Trinity Consultants
12700 Park Central Dr, Ste 2100, Dallas, TX 75251 / P 800.229.6655 / P 972.661.8100 / F 972.385.9203 / **trinityconsultants.com**

December 30, 2021

Air Permits Initial Review Team (APIRT)
Texas Commission on Environmental Quality (TCEQ)
12100 Park 35 Circle, MC 161
Building C, Third Floor
Austin, TX 78753

RE: APD-CERT Permit Application – PBR Registration No. 147140
GAF Materials Corporation – Dallas Plant
TCEQ Account Number: DB-0378-S
TCEQ Customer Reference Number: CN605251487
TCEQ Regulated Entity Number: RN100788959

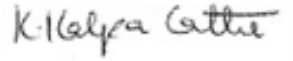
Dear Air Permits Initial Review Team:

Building Materials Investment Corporation doing business as GAF Materials Corporation (GAF) owns and operates an asphalt roofing production facility located in Dallas, Texas (Dallas Plant). The Dallas Plant operates under Title V Operating Permit No. O-2771, New Source Review (NSR) Permit No. 7711A, Standard Permit No. 91414, and various registered and non-registered Permit By Rules (PBRs). With this APD-CERT, the GAF Dallas Plant is requesting to withdraw the confidentiality claim for information submitted for PBR Registration No. 147140. Attached is the TCEQ APD-CERT Form and the complete initial PBR Registration Application and associated PBR Revision application with the "confidential" markup removed.

Thank you for your assistance in this matter. If you have any questions, please feel free to contact me at 972.661.8100 or via email at lkambham@trinityconsultants.com, or Mr. Kevin Bush (GAF) at 972.872.2325 or via email at kevin.bush@gaf.com.

Sincerely,

TRINITY CONSULTANTS



Latha Kambham
Managing Consultant

Enclosure

cc: Ms. Kimberly Fowler, TCEQ Region 4 (Dallas/Fort Worth, TX) (via STEERS)
Mr. Wayne Scott, GAF
Mr. Kevin Bush, GAF

Attachment 1
TCEQ APD-CERT Form

Texas Commission on Environmental Quality
Form APD – CERT
Certification of Emission Limits
(Page 1)

I.	**Company and Site Information**	
A.	Company Name: **Building Materials Investment Corporation**	
B.	Responsible Official Name: **Wayne Scott**	
Responsible Official's Title: **Plant Manager**		
Mailing Address: **2600 Singleton Blvd**		
City: **Dallas**		
County: **Dallas**		
State: **Texas**		
ZIP Code: **75212-3738**		
Telephone: **214-637-8964**		
Fax:		
Email Address: **Wayne.Scott@gaf.com**		
C.	Site Name: **Dallas Plant**	
Street Address: (*if different from above)*		
If "NO" street address describe the physical location with driving directions:		
City or nearest city: **Dallas**		
County: **Dallas**		
ZIP Code: **75212-3738**		
D.	TCEQ Account Identification Number *(leave blank if unknown)*: **DB-0378S**	
E.	TCEQ Customer Reference Number *(leave blank if unknown)*: **CN605251487**	
TCEQ Regulated Entity Number *(leave blank if unknown)*: **RN100788959**		
F.	Does the site have a Title V Permit?	☒ YES ☐ NO
G.	Title V Permit Number: **O-2771**	
H.	Is this a small business?	☐ YES ☒ NO
II.	**Attach the Following Documentations**	
A.	Copies of a previously completed Form PI-7 and all supporting documentation *(if applicable)*.	
B.	A list of each source of air emissions at the site.	
C.	A summary of the certified emission rates.	
D.	A process description.	

Texas Commission on Environmental Quality
Form APD – CERT
Certification of Emission Limits
(Page 2)

III. Maintain Records On Site to Demonstrate Continuing Compliance and Make the Records Available on Request
The emission rates listed on the certification shall reflect the certified emissions for the stationary sources at the site. The records demonstrating compliance with this certification must comply with applicable rules and must be maintained at the site or, for sites that normally operate unattended, at an office within Texas having day-to-day operational control of the site. Records must be kept for at least five years and must be made available upon request. For more information regarding records for permits by rule, see 30 TAC § 106.8, Recordkeeping.
IV. Purpose of this Certification *(choose and complete all that are appropriate)*
This certification is intended to establish emission rates below state and federal rule thresholds and triggers for:
☒ 30 TAC § 106.4 for Permits by Rule
☒ Permit by Rule Number: **106.261, 106.262, 106.472 (PBR Registration No. 147410)**
☐ HRVOC Emissions Cap and Trade Program
☐ Emissions Banking and Trading Program (other than HRVOC)
☐ 30 TAC Chapter 115 for Volatile Organic Compounds
☐ 30 TAC Chapter 117 for Nitrogen Oxides
☐ 40 CFR Part 60, Subpart:
☐ 40 CFR Part 61, Subpart:
☐ 40 CFR Part 63, Subpart:
☐ Title V Permit Major Source Applicability
☒ Other: Withdraw confidential claim

Texas Commission on Environmental Quality
Form APD – CERT
Certification of Emission Limits
(Page 3)

V. Certification by Responsible Official
All representations in this certification of emissions are conditions upon which the stationary source shall operate. This certification reflects the maximum emission rates for the operation of this facility. The facility will operate in compliance with all regulations of the Texas Commission on Environmental Quality and with Federal U.S. Environmental Protection Agency regulations governing air pollution. It shall be unlawful for any person to vary from such representation unless the certification is first revised. The signature below indicates that, based on information and belief formed after reasonable inquiry, the statements, and information contained in the attached documents are true, accurate, and complete.
Name: **Wayne Scott**
Title: **Plant Manager**
Original Signature Required:
Date:

Reminder: The original of this certification must be sent to the TCEQ through ePermits. A copy must also be maintained on site or, for sites that normally operate unattended, at an office within Texas having day-to-day operational control of the site.

Texas Commission on Environmental Quality
Form APD – CERT
Certification of Emission Limits
Attach additional pages if needed if needed.
(Page 4)

VI. Emission Rate Data

FIN	Facility Name	EPN	Point Name	Authorization Type	Authorization Date	Registration Number (if applicable)	Air Contaminant Name	Maximum Certified Emission Rates	
								Pounds/Hour	Tons/Year
T-22	Dallas Plant	CFL2	Line 3 Sealant Run Tank	PBR 106.472	01/05/2018	147140	CO	2.81E-03	0.01
							$PM/PM_{10}/PM_{2.5}$	6.60E-05	2.48E-04
							VOC	0.05	0.18
							H_2S	1.66E-03	6.21E-03
TK-AD	Dallas Plant	CFL2	3120 Adhesive Storage Tank	PBR 106.472	01/05/2018	147140	CO	0.12	0.02
							$PM/PM_{10}/PM_{2.5}$	2.82E-03	4.59E-04
							VOC	2.00	0.33
							H_2S	0.07	0.01
SEALAP	Dallas Plant	CFL2	Self-seal applicator and laminate self-seal applicator	PBR 106.261, PBR 106.262	01/05/2018	147140	CO	4.76E-03	0.02
							$PM/PM_{10}/PM_{2.5}$	2.46E-05	1.08E-04
							VOC	0.02	0.08

VI. Emission Rate Data

FIN	Facility Name	EPN	Point Name	Authorization Type	Authorization Date	Registration Number (if applicable)	Air Contaminant Name	Maximum Certified Emission Rates	
								Pounds/Hour	Tons/Year
							Carbonyl Sulfide (HAP)	1.55E-04	6.79E-04
HTR9	Dallas Plant	HTR9	Line 3 Heatec Heater	PBR 106.183	02/02/2017	N/A	CO	0.12	0.54
							NO_X	0.07	0.32
							$PM/PM_{10}/PM_{2.5}$	0.01	0.05
							SO_2	9.00E-04	3.94E-03
							VOC	8.10E-03	0.04
							Emissions Totals:	2.481	1.612

Attachment 2
PBR Registration Application – Dated June 6, 2017

12700 Park Central Drive | Suite 2100 | Dallas, TX 75251 | P (972) 661-8100 | F (972) 385-9203
trinityconsultants.com

Trinity Consultants

June 6, 2017

Air Permits Initial Review Team (APIRT)
Texas Commission on Environmental Quality
12100 Park 35 Circle, Mail Code 161
Building C, Third Floor
Austin, TX 78753

RE: 30 TAC §106.261, 106.262 and 106.472 Permit by Rule Registration
Building Materials Investment Corporation – Dallas Plant – Dallas, TX, Dallas County
Customer Reference Number (CN) 605251487
Regulated Entity Reference Number (RN) 100788959

Dear Air Permits Initial Review Team:

Building Materials Investment Corporation doing business as GAF Materials Corporation (GAF) owns and operates an asphalt roofing production facility located in Dallas, Texas (Dallas Plant). GAF operates under Texas Commission on Environmental Quality (TCEQ) Customer Reference Number (CN) 605251487. The Dallas Plant has been assigned TCEQ Air Quality Account Number DB-0378-S and Regulated Entity Number (RN) 100788959. Operations at GAF Dallas Plant are authorized under New Source Review (NSR) Permit No. 7711A, Standard Permit No. 91414 and several non-registerable Permits by Rule (PBRs). The Dallas Plant is a Title V facility operating under Site Operating Permit (SOP) No. O-2771.

With this project, GAF is proposing to authorize Line 3 sealant application system that includes one new Line 3 sealant run tank, associated self-seal applicator, laminate self-seal applicator, and a Heatec heater. The Heatec heater is authorized under PBR 106.183 that does not require registration with the TCEQ and the Dallas Plant maintains onsite documentation. Other units in Line 3 sealant application system are proposed to be authorized under this PBR registration.

This PBR registration is submitted in accordance with Title 30 of the Texas Administrative Code (30 TAC) Chapter 106 and includes the TCEQ Form PI-7-CERT (Certification and Registration for PBR) and supporting documentation. As demonstrated in the enclosed PBR registration, the operations meet the applicable regulatory requirements. The PBR registration fee has been submitted to the TCEQ Revenue Section via electronic payment. A copy of the payment receipt is included in this application for reference.

~~Appropriate sections of the application have been identified as confidential and should not be disclosed to the public. A confidential and non-confidential version of the application with all confidential information removed are being submitted to the TCEQ APIRT Review Team.~~

If you have any questions regarding this submittal, please feel free to contact me at (972) 661-8100 or via email at lbao@trinityconsultants.com, or Mr. Kevin Bush, GAF, at (214) 637-8933.

Sincerely,

Trinity Consultants

Lele Bao, P.E.
Consultant

cc: Ms. Elizabeth Smith, Air Section Manager, TCEQ Region 4
Ms. Joni Keach, Section Manager, City of Dallas Air Pollution Control Program
Mr. Kevin Bush, GAF
Mr. Durwin Farlough, GAF
Ms. Latha Kambham, Trinity Consultants

Enclosure

TCEQ PERMIT BY RULE REGISTRATION
LINE 3 SEALANT APPLICATION SYSTEM

Building Materials Investment Corporation – Dallas, TX

Prepared By:

Latha Kambham, Ph.D. – Managing Consultant
Lele Bao, P.E. – Consultant
Xu Liu, Ph.D., P.E. – Consultant

TRINITY CONSULTANTS

12700 Park Central Drive
Suite 2100
Dallas, Texas 75251
(972) 661-8100

~~**CONFIDENTIAL VERSION**~~

June 2017

Project 164401.0185

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

Building Materials Investment Corporation doing business as GAF Materials Corporation (GAF) owns and operates an asphalt roofing production facility located in Dallas, Texas (Dallas Plant). GAF operates under Texas Commission on Environmental Quality (TCEQ) Customer Reference Number (CN) 605251487. The Dallas Plant has been assigned TCEQ Air Quality Account Number DB-0378-S and Regulated Entity Number (RN) 100788959. Operations at GAF Dallas Plant are authorized under New Source Review (NSR) Permit No. 7711A, Standard Permit No. 91414 and several non-registerable Permits by Rule (PBRs). The Dallas Plant is a Title V facility operating under Site Operating Permit (SOP) No. O-2771.

Dallas County is currently classified as a moderate nonattainment area for the 2008 eight-hour (8-hour) ozone standard, and is an attainment or unclassified area for all other criteria pollutants.[1] Effective on December 8, 2016, the Dallas-Fort Worth (DFW) Ozone Nonattainment Area is re-designated as an attainment area for the 1997 8-hour ozone standard.[2] Therefore, Dallas County is currently classified as attainment for the 1997 8-hour ozone standard. The Dallas Plant is an existing minor source with respect to Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR), but is a major source with respect to the federal operating permits program (Title V) due to potential emissions of particulate matter with an aerodynamic diameter of less than or equal to 10 microns (PM_{10}) and sulfur dioxide (SO_2).

With this project, GAF proposes to authorize Line 3 sealant application system that includes one new Line 3 sealant run tank, associated self-seal applicator, laminate self-seal applicator, and a Heatec heater. The Heatec heater is authorized under PBR 106.183 that does not require registration with the TCEQ. An onsite PBR documentation is prepared to authorize the proposed Heatec heater. Other units in Line 3 sealant application system are proposed to be authorized under this PBR registration.

GAF proposes to authorize the emissions from the proposed self-seal applicator and laminate self-seal applicator in Line 3 sealant application system under PBRs pursuant to Title 30 of the Texas Administrative Code (30 TAC) Section (§)106.261, *Facilities (Emission Limitations)*, effective November 1, 2003 and PBR 106.262, *Facilities (Emission and Distance Limitations)*, effective November 1, 2003. GAF also proposes to authorize the Line 3 sealant run tank and associated emissions under 30 TAC § 106.472, *Organic and Inorganic Liquid Loading and Unloading*, effective September 4, 2000. This PBR registration includes the following:

- A copy of PBR Registration Fee Payment;
- TCEQ Form PI-7-CERT (Certification and Registration for Permits by Rule);
- Checklist for 30 TAC §106.4 (Requirements for Permit by Rule);
- Checklist for 30 TAC §106.261 (Facilities (Emission Limitation));
- Checklist for 30 TAC §106.262 (Facilities (Emission and Distance Limitations));
- Checklist for 30 TAC §106.472 (Organic and Inorganic Liquid Loading and Unloading);

[1] The United States Protection Agency (U.S. EPA) Green Book. Source: https://www3.epa.gov/airquality/greenbook/anayo_tx.html, accessed in April 2017.

[2] EPA proposed approval of a re-designation substitution and finding of attainment for the 1997 8-hour ozone NAAQS for the DFW area on May 25, 2016; and the final approval notice was published on November 8, 2016 with an effective date of December 8, 2016. As such, effective December 8, 2016, the NNSR thresholds will be based solely on the 2008 ozone NAAQS standards. The major source threshold for DFW will change from 50 tpy to 100 tpy as a moderate ozone nonattainment area.

- Emission calculations and PBR 106.261/262 Evaluation;
- TCEQ Table 1(a) (Emission Point Summary); and
- Other supporting documentation.

The enclosed forms and documentation demonstrate that the proposed project meets all applicable requirements of 30 TAC §106.261, 106.262 and 106.472, and the general requirements under 30 TAC §106.4. Emissions calculation details associated with the proposed project are provided in Appendix A of this PBR Registration.

2. TCEQ FORMS AND APPLICABILITY CHECKLISTS

Form PI-7-CERT
PBR §106.4 Checklist
PBR §106.261 Checklist
PBR §106.262 Checklist
PBR §106.472 Checklist
Table 1(a)

Texas Commission on Environmental Quality
Certification and Registration for Permits by Rule
Form PI-7-CERT
(Page 1)

I. Registrant Information		
A. Company or Other Legal Customer Name: Building Materials Investment Corporation		
B. Company Official Contact Information (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other _____)		
Name: Bruce Dahlgren		
Title: Plant Manager		
Mailing Address: 2600 Singleton Blvd.		
City: Dallas	State: TX	ZIP Code: 75212
Phone: 214-637-8970	Fax: 214-637-5202	
E-mail Address: bdahlgren@gaf.com		
All PBR registration responses will be sent via e-mail unless a hard copy is specifically requested. The company official must initial here if hard copy is requested. _____ *(please initial)*		
C. Technical Contact Information (☒ Mr. ☐ Mrs. ☐Ms. ☐ Other _____)		
Name: Kevin Bush		
Title: Environmental Engineer		
Company Name: Building Materials Investment Corporation		
Mailing: 2600 Singleton Blvd.		
City: Dallas	State: TX	ZIP Code: 75212
Phone: 214-637-8933	Fax: 214-637-5202	
E-mail: kbush@gaf.com		
II. Facility and Site Information		
A. Name and Type of Facility		
Facility Name: Line 3 Sealant Application System		
Type of Facility:	☒ Permanent	☐ Temporary
For portable units, please provide the serial number of the equipment being authorized below.		
Serial No:	Serial No:	
B. Facility Location Information		
Street Address: 2600 Singleton Blvd.		
If there is no street address, provide written driving directions to the site and provide the closest city or town, county, and ZIP code for the site (attach description if additional space is needed).		
City: Dallas	County: Dallas	ZIP Code: 75212

II. Facility and Site Information *(continued)*	
C. TCEQ Core Data Form	
Is the Core Data Form (TCEQ Form Number 10400) attached?	☐ YES ☒ NO
If "NO," provide customer reference number (CN) and regulated entity number (RN) below.	
Customer Reference Number (CN): CN605251487	
Regulated Entity Number (RN): RN100788959	
D. TCEQ Account Identification Number (if known): DB-0378-S	
E. PBR number(s) claimed under 30 TAC Chapter 106	
(List all the individual rule number(s) that are being claimed.)	
106.261	106.262
106.472	106.
F. Historical Standard Exemption or PBR	
Are you claiming a historical standard exemption or PBR?	☐ YES ☒ NO
If "YES," enter rule number(s) and associated effective date in the spaces provided below.	
Rule Number(s)	Effective Date
G. Previous Standard Exemption or PBR Registration Number	
Is this authorization for a change to an existing facility previously authorized under a standard exemption or PBR?	☐ YES ☒ NO
If "YES," enter previous standard exemption number(s) and PBR registration number(s), and associated effective dates in the spaces provided below.	
Standard Exemption and PBR Registration Number(s)	Effective Date
H. Other Facilities at this Site Authorized by Standard Exemption, PBR, or Standard Permit	
Are there any other facilities at this site that are authorized by an Air Standard Exemption, PBR, or Standard Permit?	☒ YES ☐ NO
If "YES," enter standard exemption number(s), PBR registration number(s), and Standard Permit registration number(s), and associated effective date in the spaces provided below.	
Standard Exemption, PBR Registration, and Standard Permit Registration Number(s)	Effective Date
Standard Permit Registration No. 91414	10/28/2016

II. Facility and Site Information *(continued)*	
I. Other Air Preconstruction Permits	
Are there any other air preconstruction permits at this site?	☒ YES ☐ NO
If "YES," enter permit number(s) in the spaces provided below.	
NSR Permit No. 7711A	
J. Affected Air Preconstruction Permits	
Does the PBR being claimed directly affect any permitted facility?	☐ YES ☒ NO
If "YES," enter the permit number(s) in the spaces provided below.	
K. Federal Operating Permit (FOP) Requirements (30 TAC Chapter 122 Applicability)	
1. Is this facility located at a site that is required to obtain an FOP pursuant to 30 TAC Chapter 122?	☒ YES ☐ NO ☐ To Be Determined
If the site currently has an existing FOP, enter the permit number: O-2771	
Check the requirements of 30 TAC Chapter 122 that will be triggered if this certification is accepted. *(check all that apply)*	
☐ Initial Application for an FOP ☐ Significant Revision for an SOP ☐ Minor Revision for an SOP	
☒ Operational Flexibility/Off Permit Notification for an SOP ☐ Revision for a GOP	
☐ To be Determined ☐ None	
2. Identify the type(s) of FOP issued and/or FOP application(s) submitted/pending for the site. *(check all that apply)*	
☒ SOP ☐ GOP ☐ GOP application/revision (submitted or under APD review)	
☐ N/A ☐ SOP application/revision (submitted or under APD review)	
III. Fee Information (*See Section VII. for address to send fee or go to www.tceq.texas.gov/epay to pay online.)*	
A. Fee Requirements	
Is a fee required per Title 30 TAC § 106.50?	☒ YES ☐ NO
If "NO," specify the exception (*check all that apply*)	
1. Registration is solely to establish a federally enforceable emission limit.	☐ YES ☒ NO
2. Registration is within six months of an initial PBR review, and it is addressing deficiencies, administrative changes, or other allowed changes.	☐ YES ☒ NO
3. Registration is for a remediation project (30 TAC § 106.533).	☐ YES ☒ NO

III.	**Fee Information (***See Section VII. for address to send fee or go to www.tceq.texas.gov/epay to pay online.) (continued)*	
B.	Fee Amount	
1.	A $100 fee is required if *any* of the answers in III.B.1 are "YES."	
This business has less than 100 employees.		☐ YES ☒ NO
This business has less than 6 million dollars in annual gross receipts.		☐ YES ☒ NO
This registration is submitted by a governmental entity with a population of less than 10,000.		☐ YES ☒ NO
This registration is submitted by a non-profit organization.		☐ YES ☒ NO
2.	A $450 fee is required for all other registrations.	
C.	Payment Information	
Check/money order/transaction or voucher number: 321851		
Individual or company name on check: Building Materials Investment Corporation		
Fee Amount: $ 450		
Was fee paid online?		☒ YES ☐ NO
IV.	**Technical Information Including State And Federal Regulatory Requirements** **Place a check next to the appropriate box to indicate what is included in your submittal.** **NOTE:** *Any technical or essential information needed to confirm that facilities are meeting the requirements of the PBR must be provided. Not providing key information could result in an automatic deficiency and voiding of the project.*	
A.	PBR requirements (Checklists are optional; however, your review will go faster if you provide applicable checklists.)	
Did you demonstrate that the general requirements in 30 TAC § 106.4 are met?		☒ YES ☐ NO
Did you demonstrate that the individual requirements of the specific PBR are met?		☒ YES ☐ NO
B.	Confidential Information (All pages properly marked "CONFIDENTIAL")	☒ YES ☐ NO
C.	Process Flow Diagram	☐ YES ☒ NO
D.	Process Description	☒ YES ☐ NO
E.	Maximum Emissions Data and Calculations	☒ YES ☐ NO
Note: *If the facilities listed in this registration are subject to the Mass Emissions Cap & Trade program under* ***30 TAC Chapter 101, Subchapter H, Division 3,*** *the owner/operator of these facilities must possess NO_x allowances equivalent to the actual NO_x, emissions from these facilities.*		

IV. Technical Information Including State And Federal Regulatory Requirements *(continued)*

Place a check next to the appropriate box to indicate what is included in your submittal.

