Mink, Stephanie R <stephanie.r.mink@wv.gov>

Response to Comments TeMa, Kearneysville Facility, R13-3414A

1 message

Carney, Brian D <brian.d.carney@wv.gov> Wed, Jun 26, 2024 at 8:30 AM
To: Brian D Carney <brian.d.carney@wv.gov>
Bcc: stephanie.r.mink@wv.gov

RE: Response to Comments
TeMa North America LLC (Jefferson County)
Permit Application No. R13-3414A
Plant ID No. 037-00110

Dear Commenter:

Please see the response to your comments attached to this email regarding the modification to the Tema North America, LLC, Plastic Extrusion facility. After consideration of all comments received, the West Virginia Division of Air Quality (DAQ) has made a final determination that TeMa's proposed modification , in accordance with the plans filed in th permit application R13-3414A, is in compliance with all applicable state and federal air quality rules and regulations, respectively.

Therefore, on June 25, 2024, the DAQ, pursuant to §45-13-5.7 and §45-14-7.5, issued Permit Number R13-3414A to TeMa North America, LLC for the modification of the plastic extrusion facility located at 395 Steeley Way, Kearneysville, Jefferson County, WV. Documents related to this permitting action, including the application, Final Permit, Response to Comments and substantive other documents/correspondence (under label IPR File), shall be made available at the following location soon (both on the page linked below under the "Popular searches" tab and on the Application Xtender database):

https://dep.wv.gov/daq/permitting/Pages/NSR-Permit-Applications.aspx

If you would like to request a hard copy of any of these documents mailed to you or if you have any questions, please contact me at (304-926-0499 x41287 or Ms. Stephanie Mink at (304) 926-0499 x41281.

Any person whose interest may be affects, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia Code §§22-5-14.

Sincerely,

Brian D. Carney, PE

Engineer

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Phone:304-926-0499 X41287
Fax: 304-926-0479

037-00110_Comments with Responses_13-3414A.pdf
129K

Carney, Brian D <brian.d.carney@wv.gov>

RE: TeMa R13-3414A

1 message

Patrick E. Ward <PEWard@potesta.com> Wed, Jun 19, 2024 at 10:07 AM
To: "Carney, Brian D" <brian.d.carney@wv.gov>
Cc: Lorenzo Spagna <lorenzo.spagna@iwisholding.com>, Gianpietro Mazzer <gianpietro.mazzer@iwisholding.com>, Giovanni Serafini <giovanni.serafini@iwisholding.com>, "Rhonda L. Henson" <rlhenson@potesta.com>

This is the type of vent filter/dust collector that will be placed on the virgin silo. It will be this make/model or an equivalent unit.

Let us know if you have any questions

Regards,

Patrick Ward

Potesta & Associates, Inc.

7012 MacCorkle Avenue, S.E.

Charleston, West Virginia 25304

Ph: (304) 342-1400

Direct: (304) 414-4751

Fax: (304) 343-9031

From: Carney, Brian D <brian.d.carney@wv.gov>
Sent: Monday, June 10, 2024 11:45 AM
To: Patrick E. Ward <PEWard@potesta.com>
Subject: TeMa R13-3414A

Mr. Ward,

Does the facility have any manufacturer data for the dust collection system X3DC? I understand if you're still bidding this equipment out and it's not available yet. DAQ has received a public comment concerning the lack of this information in the application and I thought I might check with you to see if this has been solidified and available yet.

Brian Carney,PE

ITEM 5.1 (FILTER LB-FNB4J16CM040957 24V 50-60HZ).pdf
3317K

DEP to Hold Public Meeting and Extend Public Comment Period

The West Virginia Department of Environmental Protection's Division of Air Quality (DAQ) will hold a virtual public meeting beginning at 6 p.m. on Wednesday, June 5, 2024, to provide information and receive comments regarding TEMA North America, LLC's air quality permit application R13-3414A. TEMA North America LLC has proposed to modify a plastic extrusion facility located at 395 Steeley Way, Kearneyville, WV 25430, Jefferson County, WV at 39.356546 and -77.870943.

The DAQ will hold the public meeting virtually at 6:00 p.m. on Wednesday, June 5, 2024. Instructions for asking questions and providing oral comments at the virtual public meeting are provided below. DAQ staff members will be available to provide a presentation and answer questions before taking comments from the public. The public comment period has been extended to 5:00 p.m. on Friday, June 7, 2024.

To participate online or by telephone, registration is required by 5:00 p.m. on Wednesday, June 5, 2024. To register, please complete the registration form at: https://forms.gle/JoMmcnfMZr95m6vt6. You will receive an email with information on how to join the virtual public hearing after the registration closes on June 5, 2024. There will be a question and answer session. If you would like to ask a question, please indicate "yes" you want to ask a question. After we have taken questions there will be an opportunity to submit oral public comments for the record. Please indicate "yes" if you want to provide oral comments on the record, when you register. Video demonstrations and screen sharing by commenters is not permitted. If you do not have internet access and want to register to participate via telephone, please contact Nicole Ernest at (304) 926-0499 x41256.

The purpose of the DAQ's permitting process is to make a preliminary determination of if the proposed permit will meet all state and federal requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at the public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Written comments must be received by 5:00 p.m. on Friday, June 7, 2024:

- Email written comments to Brian.D.Carney@wv.gov with "TEMA Comments" in the subject line, or
- Mail hard copy comments to Brian Carney, WV Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304.

Instructions for downloading additional information, including copies of the draft permit, application, and all other supporting materials relevant to the permit decision is available at: https://dep.wv.gov/daq/permitting/Pages/NSR-Permit-Applications.aspx. Under Popular Searches.

TeMa comments

1 message

Carney, Brian D <brian.d.carney@wv.gov> Tue, Jun 25, 2024 at 10:39 AM
To: Brian D Carney <brian.d.carney@wv.gov>

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>
Bcc:
Date: Mon, 10 Jun 2024 07:46:03 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A
Comment period closed at 5pm Friday. This came in at 4:42 pm - so it met the deadline. Found in the SPAM folder.

-------- Forwarded message --------
From: **Lynn Delles** <LBDelles@gmail.com>
Date: Fri, Jun 7, 2024 at 4:42 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes material delivered in bulk sack and “placed in storage or blown into a silo” and grinding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

3 – The efficiency of Baghouse X2DC for XPS silo is listed as 100% with 95% control. Is this realistic? This is apparently supported by manufacturers information. However, the same is assumed for Baghouse X3DC for the future silo even though no manufacturer has been selected for that baghouse yet. What is the basis for this assumption?

4 – Baghouse X3DC has no monitoring or recoding suggested. Please require stringent monitoring and recording for Baghouse X3DC.

5 – In the permit there are only very general operating and maintenance requirements for baghouses but no certification of this or other types of monitoring. Please require visual checks and pressure differentials monitoring with alarms for both baghouses. Please also require monthly maintenance checks of the bag houses with required documentation and reporting.

It is important that the DEP gets this right. As the county leadership continues to welcome industry, it's important that existing industries in the area are held to the highest standard for the sake of the air quality. Thank you for your consideration of these comments and your attention to this important matter.

--
Lynn Delles
LBDelles@gmail.com

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>, Terry A Fletcher

<terry.a.fletcher@wv.gov>
Bcc:
Date: Mon, 3 Jun 2024 07:39:53 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Emily D Gordon** <edgrolfer@gmail.com>
Date: Mon, Jun 3, 2024 at 7:12 AM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

3 – The efficiency of Baghouse X2DC for XPS silo is listed as 100% with 95% control. Is this realistic? This is apparently supported by manufacturers information. However, the same is assumed for Baghouse X3DC for the future silo even though no manufacturer has been selected for that baghouse yet. What is the basis for this assumption?

4 – Baghouse X3DC has no monitoring or recoding suggested. Please require stringent monitoring and recording for Baghouse X3DC.

5 – In the permit there are only very general operating and maintenance requirements for baghouses but no certification of this or other types of monitoring. Please require visual checks and pressure differentials monitoring with alarms for both baghouses. Please also require monthly maintenance checks of the bag houses with required documentation and reporting.

6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
Emily D Gordon
edgrolfer@gmail.com

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>
Bcc:
Date: Fri, 31 May 2024 06:59:33 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Carlo Olivares** <cboli0100@gmail.com>
Date: Thu, May 30, 2024 at 4:02 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement

delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

3 – The efficiency of Baghouse X2DC for XPS silo is listed as 100% with 95% control. Is this realistic? This is apparently supported by manufacturers information. However, the same is assumed for Baghouse X3DC for the future silo even though no manufacturer has been selected for that baghouse yet. What is the basis for this assumption?

4 – Baghouse X3DC has no monitoring or recoding suggested. Please require stringent monitoring and recording for Baghouse X3DC.

5 – In the permit there are only very general operating and maintenance requirements for baghouses but no certification of this or other types of monitoring. Please require visual checks and pressure differentials monitoring with alarms for both baghouses. Please also require monthly maintenance checks of the bag houses with required documentation and reporting.

6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
Carlo Olivares
cboli0100@gmail.com

---------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>
Bcc:
Date: Fri, 31 May 2024 11:31:23 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

---------- Forwarded message ---------
From: **Lisa Payne** <lisagpayne@comcast.net>
Date: Fri, May 31, 2024 at 11:20 AM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

I am writing to ask the WVDEP to both consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage. Clearly, these are two different processes with very different resulting emissions.

2 – For the Baghouse X2DC for the XPS silo only notes “Other, specify, with "visual checks” marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, specifically Recordkeeping, Reporting, and Testing” section, “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

3 – The efficiency of Baghouse X2DC for XPS silo is listed as 100% with 95% control. Is this a realistic number? This is apparently supported by the manufacturers information. However, the same is assumed for Baghouse X3DC for the future silo, even though no manufacturer has been selected for that baghouse yet. What is the basis for this assumption?

4 – Baghouse X3DC has no monitoring or recoding suggested. Please require stringent monitoring and recording for Baghouse X3DC.

5 – In the permit there are only very general operating and maintenance requirements for baghouses indicated but no certification of

this or other types of monitoring are specified. Please require visual checks and pressure differentials monitoring with alarms for both baghouses. Please also require monthly maintenance checks of the bag houses, with required documentation and reporting.

6 – Please hold a public hearing on this air permit. Other than relocating, the citizens of Jefferson County have to live with the environmental impacts imposed upon the air they breathe. Their voice is equally, if not more important than the companies impacting their lives.

Thank you for your consideration of these comments and your attention to this important matter.

--
Lisa Payne
lisagpayne@comcast.net

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>
Bcc:
Date: Thu, 30 May 2024 15:49:11 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Leyland delre** <leyland.delre@gmail.com>
Date: Thu, May 30, 2024 at 3:41 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

3 – The efficiency of Baghouse X2DC for XPS silo is listed as 100% with 95% control. Is this realistic? This is apparently supported by manufacturers information. However, the same is assumed for Baghouse X3DC for the future silo even though no manufacturer has been selected for that baghouse yet. What is the basis for this assumption?

4 – Baghouse X3DC has no monitoring or recoding suggested. Please require stringent monitoring and recording for Baghouse X3DC.

5 – In the permit there are only very general operating and maintenance requirements for baghouses but no certification of this or other types of monitoring. Please require visual checks and pressure differentials monitoring with alarms for both baghouses. Please also require monthly maintenance checks of the bag houses with required documentation and reporting.

6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

My family has chosen to live in this area because of the beautiful clean air and water. We have noticed how many more poor air quality days there have been. Don't let this rest on your conscience.

--
Leyland delre
leyland.delre@gmail.com

-------- Forwarded message ---------

From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>
Bcc:
Date: Wed, 29 May 2024 07:30:24 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Christian Lotze** <Chrislotze@gmail.com>
Date: Tue, May 28, 2024 at 5:19 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

3 – The efficiency of Baghouse X2DC for XPS silo is listed as 100% with 95% control. Is this realistic? This is apparently supported by manufacturers information. However, the same is assumed for Baghouse X3DC for the future silo even though no manufacturer has been selected for that baghouse yet. What is the basis for this assumption?

4 – Baghouse X3DC has no monitoring or recoding suggested. Please require stringent monitoring and recording for Baghouse X3DC.

5 – In the permit there are only very general operating and maintenance requirements for baghouses but no certification of this or other types of monitoring. Please require visual checks and pressure differentials monitoring with alarms for both baghouses. Please also require monthly maintenance checks of the bag houses with required documentation and reporting.

6 – Please hold a public hearing on this air permit.

7. Our land, Roxley Farms, is located within a few miles down Wiltshire Rd, and we would be among the first to be exposed to these higher emissions. PLEASE do mot permit the requested increases!

Thank you for your consideration of these comments and your attention to this important matter.

--
Christian Lotze
Chrislotze@gmail.com

-------- Forwarded message --------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Tue, 28 May 2024 07:34:58 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Linda Roberts** <llr5504@gmail.com>
Date: Mon, May 27, 2024 at 7:02 AM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

I am concerned about this request based on the the issues below. In addition, I believe it is imperative to follow all required regulations in order to keep West Virginia a safe place to live. If the issues are not addressed, I believe we will see a drop off in population and recreation. Jefferson county will no longer be a desirable place to live or vacation.

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

3 – The efficiency of Baghouse X2DC for XPS silo is listed as 100% with 95% control. Is this realistic? This is apparently supported by manufacturers information. However, the same is assumed for Baghouse X3DC for the future silo even though no manufacturer has been selected for that baghouse yet. What is the basis for this assumption?

4 – Baghouse X3DC has no monitoring or recoding suggested. Please require stringent monitoring and recording for Baghouse X3DC.

5 – In the permit there are only very general operating and maintenance requirements for baghouses but no certification of this or other types of monitoring. Please require visual checks and pressure differentials monitoring with alarms for both baghouses. Please also require monthly maintenance checks of the bag houses with required documentation and reporting.

6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
Linda Roberts
llr5504@gmail.com

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Wed, 22 May 2024 07:37:31 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Pamela Rowley** <pamelakrowley@gmail.com>
Date: Wed, May 22, 2024 at 7:04 AM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

3 – The efficiency of Baghouse X2DC for XPS silo is listed as 100% with 95% control. Is this realistic? This is apparently supported by manufacturers information. However, the same is assumed for Baghouse X3DC for the future silo even though no manufacturer has

been selected for that baghouse yet. What is the basis for this assumption?

4 – Baghouse X3DC has no monitoring or recoding suggested. Please require stringent monitoring and recording for Baghouse X3DC.

5 – In the permit there are only very general operating and maintenance requirements for baghouses but no certification of this or other types of monitoring. Please require visual checks and pressure differentials monitoring with alarms for both baghouses. Please also require monthly maintenance checks of the bag houses with required documentation and reporting.

6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
Pamela Rowley
pamelakrowley@gmail.com

---------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>, Beverly D McKeone <beverly.d.mckeone@wv.gov>
Bcc:
Date: Wed, 22 May 2024 07:36:55 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

---------- Forwarded message ---------
From: **Christina Melocik** <chris.tiny@comcast.net>
Date: Tue, May 21, 2024 at 10:00 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

3 – The efficiency of Baghouse X2DC for XPS silo is listed as 100% with 95% control. Is this realistic? This is apparently supported by manufacturers information. However, the same is assumed for Baghouse X3DC for the future silo even though no manufacturer has been selected for that baghouse yet. What is the basis for this assumption?

4 – Baghouse X3DC has no monitoring or recoding suggested. Please require stringent monitoring and recording for Baghouse X3DC.

5 – In the permit there are only very general operating and maintenance requirements for baghouses but no certification of this or other types of monitoring. Please require visual checks and pressure differentials monitoring with alarms for both baghouses. Please also require monthly maintenance checks of the bag houses with required documentation and reporting.

6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
Christina Melocik
chris.tiny@comcast.net

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Wed, 22 May 2024 07:36:15 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Conrad Lotze** <clotze@hotmail.com>
Date: Tue, May 21, 2024 at 3:20 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

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6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

Best, Conrad Lotze, PhD

--
Conrad Lotze
clotze@hotmail.com

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Tue, 21 May 2024 07:59:25 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Jim Reid** <preid64@comcast.net>
Date: Mon, May 20, 2024 at 9:56 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

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6 – Please hold a public hearing on this air permit.

7 = In a county with booming residential growth, large annual tourism industry, agriculture and a casino to boot, it seems idiotic that county officials would put all this in jeopardy by bringing in heavy polluters unless someones pockets are being lined. We shouldnt be a sacrifice zone for corrupt Charleston. Please end this stupidity.
Thank you for your consideration of these comments and your attention to this important matter.

--
Jim Reid
preid64@comcast.net

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Mon, 20 May 2024 12:34:33 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Walter chatham** <walter@wfchatham.com>
Date: Mon, May 20, 2024 at 12:27 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

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6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
Walter chatham
walter@wfchatham.com

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Tue, 21 May 2024 07:58:50 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **James Reid** <spyro2gyro@comcast.net>
Date: Mon, May 20, 2024 at 9:45 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

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6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
James Reid

spyro2gyro@comcast.net

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Mon, 20 May 2024 08:25:11 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Martha Sullivan** <sullivanmartha1@gmail.com>
Date: Mon, May 20, 2024 at 4:55 AM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Dear West Virginia Department of Environmental Protection, Division of Air Quality (DAQ),

As a homeowner in Jefferson County concerned about the quality of our air and the environment, I ask that you consider the following points in reference to Air Permit Application R13-3414A:

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

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5 – In the permit there are only very general operating and maintenance requirements for baghouses but no certification of this or other types of monitoring. Please require visual checks and pressure differentials monitoring with alarms for both baghouses. Please also require monthly maintenance checks of the bag houses with required documentation and reporting.

6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
Martha Sullivan
sullivanmartha1@gmail.com

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>, Beverly D McKeone <beverly.d.mckeone@wv.gov>
Bcc:
Date: Mon, 20 May 2024 09:16:20 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Hilary Lo** <lo.family.wv@gmail.com>

Date: Mon, May 20, 2024 at 9:01 AM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

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6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
Hilary Lo
lo.family.wv@gmail.com

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Mon, 20 May 2024 08:24:40 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Thomas Dymacek** <Tdymmer@gmail.com>
Date: Sun, May 19, 2024 at 9:48 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

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6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
Thomas Dymacek
Tdymmer@gmail.com

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Mon, 20 May 2024 08:24:15 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **Barbara Humes** <bhumes1@comcast.net>
Date: Sun, May 19, 2024 at 8:46 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

Ideally, emissions should decrease, not increase.

2 – For the Baghouse X2DC for the XPS silo only “Other, specify: visual checks” is marked under “how is filter monitored for indications of deterioration (e.g., broken bags)?” However, under the “Proposed Monitoring, Recordkeeping, Reporting, and Testing” section “Differential pressure” is listed under monitoring and recordkeeping. Please ensure that differential pressure is being monitoring and that alarms are required that indicate when the device is out of specification.

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6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--

Barbara Humes
bhumes1@comcast.net

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Mon, 20 May 2024 08:23:48 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **STEPHEN BERZINSKAS** <sberzinskas@comcast.net>
Date: Sun, May 19, 2024 at 7:27 PM
Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

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6 – Please hold a public hearing on this air permit.

