From: Carolyn Maus
Sent: Wednesday, October 15, 2025 11:03 AM
To: Cromer, Colton
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Thanks, Colton! I'll let you know if anything comes up from my team leader's review (I don't anticipate any issues). Once she approves everything, we will send the project to public announcement/EPA review.

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1400


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From: Cromer, Colton <cromec@cpchem.com>
Sent: Tuesday, October 14, 2025 2:28 PM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Carolyn – our DAR signed/submitted an OP-CRO1 earlier today. Let me know if you need anything else.

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP

Texas Commission on Environmental Quality

Title V Existing

2114

Site Information (Regulated Entity)

What is the name of the permit area to be authorized?	OLEFIN UNITS
Does the site have a physical address?	Yes
Physical Address	
Number and Street	9500 INTERSTATE 10 E
City	BAYTOWN
State	TX
ZIP	77521
County	HARRIS
Latitude (N) (##.######)	29.813055
Longitude (W) (-###.######)	94.938611
Primary SIC Code	2869
Secondary SIC Code	
Primary NAICS Code	32511
Secondary NAICS Code	
Regulated Entity Site Information	
What is the Regulated Entity's Number (RN)?	RN103919817
What is the name of the Regulated Entity (RE)?	CHEVRON PHILLIPS CHEMICAL CEDAR BAYOU PLANT
Does the RE site have a physical address?	Yes
Physical Address	
Number and Street	9500 INTERSTATE 10 E
City	BAYTOWN
State	TX
ZIP	77521
County	HARRIS
Latitude (N) (##.######)	29.8175
Longitude (W) (-###.######)	-94.933888
Facility NAICS Code	
What is the primary business of this entity?	INDUSTRIAL CHEMICAL MANUFACTURING PLANT

Customer (Applicant) Information

How is this applicant associated with this site?	Owner Operator
What is the applicant's Customer Number (CN)?	CN600303614
Type of Customer	Corporation
Full legal name of the applicant:	
Legal Name	Chevron Phillips Chemical Company LP
Texas SOS Filing Number	13487011
Federal Tax ID	731587712
State Franchise Tax ID	17315877120

State Sales Tax ID	
Local Tax ID	
DUNS Number	152975665
Number of Employees	501+
Independently Owned and Operated?	No

Responsible Official Contact

Person TCEQ should contact for questions about this application:	
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	BRYAN
Middle	
Last	CANFIELD
Suffix	
Credentials	
Title	EVP OF MANUFACTURING AND PRODUCTS
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	9500 LAKESIDE BLVD
Routing (such as Mail Code, Dept., or Attn:)	
City	THE WOODLANDS
State	TX
ZIP	77381
Phone (###-###-####)	8328134445
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	bryan.canfield@cpchem.com

Duly Authorized Representative Contact

Person TCEQ should contact for questions about this application	
Select existing DAR contact or enter a new contact.	DIRK PERRIN(CHEVRON PHILLIP...)
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	DIRK
Middle	
Last	PERRIN
Suffix	
Credentials	
Title	PLANT MANAGER
Enter new address or copy one from list	
Mailing Address	

Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	9500 INTERSTATE 10 E
Routing (such as Mail Code, Dept., or Attn:)	
City	BAYTOWN
State	TX
Zip	77521
Phone (###-###-####)	2814216578
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	2814216169
E-mail	perrid@cpchem.com

Technical Contact

Person TCEQ should contact for questions about this application:	
Select existing TC contact or enter a new contact.	COLTON CROMER(CHEVRON PHILLIP...)
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	COLTON
Middle	
Last	CROMER
Suffix	
Credentials	
Title	ENVIRONMENTAL AIR TEAM SUPERVISOR
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	9500 EAST FWY
Routing (such as Mail Code, Dept., or Attn:)	
City	BAYTOWN
State	TX
ZIP	77521
Phone (###-###-####)	2814216741
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	cbairgroup@cpchem.com

Title V General Information - Existing

1) Permit Type:	SOP
2) Permit Latitude Coordinate:	29 Deg 48 Min 47 Sec
3) Permit Longitude Coordinate:	94 Deg 56 Min 19 Sec
4) Is this submittal a new application or an update to an existing application?	Update
4.1. Select the permit/project number for which this update should be applied.	2114-37501

5) Who will electronically sign this Title V application?	Duly Authorized Representative
6) Does this application include Acid Rain Program or Cross-State Air Pollution Rule requirements?	No

Title V Attachments Existing

Attach OP-1 (Site Information Summary)

Attach OP-2 (Application for Permit Revision/Renewal)

Attach OP-ACPS (Application Compliance Plan and Schedule)

Attach OP-REQ1 (Application Area-Wide Applicability Determinations and General Information)

Attach OP-REQ2 (Negative Applicable Requirement Determinations)

Attach OP-REQ3 (Applicable Requirements Summary)

Attach OP-PBRSUP (Permits by Rule Supplemental Table)

Attach OP-SUMR (Individual Unit Summary for Revisions)

Attach OP-MON (Monitoring Requirements)

Attach OP-UA (Unit Attribute) Forms

If applicable, attach OP-AR1 (Acid Rain Permit Application)

Attach OP-CRO2 (Change of Responsible Official Information)

Attach OP-DEL (Delegation of Responsible Official)

Attach Void Request Form

Attach any other necessary information needed to complete the permit.

[File Properties]

File Name	FOP-02114 Proj. 37501 OP-CRO1 10.13.2025.pdf
Hash	1AE8769C78F6EB78C89E04FA7A46F6BBB558C4545913CDA0B7009440823C8121
MIME-Type	application/pdf

An additional space to attach any other necessary information needed to complete the permit.

Certification

I certify that I am the Duly Authorized Representative for this application and that, based on information and belief formed after reasonable inquiry, the statements and information on this form are true, accurate, and complete.

1. I am Dirk Perrin, the owner of the STEERS account ER075610.

2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcemer of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Title V Existing 2114.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEC

OWNER OPERATOR Signature: Dirk Perrin OWNER OPERATOR

Account Number:	ER075610
Signature IP Address:	172.202.192.127
Signature Date:	2025-10-14
Signature Hash:	2C540391995D727FA5F51DF20743244E70075C7DD1EC66C9230431593ACFBD5D
Form Hash Code at time of Signature:	CC1005CD9DA897F988556E76536B5417E144B30BBFA354B9824FA6CEC8281967

Submission

Reference Number:	The application reference number is 825031
Submitted by:	The application was submitted by ER075610/Dirk Perrin
Submitted Timestamp:	The application was submitted on 2025-10-14 at 13:26:07 CDT
Submitted From:	The application was submitted from IP address 172.202.192.127
Confirmation Number:	The confirmation number is 684961
Steers Version:	The STEERS version is 6.93
Permit Number:	The permit number is 2114

Additional Information

Application Creator: This account was created by Colton D Cromer

Form OP-CRO1
Certification by Responsible Official
Federal Operating Permit Program
Texas Commission on Environmental Quality

All initial issuance, revision, renewal, and reopening permit application submittals requiring certification must be addressed using this form. Updates to site operating permit (SOP) and temporary operating permit (TOP) applications, other than public notice verification materials, must be certified prior to authorization of public notice or start of public announcement. Updates to general operating permit (GOP) applications must be certified prior to receiving an authorization to operate under a GOP.

I. Identifying Information	
RN: 103919817	
CN: 600303614	
Account No.: HG-0310-V	
Permit No.: O-2114	
Project No.: 37501	
Area Name: Ethylene Units, Utilities, Normal Alpha Olefins, Poly Alpha Olefins, and 1-Hexene Units	
Company Name: Chevron Phillips Chemical Company LP	
II. Certification Type *(Please mark appropriate box)*	
☐ Responsible Official Representative	☒ Duly Authorized Representative
III. Submittal Type *(Please mark appropriate box) (Only one response can be accepted per form)*	
☐ SOP/TOP Initial Permit Application	☒ Permit Revision, Renewal, or Reopening
☐ GOP Initial Permit Application	☐ Update to Permit Application
☐ Other: _____	

Form OP-CRO1
Certification by Responsible Official
Federal Operating Permit Program
Texas Commission on Environmental Quality

All initial issuance, revision, and renewal permit application submittals requiring certification must be accompanied by this form. Updates to acid rain or CSAPR (other than public notice verification materials) must be certified prior to authorization of public notice for the draft permit.

IV. Certification of Truth

This certification does not extend to information which is designated by TCEQ as information for reference only.

I, Dirk Perrin certify that I am the Duly Authorized Representative (DAR)

(Certifier Name printed or typed) *(RO or DAR)*

and that, based on information and belief formed after reasonable inquiry, the statements and information dated during the time period or on the specific date(s) below, are true, accurate, and complete:
Note: Enter Either a Time Period or Specific Date(s) for each certification. This section must be completed. The certification is not valid without documentation date(s).

Time Period: From 04/28/2025 to 09/05/2025

(Start Date) *(End Date)*

Specific Dates: _____ _____ _____ _____

(Date 1) *(Date 2)* *(Date 3)* *(Date 4)*

_____ _____

(Date 5) *(Date 6)*

Signature: signed via STEERS Signature Date: October 2025

Title: Plant Manager

From: Carolyn Maus
Sent: Monday, October 6, 2025 10:28 PM
To: 'Cromer, Colton'
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Hi Colton,

I have prepared another revised WDP implementing the items from your last response. Here are the changes that have been made to the document:

1) Updated term 23 to refer to date on most recent OP-PBRSUP.
2) Added additional scenario for 1592-18 and 1592-18A for Chapter 115, Vent Gas.
3) Updated issuance date for NSR Permit 1504A/PSDTX748M1/N148M2 to August 29, 2025.
4) Updated Major NSR Summary Table for NSR Permit 1504A/PSDTX748M1/N148M2 based on your tracked changes.
5) Removed PBR registration 177876 from unit F-1594.
6) Removed PBR registration 156170 from unit F-1891.
7) Added approval email for alternative monitoring for cooling towers to Alternative Requirement section. Added ** See Alternative Requirement note to the Applicable Requirements Summary for Z-1104 and Z-1104TEMP for Chapter 115, HRVOC.

The WDP is available via TCEQ's secure FTP server, at https://ftps.tceq.texas.gov/index.php. I have shared it with you and Daniel Guthrie there. (You are welcome to pass the file along to anyone that needs it. Or, if you would like me to share directly with anyone else via the FTP, that person can create an account with their email and you can let me know.) The file will remain there for 7 days (available until 10/13/2025) so please save the file to another location for your work.

I know you all have been wanting to get this revision issued, and my management would also like to get this to public announcement as soon as possible so we can avoid project backlog. All I need from you is certification for your responses over the course of the project. Since we've had multiple submittals, it will probably be easiest to use the Time Period option on Form OP-CRO1 to cover the date range. Based on my records, the date range would start with 04/28/2025 and end with either 09/05/2025, or your response to this last draft, if you have any remaining comments. The form can be submitted:

1) By uploading the form in STEERS (RO or DAR need to submit), or
2) By emailing a scan of the signed form and following up with the wet ink original in the mail.

Please provide the OP-CRO1 by **Tuesday, October 14, 2025**. We need to send out the public announcement letter by that Friday (the 17th).

(As a side note, I will be emailing you a separate introduction, but I have just been assigned the newest minor revision for this permit that was submitted on September 9. While we normally do try to consolidate multiple revision projects together, my management would prefer to keep them separate so we can quickly complete this first revision. I can begin working on the next project while this one is in public announcement. If you have any concerns about this approach, please reach out and we can discuss.)

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1400


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From: Carolyn Maus
Sent: Tuesday, September 9, 2025 6:34 PM
To: Cromer, Colton <cromec@cpchem.com>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Hi Colton,

Thanks for your response! I got all your submittals from the FTP site. I'll review those and further revise the WDP as needed.

From: Carolyn Maus
Sent: Tuesday, September 9, 2025 6:34 PM
To: Cromer, Colton
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Hi Colton,

Thanks for your response! I got all your submittals from the FTP site. I'll review those and further revise the WDP as needed.

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1400


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From: Cromer, Colton <cromec@cpchem.com>
Sent: Monday, September 8, 2025 4:14 PM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Carolyn – prepared responses have been uploaded to the TCEQ FTP site and shared with your email address, including any updates to the forms you have requested.

Let me know if you did not receive, or if you have any questions.

Thanks,

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916

Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796
Baytown, TX 77521-9570

From: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Sent: Monday, August 25, 2025 3:13 PM
To: Cromer, Colton <cromec@cpchem.com>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Hi Colton,

I have prepared a revised WDP based on your prior responses to my questions and your WDP comments. The WDP is available via TCEQ's secure FTP server, at https://ftps.tceq.texas.gov/index.php. I have shared it with you and Daniel Guthrie there. (You are welcome to pass the file along to anyone that needs it. Or, if you would like me to share directly with anyone else via the FTP, that person can create an account with their email and you can let me know.) The file will remain there for 7 days (available until 09/01/2025) so please save the file to another location for your work. If you need to submit comments or other mark-ups on the document itself, you may send it back to me via that same FTP server, or you can submit a smaller portion of the document via email.

From: cromec@cpchem.com
Sent: Monday, September 8, 2025 4:12 PM
To: Carolyn Maus
Subject: Shared files from cromec@cpchem.com

One or more files have been shared with you from cromec@cpchem.com. Login to https://ftps.tceq.texas.gov to retrieve the files. Files will be available until 09/15/2025.

Carolyn,

We have reviewed your questions and provided responses in **blue** text below. We have updated the applicable forms and attached them as necessary. Please let us know if you have any additional questions or comments.

1. I have added in the updates related to units 1592-18 and 1592-18a. I had not included these in the first WDP because I thought that these changes were being authorized by the pending NSR amendment that you all had opted to "pull out" of this Title V project. (I saw that the edited OP-2 still included the two units, minus the NSR action, but I thought that might have been an error.) If the changes to attributes/requirements for these units are the result of the changes being authorized by that amendment, we cannot include them in the permit at this time. Please confirm in your response if these changes are authorized by the NSR action so I can determine whether to keep them or remove.

   Response: The NSR permit amendment authorizing the changes was issued on August 29, 2025, TCEQ Project No. 378824; therefore, we are requesting it be added back into the project scope at this time. We have updated Form OP-REQ1, section XII.E and XII.F (page 88) to reflect the most recent issuance date for Permits PSDTX748M1 and N148M2; and we have updated Section XII.H (Page 89) to reflect the most recent issuance date for Permit 1504A. We have also updated Form OP-2 Table 2 to reflect the original scope of this minor revision which the NSR permit changes that have been completed as part of project 378824, as well as including an associated update of the Major NSR Summary Table utilizing tracked changes in the Revised WDP O 2114 – Project 3750I1.

2. Regarding the alternative requirements for Z-1104 and Z-1104TEMP (related to Chapter 115N, HRVOC Cooling Towers), I understand that the alternative monitoring has already been approved, and that previous applications already indicated the alternative was being used for Z-1104. I also understand that you are not asking to change that method. However, the issue is that the approval letter for that alternative requirement should have always been included in the permit, and it does not appear to be there. Since the same alternative is being used for the new unit Z-1104TEMP, we need to correct that in this project. Please provide me the approval letter for this alternative so I can add it to the Alternative Requirement section of the permit.

   Response: Attached is a copy of the approved Alternative Requirement that should be attached to the Alternative Requirement section of the permit. CPChem will utilize the existing approved sampling system for Z-1104 for Unit ID: Z-1104TEMP.

3. I removed the MACT FFFF requirements for PROPAO1795 since you indicated the facility modifications are not being pursued right now. Since we aren't adding requirements, I put the existing permit shield back in the permit. Please confirm that is correct.

Response: CPChem confirms that the MACT FFFF permit shield for PROPAO1795 should be retained.

4. Thanks for clearing up most of the PBR discrepancies between different forms. As a result, I made the updates listed below (all other items were already correct in the first WDP). Please confirm these rows are now correct in the NSR Authorization References by Emission Unit table.

    a. Added registration no. 177876 for 106.261/11/01/2003 and 106.262/11/01/2003 to F-1594 and F-1592-31.

    b. Added 106.472/09/04/2000 to F-1592-31.

    c. Added registration no. 177511 for 106.262/11/01/2003, 106.472/09/04/2000, and 106.476/09/04/2000 to PROPAO1795.

    Response: Registration No. 177876 should only apply to F-1592-31. F-1594 was not involved in the project authorized by this registration. CPChem agrees with all other updates to the WDP.

5. These are the remaining questions regarding PBRs. This will involve additional updates to the OP-PBRSUP, so just a reminder to re-date and re-submit all four tables as a set when providing the corrections.

    a. For F-1891, you confirmed that registration nos. 160762, 164559, 168528, 170570, and 172323 were consolidated into NSR 37063/N178M2 and no longer authorized emissions from this unit. While they were removed from the OP-PBRSUP for F-1891, the OP-SUMR row for this unit still includes them. Please update the OP-SUMR.

    Response: The OP-SUMR has been updated to remove registration nos. 160762, 164559, 168528, 170570, and 172323 from Unit ID F-1891.

    b. You also listed registration 156170 as one of those that was consolidated for F-1891. Based on what I saw in the NSR project, it seemed like that registration was still being used for F-1891. In addition, it is still in your OP-SUMR row for that unitO, and it is still on Table A of the OP-PBRSUP (in the same row as F-1798-30 and F-130). Could you double-check this? If it is still in use for F-1891, then just add F-1891 back to Table D of the OP-PBRSUP to the row with F-1798-30 and F-130. If it is not in use for F-1891, then please remove F-1891 from that row of Table A and remove the registration number from F-1891's row on the OP-SUMR.

    Response: Emissions associated with Unit ID F-1891 that were authorized by registration no. 156170 were consolidated into NSR Permit No. 37063 as part of

NSR project no. 366051. As such, we have removed registration no. 156170 from Unit ID F-1891 on the OP-SUMR and Table A of the OP-PBRSUP.

c. On Table A of the OP-PBRSUP, one of the rows for registration no. 160298 includes unit F-1595-66. I believe this should be F-1795-66. Please correct this. (The corresponding Table D row is fine.)

Response: This update to Table A of the OP-PBRSUP has been completed.

d. Table B of the OP-PBRSUP includes rows for Z-1104 and Z-1104TEMP authorized by 106.371/09/04/2000. Please add corresponding rows to Table D.

Response: The 106.371/09/04/2000 authorizations for Z-1104 and Z-1104TEMP have been added to the Table D of the OP-PBRSUP.

e. The OP-SUMR row for F-1594 included registration no. 177876 (for 106.261/11/01/2003 & 106.262/11/01/2003). However, the OP-PBRSUP did not list this for F-1594 on Table A or D. Please correct either the OP-SUMR or OP-PBRSUP as needed.

Response: As mentioned in the response to item 4.a, above, F-1594 did not have emissions authorized as part of PBR registration no. 177876. Therefore, CPChem has removed registration no. 177876 from Unit ID F-1594 on the OP-SUMR.

In addition to the questions above, CPChem is providing an updated OP-UA15 and OP-REQ3 to add an additional scenario for Unit IDs 1592-18 and 1592-18A. If this update is acceptable to TCEQ, this scenario will allow these vents to continue to comply with the recordkeeping provisions of 30 TAC 115.126(4), in addition to the requirements of 30 TAC 115.126(3)(C). Please let us know if you have any concerns about this update.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 9/5/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
1	MS-C	No	1592-18	OP-REQ3 OP-UA15	1504A	Add and update applicable requirements as detailed on the attached unit attribute forms and Form OP-REQ3. Incorporate NSR amendment (NSR Permit No. 1504A, TCEQ Project No. 378824).
2	MS-C	No	1592-18A	OP-REQ3 OP-UA15	1504A	Add and update applicable requirements as detailed on the attached unit attribute forms and Form OP-REQ3. Incorporate NSR amendment (NSR Permit No. 1504A, TCEQ Project No. 378824).
3	MS-A	Yes	Z-1104TEMP	OP-SUMR OP-REQ3 OP-UA13	106.371/09/04/2000	Add to permit a temporary cooling tower to operate while cooling tower Z-1104 undergoes construction (> 6 months). Add HRVOC regulatory applicability to the permit for this cooling tower.
4	MS-C	No	PROPAO1795	OP-SUMR ~~OP-REQ3~~ ~~OP-UA1~~	37063 **177511**	~~Add 40 CFR 63 Subpart FFFF (MON) applicability to units affected by new co-catalyst trial conducted 09/16/24 - 09/28/24, per citations on OP-REQ3 Tbl 1.~~ Add permit by rule authorization as noted in OP-SUMR and incorporate into OP-PBRSUP.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 9/5/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
5	MS-A	No	Z-1104	OP-SUMR	106.371/09/04/2000	Incorporate unregistered PBR 106.371 for authorization of in-kind replacement of existing cooling tower. The replacement cooling tower is authorized for the same circulation rate, but is equipped with improved drift eliminators. No unit attributes or applicable requirements are affected by these changes.
6	MS-A	No	F-1594	OP-SUMR	177331 177876 1504A	Incorporate PBR Registration Nos. 177331 & 177876, which each authorized additional fugitive components. (Equipment leak fugitives authorized under NSR Permit No. 1504A.) No unit attributes or applicable requirements are affected by these changes.
7	MS-A	No	SITEWIDE	OP-SUMR	37063	Incorporate the most recent version of NSR 37063. No unit attributes or applicable requirements are affected by these changes.
8	MS-C	No	SITEWIDE	OP-1	-	Update Technical Contact per OP-1.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 9/5/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
9	MS-C	No	1594WWENG	OP-REQ3	106.512/06/13/2001	Remove Unit ID from permit. Unit was removed from site in 2023.
10	MS-C	No	GRPDIST97	OP-REQ3	-	Remove SOP Index No. 60NNN-03 as an operating scenario for this source. The vents in this group no longer vent to a boiler/process heater.
11	MS-C	No	GRPDIST98	OP-REQ3	-	Remove SOP Index No. 60NNN-02 as an operating scenario for this source. The vents in this group no longer vent to a boiler/process heater.
12	MS-A	N/A	Multiple	N/A	Various	Update the NSR authorizations for several units as shown on OP- SUMR to incorporate updates to the OP-PBRSUP form.

Texas Commission on Environmental Quality
Federal Operating Permit Program
Individual Unit Summary for Revisions
Form OP-SUMR
Table 1

Date	Permit No.	Regulated Entity No.
12/11/24 (Updated 9/5/25)	**O2114**	**RN103919817**

Unit/Process AI	Unit/Process Revision No.	Unit/Process ID No.	Unit/Process Applicable Form	Unit/Process Name/Description	Unit/Process CAM	Preconstruction Authorizations 30 TAC Chapter 116/ 30 TAC Chapter 106	Preconstruction Authorizations Title I
A	3	Z-1104TEMP	OP-SUMR OP-REQ3 OP-UA13	1798 Temporary Cooling Tower		106.371/09/04/2000	
	4	PROPAO1795	OP-SUMR OP-REQ3 OP-UA1	PAO 1795 Process Unit		37063 **106.262/11/01/2003 [177511]** **106.472/09/04/2000 [177511]** **106.476/09/04/2000 [177511]**	N178M2
	5	Z-1104	OP-SUMR	1798 Cooling Tower		37063 **106.371/09/04/2000**	N178M2
	6	F-1594	OP-UA12	Fugitives		1504A 106.261/11/01/2003 [156170, 160298, 160762, 164559, 170570, 170856, 172323, **172386,** 172772, 173153, 173206, 173299, 173448, 174183, **174540, 175899, 176836, 177331**] 106.262/11/01/2003 [156170, 160298, 160762, 164559, 170570, 170856, **172386,** 172772, 173153, 173206, 173299, 173448, 174183, **174540, 175899, 176836, 177331**]	GHGPSDTX9 PSDTX748M1 N148M2
	12	F-1592-31	OP-UA12	ETHYLENE UNIT (EU 1592) PROCESS FUGITIVES		1504A, 106.261/11/01/2003 [114897, 135701, 140351, 143865, 150060, 151216, 151993, 152085, 154060, 156170, 157396, 160298, 160762, 164559, 168528, 169772, 170856, 172149, 172309, 172323, 172585, 172943, **172825,** 173299, 174183, 174273, **174685, 175222, 175899, 176480, 177876**], 106.262/11/01/2003 [114897, 135701, 140351, 143865, 150060, 151216, 151993, 152085, 154060, 156170, 157396, 160298, 160762, 164559, 169772, 170856, 172149, 172309, 172585, **172825,** 172943, 173299, 174183, 174273, **174685, 175222, 175899, 176480, 177876**] **106.472/09/04/2000**	PSDTX748M1, N148M2

Texas Commission on Environmental Quality
Federal Operating Permit Program
Individual Unit Summary for Revisions
Form OP-SUMR
Table 1

Date	Permit No.	Regulated Entity No.
12/11/24 (Updated 9/5/25)	O2114	RN103919817

Unit/Process AI	Unit/Process Revision No.	Unit/Process ID No.	Unit/Process Applicable Form	Unit/Process Name/Description	Unit/Process CAM	Preconstruction Authorizations 30 TAC Chapter 116/ 30 TAC Chapter 106	Preconstruction Authorizations Title I
	12	F-160	OP-UA12	UTILITIES AREA PROCESS FUGITIVES		1504A, 106.261/11/01/2003 [132981, 139001, 153141, 160298, 162317, 163272, 170856, **174900, 175614, 175899, 176480**], 106.262/11/01/2003 [132981, 139001, 153141, 160298, 162317, 163272, 170856, **174900, 175614, 175899, 176480**]	PSDTX748M1, N148M2
	12	F-1798-30	OP-UA12	NAOU 1798 PROCESS FUGITIVES		37063, 106.261/11/01/2003 [156170, 160762, 164559, 172323, 174183, **175899**], 106.262/11/01/2003 [156170, 160762, 164559, 174183, **175899**]	N178M2
	12	F-130	OP-UA12	NAOU 1791/1797 PROCESS FUGITIVES		37063, 106.261/11/01/2003 [156170, 160762, 164559, 168528, 172323, 174183, **175899**], 106.262/11/01/2003 [156170, 160762, 164559, 174183, **175899**]	N178M2
	12	F-1891	OP-UA12	1-HEXENE UNIT FUGITIVES		37063, 106.261/11/01/2003 [174183, **175899, 176836**], 106.262/11/01/2003 [174183, 174389, **175899, 176836**]	N178M2
	12	F-1795-66	OP-UA12	PAOU 1795 PROCESS FUGITIVES		37063, 106.261/11/01/2003 [160298, 164559, 172323, 172825, **175899**], 106.262/11/01/2003 [160298, 164559, 172825, **175899, 177511**]	N178M2
	12	PK-905	OP-UA7	FLARE		1504A, 106.261/11/01/2003 [173206, **177331**], 106.262/11/01/2003 [173206, **177331**]	GHGPSDTX9, PSDTX748M1, N148M2

Emission Point/Stationary Vent/Distillation Operation Vent/Process Vent Attributes
Form OP-UA15 (Page 3)
Federal Operating Permit Program
Table 2a: Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115)
Subchapter B: Vent Gas Control
Texas Commission on Environmental Quality

Date:	Permit No.:	Regulated Entity No.:
12/11/24 (Updated 9/5/25)	O2114	RN103919817

Emission Point ID No.	SOP/GOP Index No.	Chapter 115 Division	Combustion Exhaust	Vent Type	Total Uncontrolled VOC Weight	Combined 24-Hour VOC Weight	VOC Concentration	VOC Concentration or Emission Rate at Maximum Operating Conditions
1592-18	R5121-07	NO	NO	REGVAPPL		100+	612-	NO
1592-18A	R5121-07	NO	NO	REGVAPPL		100+	612-	NO
1592-18	R5121-08	NO	NO	REGVAPPL		100+	612-	YES
1592-18A	R5121-08	NO	NO	REGVAPPL		100+	612-	YES

Emission Point/Stationary Vent/Distillation Operation Vent/Process Vent Attributes
Form OP-UA15 (Page 4)
Federal Operating Permit Program
Table 2b: Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115)
Subchapter B: Vent Gas Control
Texas Commission on Environmental Quality

Date:	Permit No.:	Regulated Entity No.:
12/11/24 (Updated 9/5/25)	O2114	RN103919817

Emission Point ID No.	SOP Index No.	Alternate Control Requirement	ACR ID No.	Control Device Type	Control Device ID No.
1592-18	R5121-07	NONE			
1592-18A	R5121-07	NONE			
1592-18	R5121-08				
1592-18A	R5121-08				

Date	Permit No.	Regulated Entity No.
09/05/2025	**O2114**	**RN103919817**

For SOP applications, answer ALL questions unless otherwise directed.
♦ For GOP applications, answer ONLY these questions unless otherwise directed.

