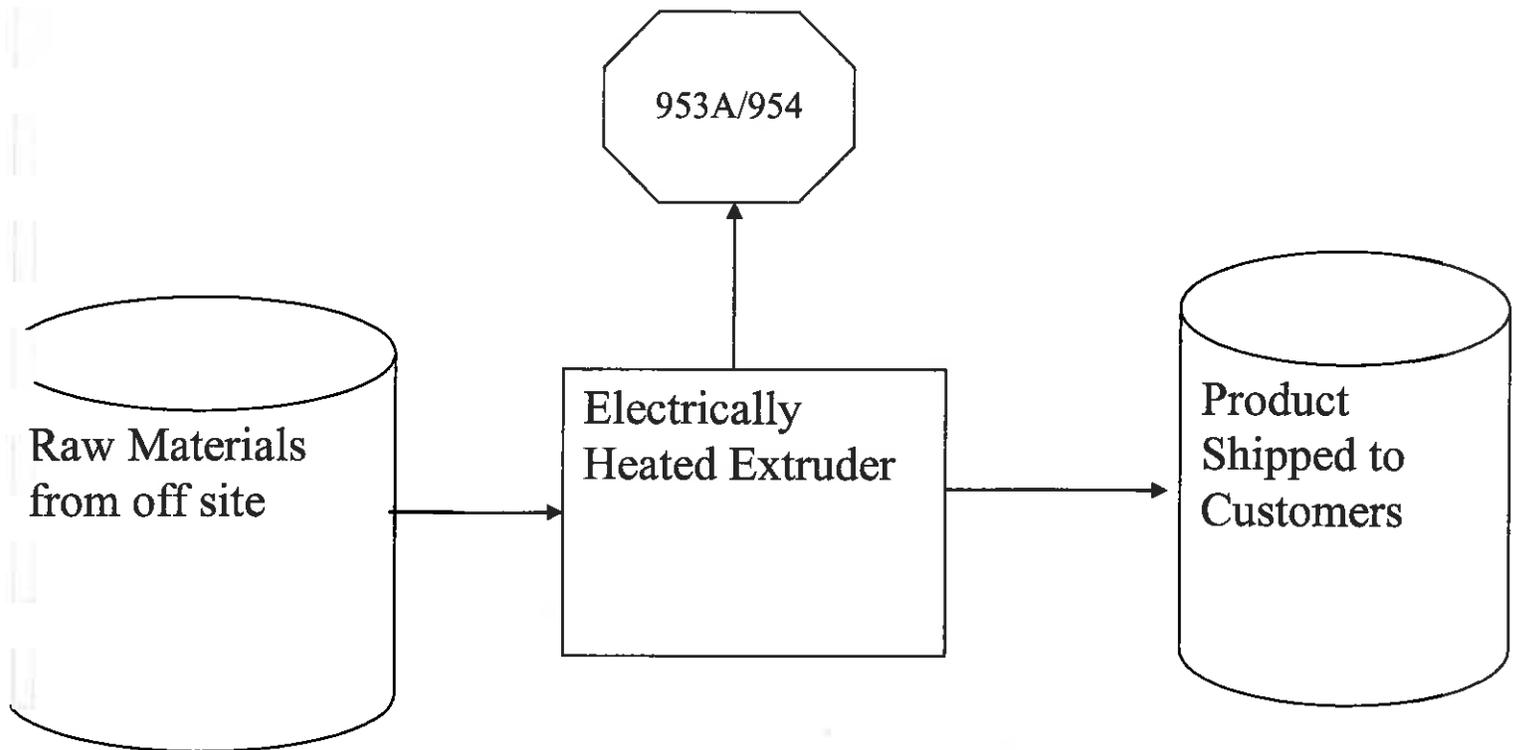
RAVENSWOOD ALUMINUM CORPORATION
DEED BOOK 284 PAGE 38
TAX MAP 4 PARCEL 11



Attachment F

Process Flow Diagram (A-Building)