Thank you for your consideration of these comments and your attention to this important matter.

--
STEPHEN BERZINSKAS
sberzinskas@comcast.net

-------- Forwarded message ---------
From: "Air Quality Permitting, DEP" <depairqualitypermitting@wv.gov>
To: Brian D Carney <brian.d.carney@wv.gov>, Laura M Crowder <laura.m.crowder@wv.gov>
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Terry A Fletcher <terry.a.fletcher@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>
Bcc:
Date: Mon, 20 May 2024 08:23:11 -0400
Subject: Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A

-------- Forwarded message --------
From: **William Telfair** <Wbchtelfair@sbcglobal.net>
Date: Sun, May 19, 2024 at 6:27 PM

Subject: Public Comment for TeMa Modification Air Permit application R13-3414A
To: <brian.d.carney@wv.gov>, <DEPAirQualityPermitting@wv.gov>

Dear Mr. Carney,

Please consider and address the following issues with the TEMA air permit (R13-3414) before approving.

1 – The applicant claims no fugitive emissions from truck unloading or storage. This is hard to accept because this includes cement delivered in bulk sack and “placed in storage or blown into a silo” and griding of trimmings with transfer of grindings to a silo. Please require the applicant to accurately estimate and control the fugitive emissions associated with truck unloading and materials storage.

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6 – Please hold a public hearing on this air permit.

7 - This is important to me and my family (as well as the general public) to reduce the particle content of the air we breathe. Asthma and Diabetes are much worse as these particles are added to the air.

Thank you for your consideration of these comments and your attention to this important matter.

--
William Telfair
Wbchtelfair@sbcglobal.net

19 attachments

Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A.eml
12K

Fwd: Public Comment for TeMa Modification Air Permit application R13-3414A.eml
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6.6.2 Poly(ethylene Terephthalate)[1-2]

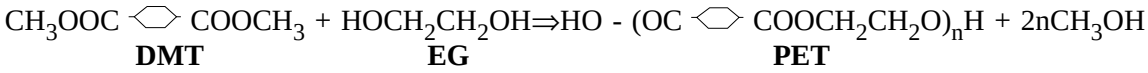
6.6.2.1 General

Poly(ethylene terephthalate), or PET, is a thermoplastic polyester resin. Such resins may be classified as low-viscosity or high-viscosity resins. Low-viscosity PET typically has an intrinsic viscosity of less than 0.75, while high-viscosity PET typically has an intrinsic viscosity of 0.9 or higher. Low-viscosity resins, which are sometimes referred to as "staple" PET (when used in textile applications), are used in a wide variety of products, such as apparel fiber, bottles, and photographic film. High-viscosity resins, sometimes referred to as "industrial" or "heavy denier" PET, are used in tire cord, seat belts, and the like.

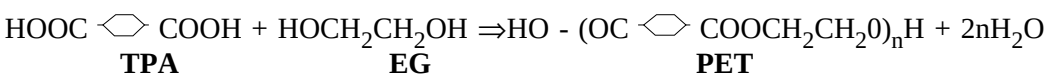
PET is used extensively in the manufacture of synthetic fibers (i. e., polyester fibers), which compose the largest segment of the synthetic fiber industry. Since it is a pure and regulated material meeting FDA food contact requirements, PET is also widely used in food packaging, such as beverage bottles and frozen food trays that can be heated in a microwave or conventional oven. PET bottles are used for a variety of foods and beverages, including alcohol, salad dressing, mouthwash, syrups, peanut butter, and pickled food. Containers made of PET are being used for toiletries, cosmetics, and household and pharmaceutical products (e. g., toothpaste pumps). Other applications of PET include molding resins, X-ray and other photographic films, magnetic tape, electrical insulation, printing sheets, and food packaging film.

6.6.2.2 Process Description[3-15]

PET resins are produced commercially from ethylene glycol (EG) and either dimethyl terephthalate (DMT) or terephthalic acid (TPA). DMT and TPA are solids. DMT has a melting point of 140°C (284°F), while TPA sublimes (goes directly from the solid phase to the gaseous phase). Both processes first produce the intermediate bis-(2-hydroxyethyl)-terephthalate (BHET) monomer and either methanol (DMT process) or water (TPA process). The BHET monomer is then polymerized under reduced pressure with heat and catalyst to produce PET resins. The primary reaction for the DMT process is:



The primary reaction for the TPA process is:



Both processes can produce low- and high-viscosity PET. Intrinsic viscosity is determined by the high polymerizer operating conditions of: (1) vacuum level, (2) temperature, (3) residence time, and (4) agitation (mechanical design).

The DMT process is the older of the two processes. Polymerization grade TPA has been available only since 1963. The production of methanol in the DMT process creates the need for methanol recovery and purification operations. In addition, this methanol can produce major VOC emissions. To avoid the need to recover and purify the methanol and to eliminate the potential VOC emissions, newer plants tend to use the TPA process.

DMT Process -

Both batch and continuous operations are used to produce PET using DMT. There are three basic differences between the batch process and continuous process: (1) a column-type reactor replaces the kettle reactor for esterification (ester exchange between DMT and ethylene glycol), (2) "no-back-mix" (i. e., no stirred tank) reactor designs are required in the continuous operation, and (3) different additives and catalysts are required to ensure proper product characteristics (e. g., molecular weight, molecular weight distribution).

Figure 6.6.2-1 is a schematic representation of the PET/DMT continuous process, and the numbers and letters following refer to this figure. Ethylene glycol is drawn from raw material storage (1) and fed to a mix tank (2), where catalysts and additives are mixed in. From the mix tank, the mixture is fed, along with DMT, to the esterifiers, also known as ester exchange reactors (3). About 0.6 pounds (lb) of ethylene glycol and 1.0 lb of DMT are used for each pound of PET product. In the esterifiers, the first reaction step occurs at an elevated temperature (between 170 and 230°C [338 and 446°F]) and at or above atmospheric pressure. This reaction produces the intermediate BHET monomer and the byproduct methanol. The methanol vapor must be removed from the esterifiers to shift the conversion to produce more BHET.

The vent from the esterifiers is fed to the methanol recovery system (11), which separates the methanol by distillation in a methanol column. The recovered methanol is then sent to storage (12). Vapor from the top of the methanol column is sent to a cold water (or refrigerated) condenser, where the condensate returns to the methanol column, and noncondensables are purged with nitrogen before being emitted to the atmosphere. The bottom product of methanol column, mostly ethylene glycol from the column's reboiler, is reused.

The BHET monomer, with other esterifier products, is fed to a prepolymerization reactor (4) where the temperature is increased to 230 to 285°C (446 to 545°F), and the pressure is reduced to between 1 and 760 millimeters (mm) of mercury (Hg) (typically, 100 to 200 mm Hg). At these operating conditions, residual methanol and ethylene glycol are vaporized, and the reaction that produces PET resin starts.

Product from the prepolymerizer is fed to one or more polymerization reactors (5), in series. In the polymerization reactors, sometimes referred to as end finishers, the temperature is further increased to 260 to 300°C (500 to 572°F). The pressure is further reduced (e. g., to an absolute pressure of 4 to 5 mm Hg). The final temperature and pressure depend on whether low- or high-viscosity PET is being produced. For high-viscosity PET, the pressure in the final (or second) end finisher is less than 2 mm Hg. With high-viscosity PET, more process vessels are used than low-viscosity PET to achieve the higher temperatures and lower pressures needed.

The vapor (ethylene glycol, methanol, and other trace hydrocarbons from the prepolymerization and polymerization reactors) typically is evacuated through scrubbers (spray condensers) using spent ethylene glycol. The recovered ethylene glycol is recirculated in the scrubber system, and part of the spent ethylene glycol from the scrubber system is sent to storage in process tanks (13), after which it is sent to the ethylene glycol recovery system (14).

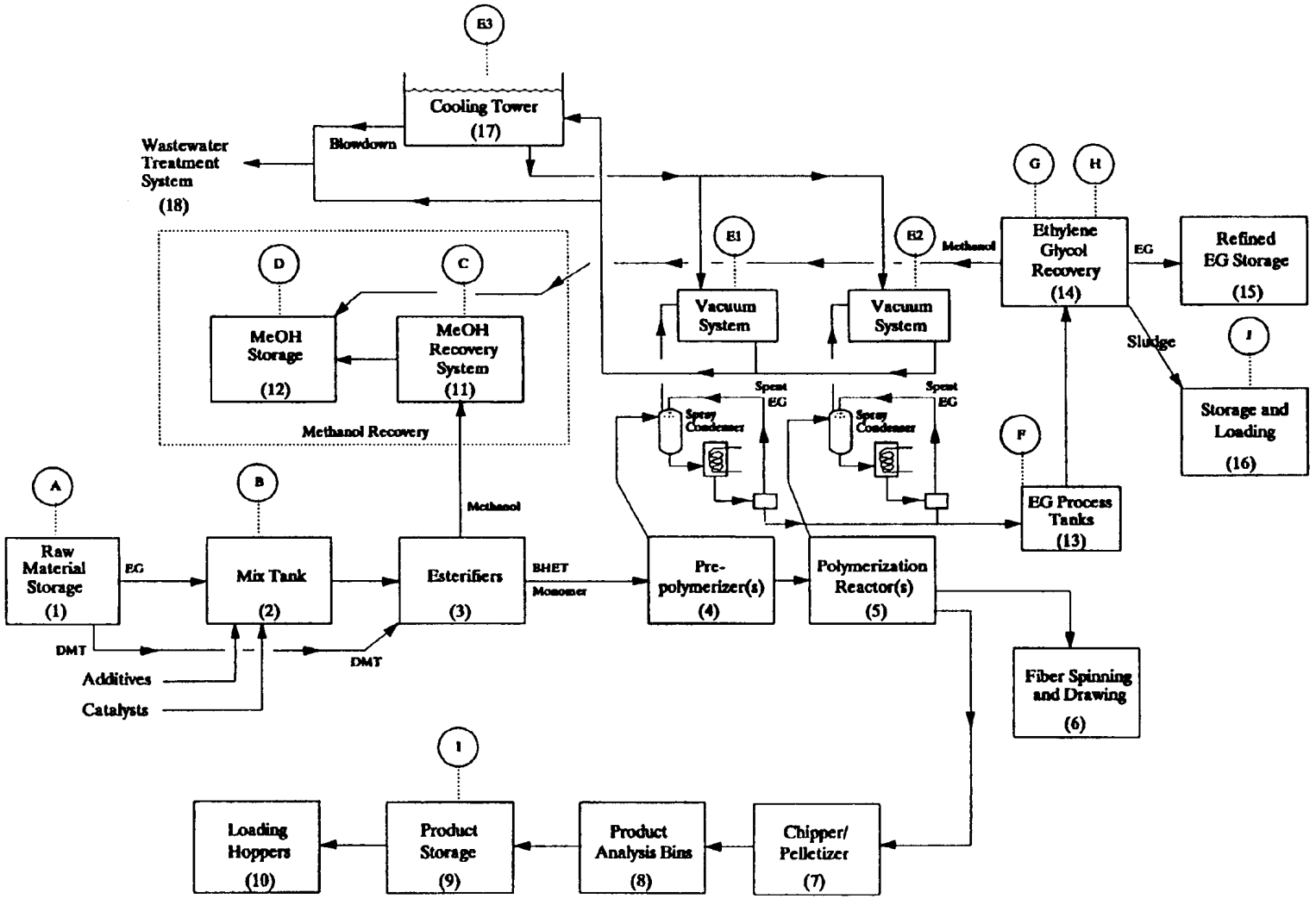


Figure 6.6.2-1. Simplified flow diagram of PET/DMT continuous process.

The ethylene glycol recovery system (14) usually is a distillation system composed of a low boiler column, a refining column, and associated equipment. In such a system, the ethylene glycol condensate is fed to the low boiler column. The top product from this column is sent to a condenser, where methanol is condensed and sent to methanol storage. The noncondensable vent (from the low boiler condenser) is purged with nitrogen and sent to the atmosphere (Stream G in the flow diagram). The bottom product of the low boiler column goes to its reboiler, with the vapor recycled back to the low boiler column and the underflow sent to the refining column. The refining column is under vacuum and is evacuated to the atmosphere. Top product from the refining column goes through a condenser, and the condensate is collected in a reflux tank. Part of the ethylene glycol condensate returns to the refining column. The remaining liquid goes to refined ethylene glycol storage (15). The reflux tank is purged with nitrogen. (The purge gas vented to the atmosphere from the reflux tank consists of only nitrogen.) The bottom product of the refining column goes to a reboiler, vapor returns to the column, and what remains is a sludge byproduct (16).

The vacuum conditions in the prepolymerization and polymerization reactors are created by means of multistage steam jet ejector (venturi) systems. The vacuum system typically is composed of a series of steam jets, with condensers on the discharge side of the steam jet to cool the jets and to condense the steam. The condensed steam from the vacuum jets and the evacuated vapors are combined with the cooling water during the condensation process. This stream exiting the vacuum system goes either to a cooling tower (17), where the water is cooled and then recirculated through the vacuum system, or to a waste water treatment plant (once-through system) (18).

Product from the polymerization reactor (referred to as the polymer melt) may be sent directly to fiber spinning and drawing operations (6). Alternatively, the polymer melt may be chipped or pelletized (7), put into product analysis bins (8), and then sent to product storage (9) before being loaded into hoppers (10) for shipment to the customer.

TPA Process -

Figure 6.6.2-2 is a schematic diagram of a continuous PET/TPA process, and the numbers and letters following refer to this figure. Raw materials are brought on site and stored (1). Terephthalic acid, in powder form, may be stored in silos. The ethylene glycol is stored in tanks. The terephthalic acid and ethylene glycol, containing catalysts, are mixed in a tank (2) to form a paste. In the mix tank, ethylene glycol flows into a manifold that sprays the glycol through many small slots around the periphery of the vent line. The terephthalic acid and ethylene glycol are mixed by kneading elements working in opposite directions. Combining these materials into a paste is a simple means of introducing them to the process, allowing more accurate control of the feed rates to the esterification vessels. A portion of the paste is recycled to the mix tank. This paste recycle and feed rates of TPA and ethylene glycol are used to maintain an optimum paste density or weight percent of terephthalic acid.

The paste from the mix tanks is fed, using gear pumps to meter the flow, to a series of esterification vessels (referred to as esterifiers, or ester exchange reactors). Two or more esterifiers may be used. Residence time is controlled by valves in the transfer lines between each vessel. These esterifiers are closed, pressurized reactors. Pressure and temperature operating conditions in the primary esterifier (3) are between 30 and 50 pounds per square inch gauge (psig) and 230 to 260°C (446 to 500°F), respectively. Vapors, primarily water (steam) and glycol, are vented to a reflux column or distillation column. A heat exchanger cools the vapors. Recovered glycol is returned to the primary esterifier. The water vapor is condensed using 29°C (85°F) cooling water in a shell-and-tube condenser and then is discharged to the waste water treatment system. The monomer formed in the primary esterifier and the remaining reactants are pumped to the secondary esterifier.

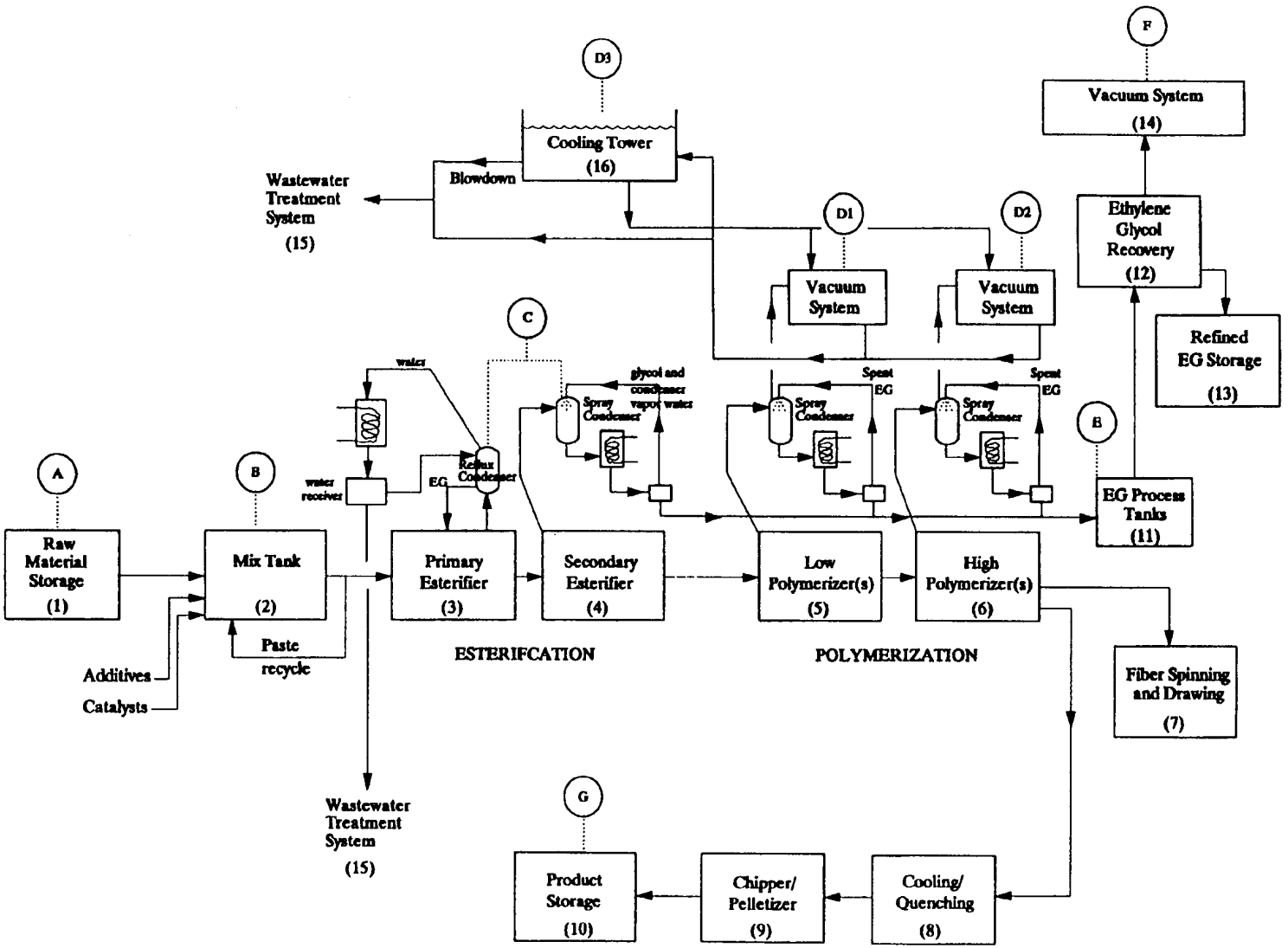


Figure 6.6.2-2. Simplified flow diagram of PET/TPA continuous process.