XII. NSR Authorizations (Attach additional sheets if necessary for sections XII.E-J.)

E. PSD Permits and PSD Major Pollutants

Permit No.	Issuance Date	Pollutant(s):	Permit No.	Issuance Date	Pollutant(s):
GHGPSDTX9	06/12/2020	GHG			
PSDTX748M1	**08/29/2025**	$PM_{2.5}$, NO_X, CO			

If PSD Permits are held for the application area, please complete the Major NSR Summary Table located under the Technical Forms heading at: www.tceq.texas.gov/permitting/air/titlev/site/site_experts.html.

F. Nonattainment (NA) Permits and NA Major Pollutants

Permit No.	Issuance Date	Pollutant(s):	Permit No.	Issuance Date	Pollutant(s):
N148M2	**08/29/2025**	VOC, NO_X			
N178M2	09/30/2024	VOC, NO_X			
N224	09/28/2023	VOC			

If NA Permits are held for the application area, please complete the Major NSR Summary Table located under the Technical Forms heading at: www.tceq.texas.gov/permitting/air/titlev/site/site_experts.html.

G. NSR Authorizations with FCAA § 112(g) Requirements

NSR Permit No.	Issuance Date	NSR Permit No.	Issuance Date	NSR Permit No	Issuance Date

Date	Permit No.	Regulated Entity No.
09/05/2025	**O2114**	**RN103919817**

For SOP applications, answer ALL questions unless otherwise directed.
♦ For GOP applications, answer ONLY these questions unless otherwise directed.

XII. NSR Authorizations (continued) - (Attach additional sheets if necessary for sections XII.E-J.)

♦ **H. Title 30 TAC Chapter 116 Permits, Special Permits, Standard Permits, Other Authorizations (Other Than Permits By Rule, PSD Permits, NA Permits) for the Application Area**

Authorization No.	Issuance Date	Authorization No.	Issuance Date	Authorization No.	Issuance Date
1504A	**08/29/2025**	135086	09/28/2023		
37063	**09/30/2024**	163274	12/09/2020		
83791	09/28/2023	169895	05/02/2023		
120563	06/20/2023	171826	03/15/2023		

♦ **I. Permits by Rule (30 TAC Chapter 106) for the Application Area**

A list of selected Permits by Rule (previously referred to as standard exemptions) that are required to be listed in the FOP application is available in the instructions.

PBR No.	Version No./Date	PBR No.	Version No./Date	PBR No.	Version No./Date
60	04/04/1975	106.472	09/04/2000		
106.122	09/04/2000	106.473	03/14/1997		
106.261	11/01/2003	106.473	09/04/2000		
106.262	11/01/2003	**106.476**	**09/04/2000**		
106.263	11/01/2001	106.478	09/04/2000		
106.355	11/01/2001	106.511	09/04/2000		
106.371	09/04/2000	~~106.512~~	~~06/13/2001~~		
106.454	11/01/2001				

♦ **J. Municipal Solid Waste and Industrial Hazardous Waste Permits with an Air Addendum**

Permit No.	Issuance Date	Permit No.	Issuance Date	Permit No.	Issuance Date

Applicable Requirements Summary
Form OP-REQ3 (Page 1)
Federal Operating Permit Program
Table 1a: Additions

Date:	**12/11/24 (Updated 9/5/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
1	1592-18	OP-UA15	R5720-3	Highly Reactive VOC	30 TAC Chapter 115, HRVOC Vent Gas	§115.722(c)(1) §115.722(c)(3) §115.725(n) [G]§115.725(l) §115.725(a)(3) [G]§115.726(a)(2) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)
1	1592-18	OP-UA15	R5121-07	VOC	30 TAC Chapter 115, Vent Gas	§115.127(a)(2)(B) [G]§115.122(a)(4) §115.127(a)(2)
1	1592-18	OP-UA15	R5121-08	VOC	30 TAC Chapter 115, Vent Gas	§115.127(a)(2)(B) [G]§115.122(a)(4) §115.127(a)(2)

Applicable Requirements Summary
Form OP-REQ3 (Page 1)
Federal Operating Permit Program
Table 1a: Additions

Date:	**12/11/24 (Updated 9/5/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
2	1592-18A	OP-UA15	R5720-3	Highly Reactive VOC	30 TAC Chapter 115, HRVOC Vent Gas	§115.722(c)(1) §115.722(c)(3) §115.725(n) [G]§115.725(l) §115.725(a)(3) [G]§115.726(a)(2) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)
2	1592-18A	OP-UA15	R5121-07	VOC	30 TAC Chapter 115, Vent Gas	§115.127(a)(2)(B) [G]§115.122(a)(4) §115.127(a)(2)
2	1592-18A	OP-UA15	R5121-08	VOC	30 TAC Chapter 115, Vent Gas	§115.127(a)(2)(B) [G]§115.122(a)(4) §115.127(a)(2)

Applicable Requirements Summary
Form OP-REQ3 (Page 1)
Federal Operating Permit Program
Table 1a: Additions

Date:	**12/11/24 (Updated 9/5/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
3	Z-1104TEMP	OP-SUMR OP-UA13	R5760	VOC	30 TAC Chapter 115, Subchapter H	§115.761(c)(1) §115.761(c)(3) §115.766(i)
4	~~PROPAO1795~~	~~OP-SUMR~~ ~~OP-UA1~~	~~63FFFF MCPU~~	~~112(B) HAPS~~	~~40 CFR Part 63, Subpart FFFF~~	~~§63.2440(a)~~ **~~§63.2450(a)(2)~~** ~~§63.2450(l)~~ **~~§63.2450(u)~~** **~~[G]§63.2450(v)~~**

Applicable Requirements Summary
Form OP-REQ3 (Page 1)
Federal Operating Permit Program
Table 1a: Additions

Date:	**12/11/24 (Updated 9/5/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
~~4 (cont'd)~~	~~PROPAO1795 (cont'd)~~		~~63FFFF-MCPU (cont'd)~~			

Applicable Requirements Summary
Form OP-REQ3 (Page 2)
Federal Operating Permit Program
Table 1b: Additions

Date:	**12/11/24 (Updated 9/5/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
1	1592-18	R5720-3	Highly Reactive VOC	§115.725(a)(5) §115.725(a)(3) §115.725(a)(3)(B) [T]§115.725(a) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)	[G]§115.726(h) [G]§115.726(i) §115.726(j)(1) §115.726(j)(2) §115.726(b)(1) §115.726(b)(2)-(3)	§115.725(n) §115.725(a)(5) [G]§115.726(a)(2) [G]§115.725(a)(4)
1	1592-18	R5121-07	VOC	[G]§115.125 §115.126(2) §115.126(3)(C)	§115.126 §115.126(2) §115.126(3) §115.126(3)(C)	None
1	1592-18	R5121-08	VOC	[G]§115.125 §115.126(2)	§115.126 §115.126(2) §115.126(4)	None

Applicable Requirements Summary
Form OP-REQ3 (Page 2)
Federal Operating Permit Program
Table 1b: Additions

Date:	**12/11/24 (Updated 9/5/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
2	1592-18A	R5720-3	Highly Reactive VOC	§115.725(a)(5) §115.725(a)(3) §115.725(a)(3)(B) [T]§115.725(a) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)	[G]§115.726(h) [G]§115.726(i) §115.726(j)(1) §115.726(j)(2) §115.726(b)(1) §115.726(b)(2)-(3)	§115.725(n) §115.725(a)(5) [G]§115.726(a)(2) [G]§115.725(a)(4)
2	1592-18A	R5121-07	VOC	[G]§115.125 §115.126(2) §115.126(3)(C)	§115.126 §115.126(2) §115.126(3) §115.126(3)(C)	None
2	1592-18A	R5121-08	VOC	[G]§115.125 §115.126(2)	§115.126 §115.126(2) §115.126(4)	None

Applicable Requirements Summary
Form OP-REQ3 (Page 2)
Federal Operating Permit Program
Table 1b: Additions

Date:	**12/11/24 (Updated 9/5/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
3	Z-1104TEMP	R5760	VOC	§115.764(c) §115.764(f)	§115.766(a)(1) §115.766(a)(2) §115.766(a)(3) §115.766(a)(5) §115.766(a)(6) §115.766(c) §115.766(g) §115.766(h) §115.766(i)(1)	§115.766(i)(2)
4	~~PROPAO1795~~	~~63FFFF MCPU~~	~~112(B) HAPS~~	~~§63.2445(d)~~ **~~[G]§63.2450(v)~~**	~~§63.2525~~ ~~§63.2525(a)~~ ~~[G]§63.2525(b)~~ ~~§63.2525(f)~~ **~~[G]§63.2525(p)~~**	~~§63.2435(d)~~ ~~§63.2445(e)~~ ~~§63.2450(g)(5)~~ ~~§63.2450(m)~~ ~~§63.2450(m)(1)~~ ~~§63.2450(m)(2)~~ ~~§63.2515(a)~~ ~~§63.2515(b)(2)~~ ~~§63.2515(c)~~ **~~§63.2515(d)~~** ~~§63.2520(a)~~ ~~[G]§63.2520(b)~~ ~~[G]§63.2520(d)~~

Applicable Requirements Summary
Form OP-REQ3 (Page 2)
Federal Operating Permit Program
Table 1b: Additions

Date:	**12/11/24 (Updated 9/5/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
~~4 (cont'd)~~	~~PROPAO1795 (cont'd)~~	~~63FFFF MCPU (cont'd)~~				~~§63.2520(e)~~ ~~§63.2520(e)(1)~~ ~~§63.2520(e)(2)~~ ~~§63.2520(e)(3)~~ ~~§63.2520(e)(4)~~ ~~§63.2520(e)(5)~~ ~~§63.2520(e)(5)(i)~~ ~~[G]§63.2520(e)(5)(ii)~~ ~~[G]§63.2520(e)(5)(iii)~~ ~~§63.2520(e)(6)~~ ~~§63.2520(e)(7)~~ ~~§63.2520(e)(9)~~ ~~[G]§63.2520(e)(10)~~ ~~**[G]§63.2520(e)(14)**~~

From:	Mark Kolkmeier
To:	Aitkens, Beth A
Cc:	Chappell-Cox, Heather; CED RA Environ; Andrew Evans
Subject:	RE: CPC - HRVOC Cooling Tower Monitoring and Testing Modification Request [**EXTERNAL**]
Date:	Friday, February 23, 2018 2:29:03 PM
Attachments:	image001.png image002.png 2017-11 HRVOC Cooling Tower Monitoring and Testing Modification Request.pdf TCEQ Appendix P.PDF

*** WARNING: This email originated outside of the CPChem network. Use caution opening attachments, clicking web links, or replying. ***

-

Good Afternoon Ms. Aitkens,

The purpose of this e-mail is to respond to Chevron Phillips Chemical Company LP's ("Chevron") letter dated November 16, 2017 regarding a "HRVOC Cooling Tower Monitoring and Testing Modification Request."

Based on review of the letter, TCEQ Region 12 agrees that the Siemens Applied Automation (SAA) AL 2-HRVOC Sparger systems used for sampling, analysis, monitoring, and testing of cooling towers (hereafter referred to as the "Alternative Method") is/are equivalent to the TCEQ Sampling Procedures Manual Appendix P "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" required by applicable regulations including 30 TAC §115.764.

Please note this approval was conducted on a site specific basis and applies only to the sources referenced in Chevron's November 16, 2017 letter, and does not apply to any other sources or facilities.

Chevron is responsible for constructing, installing, maintaining, and calibrating the Alternative Method as represented in Chevron's letter dated November 16, 2017.

Deviation from the implied representations in the said letter, or records indicating that the Alternative Method is not as sensitive (regarding the method detection limit of VOC) and precise as the TCEQ Appendix P Modified method, may result in this approval being rescinded.

Sincerely,

Mark Kolkmeier

Team Leader
TCEQ Region 12 Air Section
T: 713-767-3719
5425 Polk Street, Ste H.,
Houston, TX, 77023

Stack Test notifications and updates may be submitted to R12STACK@tceq.texas.gov

proud-partner-logo

Chevron Phillips Chemical Company LP

Cedar Bayou Plant

9500 I-10 East, Exit 796
Baytown, Texas 77521-9570

Phone 281-421-6500
Fax 281-421-6272

www.cpchem.com

November 16, 2017

Certified Mail No. 7014 3490 0000 4315 7046
Return Receipt Requested

Attn: Mark Kolkmeier
Texas Commission on Environmental Quality
5425 Polk Street, Ste H
Houston, TX 77023-1452

Re: Chevron Phillips Chemical Company LP
Account No. HG-0310-V
Regulated Entity Number: RN103919817
Customer Reference Number: CN600303614
HRVOC Cooling Tower Monitoring and Testing Modification Request

Dear Kolkmeier,

Chevron Phillips Chemical Company LP (CPChem) requests a minor modification to the monitoring and testing required under 30 TAC §115.764, as allowed by 30 TAC §115.764(f).

CPChem monitors seven cooling towers, EF-751 (EPN 1592-41), E-501/E-502 (EPN 1792-76), E-531 (EPN 1796-13A), Z-104 (EPN 150), Z-201 (EPN 150A), Z-1104 (EPN 1798-20), and E-9001 (EPN 1799-15) with the Siemens Applied Automation (SAA) AI 2-HRVOC Sparger Technology rather than El Paso Strippers. Due to recovery efforts associated with Hurricane Harvey the Siemens Applied Automation (SAA) AI 2-HRVOC Sparger were replaced with in kind components. CPChem is submitting this minor modification request to update records due to the equipment replacement.

Additionally, CPChem intends to monitor the EU-1594 unit cooling tower PK-840 (EPN PK-840) with the Siemens Applied Automation (SAA) AI 2-HRVOC Sparger Technology rather than El Paso Strippers. This is a new installation in the new Ethylene Unit (EU-1594).

CPChem understands that minor modifications are permissible provided that such modifications are validated by 40 CFR 63, Appendix A, Test Method 301 (December 29, 1992) and approved by the executive director.

CPChem is submitting the attached Product Bulletin, contained in Attachment A, from SAA as evidence that the minor modifications for the proposed cooling tower sampling and analysis system provided by SAA have been validated by Test Method 301. CPChem has confirmed that the SAA sparger installations for all eight cooling towers are equivalent to the installation tested in the attached Product Bulletin. Information pertinent to the system equivalency is summarized on page 35 of the attached Product Bulletin as follows, "the Siemens "AI 2-HRVOC" sparger is an equivalent system to the El Paso Stripper and the GC is suitable for being the analysis system".

Consequently, CPChem requests approval that the Siemens "AI 2-HRVOC" sparger be considered equivalent to the El Paso Stripper and the gas

chromatograph be considered an acceptable analysis system compliant with the monitoring and testing requirements prescribed in 30 TAC §115.764.

Please contact Beth Aitkens at 281-421-6139, if you have any questions.

Sincerely,

Jerome A Jarboe, P.E.
Environmental Superintendent

Attachments

ATTACHMENT A

"AI 2 – HRVOC" - SPARGER EQUIVALENCY REPORT

SIEMENS

Siemens Applied Automation

Product Bulletin V3.3

July 8 2005

"AI 2 – HRVOC" - SPARGER EQUIVALENCY REPORT

According Method 301

Factory Compliance & Equivalency Testing Results for Cooling Tower Water Monitoring comparing the Siemens Sparger with the Appendix-P Stripper

SIEMENS APPLIED AUTOMATION

7101 Hollister Road
Houston, TX, 77040
P: 713 939 3208
F: 713 939 9050
saaisales@sea.siemens.com

500 West Highway 60
Bartlesville, OK 74003
P: 918 662 7000
F: 918 662 7052

Siemens Model "AI 2 – HRVOC"
Factory Compliance and Equivalency Testing Results for TCEQ HR-VOC Cooling Water Tower Monitoring

Siemens Applied Automation
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Introduction

The Texas Commission on Environmental Quality (TCEQ) has mandated that stationary sources with Cooling Water Towers (CWT) monitor the cooling towers' emissions of Highly-Reactive Volatile Organic Hydrocarbons (HRVOCs). As of this report's date, the chemicals currently in this category are: ethylene, propylene, 1-butene/isobutylene, trans-2-butene, cis-2-butene and 1,3-butadiene. The TCEQ has promulgated this mandate in the form of Chapter 115 regulations that specify that the sampling of the water should be accomplished utilizing the El Paso Stripper (EPS) or equivalent and that on-line CEMS units used for the analytical measurements are additionally subject to EPA 40CFR60 Performance Specification 9. Should an equivalent system be used, it must pass EPA Method 301 testing to demonstrate its equivalency to the EPS.

Comparison with a Validated Method

Siemens Applied Automation (SAA) has available a water sparger system suitable for the measurements of these components of interest. This system is easier to maintain, provides a more stable result with a superior sensitivity to the EPS. The data presented here will demonstrate the equivalency and suitability of this system as an alternative to the EPS in accordance with EPA Method 301. Additional data is also provided in accordance with the mandated specifications of Performance Specification 9.

Method 301 permits the usage of two sampling systems the first being the validated or approved method and the second being the proposed method. For the purposes of this report, the terms "validated method" or "approved method" refer to the El Paso Stripper while the term "proposed method" refers to the SAA sparger system. The El Paso Stripper used is a model RT201 HRVOC Stripping Unit obtained from Clear Passage Products, L.P., Houston, TX.

In order to validate the proposed system, both the approved and proposed systems are connected to the same stream of water to create a "paired sampling system". In the case of this test, this stream of water is charcoal filtered municipal water. The gas chromatograph, a SAA Maxum Edition II, containing two sets of sample valves, columns and detectors is used to simultaneously analyze the effluent obtained from the EPS and SAA sparger (see Fig 1). The water sample is preheated and temperature controlled in the sparger cabinet to 40°C prior to sparging. The cabinet is controlled to 60°C. The El Paso stripper and its water influent are at ambient conditions. Vapor flows are checked using calibrated bubble-type digital flow meters. Liquid flows were verified using appropriate graduated cylinders.

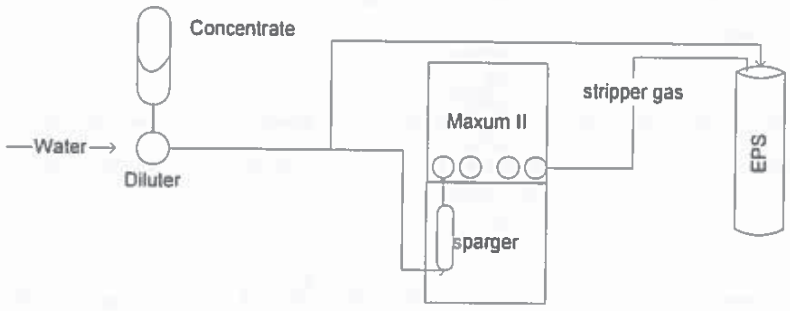


Figure 1

Discussion of Sample Preparations and Analysis

Three certified vapor blends and one certified liquid blend in a piston cylinder, all of 2% accuracy, were purchased from Superior Specialty Gas Services, Inc. Superior is located in Tulsa, Oklahoma at P.O. Box 470466,74147. The technical contact is Ken Roper at FAX 918 688 4220 or phone number 918 592 0081.

Vapor blends were chosen at approximately 50% of the full scale value of 100 ppmv, full scale, and 150% of full scale. These blends are used for 3-point calibration of the instrument, demonstration of separation, vapor linearity testing and the 7-day calibration error (CE) test.

The liquid blend is used as a concentrate for a dilution system that simulates a ppb level water stream containing HRVOCs. This blend contains roughly 250ppmv of the components of interest in methanol. Additional description of the system and its use is described later in this report. See Attachment for blend certification.

Both vapor and liquid samples were prepared gravimetrically against NIST traceable standards and validated by GC methods as part of the vendor's certification process.

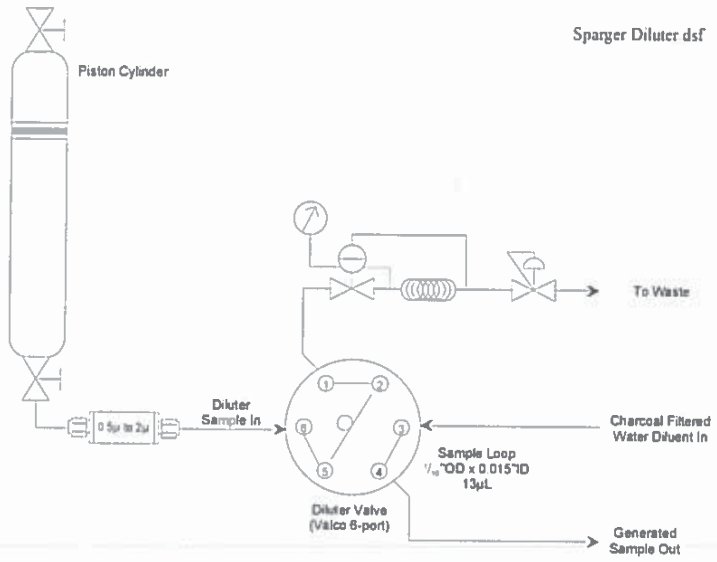
"AI 2-HRVOC" Basic Sparger Design of

The SAA Sparger is a heated enclosure whereby water sample is introduced and dissolved gases are removed by purging (sparging) the water with a stripping gas. Both water and stripping gas are continuously flowed through the system. The water is preheated and temperature controlled by an inline water heater prior to sparging. Connective tubing between heater and sparge vessel and the sparge vessel and the inlet to the analyzer is Teflon. The effluent of the sparge vessel is passed through a PermaPure® drier (Perma Pure LLC) to remove water prior to sample introduction to the GC allowing for proper comparison to the calibration standards. The sparge vessel is comprised of glass. In order to produce reproducible and small sparge gas bubbles between spare parts, the sparge gas frit is made of sintered 316 stainless steel. The basic flow path and design of the SAA sparger is provided at the end of this report in an attachment.

Laboratory Data Supporting the Quality of the Dilution System

The dilution system used (referred to herein as "diluter") is of a proprietary design created by SAA. A concentrate of ppm level HRVOC components in methanol is loaded into a piston cylinder such as those available from Welker Engineering or YZ Industries. The solution is then pushed through a sample valve that is in-line with the water supply. The sample valve is then injected at regular intervals that can be varied to adjust the amount of concentrate being introduced over time. A steady-state concentration is achieved. (see Fig 2)

Figure 2



Using the device shown above in Figure 2, injections of 1, 2, 3, 4, 6, and 10 per minute at equally spaced intervals were made into water in order to simultaneously investigate the linearity of the SAA Sparger and the EPS device. The data is presented below. First, the data for the SAA Sparger is presented followed by data for the EPS. The expected concentration shown on the bottom line of each different injection rate section is a calculated value representing the ppbv of each component.