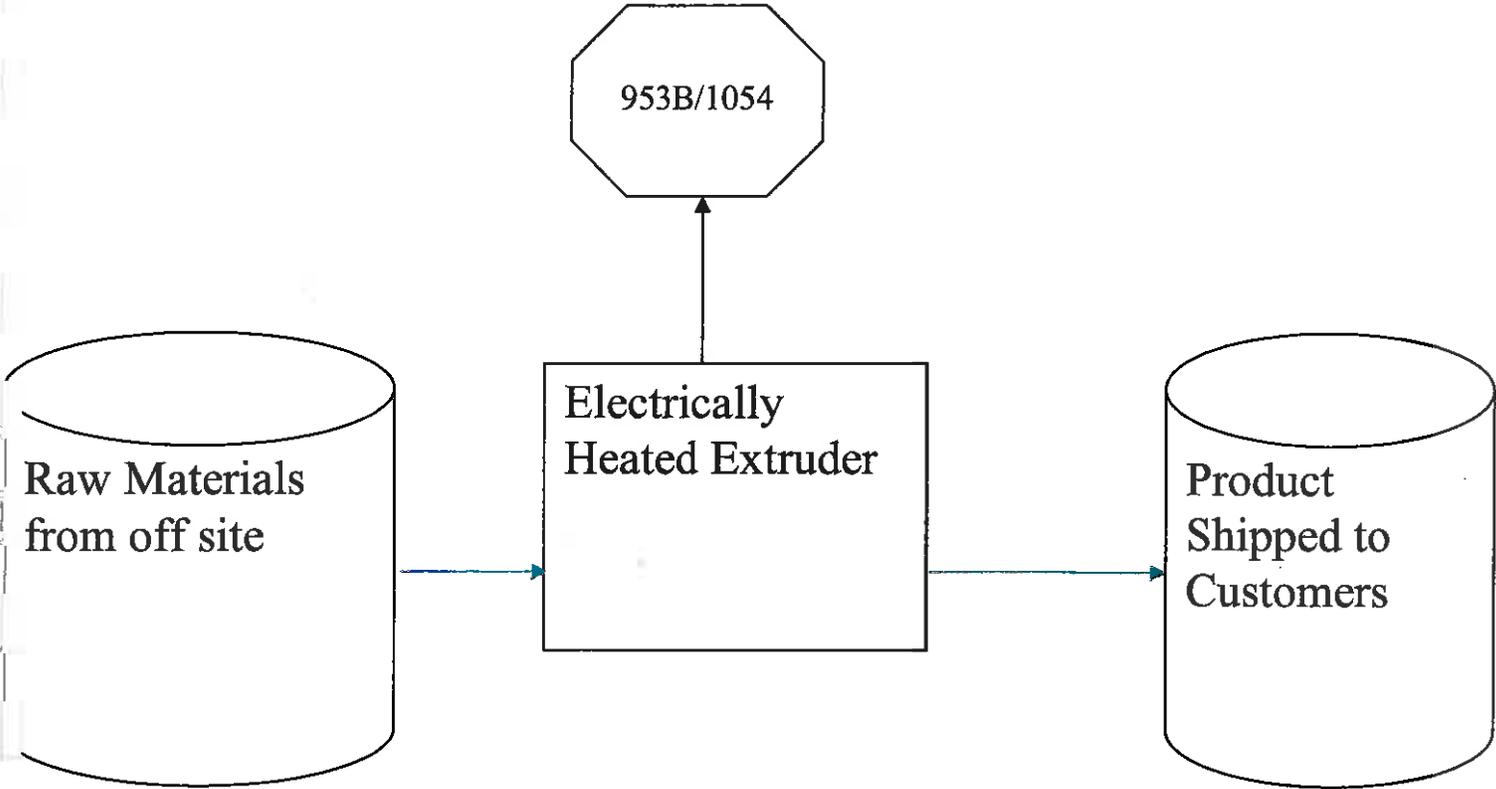
(ABS / HIPS/ PC) Application



Attachment F

Process Flow Diagram (B-Building)