The secondary esterifier (4) is operated at atmospheric pressure and at a temperature of 250 to 270°C (482 to 518°F). The vapors from the secondary esterifier, primarily water vapor, are vented to a spray condenser, and this condensate is sent to a central ethylene glycol recovery unit (12). The condensate water is cooled by cooling water in a shell-and-tube heat exchanger and then recycled.

At one plant, the secondary esterifiers for the staple PET lines have a manhole (or rotary valve on some lines) through which chips and reworked yarn pellets are recycled. These manholes are not present on the secondary esterifiers for the industrial PET lines. Water vapor and monomer are emitted from the manholes, and the monomer sublimates on piping near the manhole.

Monomer (BHET) from the secondary esterifier is then pumped to the polymerization reactors. The number of reactors and their operating conditions depends on the type of PET being produced. Typically, there will be at least two polymerization reaction vessels in series, an initial (low) polymerizer and a final (high) polymerizer. The former is sometimes referred to as a prepolymerizer or a prepolycondensation reactor. The latter is sometimes called an end finisher. In producing high-viscosity PET, a second end finisher is sometimes used.

In the initial (low) polymerizer (5), esterification is completed and polymerization occurs (i. e., the joining of short molecular chains). Polymerization is "encouraged" by the removal of ethylene glycol. This reactor is operated under pressures of 20 to 40 mm Hg and at 270 to 290°C (518 to 554°F) for staple (low-viscosity) PET, and 10 to 20 mm Hg and 280 to 300°C (536 to 572°F) for industrial filament PET. The latter conditions produce a longer molecule, with the greater intrinsic viscosity and tenacity required in industrial fibers. Glycol released in the polymerization process and any excess or unreacted glycol are drawn into a contact spray condenser (scrubber) countercurrent to a spent ethylene glycol spray. (At one facility, both the low and high polymerizer spray condensers have four spray nozzles, with rods to clear blockage by solidified polymer. Care is taken to ensure that the spray pattern and flow are maintained.) Recovered glycol is pumped to a central glycol recovery unit, a distillation column. Vacuum on the reactors is maintained by a series of steam jets with barometric intercondensers. At one plant, a two-stage steam ejector system with a barometric intercondenser is used to evacuate the low polymerizer. The condensate from the intercondensers and the last steam jets is discharged to an open recirculating water system, which includes an open trough (referred to as a "hot well") and cooling tower. The recirculation system supplies cooling water to the intercondensers.

In the production of high-viscosity PET, the polymer from the low polymerizer is pumped to a high polymerizer vessel (6). In the high polymerizer, the short polymer chains formed in the low polymerizer are lengthened. Rotating wheels within these vessels are used to create large surface exposure for the polymer to facilitate removal of ethylene glycol produced by the interchange reaction between the glycol ester ends. The high polymerizer is operated at a low absolute pressure (high vacuum), 0.1 to 1.0 mm Hg, and at about 280 to 300°C (536 to 572°F). Vapors evolved in the high polymerizer, including glycol, are drawn through a glycol spray condenser. If very "hard" vacuums are drawn (e. g., 0.25 mm Hg), such spray condensers are very difficult, if not impossible, to use. At least one facility does not use any spray condensers off the polymerizers (low and high). Recovered glycol is collected in a receiver and is pumped to a central ethylene glycol recovery unit. At one plant, chilled water between -3.9 and 1.7°C (25 and 35°F) is used on the heat exchanger associated with the high polymerizer spray condenser.

At least one facility uses two high polymerizers (end finishers) to produce high-viscosity PET. At this plant, the first end finisher is usually operated with an intermediate vacuum level of about 2 mm Hg. The polymer leaving this reactor then enters a second end finisher, which may have a vacuum level as low as 0.25 mm Hg.

Vapors from the spray condenser off the high polymerizers are also drawn through a steam jet ejector system. One facility uses a five-jet system. After the first three ejectors, there is a barometric intercondenser. Another barometric intercondenser is located between the fourth and fifth ejectors. The ejectors discharge to the cooling water hot well. The stream exiting the vacuum system is sent either to a cooling tower (16) where the water is recirculated through the vacuum system, or to a waste water treatment plant (once-through system) (15).

Vacuum pumps were installed at one plant as an alternative to the last two ejectors. These pumps were installed as part of an energy conservation program and are used at the operator's discretion. The vacuum pumps are operated about 50 percent of the time. The vacuum system was designed for a maximum vapor load of about 10 kilograms per hour (kg/hr). If vacuum is lost, or is insufficient in the low or high polymerizers, off-specification product results. Each process line has a dual vacuum system. One five-stage ejector/vacuum pump system is maintained as a standby for each industrial filament (high-viscosity) process line. The staple (low-viscosity) lines have a standby ejector system, but with only one vacuum pump per process line. Steam ejectors reportedly recover faster from a slug of liquid carryover than do vacuum pumps, but the spare system is used in the production of either high- or low-viscosity PET.

At many facilities, molten PET from the high polymerizer is pumped at high pressure directly through an extruder spinerette, forming polyester filaments (7). The filaments are air cooled and then either cut into staple or wound onto spools. Molten PET can also be pumped out to form blocks as it cools and solidifies (8), which are then cut into chips or are pelletized (9). The chips or pellets are stored (10) before being shipped to the customer, where they are remelted for end-product fabrication.

Ethylene glycol recovery (12) generally involves a system similar to that of the DMT process. The major difference is the lack of a methanol recovery step. At least one TPA facility has a very different process for ethylene glycol recovery. At this plant, ethylene glycol emissions from the low and high polymerizers are allowed to pass directly to the vacuum system and into the cooling tower. The ethylene glycol is then recovered from the water in the cooling tower. This arrangement allows for a higher ethylene glycol concentration in the cooling tower.

6.6.2.3 Emissions And Controls[3,5,11,13,16-21]

Table 6.6.2-1 shows the VOC and particulate emissions for the PET/DMT continuous process, with similar levels expected for batch processes. The extensive use of spray condensers and other ethylene glycol and methanol recovery systems is economically essential to PET production, and these are not generally considered "controls".

Total VOC emissions will depend greatly on the type of system used to recover the ethylene glycol from the prepolymerizers and polymerization reactors, which give rise to emission streams E1, E2, E3, F, G, H, and J. The emission streams from the prepolymerizers and polymerization reactors are primarily ethylene glycol, with small amounts of methanol vapors and volatile impurities in the raw materials. Of these emission streams, the greatest emission potential is from the cooling tower (Stream E3). The amount of emissions from the cooling tower depends on a number of factors, including ethylene glycol concentration and windage rate. The ethylene glycol concentration depends on a number of factors, including use of spray condensers off the polymerization vessels, circulation rate of the cooling water in the cooling tower, blowdown rate (the rate are which water is drawn out of the cooling tower), and sources of water to cooling tower (e. g., dedicated cooling tower versus plant-side cooling tower).

Table 6.6.2-1 (Metric Units). EMISSION FACTORS FOR PET/DMT PROCESS[a]

Stream Identification	Emission Stream	Nonmethane VOC[b]	Particulate	EMISSION FACTOR RATING	References
A	Raw material storage	0.1	0.165[c]	C	17
B	Mix tanks	negligible[d]	ND	C	13
C	Methanol recovery system	0.3[e]	ND	C	3, 17
D	Recovered methanol storage	0.09[f]	ND	C	3, 17
E	Polymerization reaction				
E1	Prepolymerizer vacuum system	0.009	ND	C	17
E2	Polymerization reactor vacuum system	0.005	ND	C	17
E3		0.2			
	Cooling tower[g]	3.4	ND	C	18 - 19
F	Ethylene glycol process tanks	0.0009	ND	C	17
G	Ethylene glycol recovery condenser	0.01	ND	C	17
H	Ethylene glycol recovery vacuum system	0.0005	ND	C	17
I	Product storage	ND	0.0003[h]	C	17
J	Sludge storage and loading	0.02	ND	C	17
Total Plant		0.73[j] 3.9[k]	0.17		

[a] Stream identification refers to Figure 6.6.2-1. Units are grams per kilogram of product. ND = no data.

[b] Rates reflect extensive use of condensers and other recovery equipment as part of normal industry economical practice.

[c] From storage of DMT.

[d] Assumed same as for TPA process.

[e] Reference 3. For batch PET production process, estimated to be 0.15 grams VOC per kilogram of product.

[f] Reflects control by refrigerated condensers.

[g] Based on ethylene glycol concentrations at two PET/TPA plants. The lower estimate reflects emissions where spray condensers are used off the prepolymerizers and the polymerization reactors. The higher estimate reflects emissions where spray condensers are not used off the prepolymerizers and the polymerization reactors. A site-specific calculation is highly recommended for all cooling towers, because of the many variables. The following equation may be used to estimate windage emissions from cooling towers:

$$E = [EG_{wt\%} \times CT_{cr} \times 60 \times WR] \times [(4.2 \times EG_{wt\%}) + (3.78 \times H_2O_{wt\%})]$$

Table 6.6.2-1 (cont.).

where:

E = Mass of VOC emitted (kilograms per hour)
$EG_{wt\%}$ = Concentration of ethylene glycol, weight percent (fraction)
60 = Minutes per hour
CT_{cr} = Cooling tower circulation rate, gallons per minute
WR = Windage rate, fraction
4.2 = Density of ethylene glycol (kilograms per gallon)
3.78 = Density of water (kilograms per gallon)
$H_2O_{wt\%}$ = Concentration of water, weight percent (fraction)

Example: The VOC emissions from a cooling tower with an ethylene glycol concentration of 8.95% by weight, a water concentration of 91.05% by weight, a cooling tower circulation rate of 1270 gallons per minute, and a windage rate of 0.03% are estimated to be:

$$E = [0.0895 \times 1270 \times 60 \times 0.0003] \times [(4.2 \times 0.0895) + (3.78 \times 0.9105)]$$

$$= 7.8 \text{ kilograms per hour}$$

[h] Emission rate is for "controlled" emissions. Without controls, the estimated emission rate is 0.4 grams per kilogram of product.
[j] With spray condensers off all prepolymerizers and the polymerization reactors.
[k] With no spray condensers off all prepolymerizers and the polymerization reactors.

Most plants recover the ethylene glycol by using a spent ethylene glycol spray scrubber condenser directly off these process vessels and before the stream passes through the vacuum system. The condensed ethylene glycol may then be recovered through distillation. This type of recovery system results in relatively low concentrations of ethylene glycol in the cooling water at the tower, which in turn lowers emission rates for the cooling tower and the process as a whole. At one PET/TPA plant, a typical average concentration of about 0.32 weight percent ethylene glycol was reported, from which an emission rate of 0.2 grams VOC per kilogram (gVOC/kg) of product was calculated.

Alternatively, a plant may send the emission stream directly through the vacuum system (typically steam ejectors) without using spent ethylene glycol spray condensers. The steam ejectors used to produce a vacuum will produce contaminated water, which is then cooled for reuse. In this system, ethylene glycol is recovered from the water in the cooling tower by drawing off water from the tower (blowdown) and sending the blowdown to distillation columns. This method of recovering ethylene glycol can result in much higher concentrations of ethylene glycol in the cooling tower than when the ethylene glycol is recovered with spray condensers directly off the process vessels. (The actual concentration of ethylene glycol in the cooling water depends, in part, on the blowdown rate.) Higher concentrations in the cooling tower result in greater ethylene glycol emissions from the cooling tower and, in turn, from the process as a whole. At one PET/TPA plant recovering the ethylene glycol from the cooling tower, emissions from the cooling tower were approximately 3.4 gVOC/kg of product.

Next to the cooling tower, the next largest potential emission source in the PET/DMT process is the methanol recovery system. Methanol recovery system emissions (Stream C) from a plant using a continuous process are estimated to be approximately 0.3 gVOC/kg of product and about 0.09 gVOC/kg of product from the recovered methanol storage tanks. The emissions from the methanol recovery system (Stream C) for a batch process were reported to be 0.15 gVOC/kg of product, and typically are methanol and nitrogen.

The other emission streams related to the prepolymerizer and polymerization reactors are collectively relatively small, being about 0.04 gVOC/kg of product. VOC emissions from raw material storage (mostly ethylene glycol) are estimated to be about 0.1 gVOC/kg of product. Fixed roof storage tanks (ethylene glycol) and bins (DMT) are used throughout the industry. Emissions are vapors of ethylene glycol and DMT result from vapor displacement and tank breathing. Emissions from the mix tank are believed to be negligible.

Particulate emissions occur from storage of both raw material (DMT) and end product. Those from product storage may be controlled before release to the atmosphere. Uncontrolled particulate emissions from raw material storage are estimated to be approximately 0.17 g/kg of product. Particulate emissions from product storage are estimated to be approximately 0.0003 g/kg of product after control and approximately 0.4 g/kg of product before control.

Total VOC emissions from a PET/DMT continuous process are approximately 0.74 gVOC/kg of product if spray condensers are used off all of the prepolymerizers and polymerization reaction vessels. For a batch process, this total decreases to approximately 0.59 gVOC/kg of product. If spray condensers are not used, the ethylene glycol concentration in the cooling tower is expected to be higher, and total VOC emissions will be greater. Calculation of cooling tower emissions for site-specific plants is recommended. Total particulate emissions are approximately 0.17 g/kg of product, if product storage emissions are controlled.

Table 6.6.2-2 summarizes VOC and particulate emissions for the PET/TPA continuous process, and similar emission levels are expected for PET/TPA batch processes. VOC emissions are generally "uncontrolled", in that the extensive use of spray condensers and other ethylene glycol recovery systems are essential to the economy of PET production.

Emissions from raw material storage include losses from the raw materials storage and transfer (e. g., ethylene glycol). Fixed roof storage tanks and bins with conservation vents are used throughout the process. The emissions, vapors of ethylene glycol, TPA, and TPA dust, are from working and breathing losses. The VOC emission estimate for raw materials storage is assumed to be the same as that for the PET/DMT process. No emission estimate was available for the storage and transfer of TPA.

VOC emissions from the mix tank are believed to be negligible. They are emitted at ambient temperatures through a vent line from the mixer.

VOC emissions from the esterifiers occur from the condensers/distillation columns on the esterifiers. Emissions, which consist primarily of steam and ethylene glycol vapors, with small amounts of feed impurities and volatile side reaction products, are estimated to be 0.04 gVOC/kg of product. Exit temperature is reported to be approximately 104°C (220°F). At least one plant controls the primary esterifier condenser vent with a second condenser. At this plant, emissions were 0.0008 gVOC/kg of product with the second condenser operating, and 0.037 gVOC/kg of product without the second condenser operating. The temperature for the emission stream from the second

Table 6.6.2-2 (Metric Units). EMISSION FACTORS FOR PET/TPA PROCESS[a]

Stream Identification	Emission Stream	Nonmethane VOC[b]	Particulate	EMISSION FACTOR RATING	References
A	Raw material storage	0.1[c]	ND	C	17
B	Mix tanks	negligible	ND	C	13
C	Esterification	0.04[d]	ND	A	20 - 21
D	Polymerization reaction				
D1	Prepolymerizer vacuum system	0.009[c]	ND	C	17
D2	Polymerization reactor vacuum system	0.005[c]	ND	C	17
D3	Cooling tower[e]	0.2 3.4	ND	C	18 - 19
E	Ethylene glycol process tanks	0.0009[c]	ND	C	17
F	Ethylene glycol recovery vacuum system	0.0005[c]	ND	C	17
G	Product storage	ND	0.0003[c,f]	C	17
Total Plant		0.36[g] 3.6[h]			

[a] Stream identification refers to Figure 6.6.2-2. Units are grams per kilogram of product. ND = no data.

[b] Rates reflect extensive use of condensers and other recovery equipment as part of normal industry economical practice.

[c] Assumed same as for DMT process.

[d] At least one plant controls the primary esterifier condenser vent with a second condenser. Emissions were 0.0008 grams VOC per kilogram of product with the second condenser operating, and 0.037 grams VOC per kilogram of product without the second condenser operating.

[e] Based on ethylene glycol concentrations at two PET/TPA plants. The lower estimate reflects emissions where spray condensers are used off the prepolymerizers and the polymerization reactors. The higher estimate reflects emissions where spray condensers are not used off the prepolymerizers and the polymerization reactors. It is highly recommended that a site-specific calculation be done for all cooling towers as many variables affect actual emissions. The equation found in footnote g for Table 6.6.2-1 may be used to estimate windage emissions from cooling towers.

[f] Reflects control of product storage emissions. Without controls, the estimated emission rate is 0.4 grams per kilogram of product.

[g] With spray condensers off all prepolymerizers and the polymerization reactors.

[h] With no use of spray condensers off all prepolymerizers and the polymerization reactors.

condenser was reported to be 27 to 38°C (80 to 100°F). The emissions from the second condenser were composed of di-iso-propyl amine (DIPA) and acetaldehyde, with small amounts of ethylene.

Emissions from the prepolymerizers and polymerization reaction vessels in both PET/TPA and PET/DMT processes should be very similar. The emissions were discussed earlier under the DMT process.

The estimates of VOC emissions from the ethylene glycol process tanks and the ethylene glycol recovery system, and of particulate emissions from product storage, are assumed to be the same as for the DMT process.

Total VOC emissions from the PET/TPA process are approximately 0.36 gVOC/kg of product if spray condensers are used with all of the prepolymerizers and polymerization reaction vessels. If spray condensers are not used with all of these process vessels, the concentration in the cooling tower can be expected to be higher, and total VOC emissions will be greater. For example, at one plant, emissions from the cooling tower were calculated to be approximately 3.4 gVOC/kg of product, resulting in a plantwide estimate of 3.6 gVOC/kg of product. Calculation of cooling tower emissions for site-specific plants is recommended. Excluding TPA particulate emissions (no estimate available), total particulate emissions are expected to be small.

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6. Written communication from R. E. Lee, Tennessee Eastman Co., Kingsport, TN, to A. Limpiti, Energy And Environmental Analysis, Inc., Durham, NC, November 7, 1980.

7. Written communication from P. Meitner, E. I. duPont de Nemours and Company, Inc., Wilmington, DE, to Central Docket Section, U. S. Environmental Protection Agency, Washington, DC, February 8, 1988.

8. Written communication from P. Meitner, E. I. duPont de Nemours and Company, Inc., Wilmington, DE, to J. R. Farmer, U. S. Environmental Protection Agency, Research Triangle Park, NC, August 29, 1988.

9. *Final Trip To DuPont's Poly(ethylene terephthalate) Plant, Kinston, NC*, Pacific Environmental Services, Inc., Durham, NC, February 21, 1989.

10. Telephone communication between R. Purcell, Pacific Environmental Services, Inc., Durham, NC, and J. Henderson and L. Williams, E. I. duPont de Nemours and Company, Inc., Kinston, NC, December 1988.

11. *Final Trip Report To Fiber Industries Polyester Plant, Salisbury, NC*, Pacific Environmental Services, Inc., Durham, NC, September 29, 1982.

12. Written communication from D. V. Perry, Fiber Industries, Salisbury, NC, to K. Meardon, Pacific Environmental Services, Inc., Durham, NC, November 22, 1982.