SAA Sparger

	Sparger					
Water Flow, cc/min	30					
Sparge Gas, cc/min	75					
Dilutor Inject Size, µL	13					
Temperature, °C *	21					
* at point of sparger flow meas						
	Sparger	Sparger	Sparger	Sparger	Sparger	Sparger
	Ethylene	Propylene / Acetylene	Isobutylene / 1 Butene	Trans-2-Butene	Cis-2-Butene	1,3-Butadiene
Inject Rate	1	1	1	1	1	1
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	1.630	2.126	2.000	1.948	2.051	2.144
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	1.644	2.131	2.001	1.952	2.056	2.151
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	1.614	2.135	1.998	1.941	2.044	2.140
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	5.135	10.157	12.655	12.254	13.153	13.348
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	5.180	10.182	12.666	12.280	13.184	13.391
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	5.086	10.200	12.643	12.208	13.110	13.322
Mean (ppbw)	5.134	10.180	12.655	12.247	13.149	13.353
Min (ppbw)	5.086	10.157	12.643	12.208	13.110	13.322
Max (ppbw)	5.180	10.200	12.666	12.280	13.184	13.391
StdDev	0.0469	0.0220	0.0111	0.0364	0.0374	0.0351
Peak Area Avg	65683	137465	159940	159747	165831	164306
Expected Conc (ppbv)	21.05	20.80	20.97	20.80	20.97	21.14
Inject Rate	2	2	2	2	2	2
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	3.006	3.944	3.694	3.587	3.790	3.975
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	2.980	3.920	3.679	3.580	3.778	3.961
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	3.062	4.015	3.767	3.665	3.861	4.047
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	9.374	18.549	23.099	22.566	23.880	24.439
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	9.293	18.438	23.001	22.523	23.805	24.357
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	9.548	18.885	23.554	23.059	24.330	24.886
Mean (ppbw)	9.405	18.624	23.218	22.716	24.005	24.561
Min (ppbw)	9.293	18.438	23.001	22.523	23.805	24.357
Max (ppbw)	9.548	18.885	23.554	23.059	24.330	24.886
StdDev	0.1305	0.2327	0.2948	0.2975	0.2841	0.2849
Peak Area Avg	121613	255483	297036	296252	308168	305976
Expected Conc (ppbv)	42.10	41.60	41.94	41.60	41.94	42.27

	Sparger	Sparger	Sparger	Sparger	Sparger	Sparger
	Ethylene	Propylene / Acetylene	Isobutylene / 1-Butene	Trans-2-Butene	Cis-2-Butene	1,3-Butadiene
Inject Rate	3	3	3	3	3	3
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	4.537	5.925	5.539	5.393	5.697	5.977
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	4.687	5.988	5.611	5.482	5.815	6.141
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	4.726	6.185	5.794	5.645	5.966	6.256
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	13.550	27.830	34.608	33.734	35.707	36.455
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	13.996	28.123	35.056	34.291	36.443	37.452
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	14.114	29.051	36.198	35.310	37.388	38.151
Mean (ppbw)	13.887	28.335	35.287	34.445	36.512	37.353
Min (ppbw)	13.550	27.830	34.608	33.734	35.707	36.455
Max (ppbw)	14.114	29.051	36.198	35.310	37.388	38.151
StdDev	0.2979	0.6372	0.8202	0.7992	0.8426	0.8523
Peak Area Avg	187481	389211	451780	451817	471249	469146
Expected Conc (ppbv)	63.15	62.40	62.90	62.40	62.90	63.41
Inject Rate	4	4	4	4	4	4
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	6.197	8.169	7.680	7.474	7.874	8.257
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	6.289	8.161	7.680	7.481	7.880	8.271
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	6.220	8.204	7.700	7.507	7.910	8.301
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	18.798	37.884	47.330	46.009	48.732	49.814
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	19.078	37.848	47.333	46.057	48.769	49.897
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	18.869	38.046	47.453	46.213	48.954	50.074
Mean (ppbw)	18.915	37.926	47.372	46.093	48.818	49.929
Min (ppbw)	18.798	37.848	47.330	46.009	48.732	49.814
Max (ppbw)	19.078	38.046	47.453	46.213	48.954	50.074
StdDev	0.1458	0.1056	0.0699	0.1070	0.1187	0.1328
Peak Area Avg	251408	527600	614854	614335	638070	633969
Expected Conc (ppbv)	84.21	83.20	83.87	83.20	83.87	84.54

	Sparger	Sparger	Sparger	Sparger	Sparger	Sparger
	Ethylene	Propylene / Acetylene	Isobutylene / 1-Butene	Trans-2-Butene	Cis-2-Butene	1,3-Butadiene
Inject Rate	6	6	6	6	6	6
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	8.976	11.763	11.062	10.773	11.353	11.921
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	9.011	11.759	11.064	10.778	11.362	11.924
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	9.009	11.789	11.075	10.800	11.386	11.964
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	26.244	52.865	66.225	64.220	67.918	69.421
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	26.347	52.847	66.239	64.251	67.971	69.441
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	26.339	52.983	66.305	64.381	68.113	69.671
Mean (ppbw)	26.310	52.899	66.256	64.284	68.001	69.511
Min (ppbw)	26.244	52.847	66.225	64.220	67.918	69.421
Max (ppbw)	26.347	52.983	66.305	64.381	68.113	69.671
StdDev	0.0572	0.0737	0.0429	0.0851	0.1010	0.1388
Peak Area Avg	362813	759405	885252	884786	919459	914328
Expected Conc (ppbv)	126.31	124.80	125.81	124.80	125.81	126.81
Inject Rate	10	10	10	10	10	10
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	14.536	18.952	17.709	17.250	18.202	19.147
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	14.463	18.897	17.652	17.191	18.132	19.072
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	14.371	18.791	17.545	17.103	18.039	18.974
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	41.223	82.304	102.504	99.385	105.244	108.344
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	41.014	82.066	102.170	99.043	104.837	107.919
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	40.753	81.602	101.555	98.537	104.301	107.367
Mean (ppbw)	40.997	81.991	102.076	98.988	104.794	107.877
Min (ppbw)	40.753	81.602	101.555	98.537	104.301	107.367
Max (ppbw)	41.223	82.304	102.504	99.385	105.244	108.344
StdDev	0.2357	0.3571	0.4814	0.4268	0.4726	0.4899
Peak Area Avg	582861	1218084	1410657	1409727	1466065	1460322
Expected Conc (ppbv)	210.52	208.00	209.68	208.00	209.68	211.35

El Paso Stripper

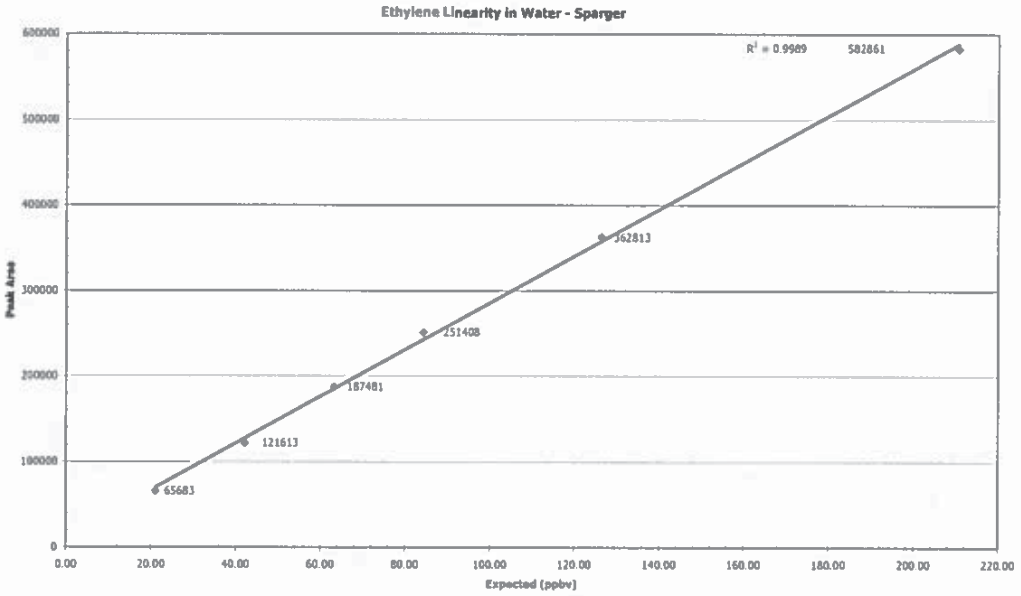
	Stripper					
Water Flow, cc/min	125					
Sparge Gas, cc/min	2500					
Dilutor Inject Size, µL	13					
Temperature, °C *	21					
* at point of stripper flow meas						
	Stripper	Stripper	Stripper	Stripper	Stripper	Stripper
	Ethylene	Propylene / Acetylene	Isobutylene / 1 Butene	Trans-2-Butene	Cis-2-Butene	1,3-Butadiene
Inject Rate	1	1	1	1	1	1
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	0.2210	0.3071	0.2820	0.2751	0.2989	0.3105
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	0.2193	0.2862	0.2674	0.2603	0.2771	0.2974
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	0.2375	0.3050	0.2868	0.2727	0.2957	0.3122
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	5.071	10.570	12.942	12.627	13.719	13.735
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	5.032	9.850	12.270	11.946	12.715	13.157
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	5.450	10.497	13.162	12.515	13.572	13.812
Mean (ppbw)	5.184	10.306	12.791	12.362	13.335	13.568
Min (ppbw)	5.032	9.850	12.270	11.946	12.715	13.157
Max (ppbw)	5.450	10.570	13.162	12.627	13.719	13.812
StdDev	0.2311	0.3961	0.4646	0.3651	0.5420	0.3579
Peak Area Avg	11752	24853	28656	28651	30475	30591
Expected Conc (ppbv)	21.05	20.80	20.97	20.80	20.97	21.14
Inject Rate	2	2	2	2	2	2
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	0.4185	0.5380	0.5011	0.4938	0.5223	0.5577
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	0.3958	0.5485	0.5132	0.5025	0.5323	0.5613
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	0.4248	0.5511	0.5159	0.5027	0.5299	0.5676
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	9.602	18.518	22.995	22.662	23.971	24.673
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	9.081	18.878	23.550	23.062	24.430	24.831
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	9.747	18.966	23.676	23.069	24.317	25.112
Mean (ppbw)	9.477	18.787	23.407	22.931	24.239	24.872
Min (ppbw)	9.081	18.518	22.995	22.662	23.971	24.673
Max (ppbw)	9.747	18.966	23.676	23.069	24.430	25.112
StdDev	0.3503	0.2376	0.3623	0.2332	0.2391	0.2226
Peak Area Avg	21482	45307	52439	53145	55394	56077
Expected Conc (ppbv)	42.10	41.60	41.94	41.60	41.94	42.27

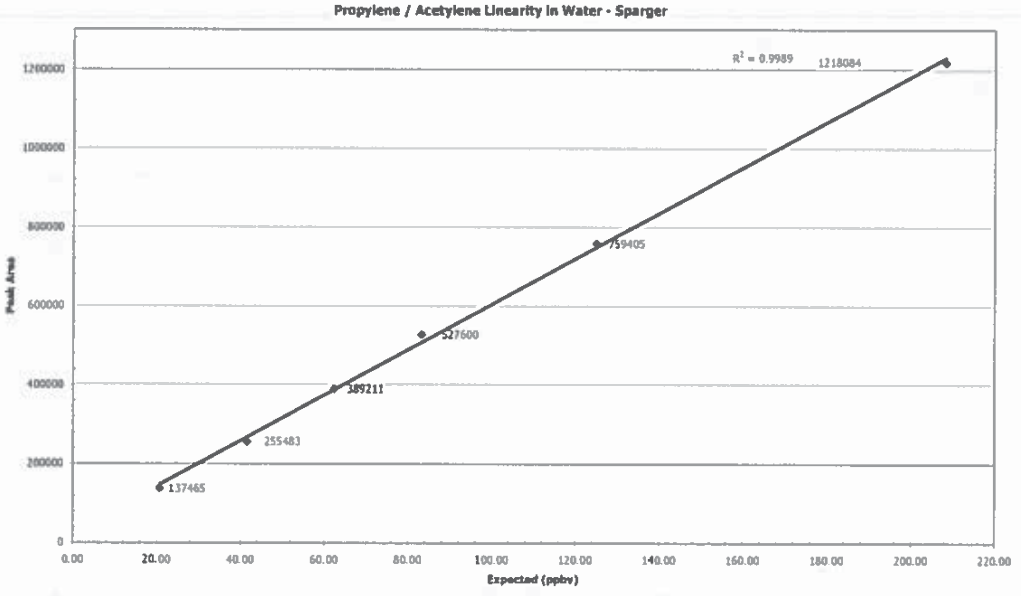
	Stripper	Stripper	Stripper	Stripper	Stripper	Stripper
	Ethylene	Propylene / Acetylene	Isobutylene / 1-Butene	Trans-2-Butene	Cis-2-Butene	1,3-Butadiene
Inject Rate	3	3	3	3	3	3
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	0.6004	0.8161	0.7585	0.7415	0.7822	0.8292
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	0.5887	0.8273	0.7771	0.7574	0.8078	0.8607
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	0.6296	0.8474	0.7896	0.7713	0.8174	0.8702
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	13.777	28.089	34.811	34.031	35.899	36.683
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	13.507	28.472	35.663	34.760	37.070	38.076
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	14.447	29.165	36.235	35.395	37.514	38.498
Mean (ppbw)	13.911	28.575	35.570	34.729	36.828	37.752
Min (ppbw)	13.507	28.089	34.811	34.031	35.899	36.683
Max (ppbw)	14.447	29.165	36.235	35.395	37.514	38.498
StdDev	0.4840	0.5454	0.7167	0.6828	0.8346	0.9500
Peak Area Avg	31533	68912	79686	80487	84161	85117
Expected Conc (ppbv)	63.15	62.40	62.90	62.40	62.90	63.41
Inject Rate	4	4	4	4	4	4
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	0.8173	1.1115	1.0396	1.0093	1.0679	1.1380
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	0.8281	1.1041	1.0326	1.0075	1.0700	1.1392
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	0.8359	1.1105	1.0418	1.0125	1.0734	1.1367
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	18.753	38.254	47.708	46.318	49.007	50.347
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	19.001	38.000	47.387	46.238	49.103	50.398
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	19.180	38.221	47.811	46.468	49.259	50.288
Mean (ppbw)	18.978	38.158	47.635	46.341	49.123	50.344
Min (ppbw)	18.753	38.000	47.387	46.238	49.007	50.288
Max (ppbw)	19.180	38.254	47.811	46.468	49.259	50.398
StdDev	0.2143	0.1380	0.2211	0.1165	0.1274	0.0553
Peak Area Avg	43020	92021	106717	107400	112260	113508
Expected Conc (ppbv)	84.21	83.20	83.87	83.20	83.87	84.54

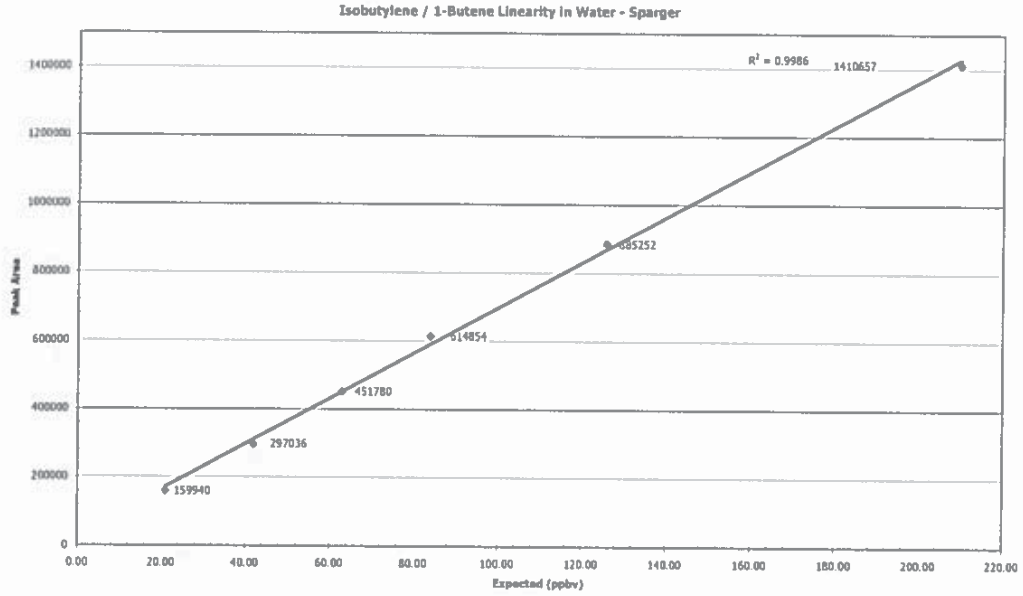
	Stripper	Stripper	Stripper	Stripper	Stripper	Stripper
	Ethylene	Propylene / Acetylene	Isobutylene / 1 Butene	Trans-2-Butene	Cis-2-Butene	1,3-Butadiene
Inject Rate	6	6	6	6	6	6
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	1.1465	1.5448	1.4528	1.4069	1.4863	1.5749
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	1.1501	1.5419	1.4510	1.4071	1.4893	1.5835
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	1.1446	1.5335	1.4356	1.3947	1.4779	1.5686
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	26.307	53.167	66.674	64.568	68.208	69.672
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	26.389	53.068	66.590	64.574	68.346	70.056
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	26.263	52.778	65.885	64.008	67.823	69.394
Mean (ppbw)	26.320	53.004	66.383	64.383	68.126	69.707
Min (ppbw)	26.263	52.778	65.885	64.008	67.823	69.394
Max (ppbw)	26.389	53.167	66.674	64.574	68.346	70.056
StdDev	0.0641	0.2022	0.4335	0.3250	0.2712	0.3324
Peak Area Avg	59662	127823	148716	149214	155686	157164
Expected Conc (ppbv)	126.31	124.80	125.81	124.80	125.81	126.81
Inject Rate	10	10	10	10	10	10
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 1	1.7891	2.3960	2.2359	2.1656	2.2899	2.4538
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 2	1.7903	2.3811	2.2208	2.1576	2.2862	2.4401
Comp in Vapor (as read by AX) (ppmv) - 3pt Avg 3	1.7814	2.3703	2.2166	2.1479	2.2747	2.4253
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 1	41.052	82.464	102.611	99.385	105.090	108.557
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 2	41.080	81.952	101.918	99.016	104.918	107.951
Comp in H2O (calc w/CF) (ppbw) - 3pt Avg 3	40.874	81.578	101.725	98.571	104.393	107.297
Mean (ppbw)	41.002	81.998	102.085	98.990	104.800	107.935
Min (ppbw)	40.874	81.578	101.725	98.571	104.393	107.297
Max (ppbw)	41.080	82.464	102.611	99.385	105.090	108.557
StdDev	0.1115	0.4446	0.4658	0.4075	0.3633	0.6298
Peak Area Avg	92944	197743	228698	229420	239498	243353
Expected Conc (ppbv)	210.52	208.00	209.68	208.00	209.68	211.35

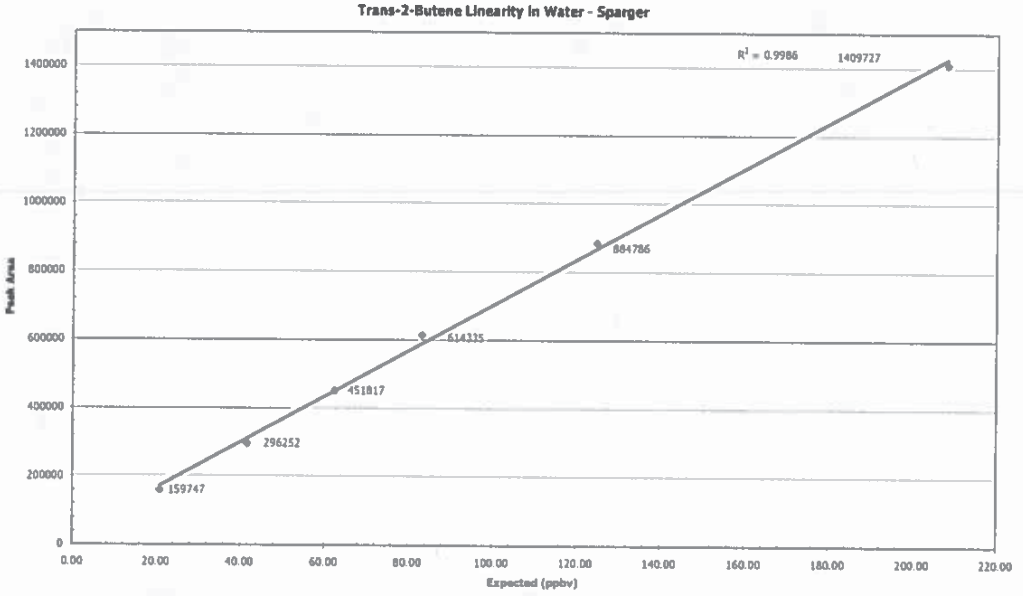
Linearity Charts

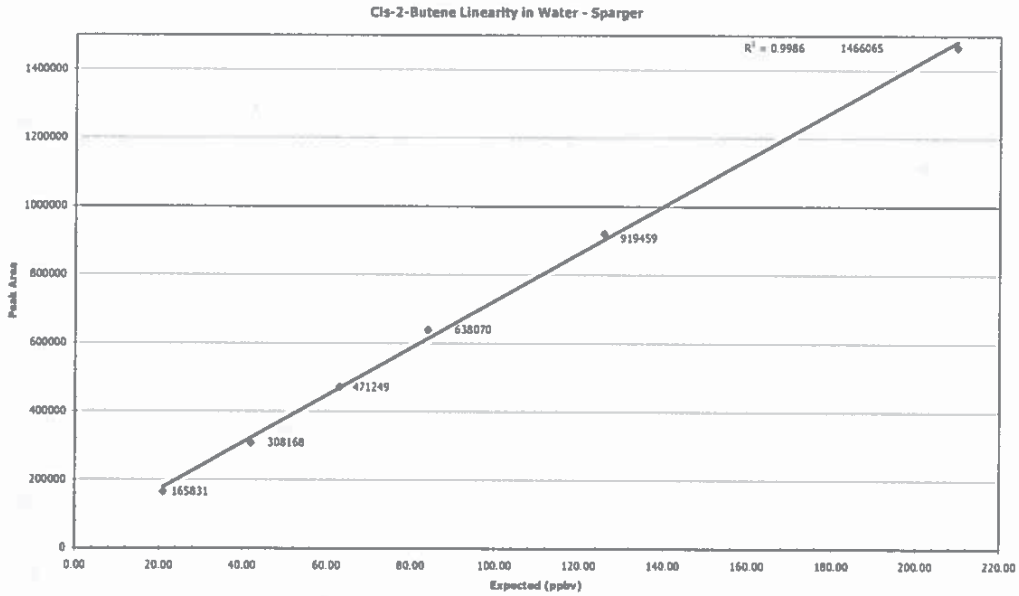
The analyzer was calibrated per Performance Specification 9 using certified vapor blends then sample was injected at 1, 2, 3, 4, 6 and 10 times per minute using the diluter presented in Figure 2. The resulting graph shows the excellent linearity of the diluter system as viewed by both the SAA sparger and EPS (See Charts Below).