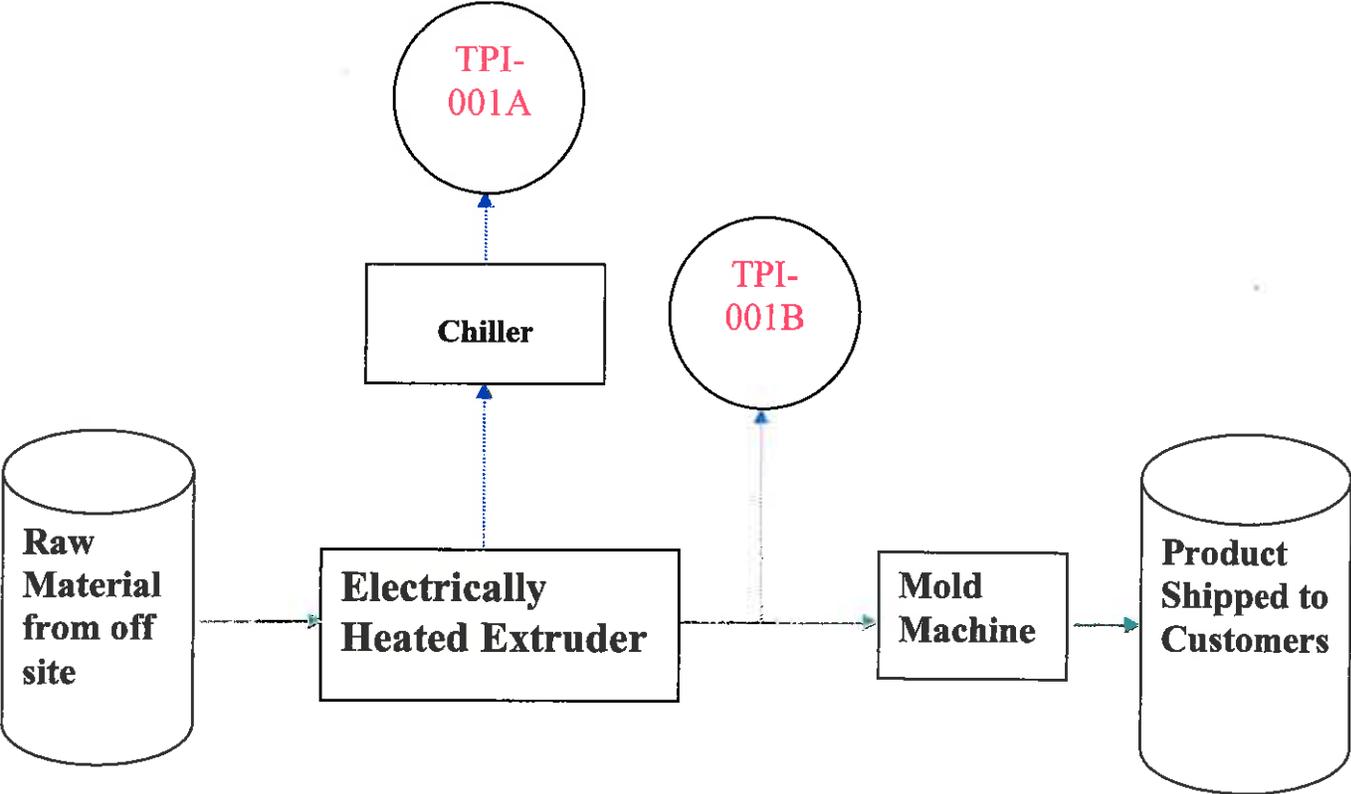
(ABS / HIPS/ PC) Application



Attachment F

Process Flow Diagram (C-Building)

(PE) Application



ATTACHMENT G

PROCESS DESCRIPTION

STAR Plastics, Inc. (STAR) and Technology Plastics, LLC (TPI) are co-located at the STAR facility in Millwood, West Virginia.

STAR produces various plastic resins including acrylonitrile butadiene styrene (ABS), high impact polystyrene (HIPS), polycarbonate (PC), acrylate styrene acrylonitrile (ASA), and polypropylene (PP). Some of the materials are sold to TPI for further processing.

As part of this permit modification STAR is decommissioning its 3-1/2 inch extruder and reducing the production rate of the 6-inch extruder from 6,000 pounds per hour to 3,000 pounds per hour. The 4-1/2 inch extruder will retain the existing hourly process rate of 3,000 pounds per hour.