13. Written communication from R. K. Smith, Allied Chemical, Moncure, NC, to D. R. Goodwin, U. S. Environmental Protection Agency, Research Triangle Park, NC, October 27, 1980.

14. *Final Trip Report To Monsanto's Polyester Plant, Decatur, Alabama*, Energy and Environmental Analysis, Durham, NC, August 27, 1980.

15. Written communication from R. K. Smith, Allied Fibers and Plastics, Moncure, NC, to J. R. Farmer, U. S. Environmental Protection Agency, Research Triangle Park, NC, April 15, 1982.

16. Written communication from D. Perry, Fiber Industries, Salisbury, NC, to K. Meardon, Pacific Environmental Services, Inc., Durham, NC, February 11, 1983.

17. Written communication from D. O. Quisenberry, Tennessee Eastman Company, Kingsport, TN, to S. Roy, U. S. Environmental Protection Agency, Research Triangle Park, NC, August 25, 1988.

18. K. Meardon, *"Revised Costs For PET Regulatory Alternatives"*, Docket No. A-82-19, Item II-B-90. U. S. EPA, Air Docket Section, Waterside Mall, 401 M Street, SW, Washington, DC, August 20, 1984.

19. Written communication from J. W. Torrance, Allied Fibers and Plastics, Petersburg, VA, to J. R. Farmer, U. S. Environmental Protection Agency, Research Triangle Park, NC, September 4, 1984.

20. Written communication from A. T. Roy, Allied-Signal, Petersburg, VA, to K. Meardon, Pacific Environmental Services, Inc., Durham, NC, August 18, 1989.

21. Telephone communication between K. Meardon, Pacific Environmental Services, Inc., Durham, NC, and A. Roy, Allied-Signal, Petersburg, VA, August 18, 1989.

IDEM

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
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Mr. Rob Wells
Primex Plastics Corporation
1235 North F Street
Richmond, Indiana 47374

March 3, 2009

Re: Permit By Rule Status
177-27338-00065

Dear Mr. Wells:

On January 6, 2009, Primex Plastics Corporation submitted a letter with supporting data to the Office of Air Quality (OAQ) indicating that the collocated, stationary, plastic sheet production source, located at 1235 North F Street, Richmond, Indiana 47374 and 2175 Williamsburg Pike, Richmond, Indiana 47374, satisfies the criteria to operate under the provisions of 326 IAC 2-10 (Permit by Rule). Based on the data and information submitted (Attachment A - Source Determination, Attachment B - Emissions Calculations) and the provisions of 326 IAC 2-10 (Permit by Rule), Primex Plastics Corporation, is now operating under Permit by Rule (PBR) Status.

Pursuant to 326 IAC 2-10 (Permit by Rule), this source shall comply with the following conditions:

(a) The source limits actual emissions for every twelve (12) month period to less than twenty percent (20%) of any threshold for the following:

(1) A major source of regulated air pollutants, as defined by 326 IAC 2-7-1(22) (i.e., one hundred (100) tons per year of any regulated air pollutant, in all areas except areas classified as serious, severe, and extreme nonattainment for ozone). [326 IAC 2-10-3.1(1)(A)]

(2) A major source of hazardous air pollutants (HAPs), as defined in Section 112 of the Clean Air Act (i.e., ten (10) tons per year of any individual HAP or twenty-five (25) tons per year of any combination of HAPs). [326 IAC 2-10-3.1(1)(B)]

(b) The source shall not rely on air pollution control equipment to comply with the above-mentioned limitations. [326 IAC 2-10-3.1(2)]

(c) Not later than thirty (30) days after receipt of written request by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), or U.S. Environmental Protection Agency (EPA), the owner or operator shall demonstrate that the source is in compliance with the above-mentioned conditions. [326 IAC 2-10-4.1]

(d) Compliance demonstration shall be based on actual emissions for the previous 12 months and may include, but is not limited to, fuel or material usage or production records. No other demonstration of compliance shall be required. [326 IAC 2-10-4.1]

This source is hereby notified that this Permit by Rule approval does not relieve the source of the responsibility to comply with the provisions of any applicable federal, state, or local requirements, such as New source Performance Standards (NSPS), 40 CFR Part 60, or National Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61 or 40 CFR Part 63. [326 IAC 2-10-5.1]

Any change or modification which will alter operations in such a way that the source will no longer comply with 326 IAC 2-10 (Permit by Rule), must obtain the appropriate approval from the OAQ under 326 IAC 2-1.1, 326 IAC 2-2, 326 IAC 2-3, 326 IAC 2-7, 326 IAC 2-8, or 326 IAC 2-9 before such change may occur. This source may at any time apply for a state operating permit under 326 IAC 2-6.1, a Part 70 permit under 326 IAC 2-7, a FESOP under 326 IAC 2-8, or an operating agreement under 326 IAC 2-9, as applicable. [326 IAC 2-10-1(b)]

Any violation of 326 IAC 2-10 (Permit by Rule) may result in administrative or judicial enforcement proceedings under IC 13-30-3 and penalties under IC 13-30-4, IC 13-30-5, or IC 13-30-6. [326 IAC 2-10-6.1]

A copy of the PBR is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

If you have any questions on this matter, please contact Ms. Desrosiers, of my staff, at 317-234-5374 or 1-800-451-6027, and ask for extension 4-5374.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: A - Source Determination
B - Emissions Calculations

IC/hd

cc: File - Wayne County
Wayne County Health Department
Air Compliance Section
Billing, Licensing, and Training Section

Attachment A - Source Determination
Primex Plastics Corporation

Primex Plastics Corporation (Primex) has two plants in Richmond. Plant A is located at 1235 North F Street and Plant B is located at 2175 Williamsburg Pike. The two plants are approximately 2.5 miles apart. IDEM, OAQ has examined whether the two plants are part of the same source.

The term "source" is defined at 326 IAC 1-2-73. In order for these two plants to be considered one source, they must meet all three of the following criteria:

(1) the plants must be under common ownership or common control;

(2) the plants must have the same two-digit Standard Industrial Classification (SIC) Code or one must serve as a support facility for the other; and,

(3) the plants must be located on contiguous or adjacent properties.

IDEM, OAQ will first look at whether the two plants will be under common ownership or common control. The two plants are owned by Primex, therefore common ownership exists, and the first element of the definition is met.

The second element of the source definition is whether the plants have the same two-digit Standard Industrial Classification (SIC) Code, or if one serves as a support facility for the other. The SIC Codes can be found at http://www.osha.gov/pls/imis/sicsearch.html on the United States Department of Labor, Occupational Safety and Health Administration website. The proper two-digit code for both plants is Major Group 30: Rubber and Miscellaneous Plastics Products.

A plant is considered a support facility if at least 50% of its total output is dedicated to another plant. Plant B sends 80% of its output, reworked plastic, to Plant A. Plant A does not send any output to Plant B. Therefore, Plant B is a support facility to Plant A. Since the two plants have the same two-digit SIC Code and a support facility relationship, the two plants meet the second element of the definition of a source.

Since the plants are located on properties 2.5 miles apart and 80% of the output of Plant B goes to Plant A, the plants are adjacent and the third element of the definition is met. IDEM, OAQ has determined that the two plants meet all the elements of the source definition and are part of the same source.

01/29/2009 initial source determination conducted.

Attachment B - Emission Calculations
Actual Collocated Emissions Summary

Company Name: **Primex Plastics Corporation**
Address City IN Zip: **1235 North F Street, Richmond, Indiana 47374**
Permit #: **177-12874-00065**
Reviewer: **Hannah L. Desrosiers**
Date: **January 6, 2009**

	PM (tpy)	PM10* (tpy)	VOC (tpy)	CO (tpy)	Combined HAPs (tpy)
Extrusion	2.26	2.26	6.41	2.25	1.26
Grinding	8.85	8.85	--	--	--
Conveyance	0.48	0.48	--	--	--
Wood Pallets Construction	0.15	0.15	--	--	--
Plastic Scrap Cutting	0.15	0.15	--	--	--
Pallet Washing	--	--	0.04	--	--
Total	**11.89**	**11.89**	**6.45**	**2.25**	**1.26**

Notes:

***** It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Therefore, PM = PM10 = PM2.5

Attachment B - Emission Calculations
Actual Collocated Emissions - 12-Month Emissions for 2008

Company Name: Primex Plastics Corporation
Address City IN Zip: 1235 North F Street, Richmond, Indiana 47374
Permit #: 177-12874-00065
Reviewer: Hannah L. Desrosiers
Date: January 6, 2009

Criteria Pollutant Emissions

Actual Material Usage (lbs/yr)		
Resin	**Raw Material**	**Colorant**
ABS	13,272,000	580,000
HDPE	61,986,000	1,561,000
PETG	2,724,000	3,587
PP	6,916,000	561,000
PS	34,690,000	1,712,000
Additives	--	670,000

Extrusion		Particulate Matter (PM/PM10) *			Volatile Organic Compounds (VOC)			Carbon Monoxide (CO)		
Material	**Purchases (lbs/yr)**	**Emission Factor (lbs/MMlbs)**	**Actual Emissions (lbs/yr)**	**Actual Emissions (tons/yr)**	**Emission Factor (lbs/MMlbs)**	**Actual Emissions (lbs/yr)**	**Actual Emissions (tons/yr)**	**Emission Factor (lbs/MMlbs)**	**Actual Emissions (lbs/yr)**	**Actual Emissions (tons/yr)**
ABS	14,405,580	30.3	436.49	0.2182	190	2737.06	1.3685	0	0.00	0.0000
HDPE	65,591,430	26.6	1744.73	0.8724	30.7	2013.66	1.0068	50	3279.57	1.6398
PETG	2,947,435	30.0	88.42	0.0442	35	103.16	0.0516	50	147.37	0.0737
PP	7,839,330	30.3	237.53	0.1188	104	815.29	0.4076	90	705.54	0.3528
PS	37,632,080	53.3	2005.79	1.0029	190	7150.10	3.5750	10	376.32	0.1882
Total				**2.26**			**6.41**			**2.25**

Purchases (lbs/yr) = Raw Material (lbs/yr) + Colorant (lbs/yr) + Additives (lbs/yr)
Additives were assumed to be equally distributed between each resin
3% of material is scrapped and recycled, this amount was added to "Purchases (lbs/yr)"
Actual Emissions (tons/year) = Purchases (lbs/yr) x Emission Factor (lbs/1,000,000 lbs) / 2000 (lbs/ton)

Grinding	Max Capacity (lbs/yr)	PM/PM10 Emission Factor* (lb PM/ton)	PM/PM_{10} Emissions (tons/yr)
Total	119,588,000	0.296	**8.85**

Actual Emissions (tons/year) = [Max Capacity (lbs/yr) / 2000 (lbs/ton)] * [Emission Factor (lb PM/ton) / 2000 (lb/ton)]

Conveyance	Max Capacity (lbs/yr)	PM Emission Factor* (lb PM/ton)	*Control Efficiency	PM/PM10 Emissions (lbs/yr)	PM/PM10 Emissions (tons/yr)
Total	119,588,000	0.80	98.00%	956.70	**0.48**

*Dry filters on the silos and blowers of the storage and handling operations are considered integral to the process. Therefore, PTE is based on control.
Actual Emissions (tons/year) = Max Capacity (lbs/hr) /2000 (lbs/ton) * Emission Factor (lb PM/ton) * (1-Control Efficiency (%)) / 2000 (lbs/ton)

Miscellaneous Operations	Maximum Rate (lbs/hr)	Emission Factor (lbs PM/ton)	PM/PM10 Emissions (lb/hr)	PM/PM10* Emissions (tpy)	Allowable Emissions (lbs/hr)
Wood Pallets Construction	200	0.35	0.04	0.15	0.88
Plastic Scrap Cutting	200	0.35	0.04	0.15	0.88
Total			0.07	**0.31**	

Actual Emissions (tons/year) = [(Maximum Rate (lbs/hr) * Emission Factor (lbs PM/ton)) / 2000 (lbs/ton)] * 8760 (hrs/yr) / 2000 (lbs/ton)

Pallet Washing	Usage (gal/yr)	Density (lb/gal)	VOC (wt %)	HAP (wt %)	VOC Emissions (tons/yr)	HAP Emissions (tons/yr)
Total	96	8.66	10.00%	0.00%	**0.04**	**0.00**

Actual VOC Emissions (tons/year) = Usage (gal/yr) * Density (lb/gal) * VOC (wt %) / 2000 (lbs/ton)
Actual HAP Emissions (tons/year) = Usage (gal/yr) * Density (lb/gal) * HAP (wt %) / 2000 (lbs/ton)

Notes

* It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Therefore, PM = PM10 = PM2.5

Attachment B - Emission Calculations
Actual Collocated Emissions - 12-Month Emissions for 2008

Company Name: **Primex Plastics Corporation**
Address City IN Zip: **1235 North F Street, Richmond, Indiana 47374**
Permit #: **177-12874-00065**
Reviewer: **Hannah L. Desrosiers**
Date: **January 6, 2009**

Hazardous Air Pollutant (HAP) Emissions from Extrusion

ABS Processing

Purchases (lbs/yr)	14,405,580						
HAP	1,3-butadiene	Acrylonitrile	Ethyl benzene	Styrene	Cumene	Acetophenone	Total
Emission Factor	0.93	5.74	27.6	130	3.29	2.78	
Emissions (tons)	0.0067	0.0413	0.1988	0.9364	0.0237	0.0200	**1.2269**

HDPE Processing

Purchases (lbs/yr)	65,591,430				
HAP	Formaldehyde	Acrolein	Acetaldehyde	Propionaldehyde	Total
Emission Factor	0.14	0.02	0.09	0.02	
Emissions (tons)	0.00459	0.00066	0.00295	0.00066	**0.0089**

PETG Processing

Purchases (lbs/yr)	2,947,435				
HAP	Formaldehyde	Acrolein	Acetaldehyde	Propionaldehyde	Total
Emission Factor	0.14	0.02	0.09	0.02	
Emissions (tons)	0.00021	0.00003	0.00013	0.00003	**0.0004**

PP Processing

Purchases (lbs/yr)	7,839,330				
HAP	Formaldehyde	Acrolein	Acetaldehyde	Propionaldehyde	Total
Emission Factor	0.74	0.01	0.46	0.05	
Emissions (tons)	0.00290	0.00004	0.00180	0.00020	**0.0049**

PS Processing

Purchases (lbs/yr)	37,632,080				
HAP	Formaldehyde	Acrolein	Acetaldehyde	Propionaldehyde	Total
Emission Factor	0.74	0.01	0.46	0.05	
Emissions (tons)	0.01392	0.00019	0.00866	0.00094	**0.0237**

Combined HAPs Total **1.2648** ***tons***

Methodology
Actual HAP Emissions (tons/year) = Purchases (lbs/yr) * Emission Factor (lbs/1,000,000 lbs) / 2000 (lbs/ton)

Attachment B - Emission Calculations
Potential Collocated Emissions Summary

Company Name: **Primex Plastics Corporation**
Address City IN Zip: **1235 North F Street, Richmond, Indiana 47374**
Permit #: **177-12874-00065**
Reviewer: **Hannah L. Desrosiers**
Date: **January 6, 2009**

North F Street Location (Source A)

	PM* (tpy)	VOC (tpy)	CO (tpy)	Combined HAPs (tpy)
Extrusion	--	--	--	2.00
Plant 1	4.11	7.24	0.38	--
Plant 2	5.15	2.46	0.89	--
Plant 3	5.93	2.81	2.89	--
Plant 5	0.94	1.99	1.72	--
Conveyance	1.02	--	--	--
Wood Pallets Construction	0.15	--	--	--
Plastic Scrap Cutting	0.15	--	--	--

Williamsburg Pike Location (Source B)

	PM* (tpy)	VOC (tpy)	CO (tpy)	Combined HAPs (tpy)
Conveyance	0.20	--	--	--
Grinding	3.76	--	--	--
Pallet Washing	--	0.04	--	0.00
Total	**21.42**	**14.54**	**5.88**	**2.00**

Notes:

***** It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Therefore, PM = PM10 = PM2.5

Attachment B - Emission Calculations
Potential Emissions for Source A, Plant 1

Company Name: Primex Plastics Corporation
Address City IN Zip: 1235 North F Street, Richmond, Indiana 47374
Permit #: 177-12874-00065
Reviewer: Hannah L. Desrosiers
Date: January 6, 2009

Equipment	Resin	Max Throughput (lb/hr)	PM/PM10 Emission Factor (lb/MMlb)	PM/PM10 Emissions (lb/hr)	PM/PM10* Emissions (tpy)	VOC Emission Factor (lb/MMlb)	VOC Emissions (lb/hr)	VOC Emissions (tpy)	CO Emission Factor (lb/MMlb)	CO Emissions (lb/hr)	CO Emissions (tpy)
Extruder 1	PS	750	53.3	0.040	0.175	190	0.143	0.624	10	0.008	0.033
Extruder 2	PS	1300	53.3	0.069	0.303	190	0.247	1.082	10	0.013	0.057
Extruder 3	PS	750	53.3	0.040	0.175	190	0.143	0.624	10	0.008	0.033
Extruder 4	PS	750	53.3	0.040	0.175	190	0.143	0.624	10	0.008	0.033
Extruder 5	PS	1300	53.3	0.069	0.303	190	0.247	1.082	10	0.013	0.057
Extruder 6	PS	750	53.3	0.040	0.175	190	0.143	0.624	10	0.008	0.033
Extruder 7	PS	750	53.3	0.040	0.175	190	0.143	0.624	10	0.008	0.033
Extruder 9	PS	500	53.3	0.027	0.117	190	0.095	0.416	10	0.005	0.022
Extruder 10	PS	750	53.3	0.040	0.175	190	0.143	0.624	10	0.008	0.033
Extruder 11	PS	750	53.3	0.040	0.175	190	0.143	0.624	10	0.008	0.033
Pelletizer	Plastic Rework	350	53.3	0.019	0.082	190	0.067	0.291	10	0.004	0.015
				0.464	**2.03**		1.653	**7.24**		0.087	**0.38**

Equipment	Resin	Max Throughput (lb/hr)	PM/PM10 Emission Factor (lb/MMlb)	PM/PM10 Emissions (lb/hr)	PM/PM10* Emissions (tpy)
Grinder 1	Plastic Rework	300	0.296	0.044	0.194
Grinder 2	Plastic Rework	300	0.296	0.044	0.194
Grinder 3	Plastic Rework	300	0.296	0.044	0.194
Grinder 4	Plastic Rework	300	0.296	0.044	0.194
Grinder 5	Plastic Rework	300	0.296	0.044	0.194
Grinder 6	Plastic Rework	300	0.296	0.044	0.194
Grinder 7	Plastic Rework	300	0.296	0.044	0.194
Grinder 8	Plastic Rework	300	0.296	0.044	0.194
Grinder 9	Plastic Rework	200	0.296	0.030	0.130
Grinder 10	Plastic Rework	300	0.296	0.044	0.194
Grinder 11	Plastic Rework	300	0.296	0.044	0.194
				0.474	**2.07**

	PM (lb/hr)	PM* (tpy)	VOC (lb/hr)	VOC (tpy)	CO (lb/hr)	CO (tpy)
TOTAL PLANT 1	0.937	**4.105**	1.653	**7.240**	0.087	**0.381**

Notes

Emission factors for PS are from "Sampling and Analysis of Fumes Evolved During thermal Processing of Polystyrene Resins", Dow Chemical, et al.