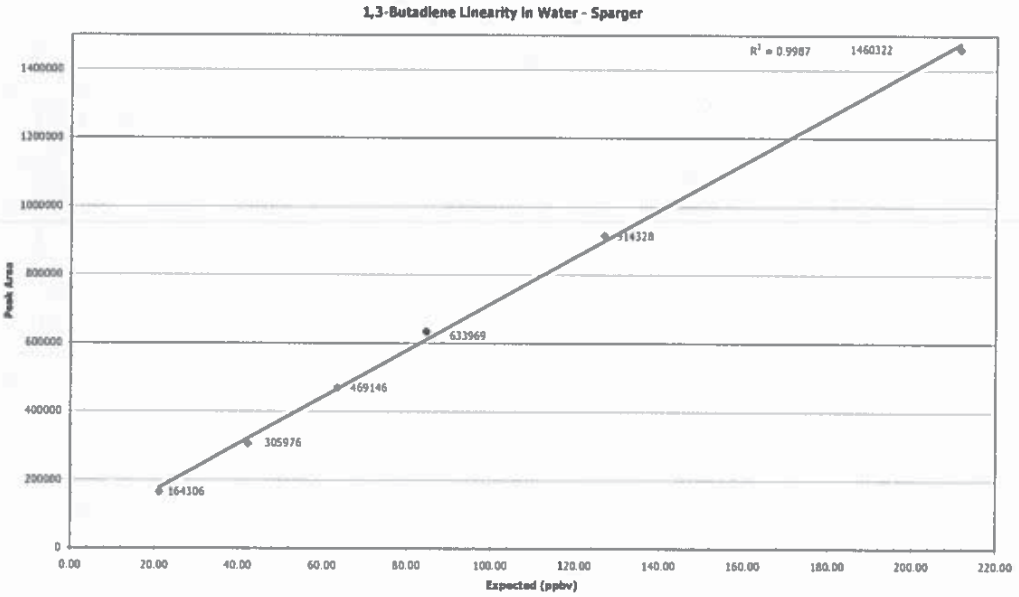


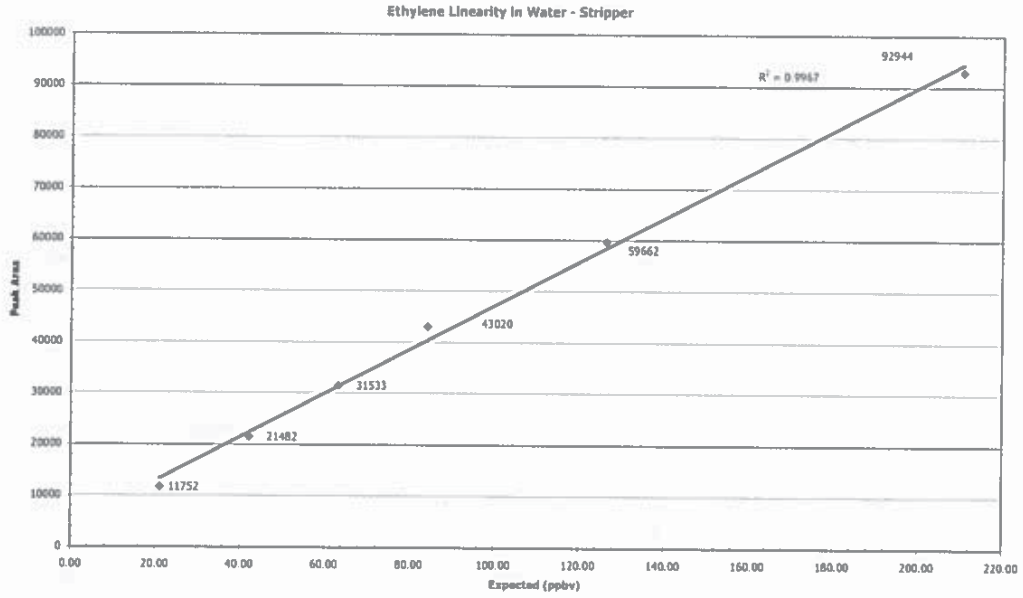


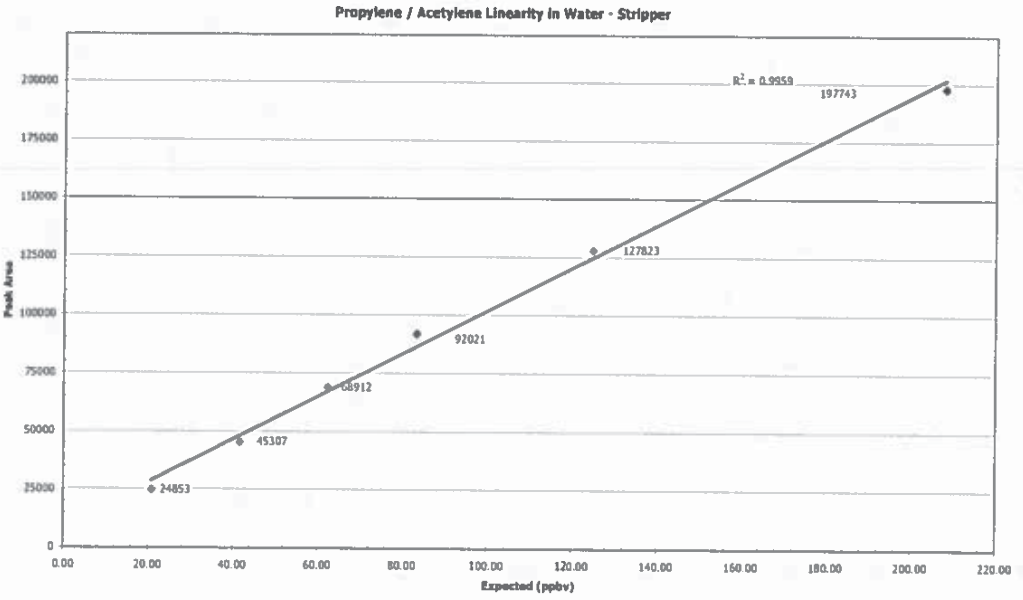

Isobutylene / 1-Butene Linearity in Water - Sparger
R^2 = 0.9986
1410657
885252
614854
451780
297036
159940
Peak Area
Expected (ppbv)
0
200000
400000
600000
800000
1000000
1200000
1400000
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00

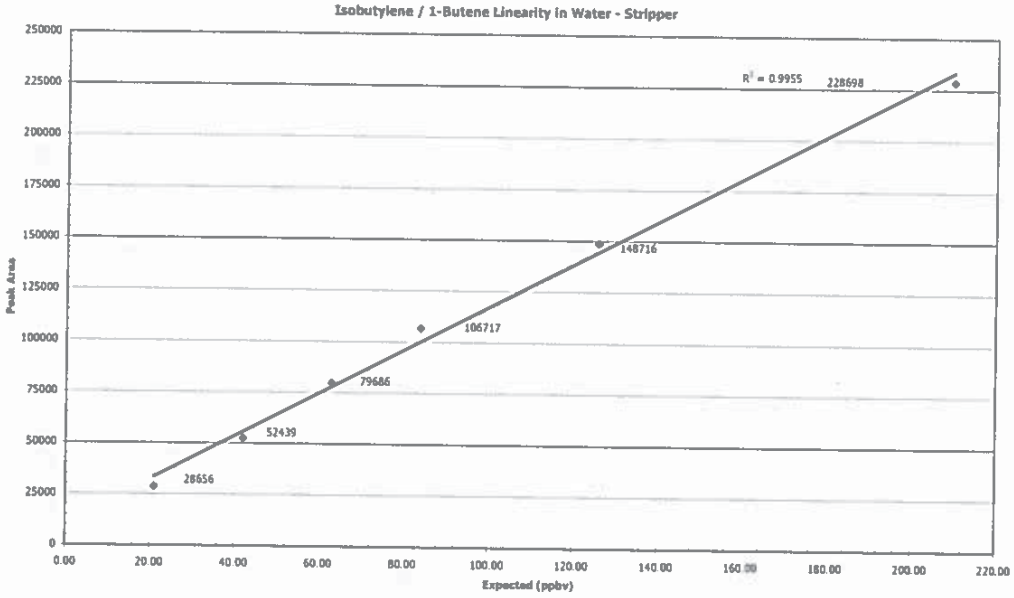

Trans-2-Butene Linearity in Water - Sparger
R^2 = 0.9986
1409727
884786
614335
451817
296252
159747
Peak Area
Expected (ppbv)
0
200000
400000
600000
800000
1000000
1200000
1400000
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00

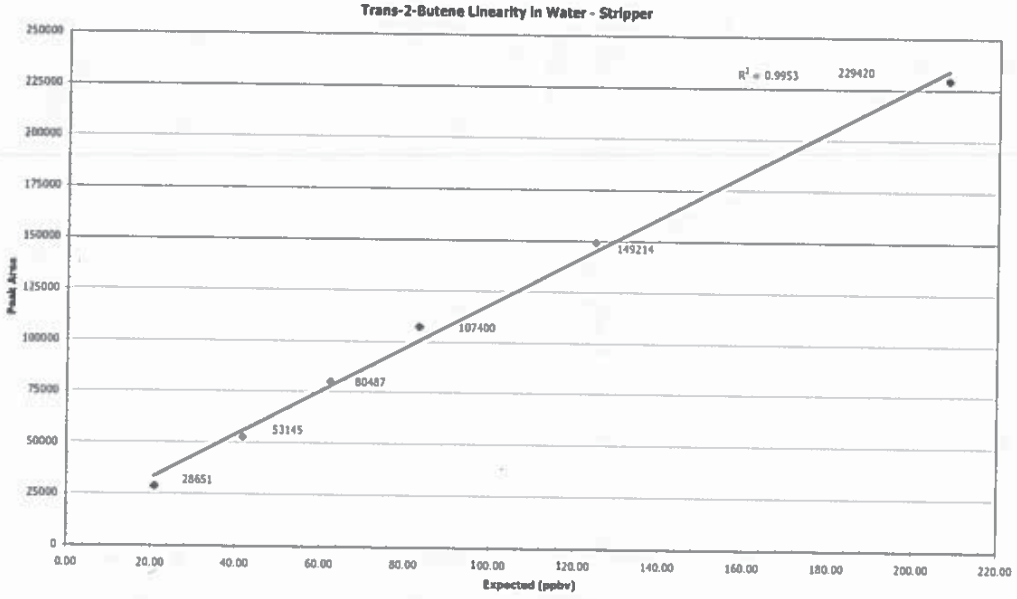

Cis-2-Butene Linearity in Water - Sparger
R² = 0.9986
1466065
919459
638070
471249
308168
165831
Peak Area
Expected (ppbv)
0
200000
400000
600000
800000
1000000
1200000
1400000
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00

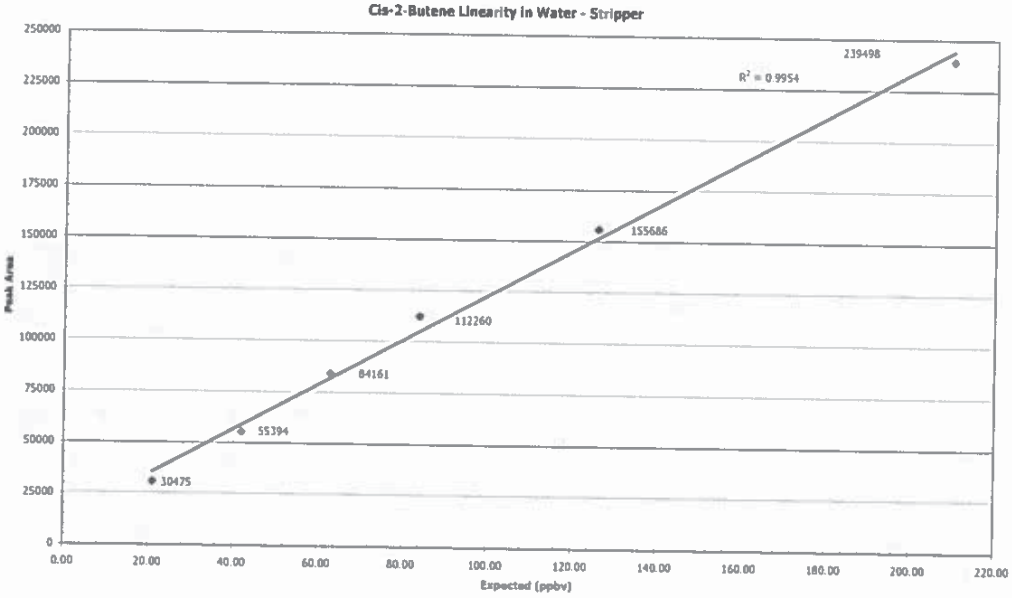

1,3-Butadiene Linearity in Water - Sparger
R² = 0.9987
1460322
914328
633969
469146
305976
164306
Peak Area
Expected (ppbv)
0
200000
400000
600000
800000
1000000
1200000
1400000
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00

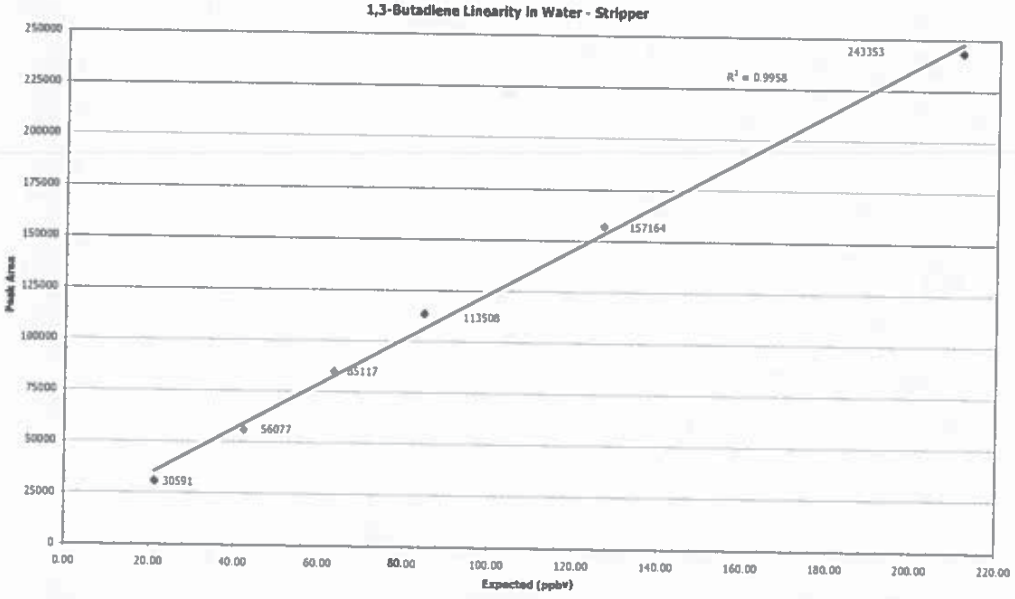

Ethylene Linearity in Water - Stripper
Peak Area
Expected (ppbv)
R² = 0.9967
92944
59662
43020
31533
21482
11752
100000
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00


Propylene / Acetylene Linearity in Water - Stripper
Peak Area
Expected (ppbv)
R² = 0.9959
197743
127823
92021
68912
45307
24853
200000
175000
150000
125000
100000
75000
50000
25000
0
0.00
20.00
40.00
60.00
80.00
100.00
120.00
140.00
160.00
180.00
200.00
220.00


Isobutylene / 1-Butene Linearity in Water - Stripper
Peak Area
Expected (ppbv)
R² = 0.9955
28656
52439
79686
106717
148716
228698


Trans-2-Butene Linearity in Water - Stripper
Peak Area
Expected (ppbv)
R² = 0.9953
28651
53145
80487
107400
149214
229420

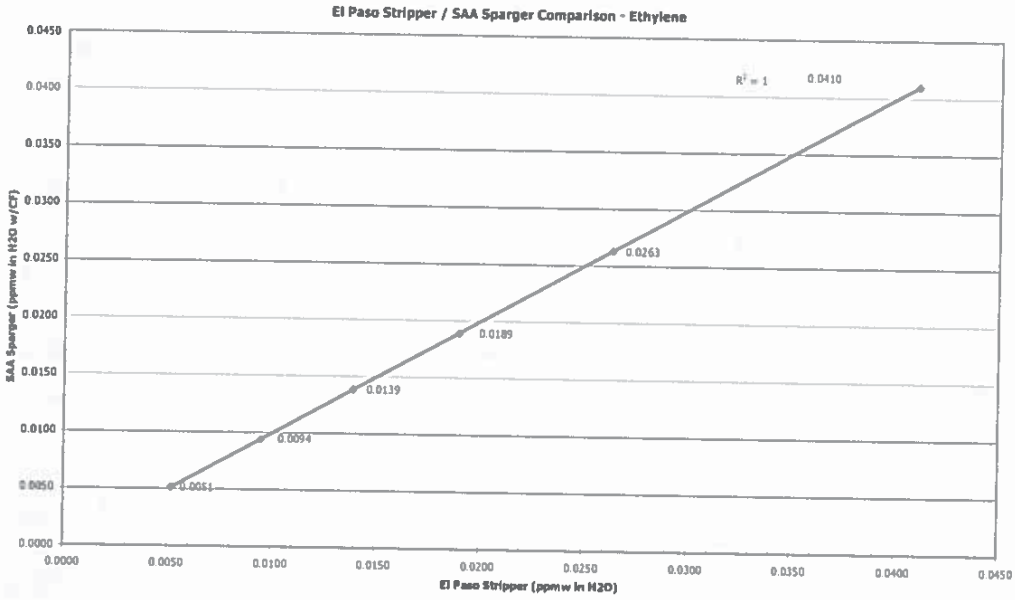


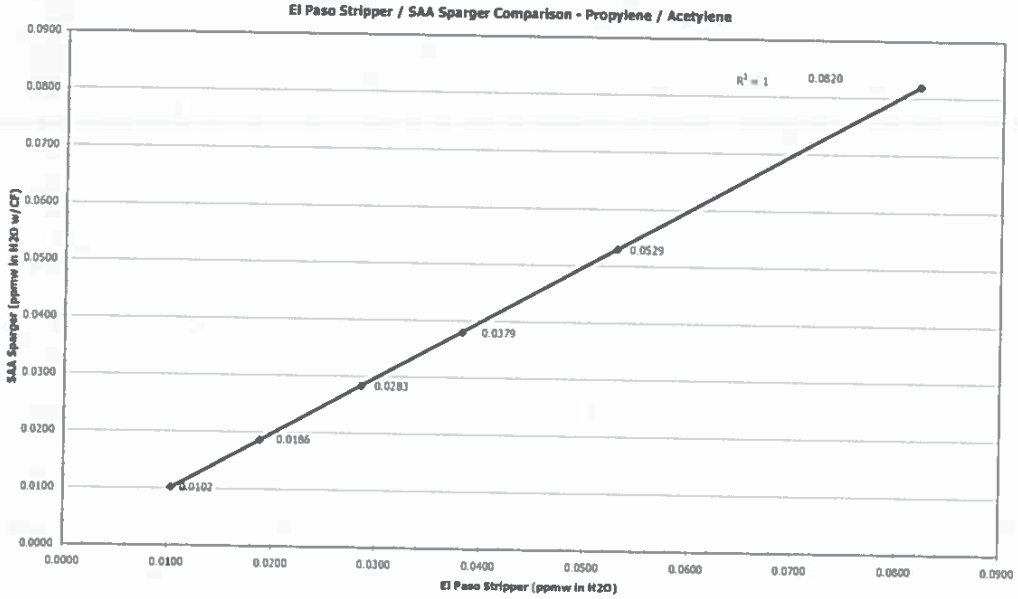


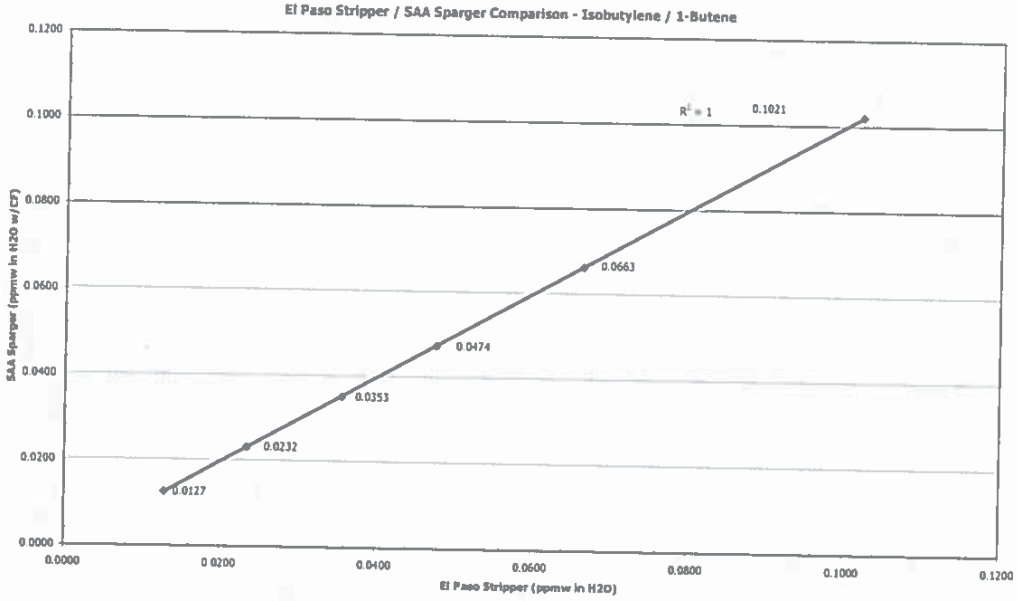
Linearity Comparison Between EPS and SAA Sparger

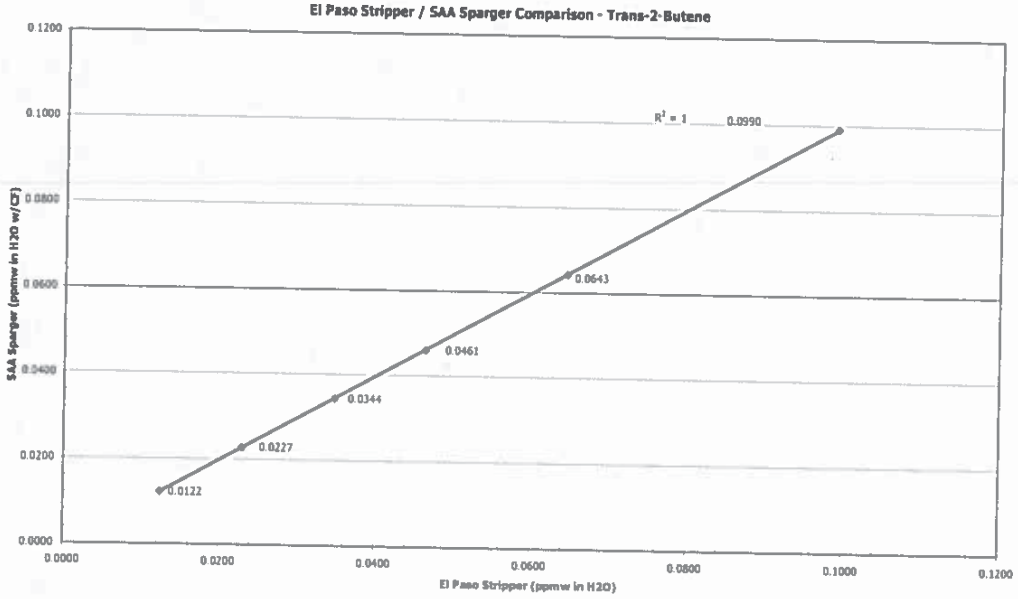
As described in the previous section, using the diluter, the concentration of HRVOCs in the water was varied. The raw data above was plotted to show the correlation between the two systems. These plots are shown below for each of the HRVOC components.

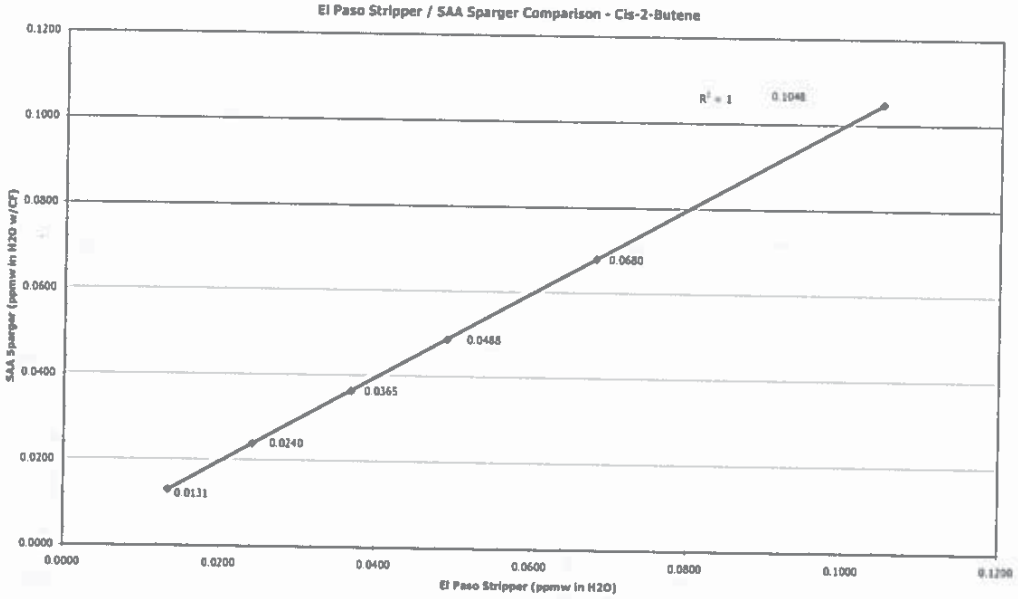
Linearity Charts (EPS vs. SAA Sparger)

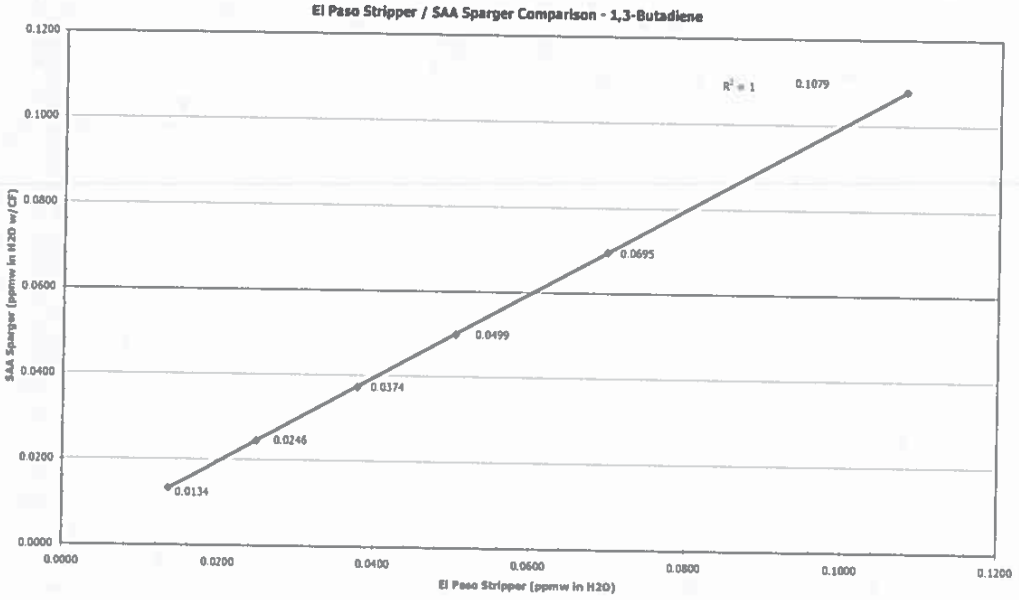





El Paso Stripper / SAA Sparger Comparison - Isobutylene / 1-Butene
SAA Sparger (ppmw in H2O w/CF)
El Paso Stripper (ppmw in H2O)
R² = 1
0.1021
0.0663
0.0474
0.0353
0.0232
0.0127
0.0000
0.0200
0.0400
0.0600
0.0800
0.1000
0.1200


El Paso Stripper / SAA Sparger Comparison - Trans-2-Butene
SAA Sparger (ppmw in H2O w/CF)
El Paso Stripper (ppmw in H2O)
R² = 1
0.0990
0.0643
0.0461
0.0344
0.0227
0.0122
0.0000
0.0200
0.0400
0.0600
0.0800
0.1000
0.1200


El Paso Stripper / SAA Sparger Comparison - Cis-2-Butene
SAA Sparger (ppmw in H2O w/ CF)
El Paso Stripper (ppmw in H2O)
R² = 1
0.1048
0.0680
0.0488
0.0365
0.0240
0.0131
0.0000
0.0200
0.0400
0.0600
0.0800
0.1000
0.1200


El Paso Stripper / SAA Sparger Comparison - 1,3-Butadiene
SAA Sparger (ppmw in H2O w/ CF)
El Paso Stripper (ppmw in H2O)
R² = 1
0.1079
0.0695
0.0499
0.0374
0.0246
0.0134
0.0000
0.0200
0.0400
0.0600
0.0800
0.1000
0.1200

Equivalency Data and Calculations per Section 6.2

Equivalency is demonstrated by analyzing the water content of twenty-seven (27) HRVOC component samplings of both the SAA Sparger and EPS vapor effluents while the diluter holds a steady-state concentration of the components of interest in the water. The data is then statistically analyzed according to the F-test and t-test in Method 301 sections 6.2. Discussions with the TCEQ on the definition of "9 pairs of data" lead to the clarification that each point in the "9 pairs" is in fact the average of 3 data points from the analysis of a "set" of data. Therefore, TCEQ's definition is that 9 pairs of data are the averages of 27 points of consecutive data whereby an average is generated for each sequential group of 3 data points.