Note: Any technical or essential information needed to confirm that facilities are meeting the requirements of the PBR must be provided. Not providing key information could result in an automatic deficiency and voiding of the project.

F. Is this certification being submitted to certify the emissions for the entire site?	☐ YES ☒ NO
If "NO," include a summary of the specific facilities and emissions being certified.	
G. Table 1(a) (Form 10153) Emission Point Summary	☒ YES ☐ NO
H. Distances from Property Line and Nearest Off-Property Structure	
Distance from this facility's emission release point to the nearest property line: 110 feet	
Distance from this facility's emission release point to the nearest off-property structure: 450 feet	
I. Project Status	
Has the company implemented the project or waiting on a response from TCEQ? ☒ Implemented ☐ Waiting	
J. Projected Start of Construction and Projected Start of Operation Dates	
Projected Start of Construction (provide date): May 2017	
Projected Start of Operation (provide date): June 2017	

V. Delinquent Fees

This form **will not be processed** until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ is paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ Web site at: www.tceq.texas.gov/agency/delin/index.html.

VI. Signature For Registration And Certification

The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which this application is made will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382, the Texas Clean Air Act (TCAA); the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.

Name (printed): Bruce Dahlgren

Signature (original signature required): B Dahl

Date: 06/01/2017

Texas Commission on Environmental Quality
Form PI-7-CERT
Certification and Registration for Permits by Rule

VII. Submitting Copies of the Certification and Registration		
Copies must be sent as listed below: **Processing delays may occur if copies are not sent as noted.**		
Who	**Where**	**What**
Air Permits Initial Review Team (APIRT)	Regular, Certified, Priority Mail MC 161, P.O. Box 13087 Austin, Texas 78711-3087 Hand Delivery, Overnight Mail MC 161, 12100 Park 35 Circle, Building C, Third Floor Austin, Texas 78753	Originals Form PI-7-CERT, Core Data Form, and all attachments. Not required if using ePermits[1]
Revenue Section, TCEQ	Regular, Certified, Priority Mail MC 214, P.O. Box 13088 Austin, Texas 78711-3088 Hand Delivery, Overnight Mail MC 214, 12100 Park 35 Circle, Building A, Third Floor Austin, Texas 78753	Original Money Order or Check, Copy of Form PI-7-CERT, and Core Data Form. Not required if fee was paid using ePay[2].
Appropriate TCEQ Regional Office	To find your Regional Office address, go to the TCEQ Web site at www.tceq.texas.gov/publications/gi/gi-002.html, or call (512) 239-1250.	Copy of Form PI-7-CERT, Core Data Form, and all attachments.
Appropriate Local Air Pollution Control Program(s)	To Find your local or Regional Air Pollution Control Programs go to the TCEQ, APD Website at www.tceq.texas.gov/permitting/air/local_programs.html, or call (512) 239-1250	Copy of Form PI-7-CERT, Core Data Form, and all attachments.

[1] ePermits located at www3.tceq.texas.gov/steers/
[2] ePay located at www.tceq.texas.gov/epay

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

The following checklist was developed by the Texas Commission on Environmental Quality (TCEQ), **Air Permits Division**, to assist applicants in determining whether or not a facility meets all of the applicable requirements. Before claiming a specific Permit by Rule (PBR), a facility must first meet all of the requirements of **Title 30 Texas Administrative Code § 106.4** (30 TAC § 106.4), "Requirements for Permitting by Rule." Only then can the applicant proceed with addressing requirements of the specific Permit by Rule being claimed.

The use of this checklist is not mandatory; however, it is the responsibility of each applicant to show how a facility being claimed under a PBR meets the general requirements of 30 TAC § 106.4 and also the specific requirements of the PBR being claimed. If all PBR requirements cannot be met, a facility will not be allowed to operate under the PBR and an application for a construction permit may be required under 30 TAC § 116.110(a).

Registration of a facility under a PBR can be performed by completing **Form PI-7** (Registration for Permits by Rule) or **Form PI-7-CERT** (Certification and Registration for Permits by Rule). The appropriate checklist should accompany the registration form. Check the most appropriate answer and include any additional information in the spaces provided. If additional space is needed, please include an extra page and reference the question number. The PBR forms, tables, checklists, and guidance documents are available from the TCEQ, Air Permits Division Web site at: www.tceq.texas.gov/permitting/air/nav/air_pbr.html.

1. 30 TAC § 106.4(a)(1) and (4): Emission limits	
List emissions in tpy for **each** facility (add additional pages or table if needed):	
• Are the SO_2, PM_{10}, VOC, or other air contaminant emissions claimed for **each** facility in this PBR submittal less than 25 tpy?	☒ YES ☐ NO
• Are the NO_x and CO emissions claimed for each facility in this PBR submittal less than 250 tpy?	☒ YES ☐ NO
*If the answer to both is "Yes," continue to the question below. If the answer to either question is "No," a **PBR cannot be claimed**.*	
Has any facility at the property had public notice and opportunity for comment under 30 TAC Section 116 for a regular permit or permit renewal? (This does not include public notice for voluntary emission reduction permits, grandfathered existing facility permits, or federal operating permits.)	☒ YES ☐ NO
If "Yes," skip to Section 2. If "No," continue to the questions below.	
If the site has had no public notice, please answer the following:	
• Are the SO_2, PM_{10}, VOC, or other emissions claimed for **all** facilities in this PBR submittal less than 25 tpy?	☐ YES ☐ NO
• Are the NO_x and CO emissions claimed for all facilities in this PBR submittal less than 250 tpy?	☐ YES ☐ NO
If the answer to both questions is "Yes," continue to Section 2.	
*If the answer to either question is "No," **a PBR cannot be claimed**. A permit will be required under Chapter 116.*	

2. 30 TAC § 106.4(a)(2): Nonattainment check	
• Are the facilities to be claimed under this PBR located in a designated ozone nonattainment county?	☒ YES ☐ NO
If "Yes," please indicate which county by checking the appropriate box to the right.	
(Moderate) - Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties:	☐ HGB
(Moderate) - Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise counties:	☒ DFW
If "Yes," to any of the above, continue to the next question. If "No," continue to Section 3.	
• Does this project trigger a nonattainment review?	☐ YES ☒ NO
• Is the project's potential to emit (PTE) for emissions of VOC or NO_x increasing by 100 tpy or more? *PTE is the maximum capacity of a stationary source to emit any air pollutant under its worst-case physical and operational design unless limited by a permit, rules, or made federally enforceable by a certification.*	☐ YES ☒ NO
• Is the site an existing major nonattainment site and are the emissions of VOC or NO_x increasing by 40 tpy or more?	☐ YES ☒ NO
If needed, attach contemporaneous netting calculations per nonattainment guidance.	
Additional information can be found at: www.tceq.texas.gov/permitting/air/forms/newsourcereview/tables/nsr_table8.html and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html	
*If "Yes," to any of the above, the project is a major source or a major modification and **a PBR may not be used**. A Nonattainment Permit review must be completed to authorize this project. If "No," continue to Section 3.*	
3. 30 TAC § 106.4(a)(3): Prevention of Significant Deterioration (PSD) check	
Does this project trigger a review under PSD rules?	
To determine the answer, review the information below:	
• Are emissions of any regulated criteria pollutant increasing by 100 tpy of any criteria pollutant at a named source?	☐ YES ☒ NO
• Are emissions of any criteria pollutant increasing by 250 tpy of any criteria pollutant at an unnamed source?	☐ YES ☒ NO
• Are emissions increasing above significance levels at an existing major site?	☐ YES ☒ NO
PSD information can be found at: www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/Tables/10173tbl.pdf and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html *If "Yes," to any of the above, **a PBR may not be used**. A PSD Permit review must be completed to authorize the project.* *If "No," continue to Section 4.*	

4. 30 TAC § 106.4(a(6): Federal Requirements	
• Will all facilities under this PBR meet applicable requirements of Title 40 Code of Federal Regulations (40 CFR) Part 60, New Source Performance Standards (NSPS)?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable?	
• Will all facilities under this PBR meet applicable requirements of 40 CFR Part 63, Hazardous Air Pollutants Maximum Achievable Control Technology (MACT) standards?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable?	
• Will all facilities under this PBR meet applicable requirements of 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs)?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable?	
If "Yes" to any of the above, please attach a discussion of how the facilities will meet any applicable standards.	
5. 30 TAC § 106.4(a)(7): PBR prohibition check	
• Are there any air permits at the site containing conditions which prohibit or restrict the use of PBRs?	☐ YES ☒ NO
If "Yes," PBRs may not be used or their use must meet the restrictions of the permit. A new permit or permit amendment may be required.	
List permit number(s):	
6. 30 TAC § 106.4(a)(8): NO_x Cap and Trade	
• Is the facility located in Harris, Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?	☐ YES ☒ NO
If "Yes," answer the question below. If "No," continue to Section 7.	
• Will the proposed facility or group of facilities obtain required allowances for NO_x if they are subject to 30 TAC Chapter 101, Subchapter H, Division 3 (relating to the Mass Emissions Cap and Trade Program)?	☐ YES ☐ NO

7. Highly Reactive Volatile Organic Compounds (HRVOC) check		
• Is the facility located in Harris County?		☐ YES ☒ NO
If "Yes," answer the next question. If "No," skip to the box below.		
• Will the project be constructed after June 1, 2006?		☐ YES ☐ NO
If "Yes," answer the next question. If "No," skip to the box below.		
• Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☐ NO
If "Yes," complete the information below:		
	lb/hr	tpy
► 1,3-butadiene		
► all isomers of butene (e.g., isobutene [2-methylpropene or isobutylene])		
► alpha-butylene (ethylethylene)		
► beta-butylene (dimethylethylene, including both cis- and trans-isomers)		
► ethylene		
► propylene		
• Is the facility located in Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?		☐ YES ☒ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
• Will the project be constructed after June 1, 2006?		☐ YES ☐ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
• Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☐ NO
If "Yes," complete the information below:		
	lb//hr	tpy
► ethylene		
► propylene		

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Texas Commission on Enviromental Quality
Title 30 Texas Administrative Code § 106.261
Permit By Rule (PBR) Checklist
Facilities (Emission Limitations)

The following checklist is designed to help you confirm that you meet Title 30 Texas Administrative Code § 106.261 (30 TAC § 106.261) requirements. If you do not meet all the requirements, you may alter the project design or operation in such a way that all the requirements of the PBR are met or you may obtain a construction permit. The PBR forms, tables, checklists, and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ) Air Permits Division website at, www.tceq.texas.gov/permitting/air/air_permits.html

For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: www.TexasEnviroHelp.org

Check The Most Appropriate Answer		
	Is a description or checklist of how this claim meets the general requirements for the use of PBRs in 30 TAC § 106.4 attached?	☒ YES ☐ NO ☐ NA
b1	Is this claim for construction of a facility authorized in another section of this chapter or for which a standard permit is in effect? *If "YES," this PBR cannot be used to authorize emissions from the project.*	☐ YES ☒ NO ☐ NA
b2	Is this claim for any change to any facility authorized under another section of this chapter or authorized under a standard permit? *If "YES," this PBR cannot be used to authorize emissions from the project.*	☐ YES ☒ NO ☐ NA
a1	Are facilities or changes located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located?	☒ YES ☐ NO ☐ NA

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Check The Most Appropriate Answer *(continued)*

a2 Are total new or increased emissions, including fugitives, less than or equal to 6.0 pounds per hour (lb/hr) and ten tons per year of the following materials[1] ☒ YES ☐ NO ☐ NA

Check All That Apply

☐ acetylene	☐ cyclopentane	☐ kaolin	☐ propane
☐ alumina	☐ emery dust	☐ limestone	☐ propyl alcohol
☐ argon	☐ ethanol	☐ magnesite	☐ propyl ether
☐ butane	☐ ethyl acetate	☐ marble	☐ propylene
☐ calcium carbonate	☐ ethyl ether	☐ methyl acetylene	☐ silicon
☐ calcium silicate	☐ ethylene	☐ methyl chloroform	☐ silicon carbide
☒ carbon monoxide	☐ glycerin mist	☐ methyl cyclohexane	☐ starch
☐ cellulose fiber	☐ gypsum	☐ neon	☐ sucrose
☐ cement dust	☐ helium	☐ nonan	☐ sulfur dioxide
☐ crude oil	☐ iron oxide dust	☐ oxides of nitrogen	☐ zinc oxide
☐ cyclohexane	☐ isohexane	☐ pentaerythritol	☐ zinc stearate
☐ cyclohexene	☐ isopropyl alcohol	☐ plaster of paris	

☐ refinery petroleum fractions (except for pyrolysis naphthas and pyrolysis gasoline) containing less than ten volume percent benzene

☐ fluorocarbons Numbers 11, 12, 13, 14, 21, 22, 23, 113, 114, 115, and 116

[1]Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission limits; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Texas Commission on Enviromental Quality
Title 30 Texas Administrative Code § 106.261
Permit By Rule (PBR) Checklist
Facilities (Emission Limitations)

Check The Most Appropriate Answer		
a3	Are total new or increased emissions, including fugitives, less than or equal to 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m^3) as listed and referenced in Table 262 of 30 TAC § 106.262 of this title (relating to Facilities (Emission and Distance Limitations)? [2]	☐ YES ☐ NO ☒ NA
List chemical(s):	L value(s):	
	Are total new or increased emissions, including fugitives, less than or equal to 1.0 lb/hr of any chemical not listed or referenced in Table 262? [1] List chemical(s): Carbonyl Sulfide	☒ YES ☐ NO ☐ NA
	Are total new or increased emissions, including fugitives, of a chemical with a limit value of less than 200 mg/m^3*?* [1] *If "YES" the authorization of the chemical is not allowed under this section. We suggest you use 30 TAC § 106.262 to authorize the emissions, if applicable.*	☒ YES ☐ NO ☐ NA
a4	Are there any changes to or additions of any existing air pollution abatement equipment?	☐ YES ☒ NO ☐ NA
a5	Will there be any visible emissions, except uncombined water, emitted to the atmosphere from any point or fugitive source in amounts greater than 5.0% opacity in any six-minute period?	☐ YES ☒ NO ☐ NA
a6	Are emission increases five tons per year or greater? *If "YES," this checklist must be attached to a Form PI-7 within ten days following the installation or modification of the facilities.* [**Note:** *The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.*]	☐ YES ☒ NO ☐ NA
a7	Are emission increases less than five tons per year? *If "YES," this checklist must be attached to a Form PI-7 and include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any. (pick one):* ☒ Within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any ☐ By March 31 of the following year summarizing all uses of this permit by rule in the previous calendar year.	☒ YES ☐ NO ☐ NA

[2] Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission limits; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Texas Commission on Environmental Quality
Title 30 Texas Administrative Code § 106.262
Permit by Rule (PBR) Checklist
Facilities (Emission and Distance Limitations)

The following checklist is designed to help you confirm that you meet Title 30 Texas Administrative Code § 106.262 (30 TAC § 106.262) requirements. If you do not meet all the requirements, you may alter the project design or operation in such a way that all the requirements of the PBR are met or you may obtain a construction permit. The PBR forms, tables, checklists, and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ), Air Permits Division Web site at, www.tceq.texas.gov/nav/permits/air_permits.html.

For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: www.TexasEnviroHelp.org

Check the Most Appropriate Answer				
	Is a description or checklist of how this claim meets the general requirements for the use of PBRs in 30 TAC § 106.4 attached?			☒ YES ☐ NO ☐ N/A
b1.	Is this claim for construction of a facility authorized in another section of this chapter or for which a standard permit is in effect? *If "YES," this PBR cannot be used to authorize emissions from the project.*			☐ YES ☒ NO ☐ N/A
b2.	Is this claim for any change to any facility authorized under another section of this chapter or authorized under a standard perm? *If "YES," this PBR cannot be used to authorize emissions from the project.*			☐ YES ☒ NO ☐ N/A
c.	Is the facility authorized under another section of this chapter or under a standard permit? *If "YES," subsection (a)(2) and (3) of this section may be used to qualify the use of other chemicals at the facility.*			☐ YES ☒ NO ☐ N/A
a1.	Are facilities or changes located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located?			☒ YES ☐ NO ☐ N/A
a2.	Are new or increased emissions, including fugitives, emitted in a quantity less than five tons per year or in a quantity less than E as determined by using the equation E=L/K?[1] See Table 262 Figures 1 and 2. *If "YES," the notification shall include a description of the project, calculations for all emissions being claimed under this PBR:*			☒ YES ☐ NO ☐ N/A
Chemical: Asphalt Fume		L value: 5	D: 450 feet	K: 81
a3.	Is this checklist attached to a Form PI-7 within ten days following the installation or modification of the facilities? *If "YES," the notification shall include a description of the project, calculations, and data identifying specific chemical names, L values, and a description of pollution control equipment, if any.*			☒ YES ☐ NO ☐ N/A

[1] Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission limits; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Title 30 Texas Administrative Code § 106.262
Permit by Rule (PBR) Checklist
Facilities (Emission and Distance Limitations)

Check the Most Appropriate Answer			
a4. Are one or more of the following chemicals is handled for this registration? (Check all that apply) *If "YES," answer the following four questions.*			☐ YES ☐ NO ☒ N/A
☐ acrolein	☐ diazomethane	☐ hydrogen sulfide	☐ ozone
☐ allyl chloride	☐ diborane	☐ ketene	☐ pentabornev
☐ ammonia (anhydrous)	☐ diglycidyl ether	☐ methylamine	☐ perchloromethyl mercaptan
☐ arsine	☐ dimethylhydrazine	☐ methyl bromide	☐ perchloryl fluoride
☐ boron trifluoride	☐ ethyleneimine	☐ methyl hydrazine	☐ phosgene
☐ bromine	☐ ethyl mercaptan	☐ methyl isocyanate	☐ phosphine
☐ carbon disulfide	☐ fluorine	☐ methyl mercaptan	☐ phosphorus trichloride
☐ chlorine	☐ formaldehyde (anhydrous)	☐ nickel carbonyl	☐ selenium
☐ chlorine dioxide	☐ hydrogen bromide	☐ nitric acid	☐ hexafluoride stibine
☐ chlorine trifluoride	☐ hydrogen chloride	☐ nitric oxide	☐ liquefied sulfur dioxide
☐ chloroacetaldehyde	☐ hydrogen cyanide	☐ nitrogen dioxide	☐ sulfur pentafluorid
☐ chloropicrin	☐ hydrogen fluoride	☐ oxygen difluoride	☐ tellurium hexafluoride
☐ chloroprene	☐ hydrogen selenide		
	Are all facilities are located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor?		☐ YES ☐ NO ☐ N/A
	Are the cumulative amount of any of the following chemicals resulting from one or more authorizations under this section (but not including permit authorizations) less than or equal to 500 pounds on the plant property?		☐ YES ☐ NO ☐ N/A
	Are all listed chemicals handled only in unheated containers operated in compliance with the United States Department of Transportation regulation (49 Code of Federal Regulation, Parts 171-178)?		☐ YES ☐ NO ☐ N/A
a5.	Are there any changes to or additions of any existing air pollution abatement equipment?		☐ YES ☒ NO ☐ N/A
a6.	Will there be any visible emissions, except uncombined water, emitted to the atmosphere from any point or fugitive source in amounts greater that 5.0% opacity in any six-minute period?		☐ YES ☒ NO ☐ N/A

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D (feet)	K	Value Description
100	326	E=maximum allowable hourly emission, and never to exceed 6 pounds per hour.
200	200	
300	139	
400	104	
600	65	
700	54	
800	46	K=value from the table on this page. (interpolate intermediate values)
900	39	
1,000	34	
2,000	14	D=distance to the nearest off-plant receptor
3,000 or more	8	

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Acetone	590.
Acetaldehyde	9.
Acetone	4.
Acetonitrile	34.
Acetylene	2662.
N-Amyl Acetate	2.7
Sec-Amyl Acetate	1.1
Benzene	3.
Beryllium and Compounds	0.0005
Boron Trifluride, as HF	0.5
Butyl Alcohol,	76.
Butyl Acrylate	19.
Butyl Chromate	0.01
Butyl Glycidyl Ether	30.
Butyl Mercaptain	0.3
Butyraldehyde	1.4
Butyric Acid	1.8
Butyronitrile	22.
Carbon Tetrachloride	12.
Chloroform	10.
Chlorophenol	0.2
Chloroprene	3.6
Chromic Acid	0.01
Chromium Metal, Chromium II and III Compounds	0.1
Chromium VI Compounds	0.01
Coal Tar Pitch Volatiles	0.1
Creosote	0.1
Cresol	0.5
Cumene	50.
Dicyclopentadiene	3.1
Diethylaminoethanol	5.5

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Diisobutyl Ketone	63.9
Dimethyl Aniline	6.4
Dioxane	3.6
Dipropylamine	8.4
Ethyl Acrylate	0.5
Ethylene Dibromide	0.38
Ethylene Glycol	26.
Ethylene Glycol Dinitrate	0.1
Ethylidene 2-norbornene, 5	7.
Ethyl Mercaptan	0.08
Ethyl Sulfide	1.6
Glycolonitrile	5.
Halothane	16.
Heptane	350.
Hexanediamine, 1, 6	0.32
Hydrogen Chloride	1.
Hydrogen Fluoride	0.5
Hydrogen Sulfide	1.1
Isoamyl Acetate	133.
Isoamyl Alcohol	15.
Isobutyronitrile	22.
Kepone	0.001
Kerosene	100.
Malononitrile	8.
Mesityl Oxide	40.
Methyl Acrylate	5.8
Methyl Amyl Ketone	9.4
Methyl-T-Butyl Ether	45.
Methyl Butyl Ketone	4.
Methyl Disulfide	2.2

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Methylenebis (2-chloroaniline) (MOCA)	0.003
Methylene Chloride	26.
Methyl Isoamyl Ketone	5.6
Methyl Mercaptan	0.2
Merthyl Methacrylate	34.
Methyl Propyl Ketone	530.
Methyl Sulfide	0.3
Mineral Spirits	350.
Naphtha	350.
Nickel, Inorganic Compounds	0.015
Nitroglycerine	0.1
Nitropropane	5.
Octane	350.
Parathion	0.05
Pentane	350.
Perchloroethylene	33.5
Petroleum Ether	350.
Phenyl Mercaptan	0.4
Propionitrile	14.
Propyl Acetate	62.6
Propylene Oxide	20.
Propyl Mercaptan	0.23
Silica-amorphous-precipitated, silica gel	4.
Silicon Carbide	4.