* It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Therefore, PM = PM10 = PM2.5

PTE (tons/year) = Maximum Rate (lbs/hr) x Emission Factor (lbs/1,000,000 lbs) x 8760 (hours/year) x (1 ton/2000 lbs)

Attachment B - Emission Calculations
Potential Emissions for Source A, Plant 2

Company Name: Primex Plastics Corporation
Address City IN Zip: 1235 North F Street, Richmond, Indiana 47374
Permit #: 177-12874-00065
Reviewer: Hannah L. Desrosiers
Date: January 6, 2009

Equipment	Resin	Max Throughput (lb/hr)	PM/PM10 Emission Factor (lb/MMlb)	PM/PM10 Emissions (lb/hr)	PM/PM10* Emissions (tpy)	VOC Emission Factor (lb/MMlb)	VOC Emissions (lb/hr)	VOC Emissions (tpy)	CO Emission Factor (lb/MMlb)	CO Emissions (lb/hr)	CO Emissions (tpy)
Extruder 1	ABS	800	30.3	0.02	0.11	190	0.15	0.67	0	0.00	0.00
Extruder 2	ABS	700	30.3	0.02	0.09	190	0.13	0.58	0	0.00	0.00
Extruder 3	ABS	800	30.3	0.02	0.11	190	0.15	0.67	0	0.00	0.00
Extruder 4	HDPE	850	26.6	0.02	0.10	30.7	0.03	0.11	50	0.04	0.19
Extruder 5	HDPE	850	26.6	0.02	0.10	30.7	0.03	0.11	50	0.04	0.19
Extruder 6	HDPE	1000	26.6	0.03	0.12	30.7	0.03	0.13	50	0.05	0.22
Extruder 7	HDPE	500	26.6	0.01	0.06	30.7	0.02	0.07	50	0.03	0.11
Extruder 8	HDPE	850	26.6	0.02	0.10	30.7	0.03	0.11	50	0.04	0.19
		6,350.00		0.18	**0.78**		0.56	**2.46**		0.20	**0.89**

Equipment	Resin	Max Throughput (lb/hr)	PM/PM10 Emission Factor (lb/MMlb)	PM/PM10 Emissions (lb/hr)	PM/PM10* Emissions (tpy)
Grinder 1	HDPE	950	0.296	0.14	0.62
Grinder 2	HDPE	950	0.296	0.14	0.62
Grinder 3	HDPE	1500	0.296	0.22	0.97
Grinder 5	HDPE	950	0.296	0.14	0.62
Grinder 6	HDPE	950	0.296	0.14	0.62
Grinder 7	HDPE	500	0.296	0.07	0.32
Grinder 8	HDPE	950	0.296	0.14	0.62
				1.00	**4.38**

	PM (lb/hr)	PM* (tpy)	VOC (lb/hr)	VOC (tpy)	CO (lb/hr)	CO (tpy)
TOTAL PLANT 2	1.18	**5.15**	0.56	**2.46**	0.20	**0.89**

Notes

Emission factors for ABS are from "Sampling and Analysis of VOCs Evolved During Thermal Processing of ABS Composite Resins", D.A. Contos, et al
Emission factors for HDPE are from "Development of Emission Factors for Polyethylene Processing", Anthony Barlow, et al
* It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Therefore, PM = PM10 = PM2.5
PTE (tons/year) = Maximum Rate (lbs/hr) x Emission Factor (lbs/1,000,000 lbs) x 8760 (hours/year) x (1 ton/2000 lbs)

Attachment B - Emission Calculations
Potential Emissions for Source A, Plant 3

Company Name: Primex Plastics Corporation
Address City IN Zip: 1235 North F Street, Richmond, Indiana 47374
Permit #: 177-12874-00065
Reviewer: Hannah L. Desrosiers
Date: January 6, 2009

Equipment	Resin	Max Throughput (lb/hr)	PM/PM10 Emission Factor (lb/MMlb)	PM/PM10 Emissions (lb/hr)	PM/PM10* Emissions (tpy)	VOC Emission Factor (lb/MMlb)	VOC Emissions (lb/hr)	VOC Emissions (tpy)	CO Emission Factor (lb/MMlb)	CO Emissions (lb/hr)	CO Emissions (tpy)
Extruder 1	PETG	600	30	0.02	0.08	35	0.02	0.09	50	0.03	0.13
Extruder 2	PETG	600	30	0.02	0.08	35	0.02	0.09	50	0.03	0.13
Extruder 3	HDPE / PP	900	30.3	0.03	0.12	104	0.09	0.41	90	0.08	0.35
Extruder 4	HDPE / PP	900	30.3	**0.03**	0.12	104	0.09	0.41	90	0.08	0.35
Extruder 5	HDPE / PP	850	30.3	0.03	0.11	104	0.09	0.39	90	0.08	0.34
Extruder 6	HDPE / PP	850	30.3	0.03	0.11	104	0.09	0.39	90	0.08	0.34
Extruder 7	HDPE / PP	850	30.3	0.03	0.11	104	0.09	0.39	90	0.08	0.34
Mega Extruder 8	HDPE	4000	30.3	0.12	0.53	37	0.15	0.65	52	0.21	0.91
		9,550.00		0.29	**1.27**		0.64	**2.81**		0.66	**2.89**

Equipment	Resin	Max Throughput (lb/hr)	PM/PM10 Emission Factor (lb/MMlb)	PM/PM10 Emissions (lb/hr)	PM/PM10* Emissions (tpy)
Grinder P1	Plastic Rework	400	0.296	0.06	0.26
Grinder P3	Plastic Rework	400	0.296	0.06	0.26
Grinder P4	Plastic Rework	400	0.296	0.06	0.26
Grinder P5	Plastic Rework	1600	0.296	0.24	1.04
Grinder P6	Plastic Rework	1600	0.296	0.24	1.04
Grinder P7	Plastic Rework	400	0.296	0.06	0.26
Grinder P10	Plastic Rework	1200	0.296	0.18	0.78
Grinder P11	Plastic Rework	1200	0.296	0.18	0.78
				1.07	**4.67**

	PM (lb/hr)	PM* (tpy)	VOC (lb/hr)	VOC (tpy)	CO (lb/hr)	CO (tpy)
TOTAL PLANT 3	1.35	**5.93**	0.64	**2.81**	0.66	**2.89**

Notes

Emission factors for PP are from "Development of Emission Factors for Polypropylene Processing", Ken Adams, et al.

Emission factors for PETG are from AP-42, Table 4.4-2.

Emission factors for HDPE are from "Development of Emission Factors for Polyethylene Processing", Anthony Barlow, et al.

* It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Therefore, PM = PM10 = PM2.5

PTE (tons/year) = Maximum Rate (lbs/hr) x Emission Factor (lbs/1,000,000 lbs) x 8760 (hours/year) x (1 ton/2000 lbs)

Attachment B - Emission Calculations
Potential Emissions for Source A, Plant 5

Company Name: Primex Plastics Corporation
Address City IN Zip: 1235 North F Street, Richmond, Indiana 47374
Permit #: 177-12874-00065
Reviewer: Hannah L. Desrosiers
Date: January 6, 2009

Equipment	Resin	Max Throughput (lb/hr)	PM/PM10 Emission Factor (lb/MMlb)	PM/PM10 Emissions (lb/hr)	PM/PM10* Emissions (tpy)	VOC Emission Factor (lb/MMlb)	VOC Emissions (lb/hr)	VOC Emissions (tpy)	CO Emission Factor (lb/MMlb)	CO Emissions (lb/hr)	CO Emissions (tpy)
Extruder 1	HDPE / PP	1000	30.3	0.03	0.13	104	0.10	0.46	90	0.09	0.39
Extruder 2	HDPE / PP	1000	30.3	0.03	0.13	104	0.10	0.46	90	0.09	0.39
Extruder 3	HDPE / PP	1000	30.3	0.03	0.13	104	0.10	0.46	90	0.09	0.39
Extruder 4	HDPE / PP	250	30.3	0.01	0.03	104	0.03	0.11	90	0.02	0.10
Extruder 5	HDPE / PP	250	30.3	0.01	0.03	104	0.03	0.11	90	0.02	0.10
Extruder 6	HDPE / PP	250	30.3	0.01	0.03	104	0.03	0.11	90	0.02	0.10
Extruder 7	HDPE / PP	250	30.3	0.01	0.03	104	0.03	0.11	90	0.02	0.10
Pelletizer	HDPE / PP	370	30.3	0.01	0.05	104	0.04	0.17	90	0.03	0.15
		4,370.00		0.13	**0.58**		0.45	**1.99**		0.39	**1.72**

Equipment	Resin	Max Throughput (lb/hr)	PM/PM10 Emission Factor (lb/MMlb)	PM/PM10 Emissions (lb/hr)	PM/PM10* Emissions (tpy)
Grinder 1	Plastic Rework	140	0.296	0.02	0.09
Grinder 2	Plastic Rework	140	0.296	0.02	0.09
Grinder 3	Plastic Rework	140	0.296	0.02	0.09
Grinder 4	Plastic Rework	140	0.296	0.02	0.09
				0.08	**0.36**

	PM (lb/hr)	PM* (tpy)	VOC (lb/hr)	VOC (tpy)	CO (lb/hr)	CO (tpy)
TOTAL PLANT 5	0.22	**0.94**	0.45	**1.99**	0.39	**1.72**

Notes

Emission factors for HDPE are from "Development of Emission Factors for Polyethylene Processing", Anthony Barlow, et al
Emission factors for PP are from "Development of Emission Factors for Polypropylene Processing", Ken Adams, et al.
* It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Therefore, PM = PM10 = PM2.5
PTE (tons/year) = Maximum Rate (lbs/hr) x Emission Factor (lbs/1,000,000 lbs) x 8760 (hours/year) x (1 ton/2000 lbs)

Attachment B - Emission Calculations
Hazardous Air Pollutant (HAP) Emissions from Extrusion

Company Name: Primex Plastics Corporation
Address City IN Zip: 1235 North F Street, Richmond, Indiana 47374
Permit #: 177-12874-00065
Reviewer: Hannah L. Desrosiers
Date: January 6, 2009

Potential Material Usage						
Resin	**Raw Material Usage (lbs/hr)**	**Raw Material Usage (lbs/yr)**	**Colorant Usage (lbs/yr)**	**Additives Usage (lbs/yr)**	**Total Usage (lbs/yr)**	**Total Usage (tons/yr)**
ABS	2,300	20,148,000	880,488	347,181	22,016,940	11,008
HDPE	14,800	129,648,000	3,264,939	347,181	137,257,924	68,629
PETG	1,200	10,512,000	13,842	347,181	11,199,214	5,600
PP	8,720	76,387,200	6,196,243	347,181	85,418,543	42,709
PS	8,350	73,146,000	3,609,857	347,181	79,416,130	39,708
Total	**35,370**	**309,841,200**	**13,965,371**	**1,735,907**	**335,308,752**	**167,654**

Methodology

> Additives were assumed to be equally distributed between each resin
> The potential pounds per year usage of colorant and additives was estimated from the actual usage using a simple ratio, as follows;
Potential Colorant Usage (lb/yr) = (Actual Colorant Usage * Potential Resin Usage) / Actual Resin Usage
Potential Additive Usage (lb/yr) = [(Total Actual Colorant Usage * Total Potential Resin Usage) / Total Actual Resin Usage) / 5]
> Total Usage (lbs/yr) = (Raw Material (lbs/yr) + Colorant (lbs/yr) + Additives (lbs/yr)) *1.03
3% of material is scrapped and recycled, this amount was added to "Purchases (lbs/yr)"

ABS Processing

Purchases (lbs/yr)	22,016,940						
HAP	1,3-butadiene	Acrylonitrile	Ethyl benzene	Styrene	Cumene	Acetophenone	Total
Emission Factor	0.93	5.74	27.6	130	3.29	2.78	
Emissions (tons)	0.0102	0.0632	0.3038	1.4311	0.0362	0.0306	**1.88**

HDPE Processing

Purchases (lbs/yr)	137,257,924				
HAP	Formaldehyde	Acrolein	Acetaldehyde	Propionaldehyde	Total
Emission Factor	0.14	0.02	0.09	0.02	
Emissions (tons)	0.00961	0.00137	0.00618	0.00137	**0.02**

PETG Processing

Purchases (lbs/yr)	11,199,214				
HAP	Formaldehyde	Acrolein	Acetaldehyde	Propionaldehyde	Total
Emission Factor	0.14	0.02	0.09	0.02	
Emissions (tons)	0.00078	0.00011	0.00050	0.00011	**0.002**

PP Processing

Purchases (lbs/yr)	85,418,543				
HAP	Formaldehyde	Acrolein	Acetaldehyde	Propionaldehyde	Total
Emission Factor	0.74	0.01	0.46	0.05	
Emissions (tons)	0.03160	0.00043	0.01965	0.00214	**0.05**

PS Processing

Purchases (lbs/yr)	79,416,130				
HAP	Formaldehyde	Acrolein	Acetaldehyde	Propionaldehyde	Total
Emission Factor	0.74	0.01	0.46	0.05	
Emissions (tons)	0.02938	0.00040	0.01827	0.00199	**0.05**

Total Combined HAPs	**2.00**	***tons***

Methodology

> Potential HAP Emissions (tons/year) = Total Usage (lbs/yr) * Emission Factor (lbs/1,000,000 lbs) / 2000 (lbs/ton)

Attachment B - Emission Calculations
Potential Emissions for Source A, Material Conveyance

Company Name: **Primex Plastics Corporation**
Address City IN Zip: **1235 North F Street, Richmond, Indiana 47374**
Permit #: **177-12874-00065**
Reviewer: **Hannah L. Desrosiers**
Date: **January 6, 2009**

Plant	Max Capacity (lbs/hr)	Process Weight Rate (tons/hr)	Emission Factor* (lb/ton)	Control Efficiency	PM/PM10 Emissions (lb/hr)	PM/PM10** Emissions (tpy)
1	8,700	4.35	0.80	98.00%	0.0696	0.3048
2	6,350	3.18	0.80	98.00%	0.0508	0.2225
3	9,550	4.78	0.80	98.00%	0.0764	0.3346
5	4,370	2.19	0.80	98.00%	0.0350	0.1531
Total					0.23	**1.02**

Notes

* Emission Factor (lb/ton) taken from Permit # 177-12874-00065

****** It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Therefore, PM = PM10 = PM2.5

Potential PM Emissions (lbs/hr) = Max Capacity (lbs/hr) /2000 (lbs/ton) * Emission Factor (lb/ton) * (1-Control Efficiency (%))

Potential PM Emissions (tons/yr) = Potential Emissions (lbs/hr) * 8760 (hrs/yr) / 2000 (lbs/ton)

Attachment B - Emission Calculations
Potential Emissions for Source A, Pallet Construction and Scrap Cutting Operations

Company Name: **Primex Plastics Corporation**
Address City IN Zip: **1235 North F Street, Richmond, Indiana 47374**
Permit #: **177-12874-00065**
Reviewer: **Hannah L. Desrosiers**
Date: **January 6, 2009**

Equipment	Maximum Rate (lbs/hr)	Process Weight Rate (tons/hr)	Emission Factor (lbs/ton)	Potential PM/PM10 Emissions (lb/hr)	Potential PM/PM10* Emissions (tpy)
Wood Pallets Construction	200	0.10	0.35	0.04	0.15
Plastic Scrap Cutting	200	0.10	0.35	0.04	0.15
TOTAL				0.07	**0.31**

Notes

***** It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Therefore, PM = PM10 = PM2.5

Emission Factors for wood and plastic cutting are from FIRE Version 6.22 for log sawing (SCC# 3-07-008-02).

Attachment B - Emission Calculations
Potential Emissions for the Source B, Warehouse
Plastic Grinding Rework

Company Name: **Primex Plastics Corporation**
Address City IN Zip: **1235 North F Street, Richmond, Indiana 47374**
Permit #: **177-12874-00065**
Reviewer: **Hannah L. Desrosiers**
Date: **January 6, 2009**

Equipment	Maximum Rate (lbs/hr)	Process Weight Rate (tons/hr)	EF* (lbs/ton)	PM/PM10 Emissions (lb/hr)	PM/PM10** Emissions (tpy)
Grinder 1	1,500	0.75	0.296	0.222	0.972
Grinder 2	1,800	0.90	0.296	0.266	1.167
Grinder 3	2,500	1.25	0.296	0.370	1.621
Total				0.86	**3.76**

Notes

* Emission factors (EF) were developed by mass balance based on material processed and material collected.

** It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Therefore, PM = PM10 = PM2.5
Potential Emissions (tons/year) = Maximum Rate (lbs/hr) x (1 ton/2000 lbs) x Emission Factor (lbs/ton) x 8760 (hours/year) x (1 ton/2000 lbs)

Attachment B - Emission Calculations
Total Potential Emissions for Source B, Pallet Washing Station

Company Name: Primex Plastics Corporation
Address City IN Zip: 1235 North F Street, Richmond, Indiana 47374
Permit #: 177-12874-00065
Reviewer: Hannah L. Desrosiers
Date: January 6, 2009

Cleaning Material	Max Usage (gal/yr)	Density (lb/gal)	VOC (wt %)	HAP (wt %)
WC-314 Cleaner	96	8.66	10.00%	0.00%

VOC (tons/yr)	HAP (tons/yr)
0.04	**0.00**

Notes

The product contains sodium hydroxide and glycol ether [111-76-2], neither of which are considered a HAP.

VOC (tons/yr) = Max Usage (gal/yr) x Density (lb/gal) x VOC (wt %)

Attachment B - Emission Calculations
Potential Emissions for Source B, Material Conveyance

Company Name: **Primex Plastics Corporation**
Address City IN Zip: **1235 North F Street, Richmond, Indiana 47374**
Permit #: **177-12874-00065**
Reviewer: **Hannah L. Desrosiers**
Date: **January 6, 2009**

Plant	Max Capacity (lbs/hr)	Process Weight Rate (tons/hr)	Emission Factor* (lb/ton)	Control Efficiency	PM/PM10 Emissions (lb/hr)	PM/PM10** Emissions (tpy)
1	1,500	0.75	0.80	98.00%	0.0120	0.0526
2	1,800	0.90	0.80	98.00%	0.0144	0.0631
3	2,500	1.25	0.80	98.00%	0.0200	0.0876
Total					0.05	**0.20**

Notes

* Emission Factor (lb/ton) taken from Permit # 177-12874-00065.

****** It is assumed that PM10 Emissions equal PM Emissions, and/or, in the absence of valid PM10 Emission Factors, PM Emission Factors have been used.

Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

Dry filters on the silos and blowers are considered integral to the process. Therefore, PTE of PM/PM10 for storage and handling is after control.