It should be noted that the standard deviation of the validated method, SD_v, does not appear to be a published value so the standard deviation of the EPS was experimentally determined and used as part of this equivalency. The TCEQ was asked to consider this as appropriate given that the EPS is the stated method of preference by the TCEQ and that no published data regarding the standard deviation of the EPS was available. The TCEQ has agreed that the standard deviation obtained during the actual equivalency test is preferred. Therefore, the standard deviation of the validated sample, SD_v, has been determined using the 9 average results obtained from the EPS and SAA sparger during the equivalency test. The standard deviation for the proposed method, SD_p, is determined as per the equation below taken from Method 301.

Equations and Variables Used

Validated Method Standard Deviation, $SD_v = \sqrt{\frac{\sum (S_i - S_m)^2}{(n-1)}}$ F - Test, $F = \frac{S_p^{\,2}}{S_v^{\,2}}$

Proposed Method Standard Deviation, $SD_p = SD_d - SD_v$ (If $SD_v > SD_d$, let $SD_p = SD_d/1.414$)

Variance of Proposed or Validated methods, $S^2_{(\text{p or v})} = SD^2$ T - Test, $t = \frac{d_m}{\left[\frac{SD_d}{\sqrt{n}}\right]}$

Mean of the difference between EPS and Sparger values, d_m

Individual value and mean of group respectively, S_i and S_m

Standard Deviation of the difference between EPS and Sparger values, SD_d

Mean of the Validated method values, V_m

Correction Factor, $CF = 1 + \frac{d_m}{V_m}$

$$\text{Appendix P water concentration, ppmw} = \frac{\text{MW x 1atm x sparger gas flow(cc/min) x vapor concentration (ppmv)}}{\text{R(ideal gas const) x (T + 273) x sparger water flow (cc/min)}}$$

Note that Appendix P states that T is the stripping chamber temperature in °C and *b* is the stripping gas flow rate. This is a correct statement provided that the device used for flow measurement is at the same temperature as the stripping chamber as is typically the case with the EPS. However, in the case of the SAA sparger (or an EPS in a temperature controlled cabinet), flow measurements are typically taken external to the heated cabinet. This means that either: a) the Appendix P equation should be modified to state that T is the temperature at which the stripper/sparger gas flow is measured or b) the flow rate

obtained using a flow measurement device at some temperature other than the stripping chamber's must have it's flow rate corrected to the temperature in the stripping chamber. The TCEQ has been notified of this observation but has not commented at the time of this report.

The data provided below follows path (a) above in that the temperature of the flow measuring device was used in T as opposed to the stripping chamber temperature. If a flow correction is the desirable approach, then the following equation can be used to correct the stripper/sparger gas flow rate to the temperature inside the stripping chamber. In doing so, the stripping chamber temperature would be used in the Appendix P equation along with the corrected stripper/sparger gas flow. Whichever approach is used, the resulting concentration is the same.

$$\text{Corrected flow rate, cc/min} = \frac{(T_s + 273)}{(T_m + 273)} \times F_m$$

Where T_s is the temperature of the stripping/sparging chamber in °C, Tm is the temperature the flow measurement device is at in °C (typically ambient) and F_m is the flow rate at T_m in cc/min.

Below are the 27 individual points taken followed by the 9 averages obtained for both sparger and stripper.

Sparger, ppmv

		C2	B-1/IC4=	TB-2	CB-2	1,3-BD	C3=/Acetylene
08/27/2004	15:45:19	13.5660	16.0765	15.5656	16.4276	17.1510	17.4217
08/27/2004	15:52:45	13.3710	15.9066	15.4104	16.2653	16.9848	17.2674
08/27/2004	16:00:11	13.2672	15.8055	15.3303	16.2037	16.9609	17.1554
08/27/2004	16:07:37	13.2996	15.6029	15.1477	16.0353	16.8537	16.9674
08/27/2004	16:15:03	13.1692	15.6619	15.1834	16.0251	16.7646	16.9727
08/27/2004	16:22:28	13.1332	15.5306	15.0660	15.9517	16.7281	16.8762
08/27/2004	16:29:53	12.9935	15.4194	14.9678	15.8345	16.5926	16.7183
08/27/2004	16:37:19	12.8492	15.3359	14.8833	15.7430	16.5006	16.6701
08/27/2004	16:44:45	12.8188	15.1592	14.7432	15.6298	16.4351	16.5379
08/27/2004	16:52:11	12.9346	15.0925	14.6706	15.5716	16.3877	16.4672
08/27/2004	16:59:37	12.8631	15.3205	14.8693	15.7261	16.4801	16.6215
08/27/2004	17:07:02	12.9711	15.2501	14.8274	15.7223	16.5327	16.6120
08/27/2004	17:14:28	12.8389	15.0401	14.6293	15.5265	16.3328	16.4065
08/27/2004	17:21:54	13.0103	15.1536	14.7294	15.6178	16.4226	16.4962
08/27/2004	17:29:21	12.8048	15.2224	14.8100	15.6793	16.4706	16.5542
08/27/2004	17:36:48	12.8646	15.2167	14.7815	15.6540	16.4328	16.5607
08/27/2004	17:44:14	12.8494	15.3089	14.8624	15.6978	16.4301	16.6141
08/27/2004	17:51:41	12.9859	15.2915	14.8808	15.7563	16.5280	16.6256
08/27/2004	17:59:07	12.8823	15.1910	14.7642	15.6367	16.4181	16.5056
08/27/2004	18:06:32	12.7302	15.0781	14.6685	15.5515	16.3501	16.4284
08/27/2004	18:13:59	12.7729	14.9797	14.5876	15.4859	16.2963	16.3428
08/27/2004	18:21:25	12.9902	15.4847	15.0346	15.8643	16.5620	16.8202
08/27/2004	18:28:51	12.8876	15.4610	15.0097	15.8475	16.5474	16.7543
08/27/2004	18:36:19	12.9209	15.4208	14.9883	15.8549	16.5947	16.7363
08/27/2004	18:43:45	12.7809	15.1244	14.7129	15.5746	16.3520	16.4691
08/27/2004	18:51:11	12.8707	15.0529	14.6467	15.5382	16.3566	16.3933
08/27/2004	18:58:37	12.8346	15.1436	14.7429	15.6041	16.3712	16.5051

	C2=	B-1/IC4=	TB-2	CB-2	1,3-BD	C3=/Acetylene
Ave #1	13.4014	15.9295	15.4354	16.2989	17.0322	17.2815
Ave #2	13.2007	15.5985	15.1324	16.0040	16.7821	16.9388
Ave #3	12.8872	15.3048	14.8648	15.7358	16.5094	16.6421
Ave #4	12.9229	15.2210	14.7891	15.6733	16.4668	16.5669
Ave #5	12.8847	15.1387	14.7229	15.6079	16.4087	16.4856
Ave #6	12.9000	15.2724	14.8416	15.7027	16.4636	16.6001
Ave #7	12.7951	15.0829	14.6734	15.5580	16.3548	16.4256
Ave #8	12.9329	15.4555	15.0109	15.8556	16.5680	16.7703
Ave #9	12.8287	15.1070	14.7008	15.5723	16.3599	16.4558

Stripper, ppmv

		C2=	B-1/IC4=	TB-2	CB-2	1,3-BD	C3=/acetylene
08/27/2004	15:45:19	1.7698	2.1330	2.0656	2.1909	2.3257	2.3202
08/27/2004	15:52:45	1.7446	2.1254	2.0594	2.1830	2.3141	2.3076
08/27/2004	16:00:11	1.7360	2.0996	2.0375	2.1582	2.2848	2.2799
08/27/2004	16:07:37	1.7268	2.0922	2.0177	2.1419	2.2708	2.2590
08/27/2004	16:15:03	1.7246	2.0638	2.0005	2.1300	2.2670	2.2485
08/27/2004	16:22:28	1.7043	2.0765	2.0078	2.1349	2.2747	2.2535
08/27/2004	16:29:53	1.6994	2.0570	1.9891	2.1088	2.2387	2.2214
08/27/2004	16:37:19	1.7012	2.0526	1.9861	2.1114	2.2489	2.2349
08/27/2004	16:44:45	1.6915	2.0528	1.9891	2.1097	2.2494	2.2227
08/27/2004	16:52:11	1.6929	2.0433	1.9779	2.1068	2.2356	2.2271
08/27/2004	16:59:37	1.6814	2.0540	1.9852	2.1116	2.2412	2.2210
08/27/2004	17:07:02	1.6911	2.0377	1.9772	2.1085	2.2512	2.2152
08/27/2004	17:14:28	1.6880	2.0466	1.9811	2.1093	2.2502	2.2224
08/27/2004	17:21:54	1.6971	2.0145	1.9544	2.0827	2.2160	2.1889
08/27/2004	17:29:21	1.6783	2.0327	1.9712	2.0993	2.2357	2.1995
08/27/2004	17:36:48	1.6991	2.0513	1.9860	2.1083	2.2529	2.2176
08/27/2004	17:44:14	1.6911	2.0491	1.9850	2.1106	2.2469	2.2108
08/27/2004	17:51:41	1.6899	2.0319	1.9670	2.0914	2.2219	2.2085
08/27/2004	17:59:07	1.6718	2.0284	1.9697	2.0975	2.2268	2.2125
08/27/2004	18:06:32	1.6764	2.0290	1.9763	2.1021	2.2461	2.2117
08/27/2004	18:13:59	1.6673	2.0523	1.9926	2.1193	2.2541	2.2292
08/27/2004	18:21:25	1.6863	2.0407	1.9794	2.1082	2.2410	2.2221
08/27/2004	18:28:51	1.6805	2.0395	1.9777	2.1025	2.2379	2.2270
08/27/2004	18:36:19	1.6845	2.0375	1.9707	2.0947	2.2221	2.2140
08/27/2004	18:43:45	1.6801	2.0518	1.9880	2.1142	2.2444	2.2306
08/27/2004	18:51:11	1.6653	2.0261	1.9608	2.0891	2.2230	2.1939
08/27/2004	18:58:37	1.6708	2.0469	1.9837	2.1134	2.2532	2.2331

	C2=	B-1/IC4=	TB-2	CB-2	1,3-BD	C3=/acetylene
Ave #1	1.7501	2.1193	2.0542	2.1774	2.3082	2.3026
Ave #2	1.7186	2.0775	2.0087	2.1356	2.2708	2.2537
Ave #3	1.6974	2.0541	1.9881	2.1100	2.2457	2.2263
Ave #4	1.6885	2.0450	1.9801	2.1090	2.2427	2.2211
Ave #5	1.6878	2.0313	1.9689	2.0971	2.2340	2.2036
Ave #6	1.6934	2.0441	1.9793	2.1034	2.2406	2.2123
Ave #7	1.6718	2.0366	1.9795	2.1063	2.2423	2.2178
Ave #8	1.6838	2.0392	1.9759	2.1018	2.2337	2.2210
Ave #9	1.6721	2.0416	1.9775	2.1056	2.2402	2.2192

Using the above data, the 9 averages are used to perform the statistical tests as per Method 301. A summary of the results from both the EPS and the SAA sparger are show in both tables below.

EPS and SAA Sparger Gas Values (as read by the vapor calibrated analyzer simultaneously)

El Paso Stripper	Water temp	C2= (vapor) ppmv	Acetylene/C3= (vapor) ppmv	B-1/IC4= (vapor) ppmv	TB-2 (vapor) ppmv	CB-2 (vapor) ppmv	1,3-BD (vapor) ppmv
Average 1	21.9	1.7501	2.3026	2.1193	2.0542	2.1774	2.3082
Average 2	21.9	1.7186	2.2537	2.0775	2.0087	2.1356	2.2708
Average 3	21.9	1.6974	2.2263	2.0541	1.9881	2.1100	2.2457
Average 4	21.9	1.6885	2.2211	2.0450	1.9801	2.1090	2.2427
Average 5	21.9	1.6878	2.2036	2.0313	1.9689	2.0971	2.2340
Average 6	21.9	1.6934	2.2123	2.0441	1.9793	2.1034	2.2406
Average 7	21.9	1.6718	2.2178	2.0366	1.9795	2.1063	2.2423
Average 8	21.9	1.6838	2.2210	2.0392	1.9759	2.1018	2.2337
Average 9	21.9	1.6721	2.2192	2.0416	1.9775	2.1056	2.2402
Mean (V_m)	21.9	1.6959	2.2308	2.0543	1.9902	2.1162	2.2509
STDDev (SD_v)		0.02470	0.03014	0.02782	0.02643	0.02538	0.02412
Variance		0.0006099	0.0009086	0.0007739	0.0006987	0.0006444	0.0005818

SAA Sparger	Temp at Strip Gas Flow Measurement, °C	C2= (vapor) ppm	C2*/C3= (vapor) ppm	B-1/IC4= (vapor) ppm	TB-2 (vapor)	CB-2 (vapor)	1,3-BD (vapor)
Average 1	21.9	13.4014	17.2815	15.9295	15.4354	16.2989	17.0322
Average 2	21.9	13.2007	16.9388	15.5985	15.1324	16.0040	16.7821
Average 3	21.9	12.8872	16.6421	15.3048	14.8648	15.7358	16.5094
Average 4	21.9	12.9229	16.5669	15.2210	14.7891	15.6733	16.4668
Average 5	21.9	12.8847	16.4856	15.1387	14.7229	15.6079	16.4087
Average 6	21.9	12.9000	16.6001	15.2724	14.8416	15.7027	16.4636
Average 7	21.9	12.7951	16.4256	15.0829	14.6734	15.5580	16.3548
Average 8	21.9	12.9329	16.7703	15.4555	15.0109	15.8556	16.5680
Average 9	21.9	12.8287	16.4558	15.1070	14.7008	15.5723	16.3599
Mean	21.9	12.9726	16.6852	15.3456	14.9079	15.7787	16.5495
STDDev		0.19762	0.27614	0.27575	0.24792	0.24147	0.22276
Variance		0.0390532	0.0762529	0.0760359	0.0614661	0.0583071	0.0496213

EPS and Sparger Water Values (calculated)

El Paso Stripper	Temp at Gas Flow Measurement, °C	C2= (in H2O) ppmw	C2*/C3= (in H2O) ppmw	B-1_IC4= (in H2O) ppmw	TB-2 (in H2O) ppmw	CB-2 (in H2O) ppmw	1,3-BD (in H2O) ppmw
Average 1	21.9	0.0406	0.0801	0.0983	0.0953	0.1010	0.1032
Average 2	21.9	0.0398	0.0784	0.0963	0.0932	0.0990	0.1015
Average 3	21.9	0.0394	0.0774	0.0953	0.0922	0.0978	0.1004
Average 4	21.9	0.0391	0.0772	0.0948	0.0918	0.0978	0.1003
Average 5	21.9	0.0391	0.0766	0.0942	0.0913	0.0973	0.0999
Average 6	21.9	0.0393	0.0769	0.0948	0.0918	0.0975	0.1002
Average 7	21.9	0.0388	0.0771	0.0944	0.0918	0.0977	0.1002
Average 8	21.9	0.0390	0.0772	0.0946	0.0916	0.0975	0.0999
Average 9	21.9	0.0388	0.0772	0.0947	0.0917	0.0976	0.1001
Mean (V_m)	21.9	0.039	0.078	0.095	0.092	0.098	0.101
STDDev (SDv)		0.00057	0.00105	0.00129	0.00123	0.00118	0.00108
Variance (S_v^2)		0.0000003	0.0000011	0.0000017	0.0000015	0.0000014	0.0000012

SAA Sparger	Temp at Gas Flow Measurement, °C	C2= (in H2O) ppmw	C2*/C3= (in H2O) ppmw	B-1_IC4= (in H2O) ppmw	TB-2 (in H2O) ppmw	CB-2 (in H2O) ppmw	1,3-BD (in H2O) ppmw
Average 1	21.9	0.0388	0.0751	0.0923	0.0895	0.0945	0.0952
Average 2	21.9	0.0383	0.0736	0.0904	0.0877	0.0928	0.0938
Average 3	21.9	0.0374	0.0723	0.0887	0.0862	0.0912	0.0923
Average 4	21.9	0.0375	0.0720	0.0882	0.0857	0.0909	0.0920
Average 5	21.9	0.0373	0.0717	0.0878	0.0853	0.0905	0.0917
Average 6	21.9	0.0374	0.0722	0.0885	0.0860	0.0910	0.0920
Average 7	21.9	0.0371	0.0714	0.0874	0.0851	0.0902	0.0914
Average 8	21.9	0.0375	0.0729	0.0896	0.0870	0.0919	0.0926
Average 9	21.9	0.0372	0.0715	0.0876	0.0852	0.0903	0.0914
Mean	21.9	0.0376	0.0725	0.0890	0.0864	0.0915	0.0925
STDDev		0.00057	0.00120	0.00160	0.00144	0.00140	0.00124

The summary of results made by comparing the values obtained from the EPS and the SAA Sparger are shown in the following table.

Equivalency Results Summary

El Paso Stripper - SAA Sparger difference	C2= (in H2O) ppmw diff	C3=/Acetylene (in H2O) ppmw diff	B-1/IC4= (in H2O) ppmw diff	TB-2 (in H2O) ppmw diff	CB-2 (in H2O) ppmw diff	1,3-BD (in H2O) ppmw
Average 1	0.0017	0.0050	0.0059	0.0058	0.0065	0.0080
Average 2	0.0016	0.0047	0.0059	0.0054	0.0063	0.0077
Average 3	0.0020	0.0051	0.0065	0.0060	0.0066	0.0081
Average 4	0.0017	0.0052	0.0066	0.0061	0.0069	0.0082
Average 5	0.0018	0.0050	0.0064	0.0060	0.0068	0.0082
Average 6	0.0019	0.0048	0.0063	0.0058	0.0065	0.0082
Average 7	0.0017	0.0057	0.0070	0.0067	0.0075	0.0089
Average 8	0.0016	0.0043	0.0050	0.0046	0.0056	0.0073
Average 9	0.0016	0.0056	0.0071	0.0065	0.0074	0.0087
Mean (d_m)	0.0017	0.0050	0.0063	0.0059	0.0067	0.0081
STDDev (SD_d)	0.0001	0.0004	0.0006	0.0006	0.0006	0.0005
SD_p (SD_d / 1.414) *	0.00010435	0.00030931	0.00045767	0.00043340	0.00041202	0.00033490
Variance (S_p^2)	0.00000001	0.00000010	0.00000021	0.00000019	0.00000017	0.00000011
F =	0.03320817	0.08705957	0.12584503	0.12500319	0.12249635	0.09646391
t =	35.0532	34.6371	29.2601	28.7770	34.3619	51.6040
CF =	1.0438	1.0651	1.0663	1.0637	1.0680	1.0809

* SD_v is > SD_d for all components

The data passes the F-test which requires the F-value to be ≤ 1 but there is some bias as demonstrated by the t-test. As indicated in section 6.2.1.5 of Method 301, a correction factor, CF, can be applied provided the CF is between 0.9 and 1.10. The CFs calculated above fall within this window and therefore the units are considered equivalent.

Discussion of Laboratory Evaluations

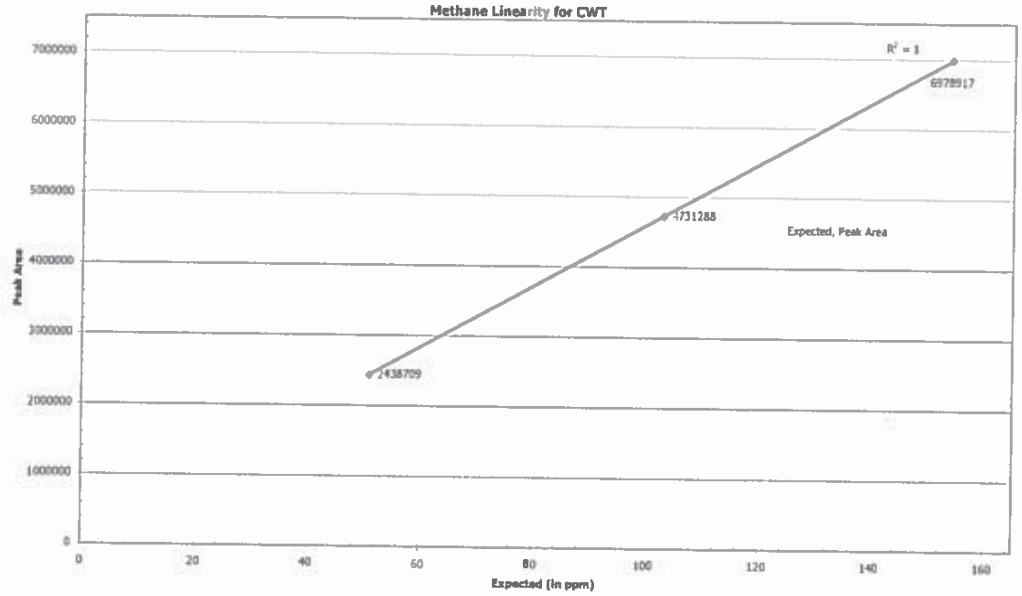
Performance Specification 9 Linearity

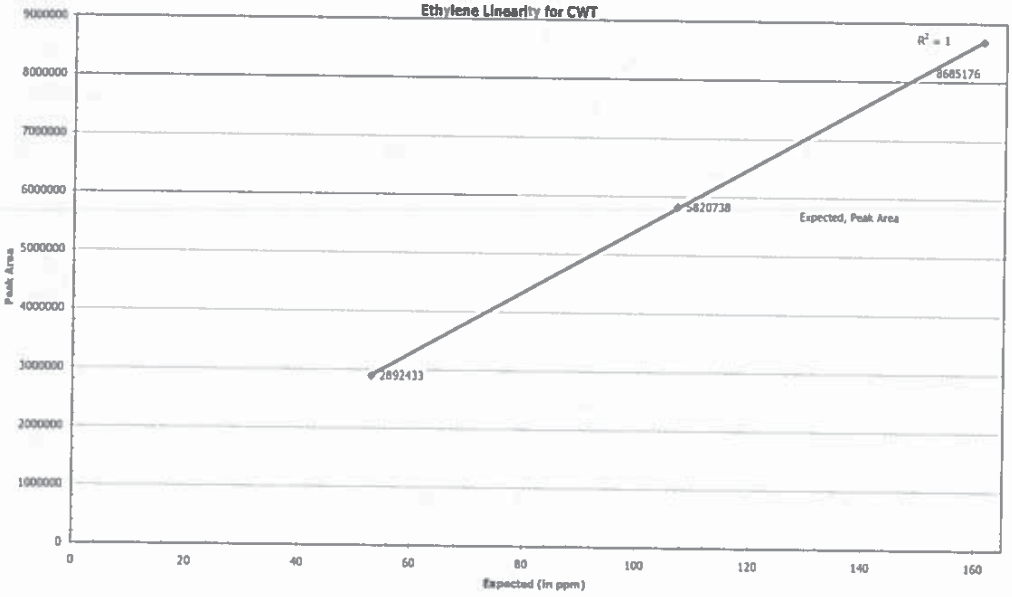
In accordance with Chapter 115, linearity testing was performed following 40CFR60, Performance Specification 9. Three vapor calibration blends discussed in the previous section were introduced directly at the analyzer inlet. Three data points per component, each within 5% of their mean, were obtained and plotted. The actual data is shown below. It is also probably worthy to note the co-elution of acetylene with propylene. In an operating application the reported results mathematically account for the co-elution of acetylene. Acetylene itself is measured on a separately calibrated analytical train with the same detector.