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Stoddard Solvent	350.
Styrene	21.
Succiononitrile	20.
Tolidin	0.02
Trichloroethylene	135.
Trinethylamine	0.1
Valeric Acid	0.34
Vinyl Acetate	15.
Vinyl Chloride	2.
Note: The time weighted average (TWA) threshold Limit Value (TLV) published by the American Conference of Governmental Industrial Hygienists (AGGIH), in its TLVs and BEIs guide (1997 Edition) shall be used for compounds not included in the table. The Short Term Exposure Level (STEL) or Ceiling Limit (annotated with a "C") published by the ACGIH shall be used for compounds that do not have a published TWA TLV. This section cannot be used if the compound is not listed in the table or does not have a published TWA TLV, STEL, or Ceiling Limit in the ACGIH TLVs and BEIs guide.	

Exemption § 106.472 Checklist
(Previously Standard Exemption 51)
Organic Liquid Loading and Unloading

The following checklist is designed to help you confirm that you meet § 106.472, previously Standard Exemption 51 (STDX 51), requirements. **Any "no" answers indicate that the claim of registration may not meet all requirements for the use of Exemption § 106.472, previously Standard Exemption 51.** If you do not meet all the requirements, you may alter the project design/operation in such a way that all the requirements of the exemption are met, or obtain a construction permit.

For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: www.TexasEnviroHelp.org

Please Complete The Following:			
Have you included a description of how this exemption claim meets the general rule for the use of exemptions (§ 106, Subchapter A checklist is available)?	☒ YES	☐ NO	☐ N/A
Are all the facilities claimed for exemption specifically named in the general section of § 106.472, previously STDX 51?	☒ YES	☐ NO	☐ N/A
[**Note:** *This exemption has been interpreted to allow mixing or blending but not chemical reaction in tankage.*]			
Is the equipment designed to prevent visible emissions?	☒ YES	☐ NO	☐ N/A
Are all the chemicals to be loaded, unloaded, or stored described in §106.472 (previously STDX 51a-i)?	☒ YES	☐ NO	☐ N/A
Attach a list of the chemicals and identify the appropriate item of § 106.472, previously STDX 51 that applies.			
Include additional supporting data. For example, a § 106.472, previously STDX 51(i), claim should identify initial boiling points of all compounds to be covered.			
Will aqueous ammonia solutions, hydrochloric acid, or acetic acid be vented through a water scrubber?	☐ YES	☐ NO	☒ N/A
Are facilities loading, unloading, or storing butyric acid, isobutyric acid, methacrylic acid, mercaptans, croton oil, 2-methyl styrene, or any other compound with an initial boiling point of 300 degrees F or greater listed in 40 CFR 261, Appendix VIII, located at least 500 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facility or the owner of the property upon which the facility is located?	☐ YES	☐ NO	☒ N/A
List these compounds and show their handling location on an attached scaled plot plan.			

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Table 1(a) Emission Point Summary

Date:	June 2017	**Permit No:**	TBD	**Regulated Entity No.:**	100788959
Area Name:	GAF Materials Corporation, Dallas Facility			**Customer Reference No.:**	605251487

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this table

AIR CONTAMINANT DATA					
1. Emission Point			**2. Component or Air Contaminant Name**	**3. Air Contaminant Emission Rate**	
EPN (A)	**FIN (B)**	**NAME (C)**		**Pounds per Hour (A)**	**TPY (B)**
CFL2	T-22 and SEALAP	Line 3 Sealant System - Mist Elimination System	CO	<0.01	0.01
			PM	<0.01	<0.01
			PM_{10}	<0.01	<0.01
			$PM_{2.5}$	<0.01	<0.01
			VOC	0.05	0.19
			H_2S	<0.01	0.01
			Carbonyl Sulfide	<0.01	<0.01

EPN = Emission Point Number

FIN = Facility Identification Number

3. PERMIT BY RULE FEE

Per 30 TAC §106.50 – *Registration Fees for Permits By Rule*, a $450 fee is required to be submitted for this registration. This fee has been submitted to the TCEQ Revenue Section via electronic payment. A copy of the payment receipt is included in this section for reference.

Print this voucher for your records. If you are sending the TCEQ hardcopy documents related to this payment, include a copy of this voucher.

Transaction Information

Voucher Number:	321851
Trace Number:	582EA000258322
Date:	05/02/2017 07:53 AM
Payment Method:	CC - Authorization 0000047774
Amount:	$450.00
Fee Type:	Permit by Rule (PBR) Fee
ePay Actor:	Kevin Bush
Actor Email:	kbush@gaf.com
IP:	65.223.143.99

Payment Contact Information

Name:	Kevin Bush
Company:	Gaf
Address:	2600 Singleton Blvd, Dallas, TX 75212
Phone:	469-337-4475

Site Information

RN:	RN100788959
Site Name:	GAF MATERIALS
Site Address:	2600 SINGLETON BLVD, DALLAS, TX 75212
Site Location:	2600 SINGLETON BLVD DALLAS TX 75212

Customer Information

CN:	CN605251487
Customer Name:	BUILDING MATERIALS INVESTMENT CORPORATION

Other Information

Comments: Building Materials Investment Corporation – Dallas Plant –106.261, 106.262 and 106.472 Permit by Rule Registration for Line 3 Sealant Application System.

Close

4. PROCESS DESCRIPTION

GAF is a nationwide manufacturer of building material products. The GAF Dallas Plant manufactures asphalt shingles for the roofing industry. There are two asphalt roofing lines at the GAF Dallas Plant: Line 1 and Line 3. Self-seal asphalt based dots are applied to the asphalt roofing sheets before they are cut into shingles and automatically packaged. Adhesive stripes are applied to the laminated shingles in Line 3 before the shingles are cut and packaged. As part of this project, GAF is planning to install Line 3 sealant application system to apply self-seal asphalt and laminate self-seal asphalt to the asphalt roofing sheets. The proposed Line 3 sealant application system includes one new Line 3 sealant run tank, associated self-seal applicator, laminate self-seal applicator, and a Heatec heater.

The emissions from the Line 3 sealant run tank, associated self-seal applicator, laminate self-seal applicator will be controlled by Line 3 Mist Elimination System (Emission Point Number [EPN]: CFL2). GAF does not expect any increase in actual emission increases from upstream or downstream processes as a result of the proposed project.

The Heatec heater is used to provide heat required by the Line 3 sealant application system, and the heater is authorized under PBR 106.183. The Dallas Plant maintains onsite documentation and as such, emissions associated with this heater are not included in this PRB registration.

Emissions from the proposed project include the following:

- Carbon monoxide (CO)
- Particulate matter (PM, as asphalt fume);
- Particulate matter with an aerodynamic diameter of less than or equal to 10 microns (PM_{10}, as asphalt fume);
- Particulate matter with an aerodynamic diameter of less than or equal to 2.5 microns ($PM_{2.5}$, as asphalt fume);
- Volatile Organic Compounds (VOC, as asphalt fume); and
- Carbonyl Sulfide (COS).

Asphalt has both PM and VOC emissions since asphalt is a VOC itself and hot asphalt forms tar globules that are considered as PM. The asphalt PM and VOC emissions are added together for purposes of PBR 106.262 compliance to reflect the fact that they are different manifestations of the same substance.

The new emission sources have been identified in Sections 1 and 4 of this application. Description of emission calculations is provided in the following paragraphs. Detailed emission calculations, are provided in Appendix A.

5.1. EMISSIONS FROM SEALANT TANK

CO and H_2S emissions from the proposed Line 3 sealant run tank are calculated based on *Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading* publication by David Trumbore, Winter 1999. The asphalt VOC emissions from the sealant tank are calculated using the TCEQ NSR guidance for storage tanks. Asphalt $PM/PM_{10}/PM_{2.5}$ emissions will be controlled by the proposed Line 3 Mist Elimination System with 99.5% control efficiency.

5.2. EMISSIONS FROM APPLICATORS

CO, VOC, $PM/PM_{10}/PM_{2.5}$ and COS emissions from the self-seal applicator and the laminate self-seal applicator are calculated based on the Asphalt Roofing Manufacturers Association (ARMA) emission factors, a safety factor of 2 and the hourly and annual throughputs of coating asphalt usages. Asphalt $PM/PM_{10}/PM_{2.5}$ emissions will also be controlled by the proposed Line 3 Mist Elimination System with 99.5% control efficiency.

This section lists the general requirements for authorization under a PBR with a description of how the Dallas Plant will comply with each requirement. Requirements of the specific PBRs claimed in this application are identified and discussed in Section 7 of this application.

6.1. REQUIREMENTS FOR PERMITTING BY RULE (30 TAC §106.4), EFFECTIVE APRIL 17, 2014

Pursuant to the Texas Health and Safety Code, Texas Clean Air Act (TCAA), §382.057, the facilities or types of facilities listed in 30 TAC Chapter 106 are exempt from the permitting requirements of the TCAA, §382.0518, because such facilities will not make a significant contribution of air contaminants to the atmosphere. A facility shall meet the following conditions to be exempt from TCAA, §382.0518.

(a) To qualify for a permit by rule, the following general requirements must be met.

(1) Total actual emissions authorized under permit by rule from the facility shall not exceed the following limits, as applicable:

(A) 250 tons per year (tpy) of carbon monoxide (CO) or nitrogen oxides (NO_X);
(B) 25 tpy of volatile organic compounds (VOC), sulfur dioxide (SO_2), or inhalable particulate matter (PM);
(C) 15 tpy of particulate matter with diameters of 10 microns or less (PM_{10});
(D) 10 tpy of particulate matter with diameters of 2.5 microns or less ($PM_{2.5}$); or
(E) 25 tpy of any other air contaminant except:
(i) water, nitrogen, ethane, hydrogen, and oxygen; and
(ii) notwithstanding any provision in any specific permit by rule to the contrary, greenhouse gases as defined in §101.1 of this title (relating to Definitions).

As presented in Appendix A of this PBR application, the total emissions of the proposed project will not exceed the above limits.

(2) Any facility or group of facilities, which constitutes a new major stationary source, as defined in §116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions), or any modification which constitutes a major modification, as defined in §116.12 of this title, under the new source review requirements of the Federal Clean Air Act (FCAA), Part D (Nonattainment) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder, must meet the permitting requirements of Chapter 116, Subchapter B of this title (relating to New Source Review Permits) and cannot qualify for a permit by rule under this chapter. Persons claiming a permit by rule under this chapter should see the requirements of §116.150 of this title (relating to New Major Source or Major Modification in Ozone Nonattainment Areas) to ensure that any applicable netting requirements have been satisfied.

As discussed in Section 1, the Dallas Plant is located in Dallas County, Texas, which is currently designated as a moderate nonattainment area for the 2008 eight-hour (8-hour) ozone standard, and is unclassified for all other criteria pollutants. The NNSR major source threshold is 100 tons per year (tpy) as a moderate ozone nonattainment area. The site is a

minor source of VOC and NO_X in the ozone nonattainment area. The total of all emission increases as result of the proposed project will not result in an increase of VOC or NO_X emissions to be greater than the NNSR major source threshold of 100 tpy. Therefore NNSR will not be not triggered as result of the proposed project and the facility may be authorized under permit by rule provisions. Emission calculations are provided in Attachment A of this registration.

(3) *Any facility or group of facilities, which constitutes a new major stationary source, as defined in 40 Code of Federal Regulations (CFR) §52.21, or any change which constitutes a major modification, as defined in 40 CFR §52.21, under the new source review requirements of the FCAA, Part C (Prevention of Significant Deterioration) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder because of emissions of air contaminants other than greenhouse gases, must meet the permitting requirements of Chapter 116, Subchapter B of this title and cannot qualify for a permit by rule under this chapter. Notwithstanding any provision in any specific permit by rule to the contrary, a new major stationary source or major modification which is subject to Chapter 116, Subchapter B, Division 6 of this title due solely to emissions of greenhouse gases may use a permit by rule under this chapter for air contaminants that are not greenhouse gases. However, facilities or projects which require a prevention of significant deterioration permit due to emissions of greenhouse gases may not commence construction or operation until the prevention of significant deterioration permit is issued.*

The Dallas Plant is a minor source with respect to the PSD permitting program. As noted in the response above, the total of all emission increases due to the proposed project will not result in an increase of VOC emissions to be greater than the PSD major source/modification threshold of 250 tpy. The affected facilities under this PBR registration do not constitute a new major stationary source or a major modification; therefore, PSD review is not triggered.

(4) *Unless at least one facility at an account has been subject to public notification and comment as required in Chapter 116, Subchapter B or Subchapter D of this title (relating to New Source Review Permits or Permit Renewals), total actual emissions from all facilities permitted by rule at an account shall not exceed 250 tpy of CO or NO_X; or 25 tpy of VOC or SO_2 or PM; or 15 tpy of PM_{10}; or 10 tpy of $PM_{2.5}$; or 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen, and GHGs (as specified in §106.2 of this title (relating to Applicability)).*

The Dallas Plant has gone through a public notice for current NSR Permits. Therefore, these requirements do not apply.

(5) *Construction or modification of a facility commenced on or after the effective date of a revision of this section or the effective date of a revision to a specific permit by rule in this chapter must meet the revised requirements to qualify for a permit by rule.*

The proposed project meets the requirements under the PBRs currently in effect. In the event that the facilities are modified, GAF will re-evaluate the applicability of the PBR(s) in effect at the time of modification.

(6) A facility shall comply with all applicable provisions of the FCAA, §111 (Federal New Source Performance Standards) and §112 (Hazardous Air Pollutants), and the new source review requirements of the FCAA, Part C and Part D and regulations promulgated thereunder.

There are no applicable Standards of Performance for New Stationary Sources (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP) associated with sources authorized by this PBR registration.

(7) There are no permits under the same commission account number that contain a condition or conditions precluding the use of a permit by rule under this chapter.

The Dallas Plant has no TCEQ permits that preclude the use of a PBR under this chapter.

(8) The proposed facility or group of facilities shall obtain allowances for NO_X if they are subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).

The requirements of 30 TAC Chapter 101, Subchapter H, Division 3 of this title applies to facilities located in the Houston/Galveston nonattainment area. The GAF Dallas Plant is not located in the Houston/Galveston nonattainment area.

(b) No person shall circumvent by artificial limitations the requirements of §116.110 of this title (relating to Applicability).

The Dallas Plant will meet all the requirements of 30 TAC Chapter 106. Therefore, a state permit is not required, and the requirements of 30 TAC §116.110 will not be circumvented.

(c) The emissions from the facility shall comply with all rules and regulations of the commission and with the intent of the Texas Clean Air Act (TCAA), including protection of health and property of the public, and all emissions control equipment shall be maintained in good condition and operated properly during operation of the facility.

GAF will be in compliance with the rules and regulations of the TCAA. The site has taken steps to ensure all operations will be authorized appropriately and will maintain on-site documentation to show compliance with all recordkeeping requirements. In addition, compliance with the requirements of 30 TAC Chapter 106 ensures protection of health and property of the public.

(d) Facilities permitted by rule under this chapter are not exempted from any permits or registrations required by local air pollution control agencies. Any such requirements must be in accordance with TCAA, §382.113 and any other applicable law.

GAF is under the jurisdiction of City of Dallas Air Pollution Control Program. The Dallas Plant will comply the applicable requirements in this section.

6.2. REQUIREMENTS FOR RECORDKEEPING (30 TAC §106.8), EFFECTIVE NOVEMBER 1, 2001

(a) Owners or operators of facilities and sources that are de minimis as designated in §116.119 of this title (relating to De Minimis Facilities or Sources) are not subject to this section.

The equipment and activities covered in this application are not de minimis facilities and are subject to the requirements of this section.

(b) Owners or operators of facilities operating under a permit by rule (PBR) in Subchapter C of this chapter (relating to Domestic and Comfort Heating and Cooling) or under those PBRs that only name the type of facility and impose no other conditions in the PBR itself do not need to comply with specific recordkeeping requirements of subsection (c) of this section. A list of these PBRs will be available through the commission's Austin central office, regional offices, and the commission's website. Upon request from the commission or any air pollution control program having jurisdiction, claimants must provide information that would demonstrate compliance with §106.4 of this title (relating to Requirements for Permitting by Rule), or the general requirements, if any, in effect at the time of the claim, and the PBR under which the facility is authorized.

GAF is not requesting authorization of activities under PBRs that only name the type of facility and impose no other conditions; therefore, this section does not apply.

(c) Owners or operators of all other facilities authorized to be constructed and operate under a PBR must retain records as follows:

(1) maintain a copy of each PBR and the applicable general conditions of §106.4 of this title or the general requirements, if any, in effect at the time of the claim under which the facility is operating. The PBR and general requirements claimed should be the version in effect at the time of construction or installation or changes to an existing facility, whichever is most recent. The PBR holder may elect to comply with a more recent version of the applicable PBR and general requirements;

GAF will maintain copies of the PBRs claimed in this registration, including a copy of the general conditions of 30 TAC §106.4, as required by this provision, in Sections 6 and 7. The PBRs claimed are the most recent versions as of the date of this registration.

(2) maintain records containing sufficient information to demonstrate compliance with the following:
all applicable general requirements of §106.4 of this title or the general requirements, if any, in effect at the time of the claim; and all applicable PBR conditions;

GAF will maintain records containing sufficient information to demonstrate compliance with the general requirements of 30 TAC §106.4 and the conditions of the specific PBR claimed.

(3) keep all required records at the facility site. If however, the facility normally operates unattended, records must be maintained at an office within Texas having day-to-day operational control of the plant site;

GAF will maintain all records needed to demonstrate compliance with this section at the Dallas Plant.

(4) make the records available in a reviewable format at the request of personnel from the commission or any air pollution control program having jurisdiction;

GAF will maintain records in a reviewable format and will make them available to the TCEQ or any other air pollution control program having jurisdiction upon request.

(5) beginning April 1, 2002, keep records to support a compliance demonstration for any consecutive 12-month period. Unless specifically required by a PBR, records regarding the quantity of air contaminants emitted by a facility to demonstrate compliance with §106.4 of this title prior to April 1, 2002 are not required under this section; and

GAF will maintain records to support a compliance demonstration for any consecutive 12-month period.

(6) for facilities located at sites designated as major in accordance with §122.10(13) of this title (relating to General Definitions) or subject to or potentially subject to any applicable federal requirement, retain all records demonstrating compliance for at least five years. For facilities located at all other sites, all records demonstrating compliance must be retained for at least two years. These record retention requirements supersede any retention conditions of an individual PBR.

GAF will maintain records for a period of at least five years, as required.

7. SPECIFIC PERMIT BY RULE REQUIREMENTS

The Dallas Plant is proposing to authorize the potential emissions associated with the proposed project under PBRs 106.261, 106.262 and 106.472. This section identifies the applicable requirements of these PBRs and documents how the Dallas Plant will comply with each requirement. General requirements for authorization under a PBR are discussed in Section 6 of this report.

7.1. REQUIREMENTS FOR FACILITIES (EMISSION LIMITATIONS) (30 TAC §106.261), EFFECTIVE NOVEMBER 1, 2003

(a) Except as specified under subsection (b) of this section, facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.

(1) The facilities or changes shall be located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.

The proposed emission sources in this registration will be located at least 100 feet from any recreational area, residence, or other structure not occupied or used solely by the Dallas Plant.

(2) Total new or increased emissions, including fugitives, shall not exceed 6.0 pounds per hour (lb/hr) and ten tons per year of the following materials: acetylene, argon, butane, crude oil, refinery petroleum fractions (except for pyrolysis naphthas and pyrolysis gasoline) containing less than ten volume percent benzene, carbon monoxide, cyclohexane, cyclohexene, cyclopentane, ethyl acetate, ethanol, ethyl ether, ethylene, fluorocarbons Numbers 11, 12, 13, 14, 21, 22, 23, 113, 114, 115, and 116, helium, isohexane, isopropyl alcohol, methyl acetylene, methyl chloroform, methyl cyclohexane, neon, nonane, oxides of nitrogen, propane, propyl alcohol, propylene, propyl ether, sulfur dioxide, alumina, calcium carbonate, calcium silicate, cellulose fiber, cement dust, emery dust, glycerin mist, gypsum, iron oxide dust, kaolin, limestone, magnesite, marble, pentaerythritol, plaster of paris, silicon, silicon carbide, starch, sucrose, zinc stearate, or zinc oxide.

Emissions of carbon monoxide from Line 3 sealant application system will not exceed 6.0 lb/hr and 10 tpy.

(3) Total new or increased emissions, including fugitives, shall not exceed 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m^3) as listed and referenced in Table 262 of §106.262 of this title (relating to Facilities (Emission and Distance Limitations)) or of any other chemical not listed or referenced in Table 262. Emissions of a chemical with a limit value of less than 200 mg/m^3 are not allowed under this section.

The proposed carbonyl sulfide emissions from Line 3 sealant application system will meet the emission limit in this paragraph.

(4) For physical changes or modifications to existing facilities, there shall be no changes to or additions of any air pollution abatement equipment.

The proposed Line 3 sealant application system to be authorized under this PBR will not involve physical changes and modifications to the existing facilities.

(5) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.

Visible emissions from sources associated with the proposed Line 3 sealant application system will not exceed 5.0% opacity in any six-minute averaging period.

(6) For emission increases of five tons per year or greater, notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.

The total emissions from the proposed project are less than five tons per year. Therefore, this section does not apply.

(7) For emission increases of less than five tons per year, notification must be provided using either:

(A) Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any; or

(B) Form PI-7 by March 31 of the following year summarizing all uses of this permit by rule in the previous calendar year. This annual notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.

The total emissions from the proposed project are less than five tons per year. GAF is providing this registration within 10 days following installation of the proposed project using form PI-7-CERT. The registration includes the required information listed above.

(b) The following are not authorized under this section:

(1) construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and
(2) any change to any facility authorized under another section of this chapter or authorized under a standard permit.

This PBR registration is not being used to authorize construction of a facility authorized under another PBR or for which a standard permit is in effect, or any change to any facility authorized under another PBR or authorized under a standard permit.