Therefore, PM = PM10 = PM2.5

Potential Emissions (lbs/hr) = Max Capacity (lbs/hr) /2000 (lbs/ton) * Emission Factor (lb/ton) * (1-Control Efficiency (%))

Potential Emissions (tons/yr) = Potential Emissions (lbs/hr) * 8760 (hrs/yr) / 2000 (lbs/ton)

TeMa R13-3414A

1 message

Carney, Brian D <brian.d.carney@wv.gov> Mon, Jun 10, 2024 at 11:45 AM
To: "Patrick E. Ward" <peward@potesta.com>

Mr. Ward,

Does the facility have any manufacturer data for the dust collection system X3DC? I understand if you're still bidding this equipment out and it's not available yet. DAQ has received a public comment concerning the lack of this information in the application and I thought I might check with you to see if this has been solidified and available yet.

Brian Carney,PE

RE: FW: WV Draft Permit R13-3414A for TeMa North America, LLC; Jefferson County Operations (0101-23-0104)

1 message

Patrick E. Ward <PEWard@potesta.com> Thu, May 23, 2024 at 1:51 PM
To: "Carney, Brian D" <brian.d.carney@wv.gov>
Cc: Lorenzo Spagna <lorenzo.spagna@iwisholding.com>, "Rhonda L. Henson" <rlhenson@potesta.com>

The TPX4 and X3Ce were switched in our table. They are correct in the permit.

I don't think there are any HAPS that would round up to 0.01 pph or tpy that are missing.

Regards,

Patrick Ward

Potesta & Associates, Inc.

7012 MacCorkle Avenue, S.E.

Charleston, West Virginia 25304

Ph: (304) 342-1400

Direct: (304) 414-4751

Fax: (304) 343-9031

From: Carney, Brian D <brian.d.carney@wv.gov>
Sent: Thursday, May 23, 2024 1:43 PM
To: Patrick E. Ward <PEWard@potesta.com>
Subject: Re: FW: WV Draft Permit R13-3414A for TeMa North America, LLC; Jefferson County Operations (0101-23-0104)

Patrick,

Table 1 on Page 6 there are a few areas that do not match our revised pages.

Should the Emission Unit be TPX4 with the Emission Point being X3CE or the way you have in your application?

Section 4.1.6. has some HAPS missing and some of the numbers look off but that is most likely just rounding off. What HAPS are missing from emission point 2E that would round up to or higher than 0.01pph or 0.01tpy?

Brian Carney

On Thu, May 23, 2024 at 11:27 AM Patrick E. Ward <PEWard@potesta.com> wrote:

A few comments on the draft permit. I typed the comments into the draft permit above regarding the following:

Table 1 on Page 6 there are a few areas that do not match our revised pages.

Section 4.1.6. has some HAPS missing and some of the numbers look off but that is most likely just rounding off.

Section 4.4.4. was removed. This section was about recording when the control devices are down. It is fine that it is not in the permit.

Let me know if you have any questions on these comments.

Regards,

Patrick Ward

Potesta & Associates, Inc.

7012 MacCorkle Avenue, S.E.

Charleston, West Virginia 25304

Ph: (304) 342-1400

Direct: (304) 414-4751

Fax: (304) 343-9031

From: Mink, Stephanie R <stephanie.r.mink@wv.gov>
Sent: Friday, April 19, 2024 9:06 AM
To: Supplee, Gwendolyn <supplee.gwendolyn@epa.gov>; Whapham, Joseph <Whapham.Joseph@epa.gov>; Lorenzo.spagna@iwisholding.com; Patrick E. Ward <PEWard@potesta.com>
Cc: Crowder, Laura M <Laura.M.Crowder@wv.gov>; McKeone, Beverly D <Beverly.D.Mckeone@wv.gov>; McCumbers, Carrie <Carrie.McCumbers@wv.gov>; Nicole D Ernest <nicole.d.ernest@wv.gov>; Brian D Carney <brian.d.carney@wv.gov>; Rebecca H Johnson <rebecca.h.johnson@wv.gov>; Christopher P Scanlan <Christopher.P.Scanlan@wv.gov>
Subject: WV Draft Permit R13-3414A for TeMa North America, LLC; Jefferson County Operations

Please find attached the Draft Permit R13-3414A, Engineering Evaluation and Public Notice for TeMa North America, LLC's Jefferson County Operations Facility located in Jefferson County.

The public notice will be published in the *Spirit of Jefferson Advocate* on Wednesday, April 24, 2024 and the thirty day comment period will end on Friday, May 24, 2024.

Should you have any questions or comments, please contact the permit writer, Brian Carney, at 304-926-0499 ext. 41287 or Brian.D.Carney@wv.gov.

--

Stephanie Mink

Environmental Resources Associate

West Virginia Department of Environmental Protection

Division of Air Quality, Title V & NSR Permitting

601 57th Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281

Carney, Brian D <brian.d.carney@wv.gov>

Public Meeting Request Granted for R13-3414A, TEMA

1 message

McKeone, Beverly D <beverly.d.mckeone@wv.gov> Mon, May 20, 2024 at 1:30 PM
To: clwimer1@yahoo.com
Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>, Brian D Carney <brian.d.carney@wv.gov>

Dr. Wimer,
Per your request, the Division of Air Quality will hold a virtual public meeting for Modification application R13-3414A, for TeMa North America.

Once a date and time for the meeting have been finalized a legal ad will be published in the Spirit of Jefferson Advocate and all commenters will be emailed information and instructions for registering for the public meeting. The public comment period will be extended until after the public meeting.

Thank you,

Bev

--
Beverly D. McKeone
NSR Program Manager
681-313-9077 (Mobile)
304-926-0499 Ext 41280 (Desk)

WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

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Division of Air Quality
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Charleston, WV 25304

INVOICE # 66800
DATE 04/24/2024
DUE DATE 05/20/2024
TERMS Payment due in full

ACTIVITY	QTY	RATE	AMOUNT
Legal Classified Apr. 24 Air Quality Permit Notice-Notice of Open Comment Period; TeMa North America, LLC applied for a Modification Permit for a plastic extrusion facility located in Jefferson County, WV	11	3.68	40.48
Legal Classified Cert. & clipping fee	1	7.50	7.50

The Spirit of Jefferson Accepts All Major Credit Cards. Call us at 304-725-2046 to make your payment.

BALANCE DUE **$47.98**

Certificate of Publication

JEFFERSON PUBLISHING COMPANY, INC., Publisher
SPIRIT OF JEFFERSON ADVOCATE

Charles Town, W. Va. April 24 20 24

I hereby certify that the annexed Air Quality Permit Notice - Notice of open comment period

in the case of TeMa North America, LLC applied for a Modification Permit for a plastic extrusion facility located in Jefferson County, WV

has been published once a week for one successive weeks, in the Spirit of Jefferson Advocate, a newspaper published in Charles Town, Jefferson County, West Virginia, in the issues of

April 24, 20 24,

as required by law.

Tim Cook
Editor/Manager, Spirit of Jefferson Advocate

State of West Virginia
County of Jefferson
Personally appeared before me, Tim Cook, Editor/Manager of the Spirit of Jefferson Advocate, and made oath that the above certificate is true and correct.

Cara D. Young
Notary Public

Commission expires

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STATE OF WEST VIRGINIA
CARA D. YOUNG
Jefferson Publishing Co., Inc.
P. O. Box 966
Charles Town WV 25414
My Commission Expires Jan. 27, 2029

AIR QUALITY PERMIT NOTICE

Notice of Open Comment Period

On January 16, 2024, TeMa North America, LLC applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a Modification Permit for a plastic extrusion facility located in Jefferson County, WV at 39.356546 and -77.870943. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of an open comment period for permit application R13-3414A.

The following increases in potential emissions will be authorized by this permit action: Particulate Matter (PM) 5.82 tons per year (tpy), PM10 of 5.05 tpy, PM2.5 of 4.76 tpy Carbon Monoxide 0.13 tpy, Volatile Organic Compounds 2.48 tpy, and Total Hazardous Air Pollutants (HAPS) 0.11 tpy

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on Friday, May 24, 2024. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed modification will meet all state and federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Brian D. Carney, PE
WV Department of
Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Telephone: 304/926-0499,
ext. 41287
Email: brian.d.carney@wv.gov

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at: https://dep.wv.gov/daq/permitting/Pages/NSR-Permit-Applications.aspx

4/24/11

Carney, Brian D <brian.d.carney@wv.gov>

WV Draft Permit R13-3414A for TeMa North America, LLC; Jefferson County Operations

1 message

Mink, Stephanie R <stephanie.r.mink@wv.gov> Fri, Apr 19, 2024 at 9:06 AM
To: "Supplee, Gwendolyn" <supplee.gwendolyn@epa.gov>, "Whapham, Joseph" <Whapham.Joseph@epa.gov>, Lorenzo.spagna@iwisholding.com, "Patrick E. Ward" <PEWard@potesta.com>
Cc: "Crowder, Laura M" <Laura.M.Crowder@wv.gov>, "McKeone, Beverly D" <Beverly.D.Mckeone@wv.gov>, "McCumbers, Carrie" <Carrie.McCumbers@wv.gov>, Nicole D Ernest <nicole.d.ernest@wv.gov>, Brian D Carney <brian.d.carney@wv.gov>, Rebecca H Johnson <rebecca.h.johnson@wv.gov>, Christopher P Scanlan <Christopher.P.Scanlan@wv.gov>

Please find attached the Draft Permit R13-3414A, Engineering Evaluation and Public Notice for TeMa North America, LLC's Jefferson County Operations Facility located in Jefferson County.

The public notice will be published in the *Spirit of Jefferson Advocate* on Wednesday, April 24, 2024 and the thirty day comment period will end on Friday, May 24, 2024.

Should you have any questions or comments, please contact the permit writer, Brian Carney, at 304-926-0499 ext. 41287 or Brian.D.Carney@wv.gov.

--

Stephanie Mink

Environmental Resources Associate

West Virginia Department of Environmental Protection

Division of Air Quality, Title V & NSR Permitting

601 57th Street SE

Charleston, WV 25304

Phone: 304-926-0499 x41281

3 attachments

037-00110_perm_13-3414A(draft).pdf
232K

037-00110_EVAL_13-3414A(signed).pdf
281K

037-00110_AIR QUALITY PERMIT NOTICE_13-3414A.pdf
62K

West Virginia Department of Environmental Protection
Harold D. Ward
Cabinet Secretary

Modification Permit

R13- 3414A

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:

TeMa North America, LLC
Kearneysville, WV
037-00110

_____

Laura M. Crowder
Director, Division of Air Quality
Issued: DRAFT

This permit will supercede and replace Permit R13-3414.

Facility Location:	Kearneysville, WV, Jefferson County, West Virginia
Mailing Address:	395 Steeley Way Kearneysville, WV 25430
Facility Description:	Plastics Extrusion Facility
NAICS Codes:	326199
UTM Coordinates:	252.63 km Easting • 4,360.28 km Northing • Zone 17
Permit Type:	Modification

Description of Change:
TeMa North America LLC is proposing to install an XPS Board Extrusion and Lamination System at their existing facility. This process will utilize polystyrene as the feed plastic instead of the existing operations which use polypropylene and polystyrene, including high density polyethylene. These lines will be in addition to the existing three extrusion lines identified as Line 2000, Line 3000, and Line 4000.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.

The source is not subject to 45CSR30.

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CERTIFICATION OF DATA ACCURACY

1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1S	TP	Super Sack Unload Station 1	2018	400 kg/hr	N
2S	TP	Super Sack Unload Station 2	2018	400 kg/hr	N
3S	TP	Manual Bag Unload Station 1	2018	400 kg/hr	N
4S	TP	Screw Conveyor 1	2018	400 kg/hr	FE
5S	TP	Screw Conveyor 2	2018	400 kg/hr	FE
6S	TP	Screw Conveyor 3	2018	400 kg/hr	FE
7S	TP	Screw Conveyor 4	2018	400 kg/hr	FE
8S	1E	Blender	2018	400 kg/hr	DC
9S	TP	Screw Conveyor 5	2018	400 kg/hr	FE
10S	1E	Pneumatic Transfer System	2018	400 kg/hr	DC
11S	1E	Extruder Feed Hopper 1	2018	400 kg/hr	DC
12S	TP	Master Batch System	2018	400 kg/hr	N
13S	TP	Extruder Feed Hopper 2	2018	400 kg/hr	N
14S	2E	Extruder	2018	400 kg/hr	N
15S	1E	Shredder	2018	400 kg/hr	DC
16S	1E	Pneumatic System	2018	400 kg/hr	DC
17S	1E	Bulk Bag Loading Station	2018	400 kg/hr	DC
18S	1E	External Shredder 1	2018	1000 kg/hr	DC
19S	1E	External Shredder 2	2018	1000 kg/hr	DC
20S	1E	Pneumatic Transfer System	2018	1000 kg/hr	DC
21S	1E	Pneumatic Transfer System	2018	1000 kg/hr	DC
22S	1E	Bulk Bag Loading Station	2018	1000 kg/hr	DC
23S	3E	Silo 1	2018	1000 kg/hr	VF
24S	4E	Silo 2	2018	1000 kg/hr	VF
25S	5E	Silo 3	2018	1000 kg/hr	VF
26S	6E	Silo 4	2018	1000 kg/hr	VF
27S	1E	Pneumatic Transfer System	2018	1000 kg/hr	DC
28S	1E	Pneumatic Transfer System	2018	1000 kg/hr	DC
29S	1E	Pneumatic Transfer System	2018	1000 kg/hr	DC
30S	1E	Pneumatic Transfer System	2018	1000 kg/hr	DC
31S	TP	Super Sack Unload Station 1	2018	600 kg/hr	N
32S	1E	Pneumatic Transfer System	2018	600 kg/hr	DC
33S	TP	Super Sack Unload Station 2	2018	600 kg/hr	N

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
34S	1E	Pneumatic Transfer System	2018	600 kg/hr	DC
35S	TP	Manual Bag Unload System	2018	600 kg/hr	N
36S	1E	Pneumatic Transfer System	2018	600 kg/hr	DC
37S	1E	Blender	2018	600 kg/hr	DC
38S	TP	Screw Conveyor No. 1	2018	600 kg/hr	N
39S	1E	Pneumatic Transfer System	2018	600 kg/hr	DC
40S	1E	Extuder Feed Hopper 1	2018	600 kg/hr	DC
41S	TP	Master Batch System	2018	600 kg/hr	N
42S	TP	Extruder Feed Hopper 2	2018	600 kg/hr	N
43S	2E	Extuder	2018	600 kg/hr	N
44S	1E	Shredder	2018	600 kg/hr	DC
45S	1E	Bulk Bag Loading	2018	600 kg/hr	DC
46S	1E	Pneumatic Transfer System	2018	600 kg/hr	DC
47S	TP	Super Sack Unload Station1	2018	1000 kg/hr	N
48S	1E	Pneumatic Transfer System	2018	1000 kg/hr	DC
49S	1E	Extruder Feed Hopper 1A, 1B	2018	1000 kg/hr	DC
50S	TP	Super Sack Unload Station 2	2018	1000 kg/hr	N
51S	TP	Super Sack Unload Station 3	2018	1000 kg/hr	N
52S	TP	Manual Bag Unloading	2018	1000 kg/hr	N
53S	TP	Screw Conveyor 1	2018	1000 kg/hr	N
54S	TP	Screw Conveyor 2	2018	1000 kg/hr	N
55S	TP	Screw Conveyor 3	2018	1000 kg/hr	N
56S	TP	Screw Conveyor 4	2018	1000 kg/hr	N
57S	1E	Blender	2018	1000 kg/hr	DC
58S	TP	Screw Conveyor 5	2018	1000 kg/hr	N
59S	1E	Pneumatic Transfer System	2018	1000 kg/hr	DC
60S	1E	Extruder Feed Hopper 2A, 2B	2018	1000 kg/hr	DC
61S	1E	Pneumatic Transfer System	2018	1000 kg/hr	DC
62S	1E	Extruder Feed Hopper 3A, 3B	2018	1000 kg/hr	DC
63S	TP	Master Batch System	2018	1000 kg/hr	N
64S	TP	Extruder Feed Hopper 4A, 4B	2018	1000 kg/hr	N
65S	2E	Extruder	2018	1000 kg/hr	N
66S	1E	Shredder	2018	1000 kg/hr	DC
67S	1E	Bulk Bag Loading	2018	1000 kg/hr	DC

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
68S	1E	Pneumatic Transfer System	2018	1000 kg/hr	DC
69S	9E	10 Building Heaters	2018	2.22 mmbtu (total)	N
70S	10E	Propane Tank	2018	1,000 gal	N
71S	11E	Propane Tank	2018	1,000 gal	N
72S	12E	Propane Tank	2018	1,000 gal	N
73S	13E	Propane Tank	2018	1,000 gal	N
NA	NA	Additive Bins 1-5 (de minimis)	2024	NA	N
X1S	X1E	Pneumatic System	2024	550 kg/hr	N
X2S	X3CE	Virgin Silo/Bags/Octabins	2024	550kg/hr	X3DC
NA	NA	Octabins/Big Bags (de minimis)	2024	550kg/hr	N
X3S	X1E	Doser/Extruder Feed Hopper	2024	550kg/hr	N
X4S	2E	Extruder	2024	550kg/hr	N
X5S	X1CE	Trimmer and Surface Planner	2024	550kg/hr	X1DC
X6S	X6E	Dimensional Cutting	2024	550kg/hr	N
TPX1	TPX1	Transfer Point (TPX1)	2024	550kg/hr	N
TPX3	TPX3	Transfer Point (TPX3)	2024	550kg/hr	FE
TPX4	X3CE	Pneumatic Truck Delivery Transfer	2024	550kg/hr	X3DC
X7S	2E	Laminator	2024	550kg/hr	None
X8S	1E	Trimmer	2024	550kg/hr	1C
X9S	X12E	Pneumatic System 3 (TPX5)	2024	550 kg/hr	X2DC
X10S	X10E	Pneumatic System2 (TPX6)	2024	550 kg/hr	VF
X11S	X11E	XPS Grinder	2024	200 kg/hr	N
X12S	X2CE	Outside Silo	2024	200 kg/hr	X2DC
X13S	X1CE	Pneumatic System 4 (TPX7)	2024	200 kg/hr	X1DC
X14S	X1CE	Doser/ Extruder Feed Hopper	2024	200 kg/hr	X1DC
X15S	2E	Extruder	2024	200 kg/hr	N
X16S	X16E	Pellet Cutter	2024	200 kg/hr	N
X17S	X1CE	Pneumatic System	2024	200 kg/hr	X1DC
X18S	X1CE	Recycled Silo	2024	200 kg/hr	X1DC
TPX8	TPX8	Transfer Point (TPX8)	2024		

2.0. General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.2. Acronyms

CAAA	Clean Air Act Amendments
CBI	Confidential Business Information
CEM	Continuous Emission Monitor
CES	Certified Emission Statement
C.F.R. *or*	Code of Federal
CFR	Regulations
CO	Carbon Monoxide
C.S.R. *or*	Codes of State Rules
CSR	
DAQ	Division of Air Quality
DEP	Department of Environmental Protection
dscm	Dry Standard Cubic Meter
FOIA	Freedom of Information Act
HAP	Hazardous Air Pollutant
HON	Hazardous Organic NESHAP
HP	Horsepower
lbs/hr	Pounds per Hour
LDAR	Leak Detection and Repair
M	Thousand
MACT	Maximum Achievable Control Technology
MDHI	Maximum Design Heat Input
MM	Million
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour
MMCF/hr *or* mmcf/hr	Million Cubic Feet per Hour
NA	Not Applicable
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter less than 2.5 μm in diameter
PM_{10}	Particulate Matter less than 10μm in diameter
Ppb	Pounds per Batch
Pph	Pounds per Hour
Ppm	Parts per Million
Ppm_V or ppmv	Parts per Million by Volume
PSD	Prevention of Significant Deterioration
Psi	Pounds per Square Inch
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VEE	Visual Emissions Evaluation
VOC	Volatile Organic Compounds
VOL	Volatile Organic Liquids

NAAQS	National Ambient Air Quality Standards
NESHAPS	National Emissions Standards for Hazardous Air Pollutants

2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation*;

2.4. Term and Renewal

2.4.1. This permit supersedes and replaces previously issued Permit R13-3414. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule;

2.5. Duty to Comply

2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3414A, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;3

[45CSR§§13-5.10 and 10.3.]