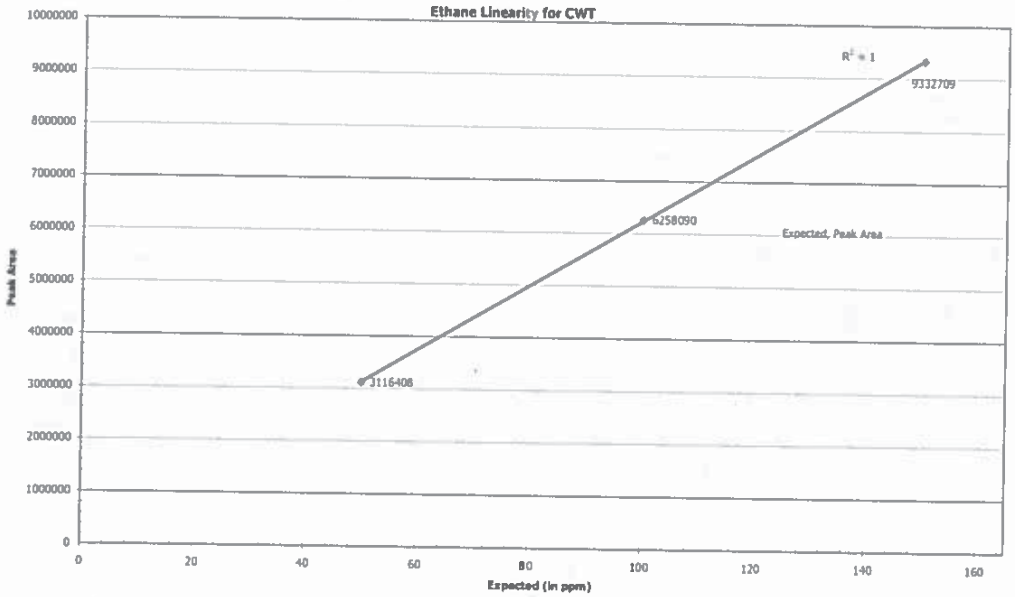
PS 9 Linearity Data, vapor std

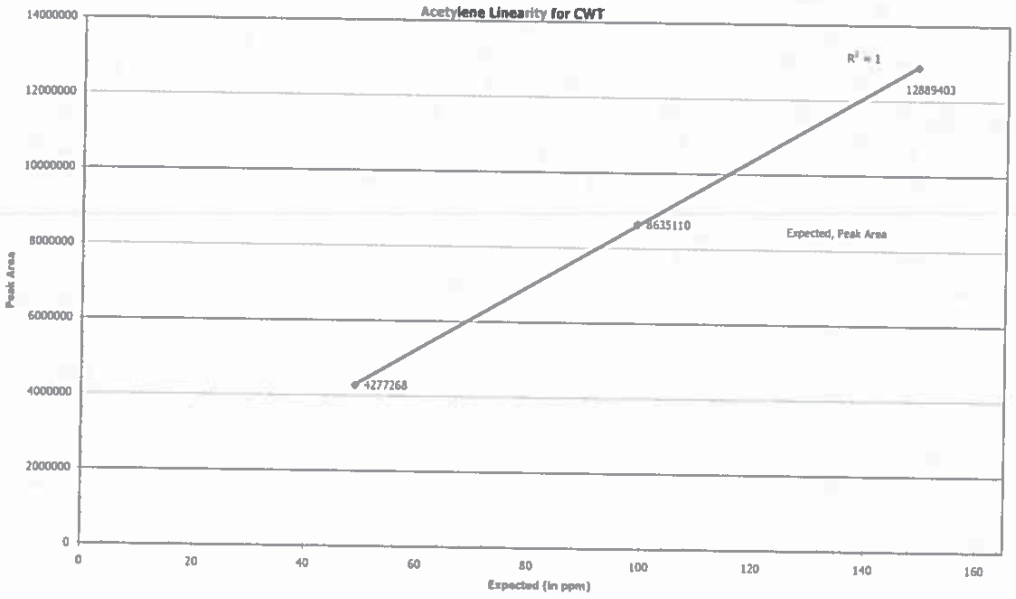
	Ethylene	Ethane	Acetylene	Methane	Propane	Isobutane	N-Butane	B-1/IC4=	TB-2	CB-2	1,3-BD	propylene_acetylene
	53.891	50.339	49.399	54.160	50.729	50.987	51.036	49.944	50.103	51.431	50.700	99.385
	53.871	50.289	49.264	54.176	50.748	50.986	51.052	49.947	50.077	51.443	50.662	99.438
	53.875	50.289	49.228	54.165	50.738	50.978	51.036	49.927	50.071	51.418	50.601	99.406
Mean (ppm)	53.879	50.306	49.297	54.167	50.738	50.983	51.041	49.939	50.084	51.431	50.654	99.409
Min	53.871	50.289	49.228	54.160	50.729	50.978	51.036	49.927	50.071	51.418	50.601	99.385
Max	53.891	50.339	49.399	54.176	50.748	50.987	51.052	49.947	50.103	51.443	50.700	99.438
MIN% from Mean	-0.0148%	-0.0337%	-0.1405%	-0.0127%	-0.0181%	-0.0117%	-0.0106%	-0.0250%	-0.0256%	-0.0245%	-0.1059%	-0.0247%
MAX% from Mean	0.0225%	0.0667%	0.2074%	0.0166%	0.0191%	0.0061%	0.0203%	0.0159%	0.0391%	0.0237%	0.0907%	0.0283%
StdDev	0.0107	0.0290	0.0904	0.0082	0.0095	0.0052	0.0090	0.0109	0.0172	0.0124	0.0502	0.0265
Response Factor	53684.0	61949.2	86765.7	45022.2	99557.5	130732.2	128819.7	106881.1	110701.6	108675.3	103269.3	83827.6
Peak Area Avg	2892433	3116408	4277268	2438709	5051388	6665181	6575129	5337564	5544349	5589258	5231031	8333257
Expected Conc ppm)	53	50	49	51	50	50	50	50	50	51	50	98
	108.442	101.028	99.476	105.103	102.082	102.643	102.765	100.559	100.856	103.573	102.210	200.564
	108.421	100.997	99.482	105.087	102.060	102.609	102.730	100.550	100.813	103.536	102.143	200.532
	108.415	101.034	99.608	105.074	102.033	102.587	102.698	100.513	100.794	103.510	102.113	200.458
Mean (ppm)	108.426	101.020	99.522	105.088	102.058	102.613	102.731	100.541	100.821	103.540	102.156	200.518
Min	108.415	100.997	99.476	105.074	102.033	102.587	102.698	100.513	100.794	103.510	102.113	200.458
Max	108.442	101.034	99.608	105.103	102.082	102.643	102.765	100.559	100.856	103.573	102.210	200.564
MIN% from Mean	-0.0105%	-0.0223%	-0.0462%	-0.0129%	-0.0247%	-0.0258%	-0.0323%	-0.0277%	-0.0264%	-0.0283%	-0.0416%	-0.0297%
MAX% from Mean	0.0152%	0.0145%	0.0866%	0.0140%	0.0232%	0.0297%	0.0330%	0.0185%	0.0346%	0.0317%	0.0537%	0.0228%
StdDev	0.0146	0.0198	0.0747	0.0142	0.0244	0.0287	0.0335	0.0245	0.0316	0.0312	0.0499	0.0540
Response Factor	53684.0	61949.2	86765.7	45022.2	99557.5	130732.2	128819.7	106881.1	110701.6	108675.3	103269.3	83827.6
Peak Area Avg	5820738	6258090	8635110	4731288	10160636	13414815	13233768	10745915	11161016	11252204	10549527	16808929
Expected Conc ppm)	107	100	99	103	101	101	101	100	100	102	101	198
	161.776	150.649	148.538	155.010	152.083	152.951	153.150	149.981	150.411	154.452	152.561	298.943
	161.766	150.649	148.571	155.000	152.060	152.969	153.158	150.005	150.418	154.493	152.588	298.987
	161.808	150.654	148.554	155.022	152.112	153.014	153.195	150.026	150.450	154.498	152.613	299.032
Mean (ppm)	161.783	150.651	148.554	155.011	152.085	152.978	153.168	150.004	150.426	154.481	152.587	298.987
Min	161.766	150.649	148.538	155.000	152.060	152.951	153.150	149.981	150.411	154.452	152.561	298.943
Max	161.808	150.654	148.571	155.022	152.112	153.014	153.195	150.026	150.450	154.498	152.613	299.032
MIN% from Mean	-0.0105%	-0.0012%	-0.0112%	-0.0068%	-0.0163%	-0.0179%	-0.0116%	-0.0151%	-0.0103%	-0.0188%	-0.0175%	-0.0149%
MAX% from Mean	0.0154%	0.0023%	0.0114%	0.0072%	0.0179%	0.0237%	0.0181%	0.0147%	0.0156%	0.0112%	0.0167%	0.0151%
StdDev	0.0220	0.0029	0.0168	0.0109	0.0261	0.0327	0.0243	0.0224	0.0207	0.0253	0.0261	0.0448
Response Factor	53684.0	61949.2	86765.7	45022.2	99557.5	130732.2	128819.7	106881.1	110701.6	108675.3	103269.3	83827.6
Peak Area Avg	8685176	9332709	12889403	6978917	15141206	19999164	19731013	16032603	16652395	16788255	15757573	25063382
Expected Conc ppm)	161	150	149	154	151	152	152	149	149	153	151	297

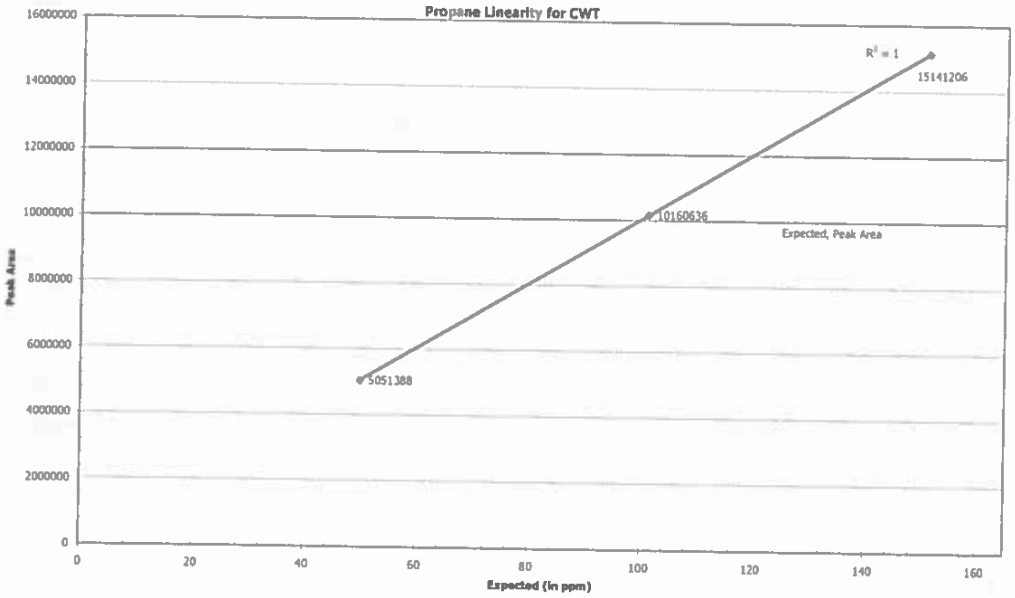
The resulting linear regression plots of area vs. concentration were obtained.

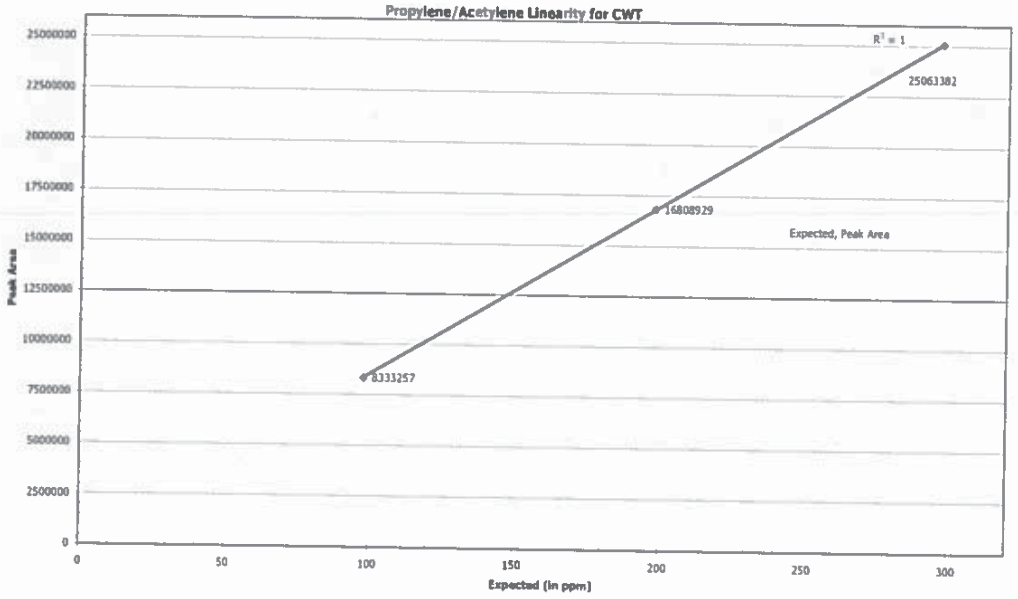

Methane Linearity for CWT
$R^2 = 1$
6978917
4731288
2438709
Expected, Peak Area
Peak Area
Expected (in ppm)
0
1000000
2000000
3000000
4000000
5000000
6000000
7000000
0
20
40
60
80
100
120
140
160

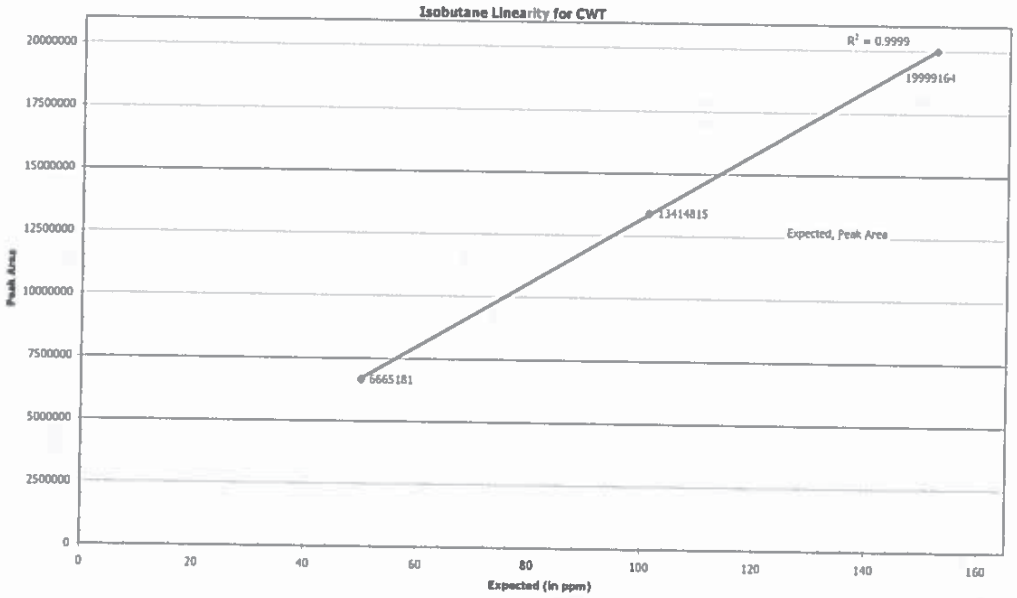

Ethylene Linearity for CWT
$R^2 = 1$
8685176
5820738
2892433
Expected, Peak Area
Peak Area
Expected (in ppm)
0
1000000
2000000
3000000
4000000
5000000
6000000
7000000
8000000
9000000
0
20
40
60
80
100
120
140
160

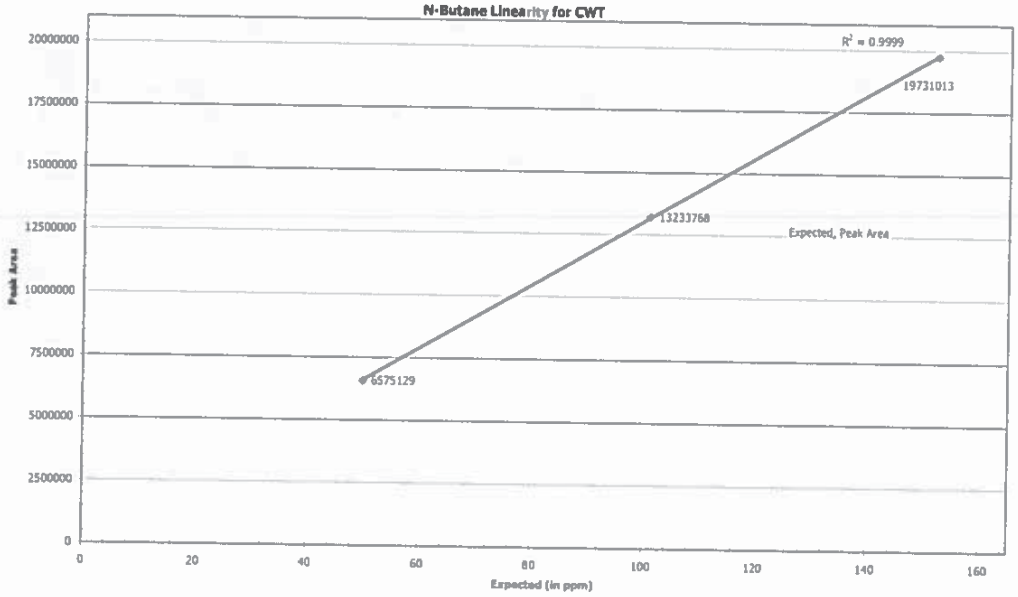

Ethane Linearity for CWT
R² = 1
9332709
6258090
3116408
Expected, Peak Area
Peak Area
Expected (in ppm)
10000000
9000000
8000000
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
0
20
40
60
80
100
120
140
160

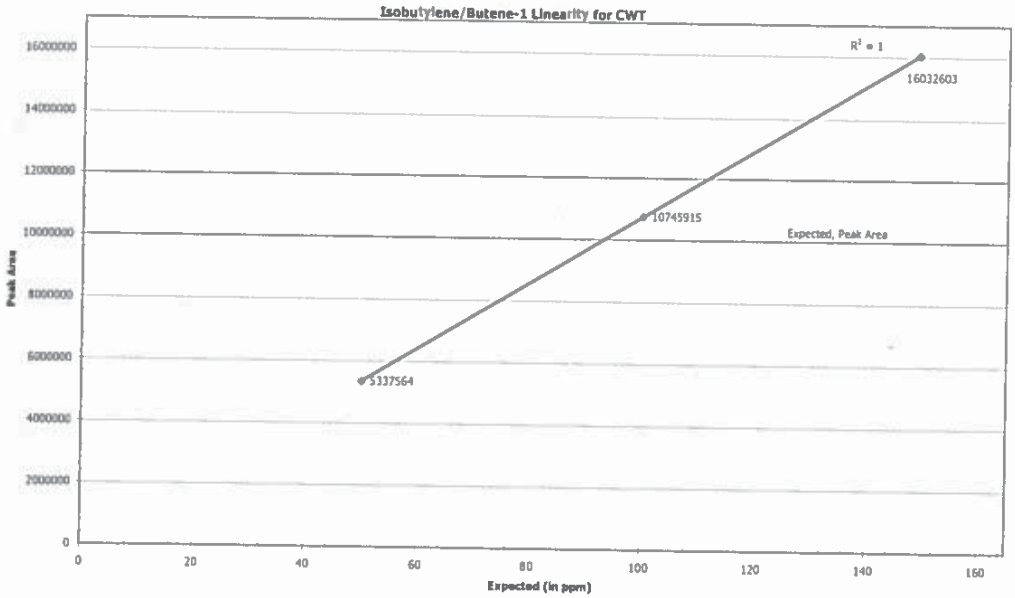

Acetylene Linearity for CWT
R² = 1
12889403
8635110
4277268
Expected, Peak Area
Peak Area
Expected (in ppm)
14000000
12000000
10000000
8000000
6000000
4000000
2000000
0
0
20
40
60
80
100
120
140
160

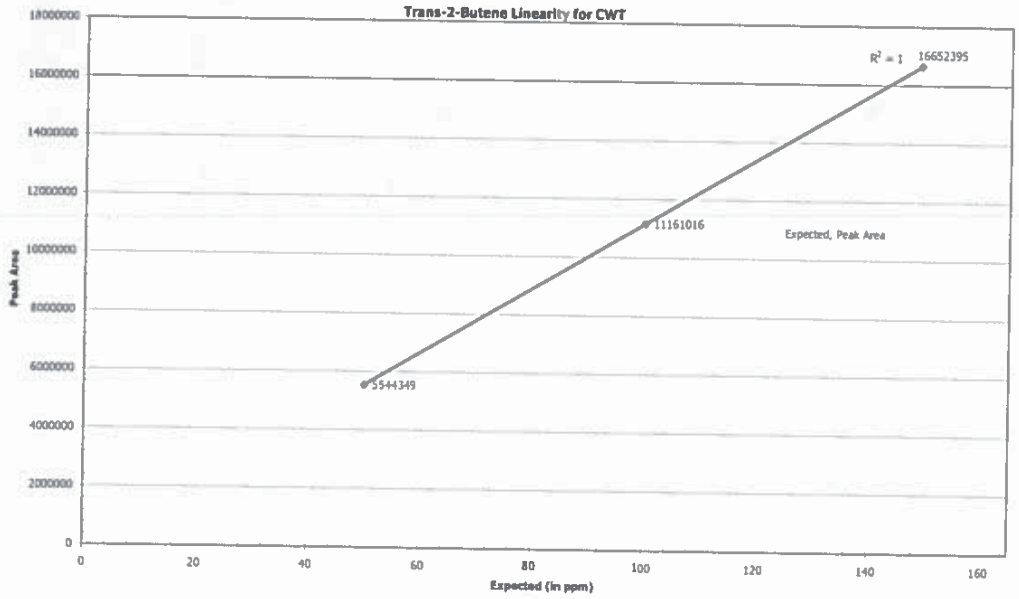

Propane Linearity for CWT
16000000
14000000
12000000
10000000
8000000
6000000
4000000
2000000
0
Peak Area
0
20
40
60
80
100
120
140
160
Expected (in ppm)
R² = 1
15141206
10160636
5051388
Expected, Peak Area

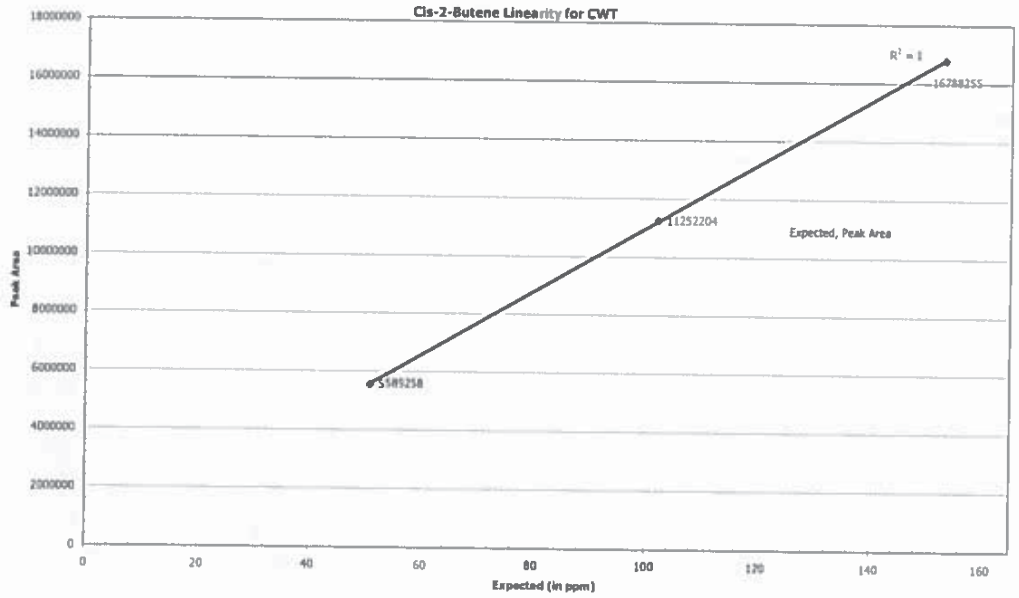

Propylene/Acetylene Linearity for CWT
25000000
22500000
20000000
17500000
15000000
12500000
10000000
7500000
5000000
2500000
0
Peak Area
0
50
100
150
200
250
300
Expected (in ppm)
R² = 1
25063382
16808929
8333257
Expected, Peak Area

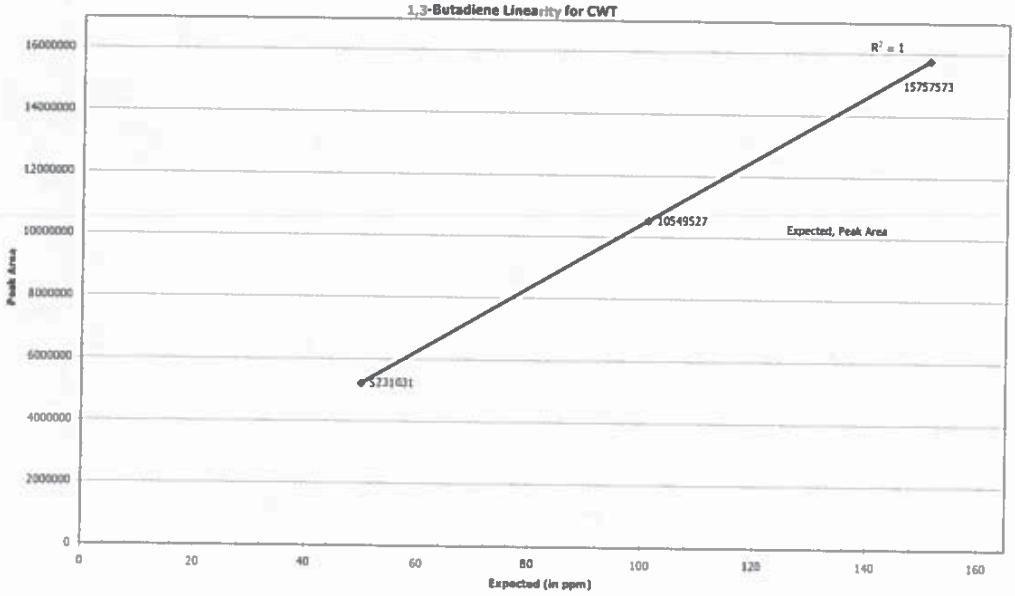

Isobutane Linearity for CWT
R^2 = 0.9999
19999164
13414815
6665181
Expected, Peak Area
Peak Area
Expected (in ppm)
20000000
17500000
15000000
12500000
10000000
7500000
5000000
2500000
0
0
20
40
60
80
100
120
140
160


N-Butane Linearity for CWT
R^2 = 0.9999
19731013
13233768
6575129
Expected, Peak Area
Peak Area
Expected (in ppm)
20000000
17500000
15000000
12500000
10000000
7500000
5000000
2500000
0
0
20
40
60
80
100
120
140
160


Isobutylene/Butene-1 Linearity for CWT
R² = 1
16032603
10745915
5337564
Expected, Peak Area
Peak Area
Expected (in ppm)
0
2000000
4000000
6000000
8000000
10000000
12000000
14000000
16000000
0
20
40
60
80
100
120
140
160


Trans-2-Butene Linearity for CWT
R² = 1
16652395
11161016
5544349
Expected, Peak Area
Peak Area
Expected (in ppm)
0
2000000
4000000
6000000
8000000
10000000
12000000
14000000
16000000
18000000
0
20
40
60
80
100
120
140
160


Cis-2-Butene Linearity for CWT
$R^2 = 1$
16788255
11252204
5585258
Expected, Peak Area
Peak Area
Expected (in ppm)
18000000
16000000
14000000
12000000
10000000
8000000
6000000
4000000
2000000
0
0
20
40
60
80
100
120
140
160


1,3-Butadiene Linearity for CWT
$R^2 = 1$
15757573
10549527
5231031
Expected, Peak Area
Peak Area
Expected (in ppm)
16000000
14000000
12000000
10000000
8000000
6000000
4000000
2000000
0
0
20
40
60
80
100
120
140
160

7-day Calibration Error (CE) Test Results

Performance Specification 9 requires that the on-line CEM be capable of passing a 7-day calibration error test. The specified test provides for calibration of the unit every 24hrs but prior to subsequent calibrations, the unit analyzes the calibration standard to demonstrate the amount of drift that occurs within 24hrs. Between calibrations/validations, the unit is to run a simulated process sample. This test is to be repeated for 7 days.