7.2. REQUIREMENTS FOR FACILITIES (EMISSION AND DISTANCE LIMITATIONS) (30 TAC § 106.262) EFFECTIVE NOVEMBER 1, 2003

(a) Facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.

(1) Emission points associated with the facilities or changes shall be located at least 100 feet from any off-plant receptor. Off-plant receptor means any recreational area or residence or other structure

not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.

The location of the emission point associated with facilities proposed to be authorized under this PBR registration (i.e., Line 3 Mist Elimination System stack) is at least 100 feet from the nearest off-plant receptor, including any off-property recreational area, residence, or other structure not occupied or used solely by the Dallas Plant.

(2) New or increased emissions, including fugitives, of chemicals shall not be emitted in a quantity greater than five tons per year nor in a quantity greater than E as determined using the equation E = L/K and the following table.

D, Feet	*K*	
100	*326*	*E = maximum allowable hourly emission,*
200	*200*	*and never to exceed 6 pounds per*
300	*139*	*hour.*
400	*104*	
500	*81*	*L = value as listed or referenced in Table 262*
600	*65*	
700	*54*	
800	*46*	*K = value from the table on this page.*
900	*39*	*(interpolate intermediate values)*
1,000	*34*	
2,000	*14*	*D = distance to the nearest off-plant receptor.*
3,000 or more	*8*	

TABLE 262
LIMIT VALUES (L) FOR USE WITH EXEMPTIONS FROM PERMITTING §106.262
The values are not to be interpreted as acceptable health effects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification).

Compound	*Limit (L) Milligrams Per Cubic Meter*
Acetone	*590*
Acetaldehyde	*9*
Acetone Cyanohydrin	*4*
Acetonitrile	*34*
Acetylene	*2662*
N-Amyl Acetate	*2.7*
Sec-Amyl Acetate	*1.1*
Benzene	*3*
Beryllium and Compounds	*0.0005*
Boron Trifluoride, as HF	*0.5*
Butyl Alcohol, -	*76*
Butyl Acrylate	*19*
Butyl Chromate	*0.01*
Butyl Glycidyl Ether	*30*

Compound	Limit (L) Milligrams Per Cubic Meter
Butyl Mercaptan	*0.3*
Butyraldehyde	*1.4*
Butyric Acid	*1.8*
Butyronitrile	*22*
Carbon Tetrachloride	*12*
Chloroform	*10*
Chlorophenol	*0.2*
Chloroprene	*3.6*
Chromic Acid	*0.01*
Chromium Metal, Chromium II and III Compounds	*0.1*
Chromium VI Compounds	*0.01*
Coal Tar Pitch Volatiles	*0.1*
Creosote	*0.1*
Cresol	*0.5*
Cumene	*50*
Dicyclopentadiene	*3.1*
Diethylaminoethanol	*5.5*
Diisobutyl Ketone	*63.9*
Dimethyl Aniline	*6.4*
Dioxane	*3.6*
Dipropylamine	*8.4*
Ethyl Acrylate	*0.5*
Ethylene Dibromide	*0.38*
Ethylene Glycol	*26*
Ethylene Glycol Dinitrate	*0.1*
Ethylidene-2-norbornene, 5-	*7*
Ethyl Mercaptan	*0.08*
Ethyl Sulfide	*1.6*
Glycolonitrile	*5*
Halothane	*16*
Heptane	*350*
Hexanediamine, 1,6-	*0.32*
Hydrogen Chloride	*1*
Hydrogen Fluoride	*0.5*
Hydrogen Sulfide	*1.1*
Isoamyl Acetate	*133*
Isoamyl Alcohol	*15*
Isobutyronitrile	*22*
Kepone	*0.001*
Kerosene	*100*
Malononitrile	*8*
Mesityl Oxide	*40*
Methyl Acrylate	*5.8*
Methyl Amyl Ketone	*9.4*
Methyl-t-butyl ether	*45*

Compound	*Limit (L) Milligrams Per Cubic Meter*
Methyl Butyl Ketone	*4*
Methyl Disulfide	*2.2*
Methylenebis (2-chloroaniline) (MOCA)	*0.003*
Methylene Chloride	*26*
Methyl Isoamyl Ketone	*5.6*
Methyl Mercaptan	*0.2*
Methyl Methacrylate	*34*
Methyl Propyl Ketone	*530*
Methyl Sulfide	*0.3*
Mineral Spirits	*350*
Naphtha	*350*
Nickel, Inorganic Compounds	*0.015*
Nitroglycerine	*0.1*
Nitropropane	*5*
Octane	*350*
Parathion	*0.05*
Pentane	*350*
Perchloroethylene	*33.5*
Petroleum Ether	*350*
Phenyl Mercaptan	*0.4*
Propionitrile	*14*
Propyl Acetate	*62.6*
Propylene Oxide	*20*
Propyl Mercaptan	*0.23*
Silica-amorphous- precipitated, silica gel	*4*
Silicon Carbide	*4*
Stoddard Solvent	*350*
Styrene	*21*
Succinonitrile	*20*
Tolidine	*0.02*
Trichloroethylene	*135*
Trimethylamine	*0.1*
Valeric Acid	*0.34*
Vinyl Acetate	*15*
Vinyl Chloride	*2*

NOTE: The time weighted average (TWA) Threshold Limit Value (TLV) published by the American Conference of Governmental Industrial Hygienists (ACGIH), in its TLVs and BEIs guide (1997 Edition) shall be used for compounds not included in the table. The Short Term Exposure Level (STEL) or Ceiling Limit (annotated with a "C") published by the ACGIH shall be used for compounds that do not have a published TWA TLV. This section cannot be used if the compound is not listed in the table or does not have a published TWA TLV, STEL, or Ceiling Limit in the ACGIH TLVs and BEIs guide.

The Dallas Plant has compared the proposed asphalt fume emissions being authorized under 106.262 to the list of compounds contained in Figure 2: 30 TAC §106.262(a)(2), as well as to the compounds included in the *TLVs and BEIs guide (1997 Edition)*.[3] Emissions of the asphalt fume are proposed to be authorized under §106.262 and will not exceed the respective "E" determined in the equation "E = L/K" or five tons per year, as documented in Appendix A.

(3) Notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, and data identifying specific chemical names, L values, D values, and a description of pollution control equipment, if any.

This PBR registration application is being submitted to authorize the proposed project at the Dallas Plant under PBR §106.262, and includes:

- TCEQ Form PI-7 CERT
- Process Description
- Emission Calculations
- Identification of the emitted compounds
- Applicable limit values

(4) The facilities in which the following chemicals will be handled shall be located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor and the cumulative amount of any of the following chemicals resulting from one or more authorizations under this section (but not including permit authorizations) shall not exceed 500 pounds on the plant property and all listed chemicals shall be handled only in unheated containers operated in compliance with the United States Department of Transportation regulations (49 Code of Federal Regulations, Parts 171-178): acrolein, allyl chloride, ammonia (anhydrous), arsine, boron trifluoride, bromine, carbon disulfide, chlorine, chlorine dioxide, chlorine trifluoride, chloroacetaldehyde, chloropicrin, chloroprene, diazomethane, diborane, diglycidyl ether, dimethylhydrazine, ethyleneimine, ethyl mercaptan, fluorine, formaldehyde (anhydrous), hydrogen bromide, hydrogen chloride, hydrogen cyanide, hydrogen fluoride, hydrogen selenide, hydrogen sulfide, ketene, methylamine, methyl bromide, methyl hydrazine, methyl isocyanate, methyl mercaptan, nickel carbonyl, nitric acid, nitric oxide, nitrogen dioxide, oxygen difluoride, ozone, pentaborane, perchloromethyl mercaptan, perchloryl fluoride, phosgene, phosphine, phosphorus trichloride, selenium hexafluoride, stibine, liquified sulfur dioxide, sulfur pentafluoride, and tellurium hexafluoride. Containers of these chemicals may not be vented or opened directly to the atmosphere at any time.

The proposed facilities to be authorized under 106.262 do not handle hydrogen sulfide or any of the chemicals listed above. Therefore, the requirements do not apply.

(5) For physical changes or modifications to existing facilities, there shall be no changes or additions of air pollution abatement equipment.

The proposed project does not involve physical changes to or additions of air pollution abatement equipment to existing facilities.

[3] American Conference of Governmental Industrial Hygienists, *TLVs and BEIs Guide*, 1997 Edition

(6) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.

Visible emissions from the facilities involved in this PBR registration will not exceed five percent opacity in any six-minute period.

(b) The following are not authorized under this section except as noted in subsection (c) of this section:

(1) construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and

(2) any change to any facility authorized under another section of this chapter or authorized under a standard permit.

None of the facilities associated with this PBR registration are authorized under another section of Chapter 106 or standard permit.

(c) If a facility has been authorized under another section of this chapter or under a standard permit, subsection (a)(2) and (3) of this section may be used to qualify the use of other chemicals at the facility.

None of the facilities associated with this PBR registration are authorized under another section of Chapter 106 or standard permit.

7.3. REQUIREMENTS FOR ORGANIC AND INORGANIC LIQUID LOADING AND UNLOADING (30 TAC § 106.472)
EFFECTIVE SEPTEMBER 4, 2000

Liquid loading or unloading equipment for railcars, tank trucks, or drums; storage containers, reservoirs, tanks; and change of service of material loaded, unloaded, or stored is permitted by rule, provided that no visible emissions result and the chemicals loaded, unloaded, or stored are limited to:

(1) the following list: asphalt, resins, soaps, lube oils, fuel oils, waxes, polymers, detergents, lube oil additives, kerosene, wax emulsions, vegetable oils, greases, animal fats, and diesel fuels;

(2) water or wastewater;

(3) aqueous salt solutions;

(4) aqueous caustic solutions, except ammonia solutions;

(5) inorganic acids except oleum, hydrofluoric, and hydrochloric acids;

(6) aqueous ammonia solutions if vented through a water scrubber;

(7) hydrochloric acid if vented through a water scrubber;

(8) acetic acid if vented through a water scrubber;

(9) organic liquids having an initial boiling point of 300 degrees Fahrenheit or greater. Facilities loading, unloading, or storing butyric acid, isobutyric acid, methacrylic acid, mercaptans, croton oil, 2- methyl styrene, or any other compound with an initial boiling point of 300 degrees Fahrenheit or greater listed in 40 Code of Federal Regulations 261, Appendix VIII shall be located at least 500 feet from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located.

The sealant asphalt processed by the proposed Line 3 sealant run tank is included in list in 106.472(1). GAF will comply with the requirements of 106.472, including no visible emissions.

APPENDIX A: EMISSION CALCULATIONS

GAF Dallas Plant
Emissions Summary and PBR 106.261 and 106.262 Compliance Demonstration

Table 1. Annual Emission Summary and PBR Compliance Evaluation

EPN	Description	PBR	Annual Emission Rate (tpy)				
			CO	$PM/PM_{10}/PM_{2.5}$ (asphalt fume)	VOC (asphalt fume)	H_2S	Carbonyl Sulfide (HAP)
CFL2	*Line 3 Sealant Run Tank*	*PBR 106.472*	*0.01*	*2.48E-04*	*0.18*	*6.21E-03*	--
	Self-seal Applicator and Laminate Self-seal Applicator	*PBRs 106.261, 106.262*	*2.01E-03*	*2.60E-05*	*0.02*	--	*1.63E-04*
		Total Annual Emissions	**0.01**	**2.73E-04**	**0.19**	**6.21E-03**	**1.63E-04**
Comparison to PBR 106.4 Limits							
		106.4 Limits [1]	250	25/15/10	25	25	25
		In compliance with 106.4?	Y	Y	Y	Y	Y

[1] The Dallas Plant has been through public notice, the PBR limits are obtained from 30 TAC 106.4(a)(1).

Table 2. Hourly Emission Summary

EPN	Description	PBR	Hourly Emission Rate (lb/hr)				
			CO	$PM/PM_{10}/PM_{2.5}$ (asphalt fume)	VOC (asphalt fume)	H_2S	Carbonyl Sulfide (HAP)
CFL2	*Line 3 Sealant Run Tank*	*PBR 106.472*	*2.81E-03*	*6.60E-05*	*0.05*	*1.66E-03*	--
	Self-seal Applicator and Laminate Self-seal Applicator	*PBRs 106.261, 106.262*	*5.37E-04*	*6.93E-06*	*4.91E-03*	--	*4.36E-05*
		Total Hourly Emissions	**3.35E-03**	**7.29E-05**	**0.05**	**1.66E-03**	**4.36E-05**

Table 3. Distance and K Value [1]

D (minimum) (feet)	K
450	81

[1] Minimum distance from the proposed EPNs to the nearest off-plant receptor was used for emission limit determination. The K value is obtained from an interpolation of the values in 30 TAC §106.262 (a)(2).

Table 4. PBR 106.261 and 106.262 Compliance Demonstration

Speciated Chemical	L [1]	Allowed Emission Limit (L/K)		Proposed Total Emissions [3]		Authorization	Qualified for PBR?
	(mg/m^3)	(lb/hr)	(tpy)	(lb/hr)	(tpy)		
CO	N/A	6	10	5.37E-04	2.01E-03	106.261(a)(2)	**Yes**
Asphalt Fume [2] ($PM/PM_{10}/PM_{2.5}$ + VOC)	5	0.061	0.27	4.919E-03	0.02	106.262	**Yes**
Carbonyl Sulfide	N/A	1	4.38	4.36E-05	1.63E-04	106.261(a)(3)	**Yes**

[1] The TLV values are obtained from Table 262 or the 1997 American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values list.

[2] Asphalt has both PM and VOC emissions since asphalt is a VOC itself and hot asphalt forms tar globules that are considered as PM. Therefore, the PM and VOC emissions are added together for purposes of 106.262 to reflect the fact that they are different manifestations of the same substance.

GAF Dallas Plant
Line 3 Sealant Run Tank Emission Calculations (PBR 106.472)

Parameters	Line 3 Sealant Run Tank	Units
EPN	CFL2	
FIN	T-22	
Maximum Filling Rate [1]	358	gal/hr
	2,686,620	gal/yr
Annual Hours of Filling [1]	7,500	hrs/yr
R [2]	80.273	psia-gal/(lbmol-°R)
Worst-case liquid surface temperature [1]	400	°F
	204	°C
	859.67	°R
Molecular Weight (M) [3]	105	lb/lb-mole
Vapor Pressure at worst-case liquid temperature [4]	0.112	psia
Hourly Working Loss (L_{max}) [2]	0.06	lb/hr
Annual Working Loss (L_W) [2]	0.23	tpy
Heated Tank? [1,5]	Y	
Particulate Fraction [1]	22%	
VOC Fraction [1]	78%	
Uncontrolled PM (asphalt fume) [6]	1.32E-02	lb/hr
	0.05	tpy
Uncontrolled VOC (asphalt fume) [6]	0.05	lb/hr
	0.18	tpy
Control Device	Mist Elimination System	
$PM/PM_{10}/PM_{2.5}$ control efficiency [1]	99.5%	
VOC Control Efficiency	0.0%	Conservative assumption
Controlled $PM/PM_{10}/PM_{2.5}$ (asphalt fume) [7]	6.60E-05	lb/hr
	2.48E-04	tpy
Controlled VOC (asphalt fume) [7]	0.05	lb/hr
	0.18	tpy
Average Asphalt Fume lower explosion limit (LEL) (%) [8]	25%	%
CO estimate (ppm) [9]	835.5	ppm
H_2S estimate (ppm) [9]	403.61	ppm
CO emissions [10]	0.003	lb/hr
	0.011	tpy
H_2S emissions [10]	0.002	lb/hr
	0.006	tpy

1. Information provided by GAF.
2. Maximum Short-term working loss emissions were calculated using the TCEQ NSR Guidance for Storage Tanks.
(https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/tanks/nsr_fac_tanks.html)
Hourly Emissions (lb/hr) were calculated using the following formula:

Calculation Procedure

Emission from loading a VFR tank should be calculated using Equation 1:

Equation 1 $$L_{MAX} = \frac{M_V \times P_{VA}}{R \times T} \times FR_M$$ **Equation 1**

- MV (lb/lbmol) is the vapor molecular weight of the VOC
- PVA (psia) is the vapor pressure of the tank contents at the worst case temperature
- FRM (gal/hr) is the maximum filling rate
- R ((Psia × gal)/(lbmol × °R)) is the ideal gas constant (80.273 for the selected units)
- T (Rankine) is the worst case liquid surface temperature. It is TCEQ practice to use either 95°F (554.67°R) or the actual temperature, whichever is higher

Using these units in Equation 1 gives emissions as a lb/hr rate.

Annual Emissions (tpy) = Hourly Emissions (lb/hr) * (1 ton/2000 lb) * (hours of operation/1 year)

3. Molecular weight of asphalt fume: The value 105 is used per AP-42.

4. For asphalt, the vapor pressure is calculated as a function of the storage temperature using Antoine Equation from AP-42, 11.1-9 Hot Mix Asphalt Plants.

$$\log_{10} P = \frac{-0.05223A}{T} + B$$

where:

P = vapor pressure, mm Hg
T = absolute temperature, Kelvin

A =	75,350.06
B =	9.00346
C =	NA

5. No standing losses are calculated since the tank is heated.

6. Uncontrolled PM and VOC emissions are calculated as follows:

Uncontrolled PM Emissions = PM% * Total Uncontrolled Emissions
Uncontrolled VOC Emissions = VOC%* Total Uncontrolled Emissions

7. Controlled PM and VOC emissions are calculated as follows:

Controlled PM Emissions = (1 - PM Control Efficiency %) * PM Uncontrolled Emissions
Controlled VOC Emissions = (1 - VOC Control Efficiency %) * VOC Uncontrolled Emissions

It is conservatively assumed the VOC control efficiency is zero. So the controlled VOC emissions equal to uncontrolled VOC emissions.

8. The average asphalt fume LEL% is obtained from the Centers for Disease Control and Prevention Asphalt Fume Exposures During the manufacture of Asphalt Roofing Products (Chapter 5.1.2), August 2001. Based on this publication "Current asphalt fume concentrations average less than 25% of the lower explosive limit in all storage tanks where these controls are used.", therefore, a conservative value of 25% is used in the calculation.

9. CO and H_2S ppm values are calculated based on the Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading publication by David Trumbore, Winter 1999, as follows:

CO (ppm) = 142*%LEL+800 (per Trumbore 1999, p 258)
H_2S (ppm) = 12.43*%LEL+400.5 (pr Trumbore 1999, p. 258)

10. CO and H_2S ppm values are calculated based on the Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading publication by David Trumbore, Winter 1999, as follows:

CO / H_2S Emissions (lb/hr) = EF * Concentration (ppm) * 0.028m^3/cf * 1lb/454,000 mg * Throughput (gal/hr) / 7.48 (gal/cf) * Total Uncontrolled Emissions / Working Losses

CO / H_2S Emissions (tpy) = EF * Concentration (ppm) * 0.028m^3/cf * 1lb/454,000 mg * Throughput (gal/yr) / 7.48 (gal/cf) * Total Uncontrolled Emissions / Working Losses / 2,000 (lb/ton)

EF = AP-42 (mg/m^3/ppm) = 1.14 (CO) & 1.39 (H_2S)

Since there are no standing losses are calculated since the tank is heated, the total uncontrolled emissions equal to the uncontrolled working loss.

GAF Dallas Plant

Emissions from Self-seal Applicator and Laminate Self-seal Applicator (PBRs 106.261, 106.262)

EPN CFL2 Line 3 Sealant System - Mist Elimination System

FIN SEALAP Self-seal Applicator and Laminate Self-seal Applicator

Emission Factors

ARMA 2003 Sealant Applicator Factors			
Pollutant	**ARMA Factor [1] (lb/ton asphalt in product)**	**Safety Factor**	**Emission Factor Used in Calculations (lb/ton asphalt in product)**
Total Hydrocarbons (THC, as hexane)	5.64E-03	2x	1.13E-02
Carbonyl Sulfide (COS)	3.91E-05	2x	7.82E-05
Formaldehyde	ND		ND
CO	4.82E-04	2x	9.64E-04

1. Emission Factors obtained from Proposed Emission Factors For Criteria Pollutants and Hazardous Air Pollutants from Asphalt Roofing Manufacturing (Asphalt Roofing Manufacturers Association [ARMA] 2003) Appendix G, Table B-4.

Emission Calculations

Pollutant	**Emissions (lb/hr) [1]**	**Emissions (tpy) [2]**
	Sealant Applicator	**Sealant Applicator**
CO	5.37E-04	0.002
THC	0.006	0.024
VOC (asphalt fume) [2]	*0.005*	*0.018*
$PM/PM_{10}/PM_{2.5}$ (Uncontrolled asphalt fume) [2]	*0.001*	*0.005*
$PM/PM_{10}/PM_{2.5}$ (Controlled fume) [3]	*6.93E-06*	*2.60E-05*
COS	4.36E-05	1.63E-04
Formaldehyde	--	--
Total HAPS	4.36E-05	1.63E-04

1. The following equation is used to calculate emissions based on the above-mentioned factors:

Emissions (lb/hr) = EF * Hourly Asphalt Usage

Emissions (tpy) = EF * Annual Asphalt Usage / 2,000 (lb/ton)

Coating Asphalt Usage: **1,115** lb/hr, only one applicator will run at a time.

Coating Asphalt Usage: **8,359,724** lb/yr

2. Based on the sealant composition, the following percentages are used to calculate VOC and PM emissions.

VOC = 78% (Per Trumbore 1999)

PM = 22% (Per Trumbore 1999)

VOC Emissions = VOC%* Total Uncontrolled Emissions

PM Emissions = PM% * Total Uncontrolled Emissions

3. The Mist Elimination System in Line 3 Sealant System provides 99.5% PM control.

Filter PM Control Efficiency = 99.5%

Controlled PM Emissions = (1 - PM Control Efficiency %) * PM Uncontrolled Emissions

GAF Dallas Plant
Heatec Heater Emissions - Natural Gas Combustion

Table 1. Natural Gas External Combustion Emission Factors - Small Boilers and Ovens (<100 MMBtu/hr)

Reference	Fuel	Units [1]	CO	NO_x	$PM/PM_{10}/PM_{2.5}$ [2]	SO_2	VOC
AP-42, Sec. 1.4, Table 1.4-1 (7/98), Table 1.4-2 (7/98)	Natural Gas	lb/MMBtu lb/MMscf	0.0824 84	0.0490 50	0.0075 7.6	0.0006 0.6	0.0054 5.5

1. It is conservatively assumed that PM is equal to PM_{10} and $PM_{2.5}$.
2. Emission factors are converted to lb/MMBtu based on a heating value of natural gas of 1,020 Btu/scf (per AP-42, Section 1.4).