2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;

2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;

2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary

copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

2.7. Duty to Supplement and Correct Information

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.8. Administrative Update

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-4.]

2.9. Permit Modification

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.
[45CSR§13-5.4.]

2.10 Major Permit Modification

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.
[45CSR§13-5.1]

2.11. Inspection and Entry

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.12. Emergency

[Reserved]

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.

2.16. Severability

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. Transferability

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13.
[45CSR§13-10.1.]

2.18. Notification Requirements

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. Credible Evidence

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.
[45CSR§6-3.1.]

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.
[40CFR§61.145(b) and 45CSR§34]

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1] ***[State Enforceable Only]***

3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.
[45CSR§13-10.5.]

3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

[Reserved]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally

accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a sourcespecific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.

b. The Secretary may on a sourcespecific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language;
2. The result of the test for each permit or rule condition; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§4. *State Enforceable Only.*]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by email as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:
Director
WVDEP
Division of Air Quality
601 57th Street
Charleston, WV 25304-2345

US EPA:
Section Chief, USEPA, Region III
Enforcement and Compliance Assurance Division
Air Section (3ED21)
Four Penn Center
1600 John F Kennedy Blvd
Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement[1]:
DEPAirQualityReports@wv.gov

[1]For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status Reports, Initial Notifications, etc.

3.5.4. Operating Fee

3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. The TeMa North America, LLC facility shall consist of only the pollutant-emitting equipment and processes identified under Section 1.0 of this permit and any other processes/units defined as De Minimis per 45CSR13. In accordance with the information filed in Permit Application R13-3414A, the equipment shall be installed, maintained, and operated so as to minimize any fugitive escape of pollutants and the equipment/processes shall use the specified control devices.

4.1.2. The production rate of each extruder shall not exceed the following:

Line	Hourly Rate (kgs/hour)	Hourly Rate (lbs/hour)
2000	400	882
3000	600	1,323
4000	1,000	2,205
XPS	550	1,213

4.1.3 Total yearly production shall not exceed 22,338 metric tons (24,623 short tons) of extruded product. The resins permitted on these lines are Polystyrene, Polypropylene (PP), and Polyethylene (PE) including High Density Polyethylene (HDPE). Compliance with this condition shall be based on a rolling twelve-month total.

4.1.4. The use of any resin type not listed above shall not be used without the prior approval of the Director.

4.1.5. The use of any laminating glue besides methylene diphenyl diisocyanate (MDI) shall not be used without the prior approval of the Director.

4.1.6. Combined emissions from the laminator and extruders (XPS, 2000, 3000 &4000) to the atmosphere from process vents through emission point 2E shall not exceed the following hourly and annual emission rate limitations:

Pollutant Category	**Pollutant**	**Particulate (PM) Emissions Limits**	
		Hourly (lb/hr)	**Yearly (tons)**
Criteria Pollutants	PM	0.50	2.25
	VOC	1.79	7.87
	CO	0.03	0.12
Hazardous Air Pollutants	Hexane	0.85	3.72
	Acetaldehyde	0.06	0.30
	Toluene	0.06	0.24
	Formaldehyde	0.03	0.06
	MDI	0.02	0.10

4.1.7. Emissions to the atmosphere from each baghouse/vent filter shall not exceed the following hourly and annual emission limitations:

Emission Point I.D.	Particulate (PM) Emissions Limits	
	Hourly (lb/hr)	Yearly (tpy)
1E	0.35	1.57
3E	0.02	0.08
4E	0.02	0.08
5E	0.02	0.08
6E	0.02	0.08
X1CE	0.06	0.27
X2CE	0.03	0.12
X3CE	0.06	0.22
X1E	0.20	0.86
X6E	0.10	0.43
X11E	0.18	0.81
X16E	0.18	0.81
TPX1	0.49	2.14
TPX3	0.10	0.43
TPX8	0.04	0.16

4.1.8. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7.
[§45-7-3.1]

4.1.9 No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to subsection 5.1 is required to have a full enclosure and be equipped with a particulate matter control device.
[§45-7-3.7]

4.1.10. No person shall cause, suffer, allow or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of this rule.
[§45-7-4.1]

4.1.11. No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be

limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such a system
hall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.
[§45-7-5.1]

4.1.12. The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.
[**§45-7-5.2]**

4.1.13. At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.
[§45-7-8.1]

4.1.14. The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions.
[§45-7-8.2]

4.1.15. Due to unavoidable malfunction of equipment, emissions exceeding those set forth in this rule may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.
[§45-7-9.1]

4.1.16. At the time a stationary source is alleged to be in compliance with an applicable emission standard and at reasonable times to be determined by the Secretary thereafter, appropriate tests consisting of visual determinations or conventional in-stack measurements or such other tests the Secretary may specify shall be conducted to determine compliance.
[§45-13-6.1]

4.1.17. The maximum heat rate of the combined building heaters shall not exceed 2.22 million btu/hr.

4.1.18. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.
[45CSR§13-5.10.]

4.2. Monitoring Requirements

4.2.1. The permittee shall monitor and maintain a certified record of the total amount of resins processed by the extrusion lines on a monthly basis. These records shall be properly maintained on site for a period not less than five (5) years and be made available to the Director, or the Director's designated representative, upon request.

4.2.2 The permittee shall operate and maintain all baghouses/vent filters in accordance with the manufacturer's specification to ensure they remain in good operating condition.

4.3. Testing Requirements

[Reserved]

4.4. Recordkeeping Requirements

4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit, and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature[1] _____ _____
(please use blue ink) Responsible Official or Authorized Representative Date

Name & Title _____ _____
(please print or type) Name Title

Telephone No. _____ Fax No. _____

[1] This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:

a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

(i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or

(ii) the delegation of authority to such representative is approved in advance by the Director;

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.

west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone (304) 926-0475 • FAX: (304) 926-0479

Harold D. Ward, Cabinet Secretary
dep.wv.gov

ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-3414A
Plant ID No.:	037-00110
Applicant:	TeMa North America, LLC
Facility Name:	Jefferson County Operations
Location:	Kearneysville, WV
NAICS Code:	326199
Application Type:	Modification
Received Date:	January 16, 2024
Engineer Assigned:	Brian Carney P.E.
Fee Amount:	$1,000.00
Date Received:	February 9, 2024
Complete Date:	April 3, 2024
Due Date:	July 2, 2024
Applicant Ad Date:	February 21, 2024
Newspaper:	*The Shepherdstown Chronicle*
UTM's:	Easting: 252.63 km Northing: 4,360.28 km Zone: 18
Latitude:	39.32712
Longitude:	-79.48648

DESCRIPTION OF EXISTING PROCESS

TeMa North America LLC has an extrusion process in the Burr Business Park in Jefferson County, West Virginia. The facility utilizes polypropylene (PP) and polyethylene (PE), including high density polyethylene (HDPE). The existing facility has three extrusion lines identified as Line 2000, Line 3000, and Line 4000 for the extrusion of the following types of products:

* Monofilaments spacer, anticorrosion and anticondensation layer on roofing and wall siding products, acoustic products as sound mat under gypsum concrete.

* Uncoupling products such as dimple membrane to be used in ceramic floors.

* Dampproofing and drainage membrane for foundations and wall protection and drainage.

Additions to the PE, PP, and HDPE include flame retardants, fluidizers and colorants.

Material is delivered in bulk sacks (super sacks) via trucks which is unloaded by forklift and placed in storage. The bulk sacks are then handled again by the forklift to move the super sacks to the unloading stations and then the contents conveyed either pneumatically or via screw conveyors to the blending system. After blending, the materials are transferred to the hoppers that feed to the extruder. The three extrusion lines are equipped with electrical resistances heating which can reach the melting temperature of the materials to be extruded (typically in the area of about 250° Centigrade/480° Fahrenheit). The extruders will then extrude the product onto water cooled roller. The material is towed/pulled to the membrane trimmer which contains knife trimming systems to cut the width of the product and square off the edges. The material can then be cut to the required length. Additionally, if the extruded material is to be laminated with a fabric, then the material is not cooled and the laminate is applied to the extruded product prior to the product cooling. This allows the lamination to occur without the use of any adhesives. The final product (laminated or not) is then placed in storage. Additional cutting occurs to meet the final product dimensions and then the products are labeled and packaged.

Pieces of the material that are cut off for proper sizing of the product are sent to the shredder and placed in a super sack or returned to the process. There are two external Shredders that will also feed back to the process via super sacks.

There are four silos that are proposed for possible future installation. These silos will be filled pneumatically from trucks and then the material will be pneumatically transferred to the extrusion lines. The silos will have a dust collector for the filling process. The transfer of the material to the inside of the facility will be controlled by the existing line dust collection system. If the silos are used to store the plastics, then bulk sack deliveries would not be used. Therefore, the only additional emission point created for the use of the silos is silo filling.

There are several building heaters. These are comfort heaters which will burn propane until natural gas is available at the site.

REQUESTED CHANGE (as taken from R13-3414A application):

TeMa North America LLC is proposing to install an XPS Board Extrusion and Lamination System at their existing facility in the Burr Business Park in Jefferson County, West Virginia. This process will utilize polystyrene as the feed plastic instead of the existing operations, which use polypropylene and polyethylene, including high density polyethylene. There is expansion gas used in the process as XPS Boards are foam boards. The expansion gas is HFC 152a which is a non-VOC material. The product also requires the addition of other additives to adjust the properties of the board. The main portions of the proposed addition are the XPS Board Extrusion Process, the Laminator to laminate by heating the XPS Board or by gluing the laminate to the XPS Board, and an XPS Recycle Line that will recycle trimmings from the process. Sample Safety Data Sheets for the materials to be used on the lines are provided in Attachment H. The supplier could change for materials, but the materials themselves will not change.

These lines will be in addition to the existing three extrusion lines identified as Line 2000, Line 3000, and Line 4000.

Material will be delivered in bulk sacks (super sacks) via trucks or tank trucks which will be unloaded by forklift and placed in storage or blown into a silo. Initially bulk sacks will be used. A forklift will be used to move the super sacks to the unloading stations and then the contents conveyed pneumatically to the Doser/Extruder Feed Hopper where additives from the five (5) additive bins are also delivered into the process pneumatically. The material is then fed to the extruder, to cooling rollers, then to the Trimmer and Surface Planer for sizing. These boards are then stacked. The stacked boards will then go to the Dimensional Cutter to be sized to the final size of the board to be laminated. The XPS boards can then be laminated with any type of material that is needed for the outsides of the board. Two forms of lamination will be used. The XPS Board can be heated to allow the surface to become tacky which will allow the laminate to stick to the board or a glue will be used that is heated and delivered to the lamination machine. The glue would then hold the laminate surface to the board. After lamination is complete, then the boards/laminate are trimmed, stacked, and wrapped as the final product.

Trimmings from the board production will be recycled in the XPS Recycle Line. The smaller trimmings and planning scraps will be sent to a dust collector and then recycled back to the system pneumatically. The larger scraps will be sent to the XPS Grinder then pneumatically transferred to a silo. Both lines will be combined in the Doser/Extruder Feed Hopper on the recycle line and then feed to the Extruder, pass through a water bath for cooling, and then to a pellet cutter. The pellets will be fed to a Recycled Silo Storage and then will be fed back into the system at the Doser/Extruder Feed Hopper for the XPS Board Extrusion Line.

SITE INSPECTION

A site inspection of the facility was performed on March 21, 2023 by Chris Scanlon (DAQ Inspector). Performed full compliance inspection at Tema North America LLC. all paperwork and records were in order during inspection.

The facility is located in the Burr Business Park near Ranson. The vast majority of surrounding buildings are commercial/industrial. The nearest non commercial/industrial building to the facility is a day care center located approximately ½ mile from TeMa's site. Additionally, an elementary school is located approximately 1 mile from the site.

To get to the facility from Martinsburg take I-81 South to exit 12. Turn left on State Route 9 and go approximately 9.9 miles before taking the Bardane exit. At the end of the off ramp turn right on Wiltshire Road and go approximately 0.3 miles and turn left on W. Burr Blvd. Then go approximately 0.3 miles and turn right on McGary Blvd. Next, go approximately 0.2 miles and turn right on Steeley Way. Proceed approximately 0.2 miles and the facility is on the left.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Emissions from the facility can be broken down into the following categories:

* Material Handling emissions

* Extruder Emissions

- Lamination Emissions

* Natural gas combustion emissions (building heat only) (not part of this modification)

* Haul Road Emissions

Material Handling Emissions

Transfer point (TP), feed hoppers, dimensional cutter, trimmers, and surface planner emissions were based on an emission factor of 0.80 pounds of PM per ton of material. This factor came from AP-42 Table 6.6.2-1 footnote h. This emission factor has a rating of "C". the emission factor was intended to be applied one time to the entire product throughput. However, TeMa's consultant conservatively applied the factor to each individual transfer point. This results in a significant overestimation of emissions.

Extruder and Lamination Emissions

Emissions from the extruders and laminator were based on emission factors from "Sampling and Analysis of Fumes Evolved During Thermal Processing of Polystyrene Resins", Dow Chemical, et al.

Haul Road Emissions

Haul Road Emissions were based on AP-42 Chapter 13.2.2. New annual emissions were based on 797 additional trips per year (based on total throughput of the plant delivered and removed and multiplied by 1.5 to account for any other miscellaneous trucking.) Hourly emissions were based on an estimated maximum of 10 trucks per hour. This again seems conservative since even if all trucking is confined to an 8 hour workday, the average would be less than 4 trucks per hour.

New criteria emissions from the facility should be as follows:

	PM		PM_{10}		$PM_{2.5}$		NO_x		CO		SO_2		VOCs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Materials Transfers (Pneumatic)(X1S)	0.10	0.43	0.10	0.43	0.10	0.43	--	--	--	--	--	--	--	--
Virgin Silo(X2S)(X3CE)	0.03	0.11	0.03	0.11	0.03	0.11	--	--	--	--	--	--	--	--
XPS Doser/Extruder Feed Hopper (X3S)(X1E)	0.10	0.43	0.10	0.43	0.10	0.43	--	--	--	--	--	--	--	--
Line XPS Extruder(X4S)	0.06	0.28	0.06	0.28	0.06	0.28	--	--	0.01	0.05	--	--	0.23	1.01
XPS Trimmer (X5S)(X1CE)	0.02	0.11	0.02	0.11	0.02	0.11	--	--	--	--	--	--	--	--
XPS Dimensional Cutting(X6S)(X6E)	0.10	0.43	0.10	0.43	0.10	0.43	--	--	--	--	--	--	--	--
XPS Lamination (X7S)(2E)	0.06	0.28	0.06	0.28	0.06	0.28	--	--	0.01	0.05	--	--	0.23	1.01

XPS Trimmer (X8S)(1E)	0.02	0.11	0.02	0.11	0.02	0.11	--	--	--	--	--	--	--	--
XPS Pneumatic System 3 (X9S)(X2CE)	0.01	0.04	0.01	0.04	0.01	0.04	--	--	--	--	--	--	--	--
XPS Pneumatic System 2 (X10S)(X2CE	0.01	0.04	0.01	0.04	0.01	0.04	--	--	--	--	--	--	--	--
XPS Grinder (X11S)(X11E)	0.18	0.81	0.18	0.81	0.18	0.81	--	--	--	--	--	--	--	--
XPS Outside Silo (X12S)(X2CE)	0.01	0.04	0.01	0.04	0.01	0.04	--	--	--	--	--	--	--	--
XPS Pneumatic System 4 (X13S)(X1CE)	0.01	0.04	0.01	0.04	0.01	0.04	--	--	--	--	--	--	--	--
XPS Doser/Extruder Feed Hopper (X14S)(X1CE)	0.01	0.04	0.01	0.04	0.01	0.04	--	--	--	--	--	--	--	--
XPS Extruder (X15S)(2E)	0.02	0.10	0.02	0.10	0.02	0.10	--	--	0.01	0.02	--	--	0.08	0.37
XPS Pellet Cutter (X16S)(X16E)	0.18	0.81	0.18	0.81	0.18	0.81	--	--	--	--	--	--	--	--
XPS Pneumatic System 5 (X17S)(X1CE)	0.18	0.81	0.18	0.81	0.18	0.81	--	--	--	--	--	--	--	--
XPS Recycled Silo Storage (X18S)(X1CE)	0.18	0.81	0.18	0.81	0.18	0.81	--	--	--	--	--	--	--	--
Building Heaters	0.02	0.07	0.02	0.07	0.02	0.07	0.22	0.95	0.18	0.80	0.01	0.01	0.01	0.05
Haul Roads	27.49	14.49	8.10	4.27	0.80	0.42	--	--	--	--	--	--	--	--
XPS Haul Roads	5.50	1.09	1.62	0.32	0.16	0.03	--	--	--	--	--	--	--	--

New Hazardous Air Pollutant emissions from the facility should be as follows:

	Toluene		Acrolein		Hexane		Acetaldehyde		Formaldehyde		Propionaldehyde		MDI		Total HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Line XPS Extruder	--	--	0.00003	0.0002	--	--	0.0002	0.0009	0.0003	0.0014	0.00003	0.0001	0.02	0.10	0.02	0.10

Updated PTE

	R13-3414		R13-3414A		Emission Increase	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
PM	31.96	34.04	38.54	39.85	6.58	5.81
PM10	12.57	23.82	15.27	28.86	2.70	5.04
PM2.5	5.27	19.97	6.51	24.72	1.24	4.75
VOCs	1.27	5.54	1.70	7.47	0.43	1.93
NOx	0.22	0.95	0.22	0.95	0.00	0.00
CO	0.18	0.80	0.21	0.93	0.03	0.13
SO2	0.01	0.01	0.01	0.01	0.00	0.00
Total HAPS	1.00	4.36	1.02	4.47	0.02	0.11

REGULATORY APPLICABILITY

The proposed facility is subject to the following state rules (no federal rules apply):

45CSR7 To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations.