TPI takes pellets or chips of ABS or ABS-FR (flame retardant) plastic and feeds them into a hopper above an extruder via a vacuum transfer system. A feeder mixes and feeds the resin from the hopper to the extruder. The resin is then electrically heated to form a fluid thermoplastic. The vapors from the extruder vent (TPI-001A) pass through a chiller prior to being emitted into the atmosphere. The extruder uses a screw to force the fluid thermoplastic through a die. Some emissions occur at the extruder die and are directed to the atmosphere through an emission point (TPI-001B) as indicated on the process flow diagram.

Pellets or chips of polyethylene (PE), polypropylene (PP), high impact polystyrene (HIPS), or HIPS-FR plastic are fed into a hopper above the extruder via a vacuum transfer system. A feeder mixes and feeds the resin from the hopper to the extruder. The resin is then electrically heated to form a fluid thermoplastic. The extruder uses a screw to force the fluid thermoplastic through a die. Emissions occur at the extruder die and are directed to the atmosphere through an emission point (TPI-001B) as indicated on the process flow diagram.

The extruded plastics are processed through a mold machine. The product is packaged for shipment to customers.

EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data															
Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
2E3 & 2E4	Upward Vertical Stack	953A/954	4-1/2" Extruder	NA	NA	NA	NA	Acrylonitrile Styrene VOC	0.00024 0.75 0.78	0.0008 1.45 2.60			Gas/Vapor	EE	
2E3 & 2E4	Upward Vertical Stack	953C/1054	6" Extruder	NA	NA	NA	NA	Acrylonitrile Styrene VOC	0.00024 3.00 3.00	0.0008 1.45 2.50			Gas/Vapor	EE	
TPI-001A	Upward Vertical Stack	TPI-001A & TPI-001B	Plastics Molding Machine	NA	NA	NA	NA	Acrylonitrile Styrene VOC	0.0002 1.875 1.875	0.00074 6.98 6.98			Gas/Vapor	EE	

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

- Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.
- Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).
- List all regulated air pollutants, Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, etc. DO NOT LIST CO₂, H₂, H₂O, N₂, O₂, and Noble Gases.
- Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).
- Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m³) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO₂, use units of ppmv (See 45CSR10).

Attachment J

EMISSION POINTS DATA SUMMARY SHEET

Table 2: Release Parameter Data

Emission Point ID No. (Must match Emissions Units Table)	Inner Diameter (ft.)	Temp. (°F)	Exit Gas		Velocity (fps)	Emission Point Elevation (ft)		UTM Coordinates (km)	
			Volumetric Flow ¹ (acfm) at operating conditions	Ground Level (Height above mean sea level)		Stack Height ² (Release height of emissions above ground level)	Northing	Easting	
2E3		90						4306.7	427.4
2E4		90						4306.7	427.4
TPI-001A	0.25	90	100	610	34	24		4306.7	427.4
TPI-001B	1	90	2010	610	43	13		4306.7	427.4

¹ Give at operating conditions. Include inerts.
² Release height of emissions above ground level.

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): TPI-001

<p>1. Name or type and model of proposed affected source:</p> <p>Nanjing Giant Machinery Company LTD Model SJ-170 Single Screw Polymer Extruder</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>2,500 lb/hr of plastics</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>2,500 lb/hr molded plastics</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants.</p> <p>None</p>

- * The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Not Applicable

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@

°F and

psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input:

× 10⁶ BTU/hr.

7. Projected operating schedule:

Hours/Day

24

Days/Week

7

Weeks/Year

52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	°F and	psia
a. NO _x	0 lb/hr	grains/ACF
b. SO ₂	0 lb/hr	grains/ACF
c. CO	0 lb/hr	grains/ACF
d. PM ₁₀	0 lb/hr	grains/ACF
e. Hydrocarbons	-- lb/hr	grains/ACF
f. VOCs	1.875 lb/hr	grains/ACF
g. Pb	-- lb/hr	grains/ACF
h. Specify other(s)		
Styrene	1.875 lb/hr	grains/ACF
Acrylonitrile	0.0002 lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.
 (2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING

RECORDKEEPING

REPORTING

TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 953A/954

<p>1. Name or type and model of proposed affected source:</p> <p>4-1/2" Extruder</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>3,000 lb/hr of plastics</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>3,000 lb/hr molded plastics</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Not Applicable

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@

°F and

psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input:

× 10⁶ BTU/hr.