Table 2. Natural Gas External Combustion Emission Rates

FIN	EPN	Description	Heat Input Rating [1] (MMBtu/hr)	Annual Operation [1] (hrs)	Hourly Emissions [2] (lb/hr)					Annual Emissions [2] (tpy)				
					CO	NO_X	$PM/PM_{10}/PM_{2.5}$	SO_2	VOC	CO	NO_X	$PM/PM_{10}/PM_{2.5}$	SO_2	VOC
HTR9	HTR9	Line 3 Heatec Heater	1.5	8,760	0.12	0.07	0.01	9.00E-04	8.10E-03	0.54	0.32	0.05	3.94E-03	0.04

1. Heatec Heater Heat Inputs provided by GAF.
2. Sample Calculations for CO emissions:

Hourly CO Emission Rate (lb/hr) of Heatec Heater = emission factor (lb/MMBtu) * heat input rating (MMBtu/hr)

$$\text{CO Emission Rate (lb/hr)} = \frac{0.0824 \text{ lb}}{\text{MMBtu}} \times \frac{1.5 \text{ MMBtu}}{\text{hr}} = 0.12 \text{ lb/hr}$$

Annual CO Emission Rate (tpy) of Heatec Heater = emission factor (lb/MMBtu) * heat input rating (MMBtu/hr) * annual operation (hrs) / 2,000 (lb/ton)

$$\text{CO Emission Rate (tpy)} = \frac{0.0824 \text{ lb}}{\text{MMBtu}} \times \frac{1.5 \text{ MMBtu}}{\text{hr}} \times \frac{8760 \text{ hrs}}{\text{year}} \times \frac{\text{ton}}{2{,}000 \text{ lb}} = 0.54 \text{ tpy}$$

Attachment 3
PBR Revision Application – Dated December 4, 2017

12700 Park Central Drive | Suite 2100 | Dallas, TX 75251 | P (972) 661-8100 | F (972) 385-9203
trinityconsultants.com

Trinity Consultants

December 4, 2017

Texas Commission on Environmental Quality (TCEQ)
Air Permits Division
Rule Registration Section
(Submitted via STEERS)
12100 Park 35 Circle
Building C, Third Floor, MC 163
Austin, TX 78753

RE: Permit By Rule Registration Revision Application for Permit No. 147140
Building Materials Investment Corporation – Dallas Plant – Dallas, TX, Dallas County
Customer Reference Number (CN) 605251487
Regulated Entity Reference Number (RN) 100788959

Dear Sir or Madam:

Building Materials Investment Corporation doing business as GAF Materials Corporation (GAF) owns and operates an asphalt roofing production facility located in Dallas, Texas (Dallas Plant). GAF operates under Texas Commission on Environmental Quality (TCEQ) Customer Reference Number (CN) 605251487. The Dallas Plant has been assigned TCEQ Air Quality Account Number DB-0378-S and Regulated Entity Number (RN) 100788959. Operations at GAF Dallas Plant are authorized under New Source Review (NSR) Permit No. 7711A, Standard Permit No. 91414 and several non-registerable Permits by Rule (PBRs). The Dallas Plant is a Title V facility operating under Site Operating Permit (SOP) No. O-2771.

On June 7, 2017, GAF submitted a PBR registration application to authorize Line 3 sealant application system that includes one new Line 3 sealant run tank, associated self-seal applicator, laminate self-seal applicator, and a Heatec heater. On July 12, 2017, TCEQ issued the PBR Registration No. 147140 for the Line 3 sealant application system.

With this PBR revision application, GAF proposes to install an Adhesive Storage Tank (Tank ID: TK-AD, 3120 Adhesives Storage Tank) for the existing Line 3 sealant application system and authorize associated changes.

~~Appropriate sections of the application have been identified as confidential. With this letter, the non-confidential version of the application is being submitted via TCEQ STEERS system. The confidential sections are being submitted directly to the TCEQ Rule Registration Section and Regional Office in a separate copy in hardcopy format. The confidential information should not be disclosed to the public.~~

The $450 PBR fee has been submitted to the TCEQ Revenue Section via the STEERS ePermits system at the time of submittal.

If you have any questions regarding this submittal, please feel free to contact me at (972) 661-8100 or via email at lbao@trinityconsultants.com, or Mr. Kevin Bush, GAF, at (214) 637-8933.

Sincerely,

Trinity Consultants

Lele Bao, P.E.
Consultant

cc: Ms. Elizabeth Smith, Air Section Manager, TCEQ Region 4
Ms. Joni Keach, Section Manager, City of Dallas Air Pollution Control Program
Mr. Kevin Bush, GAF
Ms. Latha Kambham, Trinity Consultants

Enclosure

TCEQ PERMIT BY RULE REVISION APPLICATION
NEW ADHESIVE TANK

Building Materials Investment Corporation – Dallas, TX

Prepared By:

Latha Kambham, Ph.D. – Managing Consultant
Anupama Krishnan, CEA – Senior Consultant
Lele Bao, P.E. – Consultant

TRINITY CONSULTANTS

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~~**CONFIDENTIAL VERSION**~~

December 2017

Project 174401.0287

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

Building Materials Investment Corporation doing business as GAF Materials Corporation (GAF) owns and operates an asphalt roofing production facility located in Dallas, Texas (Dallas Plant). GAF operates under Texas Commission on Environmental Quality (TCEQ) Customer Reference Number (CN) 605251487. The Dallas Plant has been assigned TCEQ Air Quality Account Number DB-0378-S and Regulated Entity Number (RN) 100788959. Operations at GAF Dallas Plant are authorized under New Source Review (NSR) Permit No. 7711A, Standard Permit No. 91414 and several non-registerable Permits by Rule (PBRs). The Dallas Plant is a Title V facility operating under Site Operating Permit (SOP) No. O-2771.

Dallas County is currently classified as a moderate nonattainment area for the 2008 eight-hour (8-hour) ozone standard, and is an attainment or unclassified area for all other criteria pollutants.[1] Effective on December 8, 2016, the Dallas-Fort Worth (DFW) Ozone Nonattainment Area is re-designated as an attainment area for the 1997 8-hour ozone standard.[2] Therefore, Dallas County is currently classified as attainment for the 1997 8-hour ozone standard. The Dallas Plant is an existing minor source with respect to Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NNSR), but is a major source with respect to the federal operating permits program (Title V) due to potential emissions of particulate matter with an aerodynamic diameter of less than or equal to 10 microns (PM_{10}) and sulfur dioxide (SO_2).

On June 7, 2017, GAF submitted a PBR registration application to authorize Line 3 sealant application system that includes one Line 3 sealant run tank, associated self-seal applicator, laminate self-seal applicator, and a Heatec heater. On July 12, 2017, TCEQ issued the PBR Registration No. 147140 for the Line 3 sealant application system.

With this PBR revision application, GAF proposes to install an Adhesive Storage Tank (Tank ID: TK-AD, 3120 Adhesive Storage Tank) for the existing Line 3 sealant application system. The proposed 3120 Adhesive Storage Tank will also feed the existing self-seal applicator and laminate self-seal applicator. No changes are proposed to the existing Line 3 sealant run tank. The project details are discussed in Section 4.

GAF proposes to authorize the 3120 Adhesive Storage Tank and associated emissions under Title 30 of the Texas Administrative Code (30 TAC) Section (§) 106.472, *Organic and Inorganic Liquid Loading and Unloading*, effective September 4, 2000. GAF also proposes to authorize the emissions resulting from the proposed throughput changes to the self-seal applicator and laminate self-seal applicator in Line 3 sealant application system under PBRs pursuant to 30 TAC §106.261, *Facilities (Emission Limitations)*, effective November 1, 2003 and PBR 106.262, *Facilities (Emission and Distance Limitations)*, effective November 1, 2003. This PBR revision application includes the following:

- Checklist for 30 TAC §106.4 (Requirements for Permit by Rule);

[1] The United States Protection Agency (U.S. EPA) Green Book. Source: https://www3.epa.gov/airquality/greenbook/anayo_tx.html, accessed in November 2017.
[2] EPA proposed approval of a re-designation substitution and finding of attainment for the 1997 8-hour ozone NAAQS for the DFW area on May 25, 2016; and the final approval notice was published on November 8, 2016 with an effective date of December 8, 2016. As such, effective December 8, 2016, the NNSR thresholds will be based solely on the 2008 ozone NAAQS standards. The major source threshold for DFW changed from 50 tpy to 100 tpy as a moderate ozone nonattainment area.

- Checklist for 30 TAC §106.261 (Facilities (Emission Limitation));
- Checklist for 30 TAC §106.262 (Facilities (Emission and Distance Limitations));
- Checklist for 30 TAC §106.472 (Organic and Inorganic Liquid Loading and Unloading);
- Emission calculations and PBR 106.261/262 Evaluation;
- TCEQ Table 1(a) (Emission Point Summary); and
- Other supporting documentation.

~~The non-confidential version of the PBR Revision Application is being submitted to the TCEQ via the State of Texas Environmental Electronic Reporting System (STEERS). Appropriate sections of the application have been identified as confidential and are being submitted directly to the TCEQ Rule Registrations Section in hardcopy format.~~ The $450 PBR fee has been submitted to the TCEQ Revenue Section via the STEERS ePermits system at the time of submittal.

The enclosed forms and documentation demonstrate that the proposed project meets all applicable requirements of 30 TAC §106.261, 106.262 and 106.472, and the general requirements under 30 TAC §106.4. Emissions calculation details associated with the proposed project are provided in Appendix A of this PBR Revision Application. The Safety Data Sheet (SDS) of the 3120 Adhesives is included in Appendix B of this PBR Revision Application.

PBR §106.4 Checklist
PBR §106.261 Checklist
PBR §106.262 Checklist
PBR §106.472 Checklist
Table 1(a)

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

The following checklist was developed by the Texas Commission on Environmental Quality (TCEQ), **Air Permits Division**, to assist applicants in determining whether or not a facility meets all of the applicable requirements. Before claiming a specific Permit by Rule (PBR), a facility must first meet all of the requirements of **Title 30 Texas Administrative Code § 106.4** (30 TAC § 106.4), "Requirements for Permitting by Rule." Only then can the applicant proceed with addressing requirements of the specific Permit by Rule being claimed.

The use of this checklist is not mandatory; however, it is the responsibility of each applicant to show how a facility being claimed under a PBR meets the general requirements of 30 TAC § 106.4 and also the specific requirements of the PBR being claimed. If all PBR requirements cannot be met, a facility will not be allowed to operate under the PBR and an application for a construction permit may be required under 30 TAC § 116.110(a).

Registration of a facility under a PBR can be performed by completing **Form PI-7** (Registration for Permits by Rule) or **Form PI-7-CERT** (Certification and Registration for Permits by Rule). The appropriate checklist should accompany the registration form. Check the most appropriate answer and include any additional information in the spaces provided. If additional space is needed, please include an extra page and reference the question number. The PBR forms, tables, checklists, and guidance documents are available from the TCEQ, Air Permits Division Web site at: www.tceq.texas.gov/permitting/air/nav/air_pbr.html.

1. 30 TAC § 106.4(a)(1) and (4): Emission limits	
List emissions in tpy for **each** facility (add additional pages or table if needed):	
• Are the SO_2, PM_{10}, VOC, or other air contaminant emissions claimed for **each** facility in this PBR submittal less than 25 tpy?	☒ YES ☐ NO
• Are the NO_x and CO emissions claimed for each facility in this PBR submittal less than 250 tpy?	☒ YES ☐ NO
*If the answer to both is "Yes," continue to the question below. If the answer to either question is "No," a **PBR cannot be claimed**.*	
Has any facility at the property had public notice and opportunity for comment under 30 TAC Section 116 for a regular permit or permit renewal? (This does not include public notice for voluntary emission reduction permits, grandfathered existing facility permits, or federal operating permits.)	☒ YES ☐ NO
If "Yes," skip to Section 2. If "No," continue to the questions below.	
If the site has had no public notice, please answer the following:	
• Are the SO_2, PM_{10}, VOC, or other emissions claimed for **all** facilities in this PBR submittal less than 25 tpy?	☐ YES ☐ NO
• Are the NO_x and CO emissions claimed for all facilities in this PBR submittal less than 250 tpy?	☐ YES ☐ NO
If the answer to both questions is "Yes," continue to Section 2.	
*If the answer to either question is "No," **a PBR cannot be claimed**. A permit will be required under Chapter 116.*	

2. 30 TAC § 106.4(a)(2): Nonattainment check	
• Are the facilities to be claimed under this PBR located in a designated ozone nonattainment county?	☒ YES ☐ NO
If "Yes," please indicate which county by checking the appropriate box to the right.	
(Moderate) - Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties:	☐ HGB
(Moderate) - Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise counties:	☒ DFW
If "Yes," to any of the above, continue to the next question. If "No," continue to Section 3.	
• Does this project trigger a nonattainment review?	☐ YES ☒ NO
• Is the project's potential to emit (PTE) for emissions of VOC or NO_x increasing by 100 tpy or more? *PTE is the maximum capacity of a stationary source to emit any air pollutant under its worst-case physical and operational design unless limited by a permit, rules, or made federally enforceable by a certification.*	☐ YES ☒ NO
• Is the site an existing major nonattainment site and are the emissions of VOC or NO_x increasing by 40 tpy or more?	☐ YES ☒ NO
If needed, attach contemporaneous netting calculations per nonattainment guidance.	
Additional information can be found at: www.tceq.texas.gov/permitting/air/forms/newsourcereview/tables/nsr_table8.html and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html	
*If "Yes," to any of the above, the project is a major source or a major modification and **a PBR may not be used**. A Nonattainment Permit review must be completed to authorize this project. If "No," continue to Section 3.*	
3. 30 TAC § 106.4(a)(3): Prevention of Significant Deterioration (PSD) check	
Does this project trigger a review under PSD rules?	
To determine the answer, review the information below:	
• Are emissions of any regulated criteria pollutant increasing by 100 tpy of any criteria pollutant at a named source?	☐ YES ☒ NO
• Are emissions of any criteria pollutant increasing by 250 tpy of any criteria pollutant at an unnamed source?	☐ YES ☒ NO
• Are emissions increasing above significance levels at an existing major site?	☐ YES ☒ NO
PSD information can be found at: www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/Tables/10173tbl.pdf and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html *If "Yes," to any of the above, **a PBR may not be used**. A PSD Permit review must be completed to authorize the project.* *If "No," continue to Section 4.*	

4. 30 TAC § 106.4(a(6): Federal Requirements	
• Will all facilities under this PBR meet applicable requirements of Title 40 Code of Federal Regulations (40 CFR) Part 60, New Source Performance Standards (NSPS)?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable?	
• Will all facilities under this PBR meet applicable requirements of 40 CFR Part 63, Hazardous Air Pollutants Maximum Achievable Control Technology (MACT) standards?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable?	
• Will all facilities under this PBR meet applicable requirements of 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs)?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable?	
If "Yes" to any of the above, please attach a discussion of how the facilities will meet any applicable standards.	
5. 30 TAC § 106.4(a)(7): PBR prohibition check	
• Are there any air permits at the site containing conditions which prohibit or restrict the use of PBRs?	☐ YES ☒ NO
If "Yes," PBRs may not be used or their use must meet the restrictions of the permit. A new permit or permit amendment may be required.	
List permit number(s):	
6. 30 TAC § 106.4(a)(8): NO_x Cap and Trade	
• Is the facility located in Harris, Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?	☐ YES ☒ NO
If "Yes," answer the question below. If "No," continue to Section 7.	
• Will the proposed facility or group of facilities obtain required allowances for NO_x if they are subject to 30 TAC Chapter 101, Subchapter H, Division 3 (relating to the Mass Emissions Cap and Trade Program)?	☐ YES ☐ NO

7. Highly Reactive Volatile Organic Compounds (HRVOC) check		
• Is the facility located in Harris County?		☐ YES ☒ NO
If "Yes," answer the next question. If "No," skip to the box below.		
• Will the project be constructed after June 1, 2006?		☐ YES ☐ NO
If "Yes," answer the next question. If "No," skip to the box below.		
• Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☐ NO
If "Yes," complete the information below:		
	lb/hr	tpy
► 1,3-butadiene		
► all isomers of butene (e.g., isobutene [2-methylpropene or isobutylene])		
► alpha-butylene (ethylethylene)		
► beta-butylene (dimethylethylene, including both cis- and trans-isomers)		
► ethylene		
► propylene		
• Is the facility located in Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?		☐ YES ☒ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
• Will the project be constructed after June 1, 2006?		☐ YES ☐ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
• Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☐ NO
If "Yes," complete the information below:		
	lb//hr	tpy
► ethylene		
► propylene		

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Texas Commission on Enviromental Quality
Title 30 Texas Administrative Code § 106.261
Permit By Rule (PBR) Checklist
Facilities (Emission Limitations)

The following checklist is designed to help you confirm that you meet Title 30 Texas Administrative Code § 106.261 (30 TAC § 106.261) requirements. If you do not meet all the requirements, you may alter the project design or operation in such a way that all the requirements of the PBR are met or you may obtain a construction permit. The PBR forms, tables, checklists, and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ) Air Permits Division website at, www.tceq.texas.gov/permitting/air/air_permits.html

For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: www.TexasEnviroHelp.org

Check The Most Appropriate Answer		
	Is a description or checklist of how this claim meets the general requirements for the use of PBRs in 30 TAC § 106.4 attached?	☒ YES ☐ NO ☐ NA
b1	Is this claim for construction of a facility authorized in another section of this chapter or for which a standard permit is in effect? *If "YES," this PBR cannot be used to authorize emissions from the project.*	☐ YES ☒ NO ☐ NA
b2	Is this claim for any change to any facility authorized under another section of this chapter or authorized under a standard permit? *If "YES," this PBR cannot be used to authorize emissions from the project.*	☐ YES ☒ NO ☐ NA
a1	Are facilities or changes located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located?	☒ YES ☐ NO ☐ NA

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Check The Most Appropriate Answer *(continued)*

a2 Are total new or increased emissions, including fugitives, less than or equal to 6.0 pounds per hour (lb/hr) and ten tons per year of the following materials[1] ☒ YES ☐ NO ☐ NA

Check All That Apply

☐ acetylene	☐ cyclopentane	☐ kaolin	☐ propane
☐ alumina	☐ emery dust	☐ limestone	☐ propyl alcohol
☐ argon	☐ ethanol	☐ magnesite	☐ propyl ether
☐ butane	☐ ethyl acetate	☐ marble	☐ propylene
☐ calcium carbonate	☐ ethyl ether	☐ methyl acetylene	☐ silicon
☐ calcium silicate	☐ ethylene	☐ methyl chloroform	☐ silicon carbide
☒ carbon monoxide	☐ glycerin mist	☐ methyl cyclohexane	☐ starch
☐ cellulose fiber	☐ gypsum	☐ neon	☐ sucrose
☐ cement dust	☐ helium	☐ nonan	☐ sulfur dioxide
☐ crude oil	☐ iron oxide dust	☐ oxides of nitrogen	☐ zinc oxide
☐ cyclohexane	☐ isohexane	☐ pentaerythritol	☐ zinc stearate
☐ cyclohexene	☐ isopropyl alcohol	☐ plaster of paris	

☐ refinery petroleum fractions (except for pyrolysis naphthas and pyrolysis gasoline) containing less than ten volume percent benzene

☐ fluorocarbons Numbers 11, 12, 13, 14, 21, 22, 23, 113, 114, 115, and 116

[1]Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission limits; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Texas Commission on Enviromental Quality
Title 30 Texas Administrative Code § 106.261
Permit By Rule (PBR) Checklist
Facilities (Emission Limitations)

Check The Most Appropriate Answer		
a3	Are total new or increased emissions, including fugitives, less than or equal to 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m^3) as listed and referenced in Table 262 of 30 TAC § 106.262 of this title (relating to Facilities (Emission and Distance Limitations)? [2]	☐ YES ☐ NO ☒ NA
List chemical(s):	L value(s):	
	Are total new or increased emissions, including fugitives, less than or equal to 1.0 lb/hr of any chemical not listed or referenced in Table 262? [1] List chemical(s): Carbonyl Sulfide	☒ YES ☐ NO ☐ NA
	Are total new or increased emissions, including fugitives, of a chemical with a limit value of less than 200 mg/m^3*?* [1] *If "YES" the authorization of the chemical is not allowed under this section. We suggest you use 30 TAC § 106.262 to authorize the emissions, if applicable.*	☒ YES ☐ NO ☐ NA
a4	Are there any changes to or additions of any existing air pollution abatement equipment?	☐ YES ☒ NO ☐ NA
a5	Will there be any visible emissions, except uncombined water, emitted to the atmosphere from any point or fugitive source in amounts greater than 5.0% opacity in any six-minute period?	☐ YES ☒ NO ☐ NA
a6	Are emission increases five tons per year or greater? *If "YES," this checklist must be attached to a Form PI-7 within ten days following the installation or modification of the facilities.* [**Note:** *The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.*]	☐ YES ☒ NO ☐ NA
a7	Are emission increases less than five tons per year? *If "YES," this checklist must be attached to a Form PI-7 and include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any. (pick one):* ☒ Within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any ☐ By March 31 of the following year summarizing all uses of this permit by rule in the previous calendar year.	☒ YES ☐ NO ☐ NA

[2] Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission limits; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Texas Commission on Environmental Quality
Title 30 Texas Administrative Code § 106.262
Permit by Rule (PBR) Checklist
Facilities (Emission and Distance Limitations)

The following checklist is designed to help you confirm that you meet Title 30 Texas Administrative Code § 106.262 (30 TAC § 106.262) requirements. If you do not meet all the requirements, you may alter the project design or operation in such a way that all the requirements of the PBR are met or you may obtain a construction permit. The PBR forms, tables, checklists, and guidance documents are available from the Texas Commission on Environmental Quality (TCEQ), Air Permits Division Web site at, www.tceq.texas.gov/nav/permits/air_permits.html.