The extruders are subject to the process weight rate based emission limitations of 45CSR7. The rule 7 emission limitation for Extruders which discharge through emission point 2E (based on a type 'a' source and a maximum process weight rate of 7,275.26 lb/hr) is 7.275 pounds per hour. Actual controlled emissions from Extruder 2E are expected to be 0.50 pounds per hour. Therefore, the requirements of 45CSR7 should be met.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation.

Potential (uncontrolled) emissions from the construction of the proposed TeMa North America, LLC facility would exceed 6 pounds per hour and 10 tons per year of PM. Therefore, a permit is required.

As required under §45-13-8.3 ("Notice Level A"), TeMa placed a Class I legal advertisement in a "newspaper of general circulation in the area where the source is . . . located." The ad ran on February 21, 2024 in the Shepherdstown Chronicle and the affidavit of publication for this legal advertisement was submitted on April 3, 2024. Additionally, TeMa paid the appropriate application fee of $1,000.

45CSR22 Air Quality Management Fee Program

The facility is not subject to any NSPS, MACT or NESHAP. Additionally, the facility is defined as a minor source under 45CSR30. Therefore the facility is not subject to 45CSR30 and will pay its annual fees through the Rule 22 program.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

The majority of non-criteria regulated pollutants fall under the definition of HAPs which, with some revision since, were 188 compounds identified under Section 112(b) of the Clean Air Act (CAA) as pollutants or groups of pollutants that EPA knows or suspects may cause cancer or other serious human health effects. The Station is classified as an area source of hazardous air pollutants. Listed below is a description of the primary hazardous air pollutants for this facility.

Acetaldehyde
Acetaldehyde is mainly used as an intermediate in the synthesis of other chemicals. It is ubiquitous in the environment and may be formed in the body from the breakdown of ethanol. Acute (short-term) exposure to acetaldehyde results in effects including irritation of the eyes, skin, and respiratory tract. Symptoms of chronic (long-term) intoxication of acetaldehyde resemble those of alcoholism. Acetaldehyde is considered a probable human carcinogen (Group B2) based on inadequate human cancer studies and animal studies that have shown nasal tumors in rats and laryngeal tumors in hamsters.

Acrolein
Acrolein is primarily used as an intermediate in the synthesis of acrylic acid and as a biocide. It may be formed from the breakdown of certain pollutants in outdoor air or from the burning of organic matter including tobacco, or fuels such as gasoline or oil. It is toxic to humans following inhalation, oral or dermal exposures. Acute (short-term) inhalation exposure may result in upper respiratory tract irritation and congestion. No information is available on its reproductive, developmental, or carcinogenic effects in humans, and the existing animal cancer data are considered inadequate to make a determination that acrolein is carcinogenic to humans.

Formaldehyde
Formaldehyde is used mainly to produce resins used in particleboard products and as an intermediate in the synthesis of other chemicals. Exposure to formaldehyde may occur by breathing contaminated indoor air, tobacco smoke, or ambient urban air. Acute (short-term) and chronic (long-term) inhalation exposure to formaldehyde in humans can result in respiratory symptoms, and eye, nose, and throat irritation. Limited human studies have reported an association between formaldehyde exposure and lung and nasopharyngeal cancer. Animal inhalation studies have reported an increased incidence of nasal squamous cell cancer. EPA considers formaldehyde a probable human carcinogen (Group B1).

Hexane
Hexane is used to extract edible oils from seeds and vegetables, as a special-use solvent, and as a cleaning agent. Acute (short-term) inhalation exposure of humans to high levels of hexane causes mild central nervous system (CNS) effects, including dizziness, giddiness, slight nausea, and headache. Chronic (longterm) exposure to hexane in air is associated with polyneuropathy in humans, with numbness in the extremities, muscular weakness, blurred vision, headache, and fatigue observed. Neurotoxic effects have also been exhibited in rats. No information is available on the carcinogenic effects of hexane in humans or animals. EPA has classified hexane as a Group D, not classifiable as to human carcinogenicity.

4,4'-Methylenediphenyl Diisocyanate (MDI)
The commercial form of 4,4'-methylenediphenyl diisocyanate (MDI) is used to produce polyurethane foams. Acute (short-term) inhalation of high concentrations of MDI may cause sensitization and asthma in humans. Acute dermal contact with MDI has induced dermatitis and eczema in workers. MDI has been observed to irritate the skin and eyes of rabbits. Chronic (long-term) inhalation exposure to MDI has

been shown to cause asthma, dyspnea, and other respiratory impairments in workers. Respiratory effects have also been observed in animals. No adequate information is available on the reproductive, developmental, or carcinogenic effects of MDI in humans. EPA has classified MDI as a Group D, not classifiable as to human carcinogenicity.

Propionaldehyde
Propionaldehyde is used in the manufacture of plastics, in the synthesis of rubber chemicals, and as a disinfectant and preservative. Limited information is available on the health effects of propionaldehyde. No information is available on the acute (short-term), chronic (long-term), reproductive, developmental or carcinogenic effects of propionaldehyde in humans. Animal studies have reported that exposure to high levels of propionaldehyde, via inhalation, results in anesthesia and liver damage, and intraperitoneal exposure results in increased blood pressure. EPA has not classified propionaldehyde for carcinogenicity.

Toluene
The acute toxicity of toluene is low. Toluene may cause eye, skin, and respiratory tract irritation. Short-term exposure to high concentrations of toluene (e.g., 600 ppm) may produce fatigue, dizziness, headaches, loss of coordination, nausea, and stupor; 10,000 ppm may cause death from respiratory failure. Ingestion of toluene may cause nausea and vomiting and central nervous system depression. `Contact of liquid toluene with the eyes causes temporary irritation. Toluene is a skin irritant and may cause redness and pain when trapped beneath clothing or shoes; prolonged or repeated contact with toluene may result in dry and cracked skin. Because of its odor and irritant effects, toluene is regarded as having good warning properties. The chronic effects of exposure to toluene are much less severe than those of benzene. No carcinogenic effects were reported in animal studies. Equivocal results were obtained in studies to determine developmental effects in animals. Toluene was not observed to be mutagenic in standard studies.

All HAPs have other non-carcinogenic chronic and acute effects. These adverse health effects may be associated with a wide range of ambient concentrations and exposure times and are influenced by source-specific characteristics such as emission rates and local meteorological conditions. Health impacts are also dependent on multiple factors that affect variability in humans such as genetics, age, health status (e.g., the presence of pre-existing disease) and lifestyle. As stated previously, *there are no federal or state ambient air quality standards for these specific chemicals*. For a complete discussion of the known health effects of each compound refer to the IRIS database located at *www.epa.gov/iris*.

AIR QUALITY IMPACT ANALYSIS

Because the original application addressed the construction of a facility that is not defined as major under 45CSR14, no modeling was performed.

MONITORING OF OPERATIONS

The permit will require the following parameters to be monitored and recorded:

* Throughput of resin (polystyrene, polypropylene, polyethylene and high density polyethylene) to each extruder on a monthly basis.

CHANGES TO R13-3414

Permit R13-3414A will supersede and replace Permit R13-3414 that was issued on October 31, 2018. The following changes were made to R13-3414:

- Updated Title page
- Updated headers
- Updated Description of Change
- Updated Table 1.0, added XPS emission points, changed extrusion emission points to 2E
- Updated Section 2.5 language
- Updated Section 2.12 to "*[Reserved]"*
- Deleted section 3.5.4.2
- Updated Section 4.1.1
- Changed 4.1.2 to include XPS extruder
- Changed 4.1.3 to include polystyrene
- 4.1.5 added language for MDI
- 4.1.6 changed to include XPS laminator and extruder
- 4.1.7 changed to include XPS

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates that TeMa North America, LLC meets all the requirements of applicable regulations. Therefore, impact on the surrounding area should be minimized and it is recommended that the Jefferson County Facility should be granted a 45CSR13 Modification for their facility.

Brian Carney, P.E.
Engineer

AIR QUALITY PERMIT NOTICE

Notice of Open Comment Period

On January 16, 2024, TeMa North America, LLC applied to the WV Department of Environmental Protection, Division of Air Quality (DAQ) for a Modification Permit for a plastic extrusion facility located in Jefferson County, WV at 39.356546 and -77.870943. A preliminary evaluation has determined that all State and Federal air quality requirements will be met by the proposed facility. The DAQ is providing notice to the public of an open comment period for permit application R13-3414A.

The following increases in potential emissions will be authorized by this permit action: Particulate Matter (PM) 5.82 tons per year (tpy), PM10 of 5.05 tpy, PM2.5 of 4.76 tpy Carbon Monoxide 0.13 tpy, Volatile Organic Compounds 2.48 tpy, and Total Hazardous Air Pollutants (HAPS) 0.11 tpy

Written comments or requests for a public meeting must be received by the DAQ before 5:00 p.m. on Friday, May 24, 2024. A public meeting may be held if the Director of the DAQ determines that significant public interest has been expressed, in writing, or when the Director deems it appropriate.

The purpose of the DAQ's permitting process is to make a preliminary determination if the proposed modification will meet all state and federal air quality requirements. The purpose of the public review process is to accept public comments on air quality issues relevant to this determination. Only written comments received at the address noted below within the specified time frame, or comments presented orally at a scheduled public meeting, will be considered prior to final action on the permit. All such comments will become part of the public record.

Brian D. Carney, PE
WV Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Telephone: 304/926-0499, ext. 41287
Email: brian.d.carney@wv.gov

Additional information, including copies of the draft permit, application and all other supporting materials relevant to the permit decision may be obtained by contacting the engineer listed above. The draft permit and engineering evaluation can be downloaded at:

https://dep.wv.gov/daq/permitting/Pages/NSR-Permit-Applications.aspx

Carney, Brian D <brian.d.carney@wv.gov>

RE: Application with Updates

1 message

Patrick E. Ward <PEWard@potesta.com> Fri, Mar 15, 2024 at 5:00 PM
To: "Carney, Brian D" <brian.d.carney@wv.gov>
Cc: "Rhonda L. Henson" <rlhenson@potesta.com>

See my comments below and attached revised pages.

Regards,

Patrick Ward

Potesta & Associates, Inc.

7012 MacCorkle Avenue, S.E.

Charleston, West Virginia 25304

Ph: (304) 342-1400

Direct: (304) 414-4751

Fax: (304) 343-9031

From: Carney, Brian D <brian.d.carney@wv.gov>
Sent: Tuesday, February 20, 2024 11:01 AM
To: Patrick E. Ward <PEWard@potesta.com>
Subject: Re: Application with Updates

Mr. Ward,

Please address the following issues I found with the revised application:

X2S in Attachment I omitted from Attachment J – added X2S of Attachment I to the same line as TPX4 in Attachment J. The emissions from the silo are caused by the transfer of material into the silo which is TPX4 which vents through X3CE.

X3S in Attachment I shows Emission point X3E, but shows X1E in Attachment J – it is X1E. Changed Attachment I to match.

X8S in Attachment I omitted from Attachment J – Added below X7S

X12S in Attachment I omitted from Attachment J – Added X12S in the same line as X9S (Pneumatic System 3 (TPX5). Both Pneumatic System 3 and Pneumatic System 2 cause the emissions from the silo.

X14 shows control device X1CE but no reduction in emissions. - Added control of X1DC (emissions point X1CE) in Attachment N and changed controlled emissions in Attachment J.

X18S in Attachment I omitted from Attachment J - added X18S of Attachment I to the same line as TPX9 in Attachment J. The emissions from the silo are caused by the transfer of material into the silo which is TPX9 which vents through X1CE.

TPX8 in Attachment J shows a reduction in emissions without any Control Device – Added fully enclosed in Attachment J.

We also put in the FE on Attachment I and J. Previously we only had dust collectors listed for control devices.

These are issues I found. However, there may be more inconsistencies.

Sincerely,

Brian Carney, PE

On Fri, Feb 16, 2024 at 10:09 AM Patrick E. Ward <PEWard@potesta.com> wrote:

> We have prepared the attached based on your comments. The legal ad has also been sent to the newspaper and will run on the 21st of February. We will send the affidavit in as soon as we get it.
>
> This is a description of what we changed:
>
> Page 19, Process Flow Diagram for the new equipment, we clarified the emission points for the Doser/Extruder Feed Hopper (now X1E), the Extruder (now 2E), Lamination with Hot Melt and Lamination Feed Unrolling System and Glue (as needed) (now 2E), Trimmer (now 1E), Pneumatic System 2 and 3 (now X2CE). We also clarified which sources feed to the dust collector 1C from the existing equipment and which vapor sources feed to the chimney from the existing sources.
> Page 21, Extruder is now listed as emission point 2E.
> Page 22, Extruder is now listed as emission point 2E.
> Page 183, Clarified emission points and added the transfer points that do not feed to a dust collector. We spilt the Virgin Silo and Octabins/Big Bags into two rows. We also added the transfer points that correspond to the pneumatic systems and numbered the pneumatic systems on this page.
> Page 190 through 194, Clarified emission points by splitting them apart and fixed typos and controls.
> Page 234 fixed XDC1 to X1DC.
>
> Please let us know if you have any questions.
>
> Regards,
> Patrick Ward
> Potesta & Associates, Inc.
> 7012 MacCorkle Avenue, S.E.
> Charleston, West Virginia 25304
> Ph: (304) 342-1400
> Direct: (304) 414-4751
> Fax: (304) 343-9031
>
>
>
> -----Original Message-----
> From: Carney, Brian D <brian.d.carney@wv.gov>
> Sent: Friday, February 9, 2024 9:45 AM
> To: lorenzo.spagna@iwisholding.com; Patrick E. Ward <PEWard@potesta.com>

Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>; Stephanie R Mink <stephanie.r.mink@wv.gov>
Subject: Incomplete

You don't often get email from brian.d.carney@wv.gov. Learn why this is important <https://aka.ms/LearnAboutSenderIdentification>

RE: Application Status: Incomplete

TeMa North America, LLC/Kearneysville, WV

Permit Application (R13-3414A)

Plant ID No. (037-00110)

Mr. Spagna:

Your application for a modification permit for a plastic extrusion facility was received by this Division on January 16th, 2024 and assigned to the writer for review. Upon initial review of said application, it has been determined that the application as submitted is incomplete based on the following items:

1. Need application Fee of $1,000.

2. Need the Affidavit of Publication for the Class I legal ad.

3. Revise or clarify the inconsistencies shown with the markups on the attached application pages.

Please address the above deficiencies in writing within fifteen (15) days of the receipt of this email. Application review will not commence until the application has been deemed to be technically complete. Failure to respond to this request in a timely manner may result in the denial of the application.

Should you have any questions, please contact Brian D. Carney, P.E. at (304) 926-0499 ext.41287 or reply to this email.

--

Brian D. Carney, P.E.
Engineer, NSR Permitting
601 57th Street SE
Charleston, WV 25304
304-414-1287

Revised Pages - Att. I Page 1, Att. J Pages 1-5, Att. N (23-0104).pdf
361K

Certificate of Publication

JEFFERSON PUBLISHING COMPANY, INC., Publisher

SPIRIT OF JEFFERSON ADVOCATE

Charles Town, W. Va. February 21 2024

I hereby certify that the annexed Air Quality Permit Notice of Application

in the case of TeMa North America, LLC; to install an XPS Board Production System at 395 Steeley Way, Kearneysville, WV

has been published once a week for one successive weeks, in the Spirit of Jefferson Advocate, a newspaper published in Charles Town, Jefferson County, West Virginia, in the issues of

February 21, 2024,

as required by law.

Tim Cook

Editor/Manager, Spirit of Jefferson Advocate

State of West Virginia
County of Jefferson
Personally appeared before me, Tim Cook, Editor/Manager of the Spirit of Jefferson Advocate, and made oath that the above certificate is true and correct.

Cara D. Young

Commission expires

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
CARA D. YOUNG
Jefferson Publishing Co., Inc.
P. O. Box 966
Charles Town WV 25414
My Commission Expires Jan. 27, 2029

Notary Public

LEGAL ADVERTISEMENT
AIR QUALITY
PERMIT NOTICE
Notice of Application

Notice is given that TeMa North America, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a construction and modification permit to install an XPS Board Production System at their existing facility located at 395 Steeley Way, Kearneysville, Jefferson County, West Virginia. The latitude and longitude coordinates are: 39.356546 and -77.870943.

The applicant estimates the proposed revisions will increase the potential to discharge the following Regulated Air Pollutants: PM of 5.82 tons per year (tpy), PM10 of 5.05 tpy, PM2.5 of 4.76 tpy, VOC at 2.48 tpy, CO of 0.13 tpy, formaldehyde of 0.00929 tpy, Acrolein of 0.00013 tpy, Acethaldehyde of 0.00577 tpy, Propionaldehyde of 0.00063 tpy, MDI of 0.096 tpy for total HAPs of 0.11 tpy.

Startup of operation is planned to begin on or about the 15th day of May, 2024. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice. Written comments will also be received via email at DEPAirQualityPermitting@WV.gov.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, Extension 41281, during normal business hours.

Dated this the 21st day of February 2024.

By: TeMa North America, LLC
Lorenzo Spagna
Chief Executive Officer
395 Steeley Way
Kearneysville, West Virginia
25430

2/21/1t

Carney, Brian D <brian.d.carney@wv.gov>

Application with Updates

1 message

Patrick E. Ward <PEWard@potesta.com> Fri, Feb 16, 2024 at 10:08 AM
To: "Carney, Brian D" <brian.d.carney@wv.gov>
Cc: Lorenzo Spagna <lorenzo.spagna@iwisholding.com>, Marco Gobbo <marco.gobbo@iwisholding.com>, "Rhonda L. Henson" <rlhenson@potesta.com>

We have prepared the attached based on your comments. The legal ad has also been sent to the newspaper and will run on the 21st of February. We will send the affidavit in as soon as we get it.

This is a description of what we changed:

Page 19, Process Flow Diagram for the new equipment, we clarified the emission points for the Doser/Extruder Feed Hopper (now X1E), the Extruder (now 2E), Lamination with Hot Melt and Lamination Feed Unrolling System and Glue (as needed) (now 2E), Trimmer (now 1E), Pneumatic System 2 and 3 (now X2CE). We also clarified which sources feed to the dust collector 1C from the existing equipment and which vapor sources feed to the chimney from the existing sources.
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Regards,
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Cc: Beverly D McKeone <beverly.d.mckeone@wv.gov>; Stephanie R Mink <stephanie.r.mink@wv.gov>
Subject: Incomplete

RE: Application Status: Incomplete

TeMa North America, LLC/Kearneysville, WV

Permit Application (R13-3414A)

Plant ID No. (037-00110)

Mr. Spagna:

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Brian D. Carney, P.E.
Engineer, NSR Permitting
601 57th Street SE
Charleston, WV 25304
304-414-1287

R13 Modification App. for XPS Board Extrusion Process - TeMa (23-0104).pdf
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