SAA chose to take this test one step further by implementing a more stringent version. The SAA test unit was calibrated initially and allowed to run a simulated vapor process sample. Once every 24hrs, the unit analyzed the calibration standards described in the section "Discussion of Sample Preparation and Analysis" 3 times at each level but did *not* calibrate at the end of each 24hr period thereby allowing the unit's electronics to drift over the entire 7 day test period. Therefore, the data provided in the attachment at the end of this report represents 7 consecutive days of the unit running without subsequent calibration.

Minimum Detection Limits (MDLs)

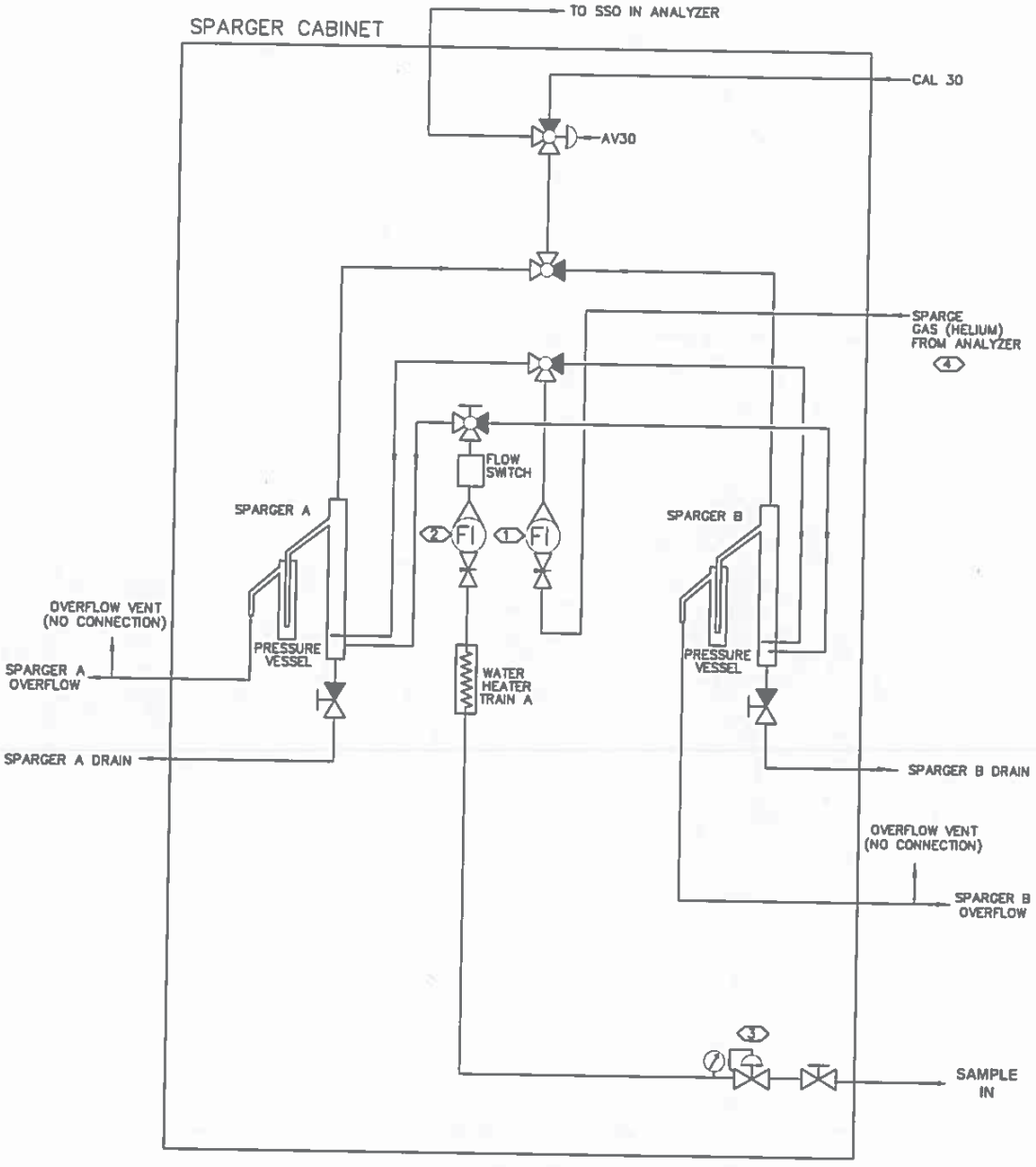
Based on minimum quantifiable limit determinations, the stated MDL offered for the GC unit is 0.1ppmv for vapor phase and for the sparger it is 0.1ppbw for the components tested.

Summary

A dilution scheme was employed to dilute a concentrate of HRVOCs in methanol into a stream of filtered water. This water was then sent in parallel to the SAA sparger and the El Paso Stripper as part of Method 301 equivalency testing. The diluter system and sparger's linearity were demonstrated by running the dilution system at various levels. The GC section was demonstrated as PS 9 linearity-ready by having ran a 3-level calibration from vapor standards prior to the Method 301 testing and has minimal drift as shown in the CE data below.

Based on the data presented, the Siemens "AI 2-HRVOC" sparger is an equivalent system to the El Paso Stripper and the GC is suitable for being the analysis system. Additionally, the SAA sparger offers greater sensitivity to that of the EPS by a factor of approximately 6x allowing for the reporting of lower base emissions during intervals where no HRVOCs are present.

SIEMENS "AI 2-HRVOC" Sparger Diagram Attachment



7-day CE Data Attachment

Concentrations in ppmv

		Methane	Ethane	Ethylene	Acetylene	Propane	C3= & Acetylene	Isobutane	N-Butane	B-1/iC4=	TB-2	CB-2	1,3-BD
Certified Blends	Low	51	50	53	49	50	98	50	50	50	50	51	50
	Mid	103	100	107	99	101	198	101	101	100	100	102	101
	High	154	150	161	149	151	297	152	152	149	149	153	151
Day 1	Low Ave	52.16	49.32	52.78	48.74	49.69	97.37	49.93	49.92	49.11	49.07	50.27	49.48
	Mid Ave	102.09	99.33	106.32	98.35	100.02	196.28	100.52	100.50	98.93	98.87	101.29	99.94
	High Ave	150.98	148.21	158.64	147.26	149.17	293.62	149.94	149.92	147.71	147.59	151.24	149.41
	Low CE	2.3%	-1.4%	-0.4%	-0.5%	-0.6%	-0.6%	-0.1%	-0.2%	-1.8%	-1.9%	-1.4%	-1.0%
	Mid CE	-0.9%	-0.7%	-0.8%	-0.7%	-1.0%	-0.9%	-0.5%	-0.5%	-1.1%	-1.1%	-0.7%	-1.1%
	High CE	-2.0%	-1.2%	-1.5%	-1.2%	-1.2%	-1.1%	-1.4%	-1.4%	-0.9%	-0.9%	-1.1%	-1.1%
Day 2	Low Ave	52.55	49.70	53.18	48.86	50.05	97.84	50.30	50.30	49.50	49.47	50.68	49.91
	Mid Ave	102.90	100.11	107.16	98.70	100.76	197.37	101.26	101.25	99.68	99.66	102.09	100.72
	High Ave	152.11	149.33	159.83	147.62	150.23	294.99	150.99	150.99	148.81	148.72	152.39	150.55
	Low CE	3.0%	-0.6%	0.3%	-0.3%	0.1%	-0.2%	0.6%	0.6%	-1.0%	-1.1%	-0.6%	-0.2%
	Mid CE	-0.1%	0.1%	0.1%	-0.3%	-0.2%	-0.3%	0.3%	0.2%	-0.3%	-0.3%	0.1%	-0.3%
	High CE	-1.2%	-0.4%	-0.7%	-0.9%	-0.5%	-0.7%	-0.7%	-0.7%	-0.1%	-0.2%	-0.4%	-0.3%
Day 3	Low Ave	52.79	49.92	53.43	48.94	50.27	98.12	50.51	50.50	49.71	49.68	50.90	50.10
	Mid Ave	103.39	100.58	107.66	98.73	101.23	197.84	101.70	101.70	100.17	100.12	102.58	101.20
	High Ave	152.88	150.07	160.65	147.89	150.95	295.95	151.68	151.71	149.56	149.47	153.17	151.32
	Low CE	3.5%	-0.2%	0.8%	-0.1%	0.5%	0.1%	1.0%	1.0%	-0.6%	-0.6%	-0.2%	0.2%
	Mid CE	0.4%	0.6%	0.6%	-0.3%	0.2%	-0.1%	0.7%	0.7%	0.2%	0.1%	0.6%	0.2%
	High CE	-0.7%	0.0%	-0.2%	-0.7%	0.0%	-0.4%	-0.2%	-0.2%	0.4%	0.3%	0.1%	0.2%
Day 4	Low Ave	53.04	50.15	53.68	49.01	50.48	98.39	50.72	50.71	49.93	49.90	51.14	50.33
	Mid Ave	103.74	100.93	108.06	98.80	101.56	198.24	102.03	102.04	100.50	100.48	102.93	101.54
	High Ave	153.44	150.58	161.22	148.01	151.47	296.61	152.19	152.22	150.09	150.01	153.72	151.86
	Low CE	0.04	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.01
	Mid CE	0.01	0.01	0.01	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.01	0.01
	High CE	0.00	0.00	0.00	-0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01
Day 5	Low Ave	53.50	50.58	54.12	49.15	50.90	98.95	51.12	51.13	50.35	50.33	51.57	50.77
	Mid Ave	104.67	101.83	109.00	99.10	102.42	199.37	102.85	102.89	101.37	101.33	103.81	102.42
	High Ave	154.61	151.77	162.46	148.41	152.58	298.04	153.26	153.34	151.21	151.16	154.89	153.02
	Low CE	4.9%	1.2%	2.1%	0.3%	1.8%	1.0%	2.2%	2.3%	0.7%	0.7%	1.1%	1.5%
	Mid CE	1.6%	1.8%	1.9%	0.1%	1.4%	0.7%	1.8%	1.9%	1.4%	1.3%	1.8%	1.4%
	High CE	0.4%	1.2%	0.9%	-0.4%	1.0%	0.3%	0.8%	0.9%	1.5%	1.4%	1.2%	1.3%
Day 6	Low Ave	52.53	49.67	53.16	48.84	50.03	97.79	50.28	50.26	49.47	49.43	50.65	49.88
	Mid Ave	102.81	100.03	107.07	98.52	100.68	197.06	101.17	101.13	99.56	99.49	101.92	100.53
	High Ave	151.92	149.14	159.64	147.50	150.06	294.65	150.82	150.82	148.64	148.54	152.19	150.35
	Low CE	3.0%	-0.7%	0.3%	-0.3%	0.1%	-0.2%	0.6%	0.5%	-1.1%	-1.1%	-0.7%	-0.2%
	Mid CE	-0.2%	0.0%	0.1%	-0.5%	-0.3%	-0.5%	0.2%	0.1%	-0.4%	-0.5%	-0.1%	-0.5%
	High CE	-1.4%	-0.6%	-0.8%	-1.0%	-0.6%	-0.8%	-0.8%	-0.8%	-0.2%	-0.3%	-0.5%	-0.4%
Day 7	Low Ave	51.98	49.16	52.60	48.66	49.53	97.14	49.79	49.77	48.96	48.92	50.12	49.34
	Mid Ave	101.77	99.03	105.98	98.20	99.71	195.83	100.22	100.18	98.61	98.54	100.96	99.58
	High Ave	150.41	147.66	158.03	146.99	148.62	292.77	149.42	149.36	147.17	147.03	150.65	148.84
	Low CE	1.9%	-1.7%	-0.8%	-0.7%	-0.9%	-0.9%	-0.4%	-0.5%	-2.1%	-2.2%	-1.7%	-1.3%
	Mid CE	-1.2%	-1.0%	-1.0%	-0.8%	-1.3%	-1.1%	-0.8%	-0.8%	-1.4%	-1.5%	-1.0%	-1.4%
	High CE	-2.3%	-1.6%	-1.8%	-1.4%	-1.8%	-1.4%	-1.7%	-1.7%	-1.2%	-1.3%	-1.5%	-1.4%

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HRVOC Equivalency Report Sparger Maintenance Section

For a description of functionality of the system, refer to page 5 of the Equivalency Report. The schematic of the system is shown on page 36. The normal operation and maintenance of the Maxum Edition II Process Gas Chromatograph is documented in the online library (Siemens Applied Automation part number 2000597-001). This manual explains operation/maintenance of the GC and operator panels. This section has been limited to information specific to the sparger.

The functionality of the system is ensured by verifying that the HRVOC parameters are within tolerance. This section details the parameters to be checked to ensure operability. It also notes the frequency for checking, the allowable tolerance for parameters, and the methods for performing the maintenance if required. The maintenance plan has been divided into scheduled and unscheduled maintenance. Unscheduled maintenance is needed only when one of the automated checks finds a problem. Scheduled maintenance occurs on a scheduled basis.

HRVOC sparger parameters:

Maintaining the parameters, listed in the table below, within tolerances is essential to ensure sparger operability. The items to be monitored include the cabinet and water temperatures as well as the sparge gas, dryer sweep gas, and water flow rates. The user should refer to the custom documentation provided with the system to see if any options have been installed which may change where the measurement is obtained.

Parameter Descriptions	Location for measurement	Setpoint	Tolerance
Cabinet temperature	MMI panel	60°C	± 2°C
Water temperature	MMI panel	40°C	± 2°C
Sparge gas flow rate	GC sample vent	75 ml/min	± 3.75 ml/min
Dryer sweep gas flow rate	Dryer vent	80 ml/min	± 4 ml/min
Water flow rate	A or B overflow vent	30 ml/min	± 1.5 ml/min

The temperature status for the cabinet is found by the following menu selections:

Select Menu > 2 > 8 > 1 > 360

The temperature controller for the cabinet (SS_HTR1) should be within ± 2°C of the setpoint noted above. You can read the temperature on the screen and see if it is within the tolerance given.

The temperature status for the water is found by the following menu selections:

Select Menu > 2 > 8 > 1 > 310

The temperature controller for the water (WTR_HTR) should be within ± 2°C of the setpoint noted above. You can read the temperature on the screen and see if it is within the tolerance given.

The sparge gas flow rate should be measured at the sample vent of the Gas Chromatograph. This will verify that there is a consistent flow through the sparger system and the sample valves in the GC. The measurement should be taken with a non-restrictive device such as a digital bubble meter or a calibrated graduated cylinder and a stop watch. The device needs to have less that 2" water backpressure. If thermal or back pressure generating devices are used, it will generate errors in the reading.

The dryer sweep gas flow rate should be measured at the dryer vent from the sparger cabinet. Measurement of this should be done with the same equipment used for the sparge gas flow rate noted in the previous paragraph.

The water flow rate should be measured at the sparger A or B overflow vent from the sparger cabinet, depending upon which sparger is selected for use at that point in time. This can be measured with a graduated cylinder – see TCEQ Appendix P, section 4.4 for a method of measurement.

Maintenance:

Two types of system maintenance are scheduled and unscheduled maintenance. Scheduled maintenance is the maintenance that is anticipated and performed on a scheduled basis. The schedule for maintenance will vary from site to site depending upon the condition of the sample. Unscheduled maintenance is done in response to alarms generated by the sparger system indicating that a problem has occurred. The user can interrogate the system from any user panel or PC to see the alarm description, and then a response should be initiated.

It is recommended that a maintenance log book be kept for each instrument detailing all maintenance performed on the equipment. This is important in being able to establish improved schedules for planned maintenance and it can be helpful in resolving problems which occur. For each entry, the user should record time and date, symptoms of a problem (when responding to a problem), the items changed, and readings from scheduled maintenance checks.

Scheduled Maintenance:

This section will provide a listing of what needs to be checked or maintained on a regular basis to ensure the operability of the sparger system. Some of the items simply need to be checked on a scheduled basis to ensure correct operation. Other items need to be maintained on a scheduled basis, as these items have a life expectancy and will need to be replaced.

The frequency of the checks is listed for a typical system, though the sample at a particular site may dictate a more frequent schedule. The frequency of checking for these items should be increased if there is a regular failure of any parameters between the scheduled checks. For instance, if an item is failing on a regular basis between the 7 day check, increase the frequency to a 4 day check or to a point less than the failure frequency.

A table for items to be checked on a scheduled basis is given below:

Parameter Descriptions	Check frequency	Setpoint	Tolerance
Sparge gas flow rate	7 days	75 ml/min	± 3.75 ml/min
Dryer sweep gas flow rate	7 days	80 ml/min	± 4 ml/min
Water flow rate	7 days *	30 ml/min	± 1.5 ml/min
Sparger vessel	Monthly	clear	
Water flow controller	6 months or as needed **		
Contamination check	Monthly		

* Initially, water flow rate should be checked daily. As the system shows this is not changing for over a week's time, then this can be extended up to once a week as appropriate for the system.

** Initially, the water flow controller should be checked twice a week,. As the system shows this is not an issue over a longer of period of time, then this timing can be extended up to 6 months.

The method for checking the first three is provided on page 39.

The sparger should be checked for signs of algae or buildup of other materials inside the vessel. Since the quality of the water varies dramatically with the application, the check frequency for this may need to be adjusted to more frequent or less frequent, depending upon the results of the inspections. The maintenance log book should provide the user with a good indication of the frequency of cleaning for the sparger vessel. The sparging system has a second backup sparging system. The user should switch from the dirty to the clean vessel in order to perform cleanup of the dirty vessel.

The user should also check for the uniform dispersion of the sparge gas through the water in the vessel. This dispersion is necessary to get a consistent sample of the volatiles in the water. The metal frit will clog if the water contains fine micro-particles of dirt, algae growth, coating processes, silt or high mineral content.

The manufacturer recommends no periodic maintenance for the water flow controller other than to completely open the valve to flush out the system. This can be done every six months, or if problems occur more frequently, this can be reduced to a shorter cycle.

The system should be checked for contamination at least monthly. It should also be checked on initial startup or when a component is changed or cleaned. The blank water is input so that a measurement can be taken with only trace concentrations of components. If the system shows higher concentrations, then the system has become contaminated and should be cleaned. Methods for cleaning the sparger vessel and frit are given later in this document.

Some components have an expected usable life and sometimes are not easy to check to see if they are operable. In these cases, a replacement schedule is setup to ensure that the component is in good working condition and replaced prior to failure. The table below lists these components and the schedule for replacement.

Component	Replacement frequency
Frit	Quarterly – modify as needed
Dryer	6 months

The frequency for frit replacement depends upon condition of the sample and cleaning techniques. When the sparger gas flow becomes a problem and the cleaning schedule has been maintained, then the frit should be checked to see if this is a problem. If the frit replacement resolves the problem and timing is less than the quarterly manufacturer's recommendation, then update the replacement frequency to something less than the failure cycle that was observed.

The dryer manufacturer recommends a replacement cycle of 6 months. The membrane will turn brown without affecting the capability of the dryer to perform. If failure of the dryer is occurring on a repetitive basis more frequently than the recommended cycle, then reduce the replacement frequency to less than the observed failure cycle timing to eliminate the unplanned maintenance.

Unscheduled Maintenance:

This section provides identification of the items which need to be resolved in order to keep the sparger system operational. These items are monitored automatically on a continuous basis with an alarm generated when a deviation occurs. Thus, action is needed only to respond to these alarms. The alarms listed below are the ones that are specific to the operation of the sparger, though there may be other alarms which occur in the GC which need to be resolved in order to ensure that the system is fully operational.

Parameter Descriptions	Check frequency	Setpoint	Tolerance
Cabinet temperature	On alarm	60°C	± 2°C
Water temperature	On alarm	40°C	± 2°C
Water flow rate	On alarm	30 ml/min	± 1.5 ml/min

The alarms are displayed on the User panel on the Gas Chromatograph and can be viewed from any user panel or the System Manager pictorial overview on the PC. The Maintenance Manual on the documentation CD provides information on how to resolve alarms.

Replacing the Frit:

The following procedure should be followed to replace the frit used in the sparger vessels.

- Loosen red ISO nut holding frit onto the Sparging vessel and pull nut and frit assembly out. Hold the SST tubing with one hand and the metal frit with the other. Turn the frit counter-clockwise to unscrew the frit. Install a new metal frit with Teflon washer.

CAUTION When removing Teflon fitting from the end of the metal frit, simply loosen the Swagelok knurled nut, but do not disassemble connections.

- Carefully install replacement frit into sparging vessel

CAUTION When reinstalling Teflon fitting on metal frit, simply hand tighten Swagelok nut. Do not use a wrench. Over-tightening will strip threads of the Swagelok virgin Teflon union.

- Open the Purge Gas Flow Regulator valve and observe whether there is uniform dispersion of inlet purge gas through the sparging vessel. If only a small number of sparging gas bubbles occur, the metal frit may be defective. It should be removed and replaced.
- Once the frit has been changed, then check and readjust the flow rate of the sparging gas flow as necessary.

Cleaning of Sparger vessel:

The following procedure should be followed to clean the sparger vessels.

- Switch the utilization of the sparger vessel so that analysis can continue while the vessel being removed is cleaned.
- Before removal of sparging vessel assembly lines, verify that each line is tagged with its function. This ensures lines will not become interchanged when reconnected. Note how sparger vessel assembly is mounted within the cabinet.

CAUTION When removing fittings from the sparging vessel glass connections, simply loosen the Swagelok knurled nut, but do not disassemble connections.

- To maintain optimum system performance, do not remove a sparging vessel until the start of a new cycle. This provides a minimal lag time between equilibration when changing vessels.
- While holding the sparging vessel, unscrew the clamp holding the thumbscrew and remove the vessel as a complete unit.
- If there is a hydrocarbon based residue on the sparger vessel, first clean with a hot water detergent solution to remove the residue, and rinse with clean water.
- Place vessel in an ultrasonic device containing 25% Acetic or 10% Nitric acid.
- Activate ultrasonic device. Activation time is dependent on severity of vessel contaminants. It may be necessary to soak the vessel in the cleaning solution overnight to loosen foreign contaminants. (A diluted Nitric acid solution of less than 0.5% can be substituted. Let the vessel soak in this solution for a week.)
- After cleaning sparging vessel, replace ultrasonic device cleaning solution with clean water. Turn device on to remove all traces of cleaning solution.
- Rinse sparging vessel in distilled water.
- Carefully replace sparging vessel and reconnect input/output lines.

CAUTION When reinstalling Teflon fitting on metal frit, simply hand tighten Swagelok nut. Do not use a wrench. Over-tightening will strip threads of the Swagelok virgin Teflon fitting and cause breakage of glass tubing.

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APPENDIX P

COOLING TOWER MONITORING

General

Cooling tower monitoring describes the characterization of volatile organic air pollutants that are capable of being air-stripped from a water matrix. While generic or indicator monitoring may be required to identify the existence of volatile organic compound (VOC) emissions, speciated compound characterizations may also be required in some instances to characterize the specific compounds present.