7. Projected operating schedule:

Hours/Day

24

Days/Week

7

Weeks/Year

52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@	°F and	psia
a. NO _x	0 lb/hr	grains/ACF
b. SO ₂	0 lb/hr	grains/ACF
c. CO	0 lb/hr	grains/ACF
d. PM ₁₀	0 lb/hr	grains/ACF
e. Hydrocarbons	-- lb/hr	grains/ACF
f. VOCs	0.78 lb/hr	grains/ACF
g. Pb	-- lb/hr	grains/ACF
h. Specify other(s)		
Styrene	0.75 lb/hr	grains/ACF
Acrylonitrile	0.00024 lb/hr	grains/ACF
	lb/hr	grains/ACF
	lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing

Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING

RECORDKEEPING

REPORTING

TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None

**Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL**

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 954C/1054

<p>1. Name or type and model of proposed affected source:</p> <p>6" Extruder</p>
<p>2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.</p>
<p>3. Name(s) and maximum amount of proposed process material(s) charged per hour:</p> <p>3,000 lb/hr of plastics</p>
<p>4. Name(s) and maximum amount of proposed material(s) produced per hour:</p> <p>3,000 lb/hr molded plastics</p>
<p>5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants.</p> <p>None</p>

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

Not Applicable

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@

°F and

psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input:

$\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day

24

Days/Week

7

Weeks/Year

52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:			
@	°F and		psia
a. NO _x	0	lb/hr	grains/ACF
b. SO ₂	0	lb/hr	grains/ACF
c. CO	0	lb/hr	grains/ACF
d. PM ₁₀	0	lb/hr	grains/ACF
e. Hydrocarbons	--	lb/hr	grains/ACF
f. VOCs	3.00	lb/hr	grains/ACF
g. Pb	--	lb/hr	grains/ACF
h. Specify other(s)			
Styrene	3.00	lb/hr	grains/ACF
Acrylonitrile	0.00024	lb/hr	grains/ACF
		lb/hr	grains/ACF
		lb/hr	grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING

RECORDKEEPING

REPORTING

TESTING

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

None

**STAR PLASTICS, INC.
MILLWOOD, WV**

Current Permitted Emission Limits			Proposed Limits		
Pollutant	STAR	TPI	TOTAL	TOTAL	Net Change
	lb/hr	lb/hr	lb/hr	lb/hr	lb/hr
PM	1.94		1.94	1.94	0
VOC	19.89	1.88	21.77	19.89	0
Antimony Oxide	0.0078		0.0078	0.0078	0
Arsenic Oxide	0.00033		0.00033	0.00033	0
Styrene	6.63	1.875	8.51	5.63	-1.01
Acrylonitrile	0.00082	0.0002	0.0010	0.00068	-0.00014
Methylene Chloride	0.50		0.50	0.50	0

Pollutant	STAR	TPI	TOTAL	Proposed Limits	Net Change
	tpy	tpy	tpy	tpy	tpy
PM	7.45		7.45	7.45	0
VOC	87.12	8.24	95.36	87.12	0
Antimony Oxide	0.011		0.011	0.011	0
Arsenic Oxide	0.0014		0.0014	0.0014	0
Styrene	9.09	8.21	17.30	9.88	0.79
Acrylonitrile	0.0036	0.00088	0.0044	0.0036	0
Methylene Chloride	2.18		2.18	2.18	0
Total HAPs	11.29	8.21	19.50	12.08	0.79

Note: TPI permitted limits are for total HAPs
styrene and acrylonitrile are not listed in permit
but are listed in the permit application