For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: www.TexasEnviroHelp.org

Check the Most Appropriate Answer				
	Is a description or checklist of how this claim meets the general requirements for the use of PBRs in 30 TAC § 106.4 attached?			☒ YES ☐ NO ☐ N/A
b1.	Is this claim for construction of a facility authorized in another section of this chapter or for which a standard permit is in effect? *If "YES," this PBR cannot be used to authorize emissions from the project.*			☐ YES ☒ NO ☐ N/A
b2.	Is this claim for any change to any facility authorized under another section of this chapter or authorized under a standard perm? *If "YES," this PBR cannot be used to authorize emissions from the project.*			☐ YES ☒ NO ☐ N/A
c.	Is the facility authorized under another section of this chapter or under a standard permit? *If "YES," subsection (a)(2) and (3) of this section may be used to qualify the use of other chemicals at the facility.*			☐ YES ☒ NO ☐ N/A
a1.	Are facilities or changes located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located?			☒ YES ☐ NO ☐ N/A
a2.	Are new or increased emissions, including fugitives, emitted in a quantity less than five tons per year or in a quantity less than E as determined by using the equation E=L/K?[1] See Table 262 Figures 1 and 2. *If "YES," the notification shall include a description of the project, calculations for all emissions being claimed under this PBR:*			☒ YES ☐ NO ☐ N/A
Chemical: Asphalt Fume		L value: 5	D: 450 feet	K: 92.5
a3.	Is this checklist attached to a Form PI-7 within ten days following the installation or modification of the facilities? *If "YES," the notification shall include a description of the project, calculations, and data identifying specific chemical names, L values, and a description of pollution control equipment, if any.*			☒ YES ☐ NO ☐ N/A

[1] Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission limits; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Title 30 Texas Administrative Code § 106.262
Permit by Rule (PBR) Checklist
Facilities (Emission and Distance Limitations)

Check the Most Appropriate Answer			
a4. Are one or more of the following chemicals is handled for this registration? (Check all that apply) *If "YES," answer the following four questions.*			☐ YES ☐ NO ☒ N/A
☐ acrolein	☐ diazomethane	☐ hydrogen sulfide	☐ ozone
☐ allyl chloride	☐ diborane	☐ ketene	☐ pentabornev
☐ ammonia (anhydrous)	☐ diglycidyl ether	☐ methylamine	☐ perchloromethyl mercaptan
☐ arsine	☐ dimethylhydrazine	☐ methyl bromide	☐ perchloryl fluoride
☐ boron trifluoride	☐ ethyleneimine	☐ methyl hydrazine	☐ phosgene
☐ bromine	☐ ethyl mercaptan	☐ methyl isocyanate	☐ phosphine
☐ carbon disulfide	☐ fluorine	☐ methyl mercaptan	☐ phosphorus trichloride
☐ chlorine	☐ formaldehyde (anhydrous)	☐ nickel carbonyl	☐ selenium
☐ chlorine dioxide	☐ hydrogen bromide	☐ nitric acid	☐ hexafluoride stibine
☐ chlorine trifluoride	☐ hydrogen chloride	☐ nitric oxide	☐ liquefied sulfur dioxide
☐ chloroacetaldehyde	☐ hydrogen cyanide	☐ nitrogen dioxide	☐ sulfur pentafluorid
☐ chloropicrin	☐ hydrogen fluoride	☐ oxygen difluoride	☐ tellurium hexafluoride
☐ chloroprene	☐ hydrogen selenide		
	Are all facilities are located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor?		☐ YES ☐ NO ☐ N/A
	Are the cumulative amount of any of the following chemicals resulting from one or more authorizations under this section (but not including permit authorizations) less than or equal to 500 pounds on the plant property?		☐ YES ☐ NO ☐ N/A
	Are all listed chemicals handled only in unheated containers operated in compliance with the United States Department of Transportation regulation (49 Code of Federal Regulation, Parts 171-178)?		☐ YES ☐ NO ☐ N/A
a5.	Are there any changes to or additions of any existing air pollution abatement equipment?		☐ YES ☒ NO ☐ N/A
a6.	Will there be any visible emissions, except uncombined water, emitted to the atmosphere from any point or fugitive source in amounts greater that 5.0% opacity in any six-minute period?		☐ YES ☒ NO ☐ N/A

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D (feet)	K	Value Description
100	326	E=maximum allowable hourly emission, and never to exceed 6 pounds per hour.
200	200	
300	139	
400	104	
600	65	
700	54	
800	46	K=value from the table on this page. (interpolate intermediate values)
900	39	
1,000	34	
2,000	14	D=distance to the nearest off-plant receptor
3,000 or more	8	

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Acetone	590.
Acetaldehyde	9.
Acetone	4.
Acetonitrile	34.
Acetylene	2662.
N-Amyl Acetate	2.7
Sec-Amyl Acetate	1.1
Benzene	3.
Beryllium and Compounds	0.0005
Boron Trifluride, as HF	0.5
Butyl Alcohol,	76.
Butyl Acrylate	19.
Butyl Chromate	0.01
Butyl Glycidyl Ether	30.
Butyl Mercaptain	0.3
Butyraldehyde	1.4
Butyric Acid	1.8
Butyronitrile	22.
Carbon Tetrachloride	12.
Chloroform	10.
Chlorophenol	0.2
Chloroprene	3.6
Chromic Acid	0.01
Chromium Metal, Chromium II and III Compounds	0.1
Chromium VI Compounds	0.01
Coal Tar Pitch Volatiles	0.1
Creosote	0.1
Cresol	0.5
Cumene	50.
Dicyclopentadiene	3.1
Diethylaminoethanol	5.5

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Diisobutyl Ketone	63.9
Dimethyl Aniline	6.4
Dioxane	3.6
Dipropylamine	8.4
Ethyl Acrylate	0.5
Ethylene Dibromide	0.38
Ethylene Glycol	26.
Ethylene Glycol Dinitrate	0.1
Ethylidene 2-norbornene, 5	7.
Ethyl Mercaptan	0.08
Ethyl Sulfide	1.6
Glycolonitrile	5.
Halothane	16.
Heptane	350.
Hexanediamine, 1, 6	0.32
Hydrogen Chloride	1.
Hydrogen Fluoride	0.5
Hydrogen Sulfide	1.1
Isoamyl Acetate	133.
Isoamyl Alcohol	15.
Isobutyronitrile	22.
Kepone	0.001
Kerosene	100.
Malononitrile	8.
Mesityl Oxide	40.
Methyl Acrylate	5.8
Methyl Amyl Ketone	9.4
Methyl-T-Butyl Ether	45.
Methyl Butyl Ketone	4.
Methyl Disulfide	2.2

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Methylenebis (2-chloroaniline) (MOCA)	0.003
Methylene Chloride	26.
Methyl Isoamyl Ketone	5.6
Methyl Mercaptan	0.2
Merthyl Methacrylate	34.
Methyl Propyl Ketone	530.
Methyl Sulfide	0.3
Mineral Spirits	350.
Naphtha	350.
Nickel, Inorganic Compounds	0.015
Nitroglycerine	0.1
Nitropropane	5.
Octane	350.
Parathion	0.05
Pentane	350.
Perchloroethylene	33.5
Petroleum Ether	350.
Phenyl Mercaptan	0.4
Propionitrile	14.
Propyl Acetate	62.6
Propylene Oxide	20.
Propyl Mercaptan	0.23
Silica-amorphous-precipitated, silica gel	4.
Silicon Carbide	4.

Table 262
Limit Values (L) for use with Exemptions from Permitting § 106.262

The values are not to be interpreted as acceptable health affects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for new Construction or Modification).

Compound	Limit (L) Milligrams Per Cubic Meter
Stoddard Solvent	350.
Styrene	21.
Succiononitrile	20.
Tolidin	0.02
Trichloroethylene	135.
Trinethylamine	0.1
Valeric Acid	0.34
Vinyl Acetate	15.
Vinyl Chloride	2.
Note: The time weighted average (TWA) threshold Limit Value (TLV) published by the American Conference of Governmental Industrial Hygienists (AGGIH), in its TLVs and BEIs guide (1997 Edition) shall be used for compounds not included in the table. The Short Term Exposure Level (STEL) or Ceiling Limit (annotated with a "C") published by the ACGIH shall be used for compounds that do not have a published TWA TLV. This section cannot be used if the compound is not listed in the table or does not have a published TWA TLV, STEL, or Ceiling Limit in the ACGIH TLVs and BEIs guide.	

Exemption § 106.472 Checklist
(Previously Standard Exemption 51)
Organic Liquid Loading and Unloading

The following checklist is designed to help you confirm that you meet § 106.472, previously Standard Exemption 51 (STDX 51), requirements. **Any "no" answers indicate that the claim of registration may not meet all requirements for the use of Exemption § 106.472, previously Standard Exemption 51.** If you do not meet all the requirements, you may alter the project design/operation in such a way that all the requirements of the exemption are met, or obtain a construction permit.

For additional assistance with your application, including resources to help calculate your emissions, please visit the Small Business and Local Government Assistance (SBLGA) webpage at the following link: www.TexasEnviroHelp.org

Please Complete The Following:			
Have you included a description of how this exemption claim meets the general rule for the use of exemptions (§ 106, Subchapter A checklist is available)?	☒ YES	☐ NO	☐ N/A
Are all the facilities claimed for exemption specifically named in the general section of § 106.472, previously STDX 51?	☒ YES	☐ NO	☐ N/A
[**Note:** *This exemption has been interpreted to allow mixing or blending but not chemical reaction in tankage.*]			
Is the equipment designed to prevent visible emissions?	☒ YES	☐ NO	☐ N/A
Are all the chemicals to be loaded, unloaded, or stored described in §106.472 (previously STDX 51a-i)?	☒ YES	☐ NO	☐ N/A
Attach a list of the chemicals and identify the appropriate item of § 106.472, previously STDX 51 that applies.			
Include additional supporting data. For example, a § 106.472, previously STDX 51(i), claim should identify initial boiling points of all compounds to be covered.			
Will aqueous ammonia solutions, hydrochloric acid, or acetic acid be vented through a water scrubber?	☐ YES	☐ NO	☒ N/A
Are facilities loading, unloading, or storing butyric acid, isobutyric acid, methacrylic acid, mercaptans, croton oil, 2-methyl styrene, or any other compound with an initial boiling point of 300 degrees F or greater listed in 40 CFR 261, Appendix VIII, located at least 500 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facility or the owner of the property upon which the facility is located?	☐ YES	☐ NO	☒ N/A
List these compounds and show their handling location on an attached scaled plot plan.			

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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Table 1(a) Emission Point Summary

Date:	December 2017	**Permit No:**	147140	**Regulated Entity No.:**	100788959
Area Name:	GAF Materials Corporation, Dallas Facility			**Customer Reference No.:**	605251487

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on this table

AIR CONTAMINANT DATA					
1. Emission Point			**2. Component or Air Contaminant Name**	**3. Air Contaminant Emission Rate**	
EPN (A)	**FIN (B)**	**NAME (C)**		**Pounds per Hour (A)**	**TPY (B)**
CFL2	TK-AD, T-22 and SEALAP	Line 3 Sealant and Adhesive System - Mist Elimination System	CO	0.06	0.05
			PM	<0.01	<0.01
			PM_{10}	<0.01	<0.01
			$PM_{2.5}$	<0.01	<0.01
			VOC	0.98	0.58
			H_2S	0.03	0.02
			Carbonyl Sulfide	<0.01	<0.01

EPN = Emission Point Number
FIN = Facility Identification Number

3. PERMIT BY RULE FEE

Per 30 TAC §106.50 – *Registration Fees for Permits By Rule*, a $450 fee is required to be submitted for this revision application. This fee has been submitted to the TCEQ Revenue Section via the STEERS ePermits system at the time of submittal.

4. PROCESS DESCRIPTION

GAF is a nationwide manufacturer of building material products. The GAF Dallas Plant manufactures asphalt shingles for the roofing industry. There are two asphalt roofing lines at the GAF Dallas Plant: Line 1 and Line 3. Self-seal asphalt based dots are applied to the asphalt roofing sheets before they are cut into shingles and automatically packaged. Adhesive stripes are applied to the laminated shingles in Line 3 before the shingles are cut and packaged. The existing Line 3 sealant application system is installed to apply self-seal asphalt and laminate self-seal asphalt to the asphalt roofing sheets. The Line 3 sealant application system includes one new Line 3 sealant run tank (Facility Identification Number [FIN]: T-22), associated self-seal applicator (FIN: SEALAP), laminate self-seal applicator (FIN: SEALAP), and a Heatec heater (FIN: HTR9).

As part of the PBR Revision Application, GAF proposes to install the 3120 Adhesive Storage Tank (FIN: TK-AD) for the existing Line 3 sealant application system. The proposed 3120 Adhesive Storage Tank will also feed the existing self-seal applicator and laminate self-seal applicator to apply dots/stripes to the shingles. The Line 3 Heatec heater (FIN: HTR9) authorized under PBR 106.183 that is currently used to provide heat required by the Line 3 sealant application system will be decommissioned as part of this project. The Line 3 sealant application system will utilize the heat from the existing Line 1 Heatec heater (FIN: HRT1) authorized under PBR § 106.183. No changes are proposed to the existing Line 3 sealant run tank. As such, emission calculations for the existing Line 1 Heatec heater or the existing Line 3 sealant run tank are not included in this PBR Revision Application.

Currently, the Line 3 sealant run tank, self-seal applicator, and the laminate self-seal applicator are controlled by the Line 3 Mist Elimination System (Emission Point Number [EPN]: CFL2). The emissions from the proposed 3120 Adhesive Storage Tank will also be routed to the Line 3 Mist Elimination System (EPN: CFL2) for control. GAF does not expect any increase in actual emission increases from upstream or downstream processes as a result of the proposed project.

The calculation methodologies for the proposed changes are consistent with the calculation methodologies used for the initial PBR application submitted on June 7, 2017.

Emissions from the proposed project include the following:

- Carbon monoxide (CO)
- Particulate matter (PM, as asphalt fume);
- Particulate matter with an aerodynamic diameter of less than or equal to 10 microns (PM_{10}, as asphalt fume);
- Particulate matter with an aerodynamic diameter of less than or equal to 2.5 microns ($PM_{2.5}$, as asphalt fume);
- Volatile Organic Compounds (VOC, as asphalt fume); and
- Carbonyl Sulfide (COS).

Asphalt has both PM and VOC emissions since asphalt is a VOC itself and hot asphalt forms tar globules that are considered as PM. The asphalt PM and VOC emissions are added together for purposes of PBR 106.262 compliance to reflect the fact that they are different manifestations of the same substance.

Description of emission calculations for the proposed changes is provided in the following paragraphs. Detailed emission calculations, are provided in Appendix A.

5.1. EMISSIONS FROM ADHESIVE TANK

CO and H_2S emissions from the proposed 3120 Adhesives Storage Tank are calculated based on *Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading* publication by David Trumbore, Winter 1999. The 3120 Adhesives consist of mostly asphalt. The Safety Data Sheet (SDS) of the 3120 Adhesives is included in Appendix B of the revision application. The asphalt VOC emissions from the adhesive tank are calculated using the TCEQ NSR guidance for storage tanks. Asphalt $PM/PM_{10}/PM_{2.5}$ emissions will be controlled by the existing Line 3 Mist Elimination System with 99.5% control efficiency. No changes are proposed to the existing Line 3 sealant run tank. As such, emissions methodology discussions and the calculations for the existing Line 3 sealant run tank are not included in this PBR Revision Application.

5.2. EMISSIONS FROM APPLICATORS

CO, VOC, $PM/PM_{10}/PM_{2.5}$ and COS emissions from the self-seal applicator and the laminate self-seal applicator are calculated based on the Asphalt Roofing Manufacturers Association (ARMA) emission factors, a safety factor of 2 and the hourly and annual throughputs of coating asphalt usages. Since the proposed 3120 Adhesive Storage Tank will also feed the existing self-seal applicator and laminate self-seal applicator, the worst case emission factors from Adhesive Applicators and Sealant Applicators are used in the calculation. In addition, the total worst case adhesive and sealant throughputs from the existing Line 3 sealant run tank and the proposed 3120 Adhesives Storage Tank are used to estimate hourly and annual emissions from the applicators. Asphalt $PM/PM_{10}/PM_{2.5}$ emissions will also be controlled by the existing Line 3 Mist Elimination System with 99.5% control efficiency.

This section lists the general requirements for authorization under a PBR with a description of how the Dallas Plant will comply with each requirement. Requirements of the specific PBRs claimed in this revision application are identified and discussed in Section 7 of this application.

6.1. REQUIREMENTS FOR PERMITTING BY RULE (30 TAC §106.4), EFFECTIVE APRIL 17, 2014

Pursuant to the Texas Health and Safety Code, Texas Clean Air Act (TCAA), §382.057, the facilities or types of facilities listed in 30 TAC Chapter 106 are exempt from the permitting requirements of the TCAA, §382.0518, because such facilities will not make a significant contribution of air contaminants to the atmosphere. A facility shall meet the following conditions to be exempt from TCAA, §382.0518.

(a) To qualify for a permit by rule, the following general requirements must be met.

(1) Total actual emissions authorized under permit by rule from the facility shall not exceed the following limits, as applicable:

(A) 250 tons per year (tpy) of carbon monoxide (CO) or nitrogen oxides (NO_X);
(B) 25 tpy of volatile organic compounds (VOC), sulfur dioxide (SO_2), or inhalable particulate matter (PM);
(C) 15 tpy of particulate matter with diameters of 10 microns or less (PM_{10});
(D) 10 tpy of particulate matter with diameters of 2.5 microns or less ($PM_{2.5}$); or
(E) 25 tpy of any other air contaminant except:
(i) water, nitrogen, ethane, hydrogen, and oxygen; and
(ii) notwithstanding any provision in any specific permit by rule to the contrary, greenhouse gases as defined in §101.1 of this title (relating to Definitions).

As presented in Appendix A of this PBR revision application, the total emissions of all sources for authorization under this PBR will not exceed the above limits.

(2) Any facility or group of facilities, which constitutes a new major stationary source, as defined in §116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions), or any modification which constitutes a major modification, as defined in §116.12 of this title, under the new source review requirements of the Federal Clean Air Act (FCAA), Part D (Nonattainment) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder, must meet the permitting requirements of Chapter 116, Subchapter B of this title (relating to New Source Review Permits) and cannot qualify for a permit by rule under this chapter. Persons claiming a permit by rule under this chapter should see the requirements of §116.150 of this title (relating to New Major Source or Major Modification in Ozone Nonattainment Areas) to ensure that any applicable netting requirements have been satisfied.

As discussed in Section 1, the Dallas Plant is located in Dallas County, Texas, which is currently designated as a moderate nonattainment area for the 2008 eight-hour (8-hour) ozone standard, and is unclassified for all other criteria pollutants. The NNSR major source threshold is 100 tons per year (tpy) as a moderate ozone nonattainment area. The site is a

minor source of VOC and NO_X in the ozone nonattainment area. The total of all emission increases as result of the proposed project will not result in an increase of VOC or NO_X emissions to be greater than the NNSR major source threshold of 100 tpy. Therefore NNSR will not be not triggered as result of the proposed project and the facility may be authorized under permit by rule provisions. Emission calculations are provided in Attachment A of this registration.

(3) *Any facility or group of facilities, which constitutes a new major stationary source, as defined in 40 Code of Federal Regulations (CFR) §52.21, or any change which constitutes a major modification, as defined in 40 CFR §52.21, under the new source review requirements of the FCAA, Part C (Prevention of Significant Deterioration) as amended by the FCAA Amendments of 1990, and regulations promulgated thereunder because of emissions of air contaminants other than greenhouse gases, must meet the permitting requirements of Chapter 116, Subchapter B of this title and cannot qualify for a permit by rule under this chapter. Notwithstanding any provision in any specific permit by rule to the contrary, a new major stationary source or major modification which is subject to Chapter 116, Subchapter B, Division 6 of this title due solely to emissions of greenhouse gases may use a permit by rule under this chapter for air contaminants that are not greenhouse gases. However, facilities or projects which require a prevention of significant deterioration permit due to emissions of greenhouse gases may not commence construction or operation until the prevention of significant deterioration permit is issued.*

The Dallas Plant is a minor source with respect to the PSD permitting program. As noted in the response above, the total of all emission increases due to the proposed project will not result in an increase of VOC emissions to be greater than the PSD major source/modification threshold of 250 tpy. The affected facilities under this PBR registration do not constitute a new major stationary source or a major modification; therefore, PSD review is not triggered.

(4) *Unless at least one facility at an account has been subject to public notification and comment as required in Chapter 116, Subchapter B or Subchapter D of this title (relating to New Source Review Permits or Permit Renewals), total actual emissions from all facilities permitted by rule at an account shall not exceed 250 tpy of CO or NO_X; or 25 tpy of VOC or SO_2 or PM; or 15 tpy of PM_{10}; or 10 tpy of $PM_{2.5}$; or 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen, methane, ethane, hydrogen, and oxygen, and GHGs (as specified in §106.2 of this title (relating to Applicability)).*

The Dallas Plant has gone through a public notice for current NSR Permits. Therefore, these requirements do not apply.

(5) *Construction or modification of a facility commenced on or after the effective date of a revision of this section or the effective date of a revision to a specific permit by rule in this chapter must meet the revised requirements to qualify for a permit by rule.*

The proposed project meets the requirements under the PBRs currently in effect. In the event that the facilities are modified, GAF will re-evaluate the applicability of the PBR(s) in effect at the time of modification.

(6) A facility shall comply with all applicable provisions of the FCAA, §111 (Federal New Source Performance Standards) and §112 (Hazardous Air Pollutants), and the new source review requirements of the FCAA, Part C and Part D and regulations promulgated thereunder.

There are no applicable Standards of Performance for New Stationary Sources (NSPS) or National Emission Standards for Hazardous Air Pollutants (NESHAP) associated with sources authorized by this PBR registration.

(7) There are no permits under the same commission account number that contain a condition or conditions precluding the use of a permit by rule under this chapter.

The Dallas Plant has no TCEQ permits that preclude the use of a PBR under this chapter.

(8) The proposed facility or group of facilities shall obtain allowances for NO_X if they are subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).

The requirements of 30 TAC Chapter 101, Subchapter H, Division 3 of this title applies to facilities located in the Houston/Galveston nonattainment area. The GAF Dallas Plant is not located in the Houston/Galveston nonattainment area.

(b) No person shall circumvent by artificial limitations the requirements of §116.110 of this title (relating to Applicability).

The Dallas Plant will meet all the requirements of 30 TAC Chapter 106. Therefore, a state permit is not required, and the requirements of 30 TAC §116.110 will not be circumvented.

(c) The emissions from the facility shall comply with all rules and regulations of the commission and with the intent of the Texas Clean Air Act (TCAA), including protection of health and property of the public, and all emissions control equipment shall be maintained in good condition and operated properly during operation of the facility.

GAF will be in compliance with the rules and regulations of the TCAA. The site has taken steps to ensure all operations will be authorized appropriately and will maintain on-site documentation to show compliance with all recordkeeping requirements. In addition, compliance with the requirements of 30 TAC Chapter 106 ensures protection of health and property of the public.

(d) Facilities permitted by rule under this chapter are not exempted from any permits or registrations required by local air pollution control agencies. Any such requirements must be in accordance with TCAA, §382.113 and any other applicable law.

GAF is under the jurisdiction of City of Dallas Air Pollution Control Program. The Dallas Plant will comply the applicable requirements in this section.

6.2. REQUIREMENTS FOR RECORDKEEPING (30 TAC §106.8), EFFECTIVE NOVEMBER 1, 2001

(a) Owners or operators of facilities and sources that are de minimis as designated in §116.119 of this title (relating to De Minimis Facilities or Sources) are not subject to this section.

The equipment and activities covered in this application are not de minimis facilities and are subject to the requirements of this section.

(b) Owners or operators of facilities operating under a permit by rule (PBR) in Subchapter C of this chapter (relating to Domestic and Comfort Heating and Cooling) or under those PBRs that only name the type of facility and impose no other conditions in the PBR itself do not need to comply with specific recordkeeping requirements of subsection (c) of this section. A list of these PBRs will be available through the commission's Austin central office, regional offices, and the commission's website. Upon request from the commission or any air pollution control program having jurisdiction, claimants must provide information that would demonstrate compliance with §106.4 of this title (relating to Requirements for Permitting by Rule), or the general requirements, if any, in effect at the time of the claim, and the PBR under which the facility is authorized.

GAF is not requesting authorization of activities under PBRs that only name the type of facility and impose no other conditions; therefore, this section does not apply.

(c) Owners or operators of all other facilities authorized to be constructed and operate under a PBR must retain records as follows:

(1) maintain a copy of each PBR and the applicable general conditions of §106.4 of this title or the general requirements, if any, in effect at the time of the claim under which the facility is operating. The PBR and general requirements claimed should be the version in effect at the time of construction or installation or changes to an existing facility, whichever is most recent. The PBR holder may elect to comply with a more recent version of the applicable PBR and general requirements;

GAF will continue to maintain copies of the PBRs claimed in this revision registration, including a copy of the general conditions of 30 TAC §106.4, as required by this provision, in Sections 6 and 7. The PBRs claimed are the most recent versions as of the date of this revision registration.

(2) maintain records containing sufficient information to demonstrate compliance with the following:
(A) all applicable general requirements of §106.4 of this title or the general requirements, if any, in effect at the time of the claim; and
(B) all applicable PBR conditions;

GAF will continue to maintain records containing sufficient information to demonstrate compliance with the general requirements of 30 TAC §106.4 and the conditions of the specific PBR claimed.

(3) keep all required records at the facility site. If however, the facility normally operates unattended, records must be maintained at an office within Texas having day-to-day operational control of the plant site;

GAF will continue to maintain all records needed to demonstrate compliance with this section at the Dallas Plant.

(4) make the records available in a reviewable format at the request of personnel from the commission or any air pollution control program having jurisdiction;

GAF will continue to maintain records in a reviewable format and will make them available to the TCEQ or any other air pollution control program having jurisdiction upon request.

(5) beginning April 1, 2002, keep records to support a compliance demonstration for any consecutive 12-month period. Unless specifically required by a PBR, records regarding the quantity of air contaminants emitted by a facility to demonstrate compliance with §106.4 of this title prior to April 1, 2002 are not required under this section; and

GAF will continue to maintain records to support a compliance demonstration for any consecutive 12-month period.

(6) for facilities located at sites designated as major in accordance with §122.10(13) of this title (relating to General Definitions) or subject to or potentially subject to any applicable federal requirement, retain all records demonstrating compliance for at least five years. For facilities located at all other sites, all records demonstrating compliance must be retained for at least two years. These record retention requirements supersede any retention conditions of an individual PBR.

GAF will continue to maintain records for a period of at least five years, as required.

The Dallas Plant is proposing to authorize the potential emissions associated with the proposed changes under PBRs 106.261, 106.262 and 106.472. This section identifies the applicable requirements of these PBRs and documents how the Dallas Plant will continue to comply with each requirement. Since there are no changes proposed to the existing Line 3 sealant run tank, the specific §106.472 requirements are included for the proposed 3120 Adhesive Storage Tank only. General requirements for authorization under a PBR are discussed in Section 6 of this report.

7.1. REQUIREMENTS FOR FACILITIES (EMISSION LIMITATIONS) (30 TAC §106.261), EFFECTIVE NOVEMBER 1, 2003

(a) Except as specified under subsection (b) of this section, facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.

(1) The facilities or changes shall be located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.

The emission sources affected by the proposed project are located at least 100 feet from any recreational area, residence, or other structure not occupied or used solely by the Dallas Plant.

(2) Total new or increased emissions, including fugitives, shall not exceed 6.0 pounds per hour (lb/hr) and ten tons per year of the following materials: acetylene, argon, butane, crude oil, refinery petroleum fractions (except for pyrolysis naphthas and pyrolysis gasoline) containing less than ten volume percent benzene, carbon monoxide, cyclohexane, cyclohexene, cyclopentane, ethyl acetate, ethanol, ethyl ether, ethylene, fluorocarbons Numbers 11, 12, 13, 14, 21, 22, 23, 113, 114, 115, and 116, helium, isohexane, isopropyl alcohol, methyl acetylene, methyl chloroform, methyl cyclohexane, neon, nonane, oxides of nitrogen, propane, propyl alcohol, propylene, propyl ether, sulfur dioxide, alumina, calcium carbonate, calcium silicate, cellulose fiber, cement dust, emery dust, glycerin mist, gypsum, iron oxide dust, kaolin, limestone, magnesite, marble, pentaerythritol, plaster of paris, silicon, silicon carbide, starch, sucrose, zinc stearate, or zinc oxide.

Emissions of carbon monoxide from Line 3 sealant application system as result of the proposed project will not exceed 6.0 lb/hr and 10 tpy.

(3) Total new or increased emissions, including fugitives, shall not exceed 1.0 lb/hr of any chemical having a limit value (L) greater than 200 milligrams per cubic meter (mg/m^3) as listed and referenced in Table 262 of §106.262 of this title (relating to Facilities (Emission and Distance Limitations)) or of any other chemical not listed or referenced in Table 262. Emissions of a chemical with a limit value of less than 200 mg/m^3 are not allowed under this section.

Emissions of carbonyl sulfide from the Line 3 sealant application system as result of the proposed project will meet the emission limit in this paragraph.

(4) For physical changes or modifications to existing facilities, there shall be no changes to or additions of any air pollution abatement equipment.

The proposed project will not involve changes to or additions of any air pollution abatement equipment.

(5) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.

Visible emissions from sources associated with the Line 3 sealant application system will not exceed 5.0% opacity in any six-minute averaging period.

(6) For emission increases of five tons per year or greater, notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.

The total emissions from the Line 3 sealant application system as result of the proposed project are less than five tons per year. Therefore, this section does not apply.

(7) For emission increases of less than five tons per year, notification must be provided using either:

(A) Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any; or

(B) Form PI-7 by March 31 of the following year summarizing all uses of this permit by rule in the previous calendar year. This annual notification shall include a description of the project, calculations, data identifying specific chemical names, limit values, and a description of pollution control equipment, if any.

The total emissions from the Line 3 sealant application system as result of the proposed project are less than five tons per year. GAF is submitting this revision application including the required information listed above by March 31 of the following year.

(b) The following are not authorized under this section:

(1) construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and
(2) any change to any facility authorized under another section of this chapter or authorized under a standard permit.

This PBR revision registration is not being used to authorize construction of a facility authorized under another PBR or for which a standard permit is in effect, or any change to any facility authorized under another PBR or authorized under a standard permit.

7.2. REQUIREMENTS FOR FACILITIES (EMISSION AND DISTANCE LIMITATIONS) (30 TAC § 106.262) EFFECTIVE NOVEMBER 1, 2003

(a) Facilities, or physical or operational changes to a facility, are permitted by rule provided that all of the following conditions of this section are satisfied.

(1) Emission points associated with the facilities or changes shall be located at least 100 feet from any off-plant receptor. Off-plant receptor means any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located.

The location of the emission point associated with facilities proposed to be authorized under this PBR registration (i.e., Line 3 Mist Elimination System stack) is at least 100 feet from the nearest off-plant receptor, including any off-property recreational area, residence, or other structure not occupied or used solely by the Dallas Plant.

(2) New or increased emissions, including fugitives, of chemicals shall not be emitted in a quantity greater than five tons per year nor in a quantity greater than E as determined using the equation E = L/K and the following table.

D, Feet	*K*	
100	*326*	*E = maximum allowable hourly emission,*
200	*200*	*and never to exceed 6 pounds per*
300	*139*	*hour.*
400	*104*	
500	*81*	*L = value as listed or referenced in Table 262*
600	*65*	
700	*54*	
800	*46*	*K = value from the table on this page.*
900	*39*	*(interpolate intermediate values)*
1,000	*34*	
2,000	*14*	*D = distance to the nearest off-plant receptor.*
3,000 or more	*8*	

TABLE 262
LIMIT VALUES (L) FOR USE WITH EXEMPTIONS FROM PERMITTING §106.262
The values are not to be interpreted as acceptable health effects values relative to the issuance of any permits under Chapter 116 of this title (relating to Control of Air Pollution by Permits for New Construction or Modification).

Compound	*Limit (L) Milligrams Per Cubic Meter*
Acetone	*590*
Acetaldehyde	*9*
Acetone Cyanohydrin	*4*
Acetonitrile	*34*
Acetylene	*2662*
N-Amyl Acetate	*2.7*
Sec-Amyl Acetate	*1.1*
Benzene	*3*
Beryllium and Compounds	*0.0005*
Boron Trifluoride, as HF	*0.5*
Butyl Alcohol, -	*76*
Butyl Acrylate	*19*

Compound	*Limit (L) Milligrams Per Cubic Meter*
Butyl Chromate	*0.01*
Butyl Glycidyl Ether	*30*
Butyl Mercaptan	*0.3*
Butyraldehyde	*1.4*
Butyric Acid	*1.8*
Butyronitrile	*22*
Carbon Tetrachloride	*12*
Chloroform	*10*
Chlorophenol	*0.2*
Chloroprene	*3.6*
Chromic Acid	*0.01*
Chromium Metal, Chromium II and III Compounds	*0.1*
Chromium VI Compounds	*0.01*
Coal Tar Pitch Volatiles	*0.1*
Creosote	*0.1*
Cresol	*0.5*
Cumene	*50*
Dicyclopentadiene	*3.1*
Diethylaminoethanol	*5.5*
Diisobutyl Ketone	*63.9*
Dimethyl Aniline	*6.4*
Dioxane	*3.6*
Dipropylamine	*8.4*
Ethyl Acrylate	*0.5*
Ethylene Dibromide	*0.38*
Ethylene Glycol	*26*
Ethylene Glycol Dinitrate	*0.1*
Ethylidene-2-norbornene, 5-	*7*
Ethyl Mercaptan	*0.08*
Ethyl Sulfide	*1.6*
Glycolonitrile	*5*
Halothane	*16*
Heptane	*350*
Hexanediamine, 1,6-	*0.32*
Hydrogen Chloride	*1*
Hydrogen Fluoride	*0.5*
Hydrogen Sulfide	*1.1*
Isoamyl Acetate	*133*
Isoamyl Alcohol	*15*
Isobutyronitrile	*22*
Kepone	*0.001*
Kerosene	*100*
Malononitrile	*8*
Mesityl Oxide	*40*
Methyl Acrylate	*5.8*

Compound	*Limit (L) Milligrams Per Cubic Meter*
Methyl Amyl Ketone	*9.4*
Methyl-t-butyl ether	*45*
Methyl Butyl Ketone	*4*
Methyl Disulfide	*2.2*
Methylenebis (2-chloroaniline) (MOCA)	*0.003*
Methylene Chloride	*26*
Methyl Isoamyl Ketone	*5.6*
Methyl Mercaptan	*0.2*
Methyl Methacrylate	*34*
Methyl Propyl Ketone	*530*
Methyl Sulfide	*0.3*
Mineral Spirits	*350*
Naphtha	*350*
Nickel, Inorganic Compounds	*0.015*
Nitroglycerine	*0.1*
Nitropropane	*5*
Octane	*350*
Parathion	*0.05*
Pentane	*350*
Perchloroethylene	*33.5*
Petroleum Ether	*350*
Phenyl Mercaptan	*0.4*
Propionitrile	*14*
Propyl Acetate	*62.6*
Propylene Oxide	*20*
Propyl Mercaptan	*0.23*
Silica-amorphous-precipitated, silica gel	*4*
Silicon Carbide	*4*
Stoddard Solvent	*350*
Styrene	*21*
Succinonitrile	*20*
Tolidine	*0.02*
Trichloroethylene	*135*
Trimethylamine	*0.1*
Valeric Acid	*0.34*
Vinyl Acetate	*15*
Vinyl Chloride	*2*

NOTE: The time weighted average (TWA) Threshold Limit Value (TLV) published by the American Conference of Governmental Industrial Hygienists (ACGIH), in its TLVs and BEIs guide (1997 Edition) shall be used for compounds not included in the table. The Short Term Exposure Level (STEL) or Ceiling Limit (annotated with a "C") published by the ACGIH shall be used for compounds that do not have a published TWA TLV. This section cannot be used if the compound is not listed in

the table or does not have a published TWA TLV, STEL, or Ceiling Limit in the ACGIH TLVs and BEIs guide.

The Dallas Plant has compared the total asphalt fume emissions being authorized under §106.262 as a result of the proposed project to the list of compounds contained in Figure 2: 30 TAC §106.262(a)(2), as well as to the compounds included in the *TLVs and BEIs guide (1997 Edition).*[3] Emissions of the asphalt fume are proposed to be authorized under §106.262 and will not exceed the respective "E" determined in the equation "E = L/K" or five tons per year, as documented in Appendix A.

(3) Notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities. The notification shall include a description of the project, calculations, and data identifying specific chemical names, L values, D values, and a description of pollution control equipment, if any.

This PBR revision application is being submitted to authorize the proposed project at the Dallas Plant under PBR §106.262, and includes:

- TCEQ Form PI-7 CERT (via STEERS)
- Process Description
- Emission Calculations
- Identification of the emitted compounds
- Applicable limit values

(4) The facilities in which the following chemicals will be handled shall be located at least 300 feet from the nearest property line and 600 feet from any off-plant receptor and the cumulative amount of any of the following chemicals resulting from one or more authorizations under this section (but not including permit authorizations) shall not exceed 500 pounds on the plant property and all listed chemicals shall be handled only in unheated containers operated in compliance with the United States Department of Transportation regulations (49 Code of Federal Regulations, Parts 171-178): acrolein, allyl chloride, ammonia (anhydrous), arsine, boron trifluoride, bromine, carbon disulfide, chlorine, chlorine dioxide, chlorine trifluoride, chloroacetaldehyde, chloropicrin, chloroprene, diazomethane, diborane, diglycidyl ether, dimethylhydrazine, ethyleneimine, ethyl mercaptan, fluorine, formaldehyde (anhydrous), hydrogen bromide, hydrogen chloride, hydrogen cyanide, hydrogen fluoride, hydrogen selenide, hydrogen sulfide, ketene, methylamine, methyl bromide, methyl hydrazine, methyl isocyanate, methyl mercaptan, nickel carbonyl, nitric acid, nitric oxide, nitrogen dioxide, oxygen difluoride, ozone, pentaborane, perchloromethyl mercaptan, perchloryl fluoride, phosgene, phosphine, phosphorus trichloride, selenium hexafluoride, stibine, liquified sulfur dioxide, sulfur pentafluoride, and tellurium hexafluoride. Containers of these chemicals may not be vented or opened directly to the atmosphere at any time.

The facilities involved in the PBR revision application to be authorized under §106.262 do not handle hydrogen sulfide or any of the chemicals listed above. Therefore, the requirements do not apply.

(5) For physical changes or modifications to existing facilities, there shall be no changes or additions of air pollution abatement equipment.

[3] American Conference of Governmental Industrial Hygienists, *TLVs and BEIs Guide*, 1997 Edition

The proposed project does not involve physical changes to or additions of air pollution abatement equipment to existing facilities.

(6) Visible emissions, except uncombined water, to the atmosphere from any point or fugitive source shall not exceed 5.0% opacity in any six-minute period.

Visible emissions from the facilities involved in this PBR revision application will not exceed five percent opacity in any six-minute period.

(b) The following are not authorized under this section except as noted in subsection (c) of this section:

(1) construction of a facility authorized in another section of this chapter or for which a standard permit is in effect; and

(2) any change to any facility authorized under another section of this chapter or authorized under a standard permit.

None of the facilities associated with this PBR revision application are authorized under another section of Chapter 106 or standard permit.

(c) If a facility has been authorized under another section of this chapter or under a standard permit, subsection (a)(2) and (3) of this section may be used to qualify the use of other chemicals at the facility.

None of the facilities associated with this PBR revision application are authorized under another section of Chapter 106 or standard permit.

7.3. REQUIREMENTS FOR ORGANIC AND INORGANIC LIQUID LOADING AND UNLOADING (30 TAC § 106.472) EFFECTIVE SEPTEMBER 4, 2000

Liquid loading or unloading equipment for railcars, tank trucks, or drums; storage containers, reservoirs, tanks; and change of service of material loaded, unloaded, or stored is permitted by rule, provided that no visible emissions result and the chemicals loaded, unloaded, or stored are limited to:

(1) the following list: asphalt, resins, soaps, lube oils, fuel oils, waxes, polymers, detergents, lube oil additives, kerosene, wax emulsions, vegetable oils, greases, animal fats, and diesel fuels;

(2) water or wastewater;

(3) aqueous salt solutions;

(4) aqueous caustic solutions, except ammonia solutions;

(5) inorganic acids except oleum, hydrofluoric, and hydrochloric acids;

(6) aqueous ammonia solutions if vented through a water scrubber;

(7) hydrochloric acid if vented through a water scrubber;

(8) acetic acid if vented through a water scrubber;

(9) organic liquids having an initial boiling point of 300 degrees Fahrenheit or greater. Facilities loading, unloading, or storing butyric acid, isobutyric acid, methacrylic acid, mercaptans, croton oil, 2- methyl styrene, or any other compound with an initial boiling point of 300 degrees Fahrenheit or greater listed in 40 Code of Federal Regulations 261, Appendix VIII shall be located at least 500 feet from any recreational area or residence or other structure not occupied or used solely by the owner of the facility or the owner of the property upon which the facility is located.

The proposed 3120 Adhesive Storage Tank will store adhesive asphalt, which is included in the list of compounds permitted by rule in §106.472(1). GAF will comply with the requirements of §106.472, including no visible emissions.

APPENDIX A: EMISSION CALCULATIONS

GAF Dallas Plant
Emissions Summary and PBR 106.261 and 106.262 Compliance Demonstration

Table 1. Annual Emission Summary and PBR Compliance Evaluation

EPN	Description	PBR	Annual Emission Rate (tpy)					Change in PBR Revision Project?
			CO	$PM/PM_{10}/PM_{2.5}$ (asphalt fume)	VOC (asphalt fume)	H_2S	Carbonyl Sulfide (HAP)	
CFL2	*Line 3 Sealant Run Tank*	*PBR 106.472*	*0.01*	*2.48E-04*	*0.18*	*6.21E-03*	--	*No Changes*
	3120 Adhesive Storage Tank	*PBR 106.472*	*0.02*	*4.59E-04*	*0.33*	*0.01*	--	*New Tank*
	Self-seal Applicator and Laminate Self-seal Applicator	*PBRs 106.261, 106.262*	*0.02*	*1.08E-04*	*0.08*	--	*6.79E-04*	*Increase in Sealant Throughtput and Authorize Adhesive Throughput*
		Total Annual Emissions	**0.05**	**8.14E-04**	**0.58**	**0.02**	**6.79E-04**	
Comparison to PBR 106.4 Limits								
		106.4 Limits [1]	250	25/15/10	25	25	25	
		In compliance with 106.4?	Y	Y	Y	Y	Y	

[1] The Dallas Plant has been through public notice, the PBR limits are obtained from 30 TAC 106.4(a)(1).

Table 2. Hourly Emission Summary

EPN	Description	PBR	Hourly Emission Rate (lb/hr)					Change in PBR Revision Project?
			CO	$PM/PM_{10}/PM_{2.5}$ (asphalt fume)	VOC (asphalt fume)	H_2S	Carbonyl Sulfide (HAP)	
CFL2	*Line 3 Sealant Run Tank*	*PBR 106.472*	*2.81E-03*	*6.60E-05*	*0.05*	*1.66E-03*	--	*No Changes*
	3120 Adhesive Storage Tank	*PBR 106.472*	*0.12*	*2.82E-03*	*2.00*	*0.07*	--	*New Tank*
	Self-seal Applicator and Laminate Self-seal Applicator	*PBRs 106.261, 106.262*	*4.76E-03*	*2.46E-05*	*0.02*	--	*1.55E-04*	*Increase in Sealant Throughtput and Authorize Adhesive Throughput*
		Total Hourly Emissions	**0.13**	**2.91E-03**	**2.06**	**0.07**	**1.55E-04**	

Table 3. Distance and K Value [1]

D (minimum) (feet)	K
450	92.5

[1] Minimum distance from the proposed EPN to the nearest off-plant receptor was used for emission limit determination.
The K value is obtained from an interpolation of the values in 30 TAC §106.262 (a)(2).

Table 4. PBR 106.261 and 106.262 Compliance Demonstration

Speciated Chemical	L [1] (mg/m^3)	Allowed Emission Limit (L/K) (lb/hr)	Allowed Emission Limit (L/K) (tpy)	Proposed Total Emissions [3] (lb/hr)	Proposed Total Emissions [3] (tpy)	Authorization	Qualified for PBR?
CO	N/A	6	10	4.76E-03	0.02	106.261(a)(2)	**Yes**
Asphalt Fume [2] ($PM/PM_{10}/PM_{2.5}$ + VOC)	5	0.054	0.24	0.017	0.08	106.262	**Yes**
Carbonyl Sulfide	N/A	1	4.38	1.55E-04	6.79E-04	106.261(a)(3)	**Yes**

[1] The TLV values are obtained from Table 262 or the 1997 American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values list.