Technology Plastics - Millwood, WV

Product	Chemical	Vac Vent Chiller EF lb/1000 lb	Die Vent Emission Factor lb/1000 lb	VacVent Chiller Emissions lb/hr	Die Vent Emissions lb/hr	VacVent Chiller Emissions tpy	Die Vent Emissions tpy
ABS	Acrylonitrile	0.00004	0.00004	0.0001	0.0001	0.00037	0.00037
	Styrene	0.0725	0.0725	0.181	0.181	0.67	0.67
	Total VOC	0.13	0.125	0.325	0.313	1.21	1.16

ABS FR	Acrylonitrile	0.00004	0.00004	0.0001	0.0001	0.00037	0.00037
	Styrene	0.0725	0.0725	0.181	0.181	0.67	0.67
	Total VOC	0.13	0.125	0.325	0.313	1.21	1.16

HIPS	Styrene	0.25	0.5	0.625	1.25	2.33	4.65
	Total VOC	0.25	0.5	0.625	1.25	2.33	4.65

HIPS FR	Styrene	0.25	0.5	0.625	1.25	2.33	4.65
	Total VOC	0.25	0.5	0.625	1.25	2.33	4.65

Throughput = 2,500 lb/hr
 12,536,000 lb/year
 6268 tpy

Maximum Potential Emissions

	lb/hr	ton/year	
Acrylonitrile	0.0002	0.00074	(ABS)
Styrene	1.875	6.98	(HIPS)
VOCs	1.875	6.98	(HIPS)

Emission factors are from stack tests of similar processes and materials at SDR Plastics, Inc. in Ravenswood, WV
 PE and PP processing do not generate air emissions.

STAR Plastics - Millwood, WV

Product	Chemical	4 1/2 Inch Extruder	6 Inch Extruder	4 1/2 Inch Extruder	6 Inch Extruder	4 1/2 Inch Extruder	6 Inch Extruder
		EF lb/1000 lb	EF lb/1000 lb	953A/954 Emissions lb/hr	953C/1054 Emissions lb/hr	953A/954 Emissions tpy	953C/1054 Emissions tpy
ABS	Acrylonitrile	0.00004	0.00004	0.00012	0.00012	0.00080	0.00080
	Styrene	0.0725	0.0725	0.44	0.44	1.45	1.45
	Total VOC	0.13	0.125	0.78	0.75	2.60	2.50

ABS FR	Acrylonitrile	0.00004	0.00004	0.00024	0.00024	0.00080	0.00080
	Styrene	0.0725	0.0725	0.44	0.44	1.45	1.45
	Total VOC	0.13	0.125	0.78	0.75	2.60	2.50

HIPS	Styrene	0.25	0.5	0.75	3.00	0.50	1.00
	Total VOC	0.25	0.5	0.75	3.00	0.50	1.00

HIPS FR	Styrene	0.25	0.5	0.75	3.00	0.50	1.00
	Total VOC	0.25	0.5	0.75	3.00	0.50	1.00

Throughput = 6,000 lb/hr (3,000 lb/hr each extruder)
 20,000 tpy 40,000,000 lb/yr
 HIPS + HIPS-FR = 2,000 tpy 4,000,000 lb/yr
 3000 lb/hr

Maximum Potential Emissions

	lb/hr	ton/year
Acrylonitrile	0.00048	0.0016
Styrene	3.75	2.90
VOCs	3.75	5.10

Emission factors are from stack tests of similar processes and materials at SDR Plastics, Inc. in Ravenswood, WV
 PE and PP processing do not generate air emissions.

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that STAR Plastics, Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Modification Permit for a plastics manufacturing process located at 326 Jack D. Burlingame Drive, in Millwood, in Jackson County, West Virginia. The latitude and longitude coordinates are: 38.90778 degrees north latitude and 81.83722 degrees west longitude.

The applicant estimates the increased potential to discharge the following Regulated Air Pollutants will be: 0.79 tons per year of styrene and 0.79 tons per year of total hazardous air pollutants (HAPs).

The modified operation is planned to begin on or about the first day of January, 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1227, during normal business hours.

Dated this the 27th day of January, 2015.

By: STAR Plastics, Inc.
Luke Schindler
Plant Manager
PO Box 249
Ravenswood, WV 26184