[2] Asphalt has both PM and VOC emissions since asphalt is a VOC itself and hot asphalt forms tar globules that are considered as PM.
Therefore, the PM and VOC emissions are added together for purposes of 106.262 to reflect the fact that they are different manifestations of the same substance.

GAF Dallas Plant
3120 Adhesive Storage Tank Emission Calculations (PBR 106.472)

Parameters	3120 Adhesive Storage Tank	Units
EPN	CFL2	
FIN	TK-AD	
Maximum Filling Rate [1]	6,930	gal/hr
	34,724,802	lb/yr
	4,890,817	gal/yr
R [2]	80.273	psia-gal/(lbmol-°R)
Worst-case liquid surface temperature [1]	400	°F
	204	°C
	859.67	°R
Adhesive Density [1]	7.10	lb/gal
Molecular Weight (M) [3]	105	lb/lb-mole
Vapor Pressure at worst-case liquid temperature [4]	0.112	psia
Hourly Working Loss (L_{max}) [2]	1.18	lb/hr
Annual Working Loss (L_W) [2]	0.42	tpy
Heated Tank? [1,5]	Y	
Particulate Fraction [1]	22%	
VOC Fraction [1]	78%	
Uncontrolled PM (asphalt fume) [6]	2.60E-01	lb/hr
	0.09	tpy
Uncontrolled VOC (asphalt fume) [6]	0.92	lb/hr
	0.33	tpy
Control Device	Mist Elimination System	
$PM/PM_{10}/PM_{2.5}$ control efficiency [1]	99.5%	
VOC Control Efficiency	0.0%	Conservative assumption
Controlled $PM/PM_{10}/PM_{2.5}$ (asphalt fume) [7]	1.30E-03	lb/hr
	4.59E-04	tpy
Controlled VOC (asphalt fume) [7]	0.92	lb/hr
	0.33	tpy
Average Asphalt Fume lower explosion limit (LEL) (%) [8]	25%	%
CO estimate (ppm) [9]	835.5	ppm
H_2S estimate (ppm) [9]	403.61	ppm
P	0.054	lb/hr
	0.019	tpy
H_2S emissions [10]	0.032	lb/hr
	0.011	tpy

1. Information provided by GAF.
2. Maximum Short-term working loss emissions were calculated using the TCEQ NSR Guidance for Storage Tanks.
(https://www.tceq.texas.gov/permitting/air/guidance/newsourcereview/tanks/nsr_fac_tanks.html)
Hourly Emissions (lb/hr) were calculated using the following formula:

Calculation Procedure

Emission from loading a VFR tank should be calculated using Equation 1:

Equation 1 $$L_{MAX} = \frac{M_V \times P_{VA}}{R \times T} \times FR_M$$ **Equation 1**

- MV (lb/lbmol) is the vapor molecular weight of the VOC
- PVA (psia) is the vapor pressure of the tank contents at the worst case temperature
- FRM (gal/hr) is the maximum filling rate
- R ((Psia × gal)/(lbmol × °R)) is the ideal gas constant (80.273 for the selected units)
- T (Rankine) is the worst case liquid surface temperature. It is TCEQ practice to use either 95°F (554.67°R) or the actual temperature, whichever is higher

Using these units in Equation 1 gives emissions as a lb/hr rate.

Annual Emissions (tpy) = Mv x Pva / (R x T) X FRM (gal/yr) / 2,000 (lb/ton).

3. Molecular weight of asphalt fume: The value 105 is used per AP-42.

4. For asphalt, the vapor pressure is calculated as a function of the storage temperature using Antoine Equation from AP-42, 11.1-9 Hot Mix Asphalt Plants.

$$\log_{10} P = \frac{-0.05223A}{T} + B$$

where:

P = vapor pressure, mm Hg
T = absolute temperature, Kelvin

A =	75,350.06
B =	9.00346
C =	NA

5. No standing losses are calculated since the tank is heated.

6. Uncontrolled PM and VOC emissions are calculated as follows:

Uncontrolled PM Emissions = PM% * Total Uncontrolled Emissions
Uncontrolled VOC Emissions = VOC%* Total Uncontrolled Emissions

7. Controlled PM and VOC emissions are calculated as follows:

Controlled PM Emissions = (1 - PM Control Efficiency %) * PM Uncontrolled Emissions
Controlled VOC Emissions = (1 - VOC Control Efficiency %) * VOC Uncontrolled Emissions

It is conservatively assumed the VOC control efficiency is zero. So the controlled VOC emissions equal to uncontrolled VOC emissions.

8. The average asphalt fume LEL% is obtained from the Centers for Disease Control and Prevention Asphalt Fume Exposures During the manufacture of Asphalt Roofing Products (Chapter 5.1.2), August 2001. Based on this publication "Current asphalt fume concentrations average less than 25% of the lower explosive limit in all storage tanks where these controls are used.", therefore, a conservative value of 25% is used in the calculation.

9. CO and H_2S ppm values are calculated based on the Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading publication by David Trumbore, Winter 1999, as follows:

CO (ppm) = 142*%LEL+800 (per Trumbore 1999, p 258)
H_2S (ppm) = 12.43*%LEL+400.5 (pr Trumbore 1999, p. 258)

10. CO and H_2S ppm values are calculated based on the Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading publication by David Trumbore, Winter 1999, as follows:

CO / H_2S Emissions (lb/hr) = EF * Concentration (ppm) * 0.028m^3/cf * 1lb/454,000 mg * Throughput (gal/hr) / 7.48 (gal/cf) * Total Uncontrolled Emissions / Working Losses

CO / H_2S Emissions (tpy) = EF * Concentration (ppm) * 0.028m^3/cf * 1lb/454,000 mg * Throughput (gal/yr) / 7.48 (gal/cf) * Total Uncontrolled Emissions / Working Losses / 2,000 (lb/ton

EF = AP-42 (mg/m^3/ppm) = 1.14 (CO) & 1.39 (H_2S)

Since there are no standing losses are calculated since the tank is heated, the total uncontrolled emissions equal to the uncontrolled working loss.

GAF Dallas Plant
Emissions from Self-seal Applicator and Laminate Self-seal Applicator (PBRs 106.261, 106.262)

EPN CFL2 Line 3 Sealant and Adhesive System - Mist Elimination System
FIN SEALAP Self-seal Applicator and Laminate Self-seal Applicator

Emission Factors - Adhesive Applicator Factors

ARMA 2003 Adhesive Applicator Factors			
Pollutant	**ARMA Factor [1] (lb/ton asphalt in product)**	**Safety Factor**	**Emission Factor Used in Calculations (lb/ton asphalt in product)**
Total Hydrocarbons (THC, as hexane)	4.43E-03	2x	8.86E-03
Carbonyl Sulfide (COS)	3.80E-05	2x	7.60E-05
Formaldehyde	3.20E-05	2x	6.40E-05
CO	1.20E-03	2x	2.40E-03

1. Emission Factors obtained from Proposed Emission Factors For Criteria Pollutants and Hazardous Air Pollutants from Asphalt Roofing Manufacturing (Asphalt Roofing Manufacturers Association [ARMA] 2003) Appendix G, Table B-3.

Emission Factors - Sealant Applicator Factors

ARMA 2003 Sealant Applicator Factors			
Pollutant	**ARMA Factor [1] (lb/ton asphalt in product)**	**Safety Factor**	**Emission Factor Used in Calculations (lb/ton asphalt in product)**
Total Hydrocarbons (THC, as hexane)	5.64E-03	2x	1.13E-02
Carbonyl Sulfide (COS)	3.91E-05	2x	7.82E-05
Formaldehyde	ND		ND
CO	4.82E-04	2x	9.64E-04

1. Emission Factors obtained from Proposed Emission Factors For Criteria Pollutants and Hazardous Air Pollutants from Asphalt Roofing Manufacturing (Asphalt Roofing Manufacturers Association [ARMA] 2003) Appendix G, Table B-4.

Emission Factors - Worst Case (Adhesive/Sealant Applicator)

ARMA 2003 Adhesive/Sealant Applicator Factors	
Pollutant	**Emission Factor Used in Calculations (lb/ton asphalt in product)**
Total Hydrocarbons (THC, as hexane)	1.13E-02
Carbonyl Sulfide (COS)	7.82E-05
Formaldehyde	ND
P	2.40E-03

Emission Calculations

Pollutant	**Emissions (lb/hr) [1]**	**Emissions (tpy) [2]**
CO	0.005	0.021
THC	0.022	0.098
VOC (asphalt fume) [2]	*0.017*	*0.077*
PM/PM $_{10}$/PM $_{2.5}$ (Uncontrolled asphalt fume) [2]	*0.005*	*0.022*
PM/PM $_{10}$/PM $_{2.5}$ (Controlled fume) [3]	*2.46E-05*	*1.08E-04*
COS	1.55E-04	6.79E-04
Formaldehyde	--	--
Total HAPS	1.55E-04	6.79E-04

1. The following equation is used to calculate emissions based on the above-mentioned factors:
Emissions (lb/hr) = EF * Hourly Asphalt Usage
Emissions (tpy) = EF * Annual Asphalt Usage / 2,000 (lb/ton)
Coating Asphalt Usage: **3,964** lb/hr
Coating Asphalt Usage: **34,724,802** lb/yr
2. Based on the sealant composition, the following percentages are used to calculate VOC and PM emissions.
VOC = 78% (Per Trumbore 1999)
PM = 22% (Per Trumbore 1999)
VOC Emissions = VOC%* Total Uncontrolled Emissions
PM Emissions = PM% * Total Uncontrolled Emissions
3. The Mist Elimination System in Line 3 Sealant System provides 99.5% PM control.
Filter PM Control Efficiency = 99.5%
Controlled PM Emissions = (1 - PM Control Efficiency %) * PM Uncontrolled Emissions

APPENDIX B: SAFETY DATA SHEET

U.S. Polyco™
Adhering To Quality

SAFETY DATA SHEET

FILE NO.: 002 (Ennis Plant) SDS REV.DATE: 3/20/13

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: USP 3000- Series

GENERAL USES: Shingle Adhesives / Sealants

MANUFACTURER:	U.S. Polyco, Inc. (Corporate)	U.S. Polyco, Inc. (Ennis Plant)
ADDRESS:	9110 Double Diamond Pkwy STEB Reno, NV 89521	3901 South I 45 Ennis, TX 75119

EMERGENCY PHONE: 972-875-9300
AFTER BUSINESS HOURS: Chemtrec 1(800) 424-9300
OTHER CALLS: 775-626-8818
FAX PHONE: 775-626-8825

CHEMICAL NAME: Polymer Modified Asphalts/ Polymer Modified Bitumen
CHEMICAL FAMILY: Petroleum Hydrocarbon

PREPARED BY: Jared Miguez

SECTION 2: HAZARD IDENTIFICATION

WARNING: Hydrocarbon odor and can burn in a fire.
Normally transported at high temperatures.
Asphalt based products may emit Vapors when heated in excess of ~ 300F.
Molten asphalt can cause thermal burns to eyes and skin.
Trace levels of hydrogen sulfide (H2S) can concentrate in closed/non-ventilated tanks.
(Hydrogen sulfide(H2S) is toxic in high concentrations.)

	NFPA 704	NPCA-HMIS	KEY
HEALTH:	1	1	0= MINIMAL
FIRE:	1	1	1=SLIGHT
REACTIVITY:	0	0	2=MODERATE
SPECIFIC HAZARD:	NONE	N/A	3=SERIOUS
PROTECTION INDEX:	N/A	B	4=SEVERE

POTENTIAL HEALTH EFFECTS

EYES: *Extreme temperatures* can cause eye irritation and burns
SKIN: Can cause severe burns to skin
INGESTION: Not likely under normal use
INHALATION: Irritation to nose, throat ,and respiratory system during prolonged exposure when heated to ~ 300 F +.

IARC CLASSIFICATION 2B

SECTION 3: CHEMICAL COMPOSITION

HAZARDOUS INGREDIENT:	CAS NO.	% VOL	Hazard Class /Risk
Asphalt (Petroleum hydrocarbon)	8052-42-4	92-98	N/A
Styrene-butadiene block copolymer	9003-55-8	2-8	N/A

	OSHA PEL		ACGIH TLV		NIOSH REL	
Ingredient	TWA	STEL	TWA	STEL	TWA	STEL
Asphalt	.5 mg./m3	N.E.	.5 mg./m3	N.E.	.5 mg./m3	N.E.
Styrene-butadiene block copolymer	N.E.	N.E.	10 mg./m3	N.E.	N.E.	N.E.

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N.E. = None Established
Hazard class and risk: This column is completed for ingredients which are classified as hazardous under EU Directive(67/548/EEC, as amended) and are present in sufficient concentration to make the over all substance hazardous. In all situations the column will be completed as "Not Applicable"

SECTION 4: FIRST AID MEASURES

EYES:	**Flush eyes generously with water if exposed to fumes or cold asphalt .Seek medical attention if irritation persists.**
SKIN:	**DO NOT attempt to remove any molten asphalt that has splashed on the skin and or eyes. Cool the affected area with water , saline solution , or ice packs until the asphalt hardens. DO NOT REMOVE ASPHALT FROM SKIN OR BANDAGE BURN. Seek medical attention.**
INGESTION:	**Not a likely occurrence**
INHALATION:	**Get victim to fresh air If breathing is labored, administer oxygen. Seek medical attention. FUMES- Must not exceed 5 ppm TWA in a 8 hr period.**

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT:	**>500°F**
METHOD USED:	**COC**
AUTOIGNITION TEMPERATURE:	**>700°F**

EXTINGUISHING MEDIA ACCORDING TO NFPA GUIDE:	**Water spray, dry chemical, foam, or carbon dioxide. (Water or spray maycause frothing of product.)**
SPECIAL FIRE FIGHTING PROCEDURES:	**Do not use water directly on burning product. Use water stream and /or fog to cool heated containers/vessels and surrounding areas. If a leak or spill has not ignited, use water or spray to disperse the vapors and to provide protection for persons attempting to stop the leak.**
UNUSUAL FIRE AND EXPLOSION HAZARDS:	**NONE**
HAZARDOUS DECOMPOSITION BYPRODUCTS:	**Hyrdogen Sulfide, carbon monoxide, and other toxic gases may evolve during combustion.**

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:	**Contact local authorities** **Avoid breathing fumes** **Use SCBA for large spills or in confined spaces** **Contain spills (if possible)and prevent product from entering sewers, storm drains, and waterways.** **Absorb spills with sand, calcium carbonate or other inert materials.** **Place recovered materials in appropriate containers and dispose of in accordance with local regulations.** **Avoid contact with skin, eyes or clothing**

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SAFETY DATA SHEET

FILE NO.: 002 (Ennis Plant) SDS REV.DATE: 3/20/13

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE:	**Handle molten product with gloves, facesheild, cotton pants, longsleeves, and apron to prevent exposure to burns. Gloves should be used to handle the product in it's solid state Vessels and containers designed shall be designed to store molten asphalt as defined by local and state regulations.**
OTHER PRECAUTIONS:	**All personnel should wear appropriate PPE (Personal Protective Equipment) as defined in Sectiion 8. Avoid exposure to fumes. Stay upwind of vessel openings when possible. Minimize breathing of vapors and fumes.**

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:	**Per local and state regulations**
VENTILATION :	**Maintain adequate general dilution ventilation to remove vapor/fumes from storage vessels/tanks. Refer to local and state regulations.**
RESPIRATORY PROTECTION:	**Use a NIOSH/MSHA approved respirator if exposure reaches or exceeds occupational exposure limits (TLV/TWA 5 MG/m3)**
EYE PROTECTION:	**Ansi Z. 87 approved safety glasses/goggles and chemical resistant full face shield.**
SKIN PROTECTION:	**Wear substantial clothing. Cotton long sleeve shirts buttoned at the wrist, pants, gloves with gauntlets, leather boots or shoes with tops extending at least 15 cm above the ankle .**
OTHER PROTECTIVE CLOTHING OR EQUIPMENT:	**Protective splash apron, barrier creams or lotions to prevent irritation of the skin**
WORK HYGIENIC PRACTICES:	**Wash hands and exposed skin thoroughly after handling product. (warm mineral oil at 90 F can be used as well)**
EXPOSURE GUIDELINES:	**ACGIH (TLV/TWA 5 MG/m3)**

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	**Dark viscous liquid, semi- solid/ solid at ambient temperatures**
ODOR:	**Asphalt/petroleum distillate hydrocarbon odor**
PHYSICAL STATE:	**Semi-solid at ambient temperature with elastomeric properties. Molten liquid when heated above products melt point**
pH AS SUPPLIED:	**Neutral**
pH (Other):	**N/A**
BOILING POINT:	**>875°F**
MELTING POINT:	**185-225 °f**
FREEZING POINT:	**Not determined**
VAPOR PRESSURE (mmHg):	**Not Determined**
VAPOR DENSITY (AIR = 1):	**Not determined**
SPECIFIC GRAVITY: @60° F:	**0.98-1.15**
EVAPORATION RATE:	**Not determined**

SECTION 10: STABILITY AND REACTIVITY

CONDITIONS TO AVOID (STABILITY):	**Do not overheat (greater than 400F)**
INCOMPATIBILITY (MATERIAL TO AVOID):	**Water (While being held at elevated temperatures), flammable solvents/liquids**

SAFETY DATA SHEET

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HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	**Evolves toxic levels of carbon dioxides, carbon monoxides, irritating aldehydes and keytones when heated to combustion**
HAZARDOUS POLYMERIZATION:	**In certain conditions, and exothermic reaction can result from prolonged overheating**

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:	**No Toxicological testing have been performed on this product. Asphalt and asphalt based products, and its by-products have been determined by IARC (International Agency for Research of Cancer) has concluded that this product falls under the 2B category for Carcinogenicity. NIOSH concluded that asphalt fumes are a potential occupational carcinogen.**
EXPOSURE LIMIT	**5mg/m3 for oil mist over an 8 hour daily exposure (ACGIH)**

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:	**This product may kill grass and other vegitiation by interfering with transpiration and respiration. This product is not toxic to fish but may coat the gill structures resulting in suffocation if spilledin shallow, running water. Product may be moderately toxic to amphibians by preventing dermal respiration. This product may cause gastroinstinal distress in birds and mammals through ingestion. Prevent product from entering waterways, storm drains and sewers. A film or sheen will cause discoloration of the water surface or ajoining shoreline.**

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA HAZARD CLASS:	**This product has been evaluated for RCRA characteristics and *does* not meet the criteria of a hazardous waste if disposed of in its purchased form. Under RCRA it is the responsibility of the user of the product to determine at the time of diposal, whether the product meets RCRA critea for hazardous waste. This product is subject to chemical alteration, which may render the resulting product as hazardous.**
WASTE DISPOSAL METHOD:	**Dispose of product per local and state regulations**

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME:	**Elevated temperature liquid, NOS**
HAZARD CLASS:	**9**
ID NUMBER:	**UN 3257 PGIII**
CANADIAN TDG	**Not Available**
EUROPEAN	**Not available**

OTHER:	**See 49 CFR for additional requirements for descriptions, allowed modes of transport, and packaing. For more information concerning spills during transport, consult the latest DOT Emergency Response Guidebook for hazardous materials incidents, DOT P 5800 3. 2B -IARC Classification**

SAFETY DATA SHEET

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SECTION 15: REGULATORY INFORMATION

North America Regulatory Information

Clean water act/ Oil pollution act:	**Under section 311 of the CLEAN WATER ACT (40 CFR 110) and the Oil Pollution Control Act of 1990, this material is considered an oil. Any spills or discharges that produce a visible sheen or film on surface of water , or in waterways, dithes, or sewers leading to surface water must be reported. Contact the National Response Center at 800-424-8802.**
TSCA:	**All components of this material are listed in the US TSCA Inventory.**
OSHA:	**IARC Monographs state that when laboratory animals are exposed to severely hydrotreated oils, such as these product(s), there is insufficient evidence for cancer. These oils are unlabeled in accordance with 29 CFR 1910.1200.**
SARA TITLE III	**Section 302/304: Extremely Hazardous Substance None** **Section 313: Toxic Chemicals None**
CERCLA:	**Section 102(a) Hazardous substance- Not a reportable quantity**
CALIFORNIA PROPOSITION #65	**Not listed**
CANADIAN DOMESTIC SUSTANCES LIST	**All components of this product are listed.**

European regulatory information

EUROPEAN REGULATORY INFORMATION:	**This product is not known to be listed on the European Inventory of Existing Commercial Substances**
CLASSIFIED AS DANGEROUS TO SUPPLY:	**NO**
RISK PHRASES:	**NOT APPLICABLE**
SAFETY PHRASES:	**NOT APPLICABLE**
SYMBOLS:	**NONE**

Asian regulatory information

JAPAN ENCS:	**This product is not known to be listed on Japan's existing or new chemical substances list.**
CHINA:	**This product is not known to be listed on China's (IECSC) inventory of existing chemical substances manufactured or imported in China.**

SAFETY DATA SHEET

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SECTION 16: OTHER INFORMATION

HAZARD RATINGS RECOMMENDED FOR CONTAINERS EVALUATION

	NFPA 704	NPCA-HMIS	KEY
HEALTH:	**1**	**1**	**0= MINIMAL**
FIRE:	**1**	**1**	**1=SLIGHT**
REACTIVITY:	**0**	**0**	**2=MODERATE**
SPECIFIC HAZARD:	**NONE**	**N/A**	**3=SERIOUS**
PROTECTION INDEX:	**N/A**	**B**	**4=SEVERE**

Precautionary labels: **NONE REQUIRED**

This SDS is compiled in accordance with ANSI Z400.1 and the EU Safety Data Sheet Directive 91/155/EEC.

Glossary:

ACIGH- American conference of Govermental Industrial Hygienist; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of dangerous goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency center(US); CHIP- Chemical Hazard Information and Packaging;DSL Domestic Substance List; EC- Equivalent Concentration; EH40 (UK)- HSE guidance note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right To Know Act; HMIS-Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL-Permissible Exposure Limits; SARA (Title III)- Superfund Amendments and Reauthorization Act (313); TWA- Time Weighted Average;TLV-Threshold Limit Value; TSCA-Toxic Substances Control Act Public Law 94-469; USDOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System

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