Historically, a method for cooling tower water characterization was developed for use by El Paso Products Company in the early 70's. This method utilized a dynamic or flow-through system for air stripping a sample of the water and analyzing the resultant off-gases for VOCs using a common flame ionization detector (FID) analyzer, and has been the popular choice in Texas for many years. The El Paso Products method, however, has been overshadowed nationally by the use of purge and trap analysis of water samples utilizing gas chromatography and/or mass spectrometry techniques. While direct water analysis has been shown to be effective for cooling tower measurements of heavier molecular weight organic compounds with relatively high boiling points, Texas Commission on Environmental Quality (TCEQ) has determined that this approach may be ineffective for capture and measurement of volatile organic compounds with lower boiling points, such as ethylene, propylene, 1,3-butadiene, and butenes. VOCs with a low molecular weight and boiling point are generally lost in the sample collection step of purge/trap type analyses. Consequently, TCEQ requires that the air stripping method presented in this manual be used for cooling tower and other applicable water matrix emission measurements of VOCs with boiling points below 140 ^{o}F. Specific procedures for cooling tower sampling and analysis for VOCs with boiling points of 140 ^{o}F and greater must be submitted to TCEQ for approval on a case-by-case basis.

Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources

1.0 Principle and Applicability

1.1 Principle. A continuous stream of cooling water, process water, or wastewater is supplied via a hard pipe or direct interface to an air stripping column apparatus for analysis. Air flowing countercurrent to the water strips volatile organic compounds from the water for analysis. Some gases may flash from the water immediately upon entering the apparatus and these gases are trapped and mixed with the air stripped compounds. The concentration of the air stripped compounds combined with the flashed gases is determined at the apparatus air outlet by a suitable detector and/or by sampling. Concentrations of air stripped compounds in the air exhaust, along with the air and water flow rates, are used to determine concentrations of strippable volatile compounds in the water. A FID analyzer is used to determine a value of "combined" or "total" strippable volatile organic compounds. Samples may also be collected in sample canisters for shipment to analytical laboratories for speciation of air contaminants. A gas chromatograph (GC) with an appropriate detector may be used to determine specific stripped species.

1.2 Applicability. This method is applicable to cooling tower water systems and may be applicable to qualitative and/or quantitative measurements on other sources such as API separators and wastewater systems.

2.0 Sensitivity

2.1 The sensitivity of this method for the onsite analysis by FID analyzer is typically 0.1 to 0.5 part-per-million, by volume (ppmv) methane in the stripped air, depending on the specific analyzer. The sensitivity of the GC speciation analysis will vary depending on the detector used. Detection limits as low as 2 - 50 part-per-billion, by volume (ppbv) in the stripped air may be possible with the use of a gas chromatograph equipped with a mass spectrometer (GC/MS).

2.2 FID Response. Response factors are not used to correct the total VOC measurement by FID analyzer. Speciation analysis of the VOCs present in the stripped gas would be required to correctly apply any proportioned response factor to the total VOC measurement, in which case, the results should be calculated from the speciated analysis rather than the total VOC results. Some chemicals, such as formaldehyde, will not respond well on a FID, having particularly high response factors and, therefore, high detection limits. The total VOC

procedure by FID should not be used on sources for which any potential targeted VOC has a response factor multiplier greater than 2 relative to methane. Such sources must either be sampled following the speciation procedure in Section 6.2, or an alternative detector, approved by the TCEQ, must be used in the total VOC procedure in Section 6.1. Alternative sampling and analysis procedures such as sorbent tube sample collection and analysis by high performance liquid chromatography (HPLC) are subject to TCEQ approval.

3.0 Equipment and Materials

3.1 Air stripping apparatus. An air stripping apparatus as presented in Figure 1 and meeting the following requirements:

3.1.1 The stripping chamber shall be a cylinder 36 inches in length with an internal diameter of 3 inches, and constructed of clear, heavy-walled glass.

3.1.2 The stripping chamber packing material shall be beryl saddles between 6 to 8 millimeter size. The depth of the packing material will be 26 inches.

3.1.3 The end caps of the stripping chamber must meet the dimensions specified in Figure 2. Neoprene stoppers are recommended; however, securing clamps will be required to prevent leakage. Black rubber stoppers are <u>not allowed</u> due to the potential absorption and release of organic compounds. Alternative designs for the end caps, such as customized threaded plastic caps with Neoprene gaskets, are acceptable provided the materials used are non-reactive with the sample matrix or target compounds, and the end caps meet the specifications in Figure 2. The tip of the water sample inlet line is intentionally left 5 to 6 inches above the water level in the stripping chamber to help accelerate the response of the system as some VOCs will be released immediately as the water falls into the chamber.

3.1.4 Tubing used in the air stripping apparatus for transporting gas and water shall be 1/4 inch stainless steel or Teflon material. Stainless steel or Teflon 1/4 inch tubing of minimal length shall be used to route water sample from the sample tap to the air stripping apparatus. The water sample tubing from the sample tap shall not be more than 50 feet in length.

3.1.5 Drying agents, such as Drierite™, for removing moisture from the stripped air stream before analysis by FID or collection in sample canisters are <u>strictly prohibited</u> to prevent loss of VOCs to the drying agents. An empty, clear-glass flask is used as a knock-out to remove some of the moisture in the stripped air stream, but gas exiting the stripping chamber will essentially be at saturated moisture for the ambient conditions. Different styles of knockout flasks are acceptable; however, the flask must be clear-glass and 500 ml or less in size. Some FID analyzers may not be able to monitor for prolonged periods under such conditions and intermittent monitoring may be required.

3.1.6 A T-union with one leg leading to a bubbler must be included as shown in Figure 1. Excess air not drawn into the analyzer probe or sample canister is vented

through the bubbler and serves to indicate that sufficient flow has been established. This is to assure that the sample is only from the stripped air and is not drawing in any external air. With the bubbler in place, care must be taken not to pull water into the FID analyzer or sample canister.

3.1.7 Gas bubble formation in the water rotameter can sometimes result from the pressure drop across the water rotameter control valve. Significant gas bubbles can interfere with accurate measurement of the sample water flow to the stripping chamber. A suggested possible solution to this problem is to place a control valve downstream of the water rotameter. By opening the rotameter to the fully open position or using a non-metering rotameter, and controlling the flow with the valve after the rotameter, the pressure drop occurs after the rotameter and bubble formation may be minimized. This approach may require a fine-adjusting control valve to achieve the flow rate control desired, and the tester must be certain that the water rotameter can withstand the pressure in the water source being sampled.

Note: The TCEQ air stripping apparatus design is based on the apparatus designed by El Paso Products Company of Odessa, Texas (see Reference 9.1)

3.2 Flame Ionization Detector (FID) Analyzer. Analyzers with analog type readouts and those normally used for leak detection are generally not appropriate for this method because such instruments are designed for much higher concentration measurement than would be expected in the air stripping apparatus effluent. FID analyzers used in conjunction with the method must:

3.2.1 be a digital readout type, readable to 0.1 ppmv.

3.2.2 be able to meet the calibration requirements specified in Section 4.1.

3.2.3 have a sampling rate less than 2000 ml/min since the stripping air flow rate is 2500 ml/min and an excess air flow is required.

3.3 Gases for Air Stripping Apparatus Operation and FID Analyzer Calibration.

3.3.1 Zero Calibration Gas and Stripping Air. Air, certified to contain less than or equal to 0.1 ppmv of total hydrocarbon (THC).

3.3.2 High-Level Calibration Gas. Cylinder gas standard of methane in air, certified by the manufacturer to be within ±2% of the specified concentration. If the sample concentration of VOCs in the stripped gas is less than 10 ppmv as methane, the span gas calibration standard shall be 10 ppmv methane. Higher concentration span calibration standards may be necessary for some sources. If a higher calibration standard is required, select a high-level concentration such that the measured sample concentrations are between 10% and 100% of the high-level calibration gas concentration.

3.3.3 Mid-Level Calibration Gas. Cylinder gas standard of methane in air, certified by the manufacturer to be within ±2% of the specified concentration. The mid-level calibration gas concentration shall be between 20% and 50% of the high-level

calibration gas concentration. (See note under 4.1.2.4.)

3.3.4 Certified gases must be used within the manufacturer's specified shelf life, or recertified upon expiration.

3.3.5 Subject to TCEQ approval, calibration gas standards other than methane may be used for sources that have only one or a predominate potential VOC present in the water matrix.

3.4 A gas chromatograph equipped with appropriate detector(s) for laboratory or field speciation of the specific organic components.

3.5 Sample canisters. Internally passivated stainless steel canisters for collection of air stripped samples for speciation analysis by GC. Sample canisters shall meet all requirements of Compendium Method TO-14A (US EPA Compendium for Determination of Toxic Organic Compounds in Ambient Air, EPA Document Number 625/R96/010B). Each sample canister shall be equipped with a) a vacuum gauge and b) either a needle valve for manually regulating flow rate or an automated flow regulator (i.e., a critical orifice or mass flow controller).

3.5.1 Tedlar™ bags may be used in place of stainless steel sample canisters, if the following provisions are met:

3.5.1.1 Bag samples must be analyzed according to Title 40 Code of Federal Regulations, Part 60, Appendix A, Method 18.

3.5.1.2 The recovery study for bag sampling in Section 8.4.2 of Method 18 must be performed for all the target compounds. The recovery study is performed by metering a known volume of zero air through a water blank stripping apparatus into the Tedlar™ bag and then spiking the bag with the target compounds. This step checks not only the potential loss of compounds due to the permeability of the Tedlar™, but also loss due to condensed moisture in the bag. Percent recovery for <u>each</u> target compound must be between 70 - 130%, or Tedlar™ bags are not acceptable for sample collection. When Tedlar™ bags are acceptable, as specified in Method 18, analysis results for target compounds must be corrected for the percent recoveries.

3.5.1.3 Tedlar™ bags must be new and unused.

3.5.1.4 Tedlar™ bags shall be checked for leaks and contamination as described in Method 18, Section 16.1.3.2.

3.5.1.5 Samples in Tedlar™ bags must be analyzed within 72 hours of collection. Recovery study bags must be stored for the same period of time as the sample bags.

4.0 Calibration.

4.1 FID Analyzer Calibration.

4.1.1 Initial/Periodic Instrument Performance Evaluation. Perform the calibration precision and response time tests as described in Sections 8.1.2 and 8.1.3 of Method 21 in 40 CFR 60, Appendix A.

4.1.2 Calibration Procedure.

4.1.2.1 Warmup period. Follow manufacturer's recommendations.

4.1.2.2 Zero calibration. Introduce the zero gas (or stripping air) to the FID analyzer. Calibrate the analyzer to read 0.0 ± 0.2 ppmv.

4.1.2.3 High-level calibration. Introduce the high-level calibration gas (10 ppmv methane) to the FID analyzer. Calibrate the analyzer to read within ± 5.0% of the calibration gas certified value.

4.1.2.4 Mid-level calibration check. Introduce the mid-level calibration to the FID analyzer. The FID analyzer response on the mid-level calibration gas must agree within ± 5.0% of the calibration gas certified value. Note: The mid-level calibration step is optional if the VOC emissions determination is based solely on the results of the GC speciation analysis of the sample canister or Tedlar™ bag samples.

4.2 GC Calibration.

4.2.1 GC analysis by Method 18.

4.2.1.1 Follow the calibrations procedures described in Sections 8.2.1.5.2.1 and 10.0 in Method 18.

4.2.1.2 Alternative procedure. If a facility or laboratory is performing the same analysis on samples collected by this method on a daily basis, then the calibration and standardization procedures in Section 10.0 of 40 CFR 60, Appendix B, Performance Specification (PS) 9, may be used. The initial and periodic calibrations must satisfy all the requirements of Method 18 Sections 8.2.1.5.2.1 and 10.0, as well as those in Section 10.0 of PS9.

4.2.2 GC analysis by Compendium Method TO-14A (US EPA Compendium for Determination of Toxic Organic Compounds in Ambient Air, EPA Document Number 625/R96/010B)

4.2.2.1 Follow the appropriate calibration procedures described in Section 10 of TO-14A for the selected detector(s) in the GC system.

4.3 Air rotameter calibration.

4.3.1 Calibrate the air supply rotameter system with a dry gas meter, soap film flowmeter, or similar direct volume measuring device with an accuracy of ± 2 percent.

4.3.2 Operate the rotameter at 2500 cc/min for at least three calibration runs for 10 minutes each. When three consecutive calibration flow rates agree within ± 5 percent, average the three flow rates.

4.3.3 If the average measured calibration flow rate agrees within ± 5% of the rotameter reading, the rotameter is acceptable. If the difference between the

rotameter reading and the measured calibration flow rate exceeds ± 5%, then remark the rotameter to the calibrated flow rate.

4.3.4 Perform the rotameter calibration before the first field test and semiannually, thereafter.

4.4 Water rotameter calibration.

4.4.1 Calibrate the water rotameter with a Class A volumetric flask, graduated cylinder, or similar container with a volume known to ± 2% accuracy and capable of holding a volume at least 4 times the calibration flow rate (i.e., a 500 ml volumetric flask to calibrate the rotameter at 125 ml/min.)

4.4.2 Operate the water rotameter at 125 ml/min while filling the container. Record the time required to fill the container and calculate the actual flow rate based on the container volume and time required to fill the container. Repeat until three consecutive flow rates agree within ± 5% of the mean.

4.4.3 If the average measured calibration flow rate agrees within ± 5% of the rotameter reading, the rotameter is acceptable. If the difference between the rotameter reading and the calibration flow rate exceeds ± 5%, then remark the rotameter to the calibrated flow rate.

4.4.4 Perform the rotameter calibration before the first field test and semiannually, thereafter.

4.4.5 Alternatively, a Class A volumetric flask or graduated cylinder may be used in the field test to collect water at the stripping chamber water exit and recording the time required to fill the container. If this approach is used, the water rotameter need not be calibrated.

4.5 Temperature probe calibration.

4.5.1 Calibrate the stripping chamber temperature probe against an ASTM mercury thermometer or equivalent. The calibration shall be performed at or near 0 °C, 20 °C, and 40 °C.

4.5.2 If the absolute temperature (in degrees Kelvin) measured by the temperature probe agree within ± 1.5% at each reference point, the temperature probe is acceptable.

4.5.3 Perform the temperature probe calibration before the first field test and semiannually, thereafter.

5.0 Pretest Preparations

5.1 Selection of the sampling site.

5.1.1 Sample sites for cooling towers must meet the following criteria:

5.1.1.1 The sample port in the cooling tower return line header must be in a location where the feed rates to the cooling tower water are still under

pressure and prior to the release of the pressure to atmospheric or any vents in the return line header. For example, if the cooling tower has an open trough along the top of the tower which distributes water to each of the cells, the water supply for the test should be taken prior to the cooling water entering the distributing trough.

5.1.1.2 The sample port/probe should not extend beyond the plane of the pipe wall into water matrix.

5.1.1.3 Samples should be drawn from either the vertical section near the base of the riser pipe (from the inside of the elbow to the riser) or the top of a horizontal section prior to the riser pipe at a location where the pipe will be completely full.

5.1.1.4 For cooling towers with multiple risers, samples must be drawn from a location prior to the risers unless sample ports are installed on each riser and the distribution of water flow to each riser can be determined.

5.1.2 Sample sites for sources other than cooling towers were not considered during the development of this method and selection criteria for such sources may be subject to TCEQ approval.

5.2 Sample canister preparation. These procedures are typically performed by the laboratory conducting the speciation analysis.

5.2.1 Before each use, sample canisters shall be cleaned, certified, and prepared according the procedures described in Section 11.1 of TO-14A.

5.2.2 Evacuate canisters to less than 0.05 mm Hg pressure at least 24 hours prior to sample collection. Record the canister ID, vacuum, date, and time on a label attached to the sample canister.

5.3 Setup of Apparatus.

5.3.1 Assure the unit is vertically level using a bubble indicator or some other level indicator. If the stripping chamber is not level, channeling of the water or air flow may occur in the chamber and result in inefficient stripping.

5.3.2 Connect the zero air supply to the air inlet of the air stripping apparatus.

5.4 Perform the calibration procedures for the FID analyzer as described in Section 4.1.

5.4.1 If VOC emissions are to be determined only by sampling with sample canisters and GC speciation, the mid-level calibration is optional since the FID analyzer is only used for monitoring for system stabilization.

5.4.2 Record calibration results on a data sheet similar to that in Figure 3.

5.4.3 Some analyzers draw fuel air for the FID separately from the sample stream. If the fuel air is drawn from ambient air without purification, variations in the ambient level of THC may cause the instrument to drift. This can be especially problematic if the analyzer is calibrated indoors and then taken out to process areas for the test. Dramatic changes in ambient temperature may also cause instrument

drift. Every effort should be made to calibrate the instrument under the same conditions it is to be used. When moving from source to source, a calibration check shall be performed on the analyzer to determine if changes in the ambient conditions (i.e., temperature or ambient THC) have caused instrument drift. Calibration drift checks shall be documented on the field data sheets. If the analyzer is not within the calibration specifications given in 4.1.2, the FID analyzer must be recalibrated.

5.5 Blank/Background Determination: The blank checks are especially important for stripping systems that are used on multiple sources and the possibility of cross contamination exists.

5.5.1 Zero Air Check

5.5.1.1 A zero air check is mandatory before each test, regardless if the system was previously used on a different source or not.

5.5.1.2 Open the zero air supply to the apparatus and adjust rotameter to read 2500 ml/min.

5.5.1.3 Monitor the air effluent from the apparatus with the FID analyzer to determine the baseline reading of the empty stripping chamber and apparatus. Record the analyzer reading on the data sheet.

5.5.1.4 If the zero air check indicates a background $ 1.0 ppmv as methane in the stripped gas, then the apparatus should be purged thoroughly to remove the contamination until an acceptable background is measured (< 1.0 ppmv as methane).

5.5.2 Water Blank Check.

5.5.2.1 Water blank checks shall be performed by the following schedule:

5.5.2.1.1 A water blank check shall be performed on all stripping apparatus systems, mobile and dedicated systems, before initial use in the field and at least once per month thereafter.

5.5.2.1.2 For mobile systems used on multiple sources, a water blank check between sources is optional (except as noted in 5.5.2.1.3), but is strongly recommended.

5.5.2.1.3 A water blank check is mandatory before beginning a test if the previous test or source for which the stripping apparatus was used indicated a total VOC reading (ppmv as methane in the stripped air) 10 times greater than the applicable allowable emission rate or action level on the current source. See Equation 7-3 in Section 7.4.

5.5.2.2 In order to ensure the entire sampling system is free of contamination, the water blank check is performed through the sampling line and water rotameter. Using either a pump or gravity, fill the stripping chamber with clean distilled water through the sample line and water rotameter until the packing is just submerged. Adjust the water flow rate to 125 ml/min.

5.5.2.3 Restart the air supply and adjust to 2500 ml/min. Monitor the air effluent from the apparatus with the FID analyzer to determine the baseline

reading of the apparatus while the system is flowing with clean water. Record the analyzer reading on the data sheet.

5.5.2.4 If the water blank check indicates a background $ 1.0 ppmv as methane in the stripped gas, then the apparatus should be cleaned and purged thoroughly to remove the contamination until an acceptable background is measured (< 1.0 ppmv as methane).

5.5.2.5 Drain the blank water from the stripping chamber before sampling.

5.5.3 Recommended cleaning procedure. If air and water blanks are not sufficient to remove contamination from the system, the system should be disassembled and the components cleaned thoroughly.

5.5.3.1 The stripping chamber should be cleaned with hot soapy water, followed by 5 rinses of tap water and 5 rinses of distilled water. The chamber may be baked off at 150 ºC for at least 1 hour, if an oven is available large enough to hold the chamber. Otherwise, the chamber will have to be air dried.

5.5.3.2 The beryl saddles, moisture knock-out flask, and Neoprene stoppers should be cleaned with hot soapy water, followed by 5 rinses of tap water, 5 rinses of distilled water, then baked off in an oven at 150 ºC for at least 1 hour.

5.5.3.3 Teflon™ and stainless steel tubing, unions, and valves that contact water or stripped air sample should be cleaned with hot soapy water, rinsed by flushing with 5 volumes of tap water and 5 volumes of distilled water, then purged with zero air or nitrogen while baked at 150 ºC in an oven for at least 1 hour. Stainless tubing too long to fit inside an available oven without bending should just be purged with zero air or nitrogen after cleaning.

5.5.3.4 The water rotameter should be cleaned according to the manufacturer's recommendations, followed by flushing with distilled water and purging with zero air or nitrogen.

5.5.3.5 Some components, such as plastic caps for the knock-out flasks and some valves, may be heat sensitive and may be damaged if baked at 150ºC. Such components should be baked at a lower temperature for longer periods, purged with zero air or nitrogen without heating, or simply air dried, as appropriate.

6.0 Sampling. This method presents two sampling approaches; an on-site determination of total VOC using a FID analyzer, and an off-site determination of speciated VOCs by sample collection in sample canisters followed by laboratory gas chromatography. Permit or applicable rule requirements may prohibit using the on-site FID analyzer approach without prior approval by the TCEQ. If the tester wishes to use both the on-site total VOC results and the laboratory speciated results for mass emission determinations, then all requirements of both approaches must be followed, including the mid-level calibration for the FID analyzer.

6.1 On-site determination of VOC emissions by FID analyzer.

6.1.1 Connect the water sample supply line to the sample port on the source (i.e., cooling tower return line header). Before connecting the water sample line to the air stripping apparatus water inlet, allow the sample water to flush through the sample line for at least 5 sample line volumes.

6.1.2 With the stripping air flowing at 2500 ml/min to the column, connect the sample line to the water inlet of the air stripping apparatus and start the sample water flow into the chamber. Sample water flow rates higher than 125 ml/min during the filling stages are permissible; however, reduce the flow to 125 ml/min once the beryl saddles are submerged. Adjust the water overflow as necessary to maintain the water level just above the beryl saddle packing. The column drain valve should not be used to control the water level, particularly if the overflow is used to obtain the sample water flow rate as described in Section 4.4.5. Periodically check the water rotameter during sampling for gas bubble formation and the bubbler to assure that sufficient air flow is maintained. Record a notation in the data sheet comments section if any gas bubbles are observed in the water rotameter.

6.1.3 After the water level in the stripping chamber has reached the appropriate level and the air and sample water flow rates are set to 2500 ml/min and 125 ml/min, respectively, allow the stripping apparatus system to stabilize for a minimum of 10 minutes before making sample measurements. Longer stabilization time may be required depending on the organic compounds present and the particular water matrix. Before starting the test run record the time required for stabilization, barometric pressure, ambient temperature, and the process water flow rate (i.e., cooling tower water flow rate in gallons per minute).

6.1.4 At two minute intervals, record the FID analyzer measurement, water rotameter flow rate, air rotameter flow rate, and stripping chamber temperature. Adjust the air and water rotameter flows as necessary to maintain the target flows of 2500 ml/min and 125 ml/min, respectively; however, actual measured flows must be recorded. Monitor and record the data for a minimum of ten minutes.

6.1.5 Average the data from Section 6.1.4 and follow the calculations described in Section 7.0 to determine the air strippable concentration and, if applicable, the mass emission rate of VOCs from the water matrix.

6.2 Off-site determination of VOC by GC analysis. Samples of the stripped compound(s) may be taken from the exhaust of the air stripping apparatus and analyzed off-site by gas chromatography for speciated VOC results. It is strongly recommended that multiple samples be collected since a sample container may leak or be lost during shipment to the laboratory.

6.2.1 Connect the water sample supply line to the sample port on the source (i.e., cooling tower return line header). Before connecting the water sample line to the air stripping apparatus water inlet, allow the sample water to flush through the sample

line for at least 5 sample line volumes.

6.2.2 With the stripping air flowing at 2500 ml/min to the column, connect the sample port of the water to be analyzed to the water inlet of the air stripping apparatus and start the sample water flow into the chamber. Sample water flow rates higher than 125 ml/min during the filling stages are permissible; however, reduce the flow to 125 ml/min once the beryl saddles are submerged. Adjust the water overflow as necessary to maintain the water level just above the beryl saddle packing. The column drain valve should not be used to control the water level, particularly if the overflow is used to obtain the sample water flow rate as described in Section 4.4.5. Periodically check the water rotameter during sampling for gas bubble formation and the bubbler to assure that sufficient air flow is maintained. Record a notation in the data sheet comments section if any gas bubbles are observed in the water rotameter.

6.2.3 After the water level in the stripping chamber has reached the appropriate level and the air and sample water flow rates are set to 2500 ml/min and 125 ml/min, respectively, allow the stripping apparatus system to stabilize for a minimum of 10 minutes before making sample measurements. Longer stabilization time may be required depending on the organic compounds present and the particular water matrix. Record the time required for stabilization, barometric pressure, ambient temperature, process water flow rate (i.e., cooling tower water flow rate in gallons per minute), and the total VOC concentration measured by the FID analyzer.

6.2.4 Before collection of a canister sample, check and record the initial canister vacuum. If the canister vacuum has changed by more than 50 mm Hg (2 in Hg) from the initial evacuation, then the canister shall be considered as leaking and cannot be used.

6.2.5 Connect the sample canister to the air outlet of the air stripping apparatus with the stripping air flowing and the sample canister valve shut. Excess air flow will be vented through the bubbler.

6.2.6 Open the sample canister valve to begin sampling. During collection, monitor and record the water rotameter flow rate, air rotameter flow rate, and stripping chamber temperature at 2 minute intervals. Adjust the air and water rotameter flows as necessary to maintain the target flows of 2500 ml/min and 125 ml/min, respectively; however, actual measured flows must be recorded. When using an automated flow controller to regulate the flow rate into the sample canister, such as a critical orifice or mass flow controller, select a flow rate equivalent to 1/10th the canister volume per minute or less. If the canister flow rate is controlled manually (i.e., without a critical orifice or other flow controller), great care must be taken to not sample at a rate over the stripping air flow rate. For manually controlled sampling, adjust the needle valve such that the change in canister vacuum is between 75 to 125 mm Hg (3 to 5 in Hg) per minute. The canister must be only partially filled to help prevent condensation in the canister. Fill the sample canister until the vacuum gauge reads between 125 and 250 mm Hg subambient pressure (-5 and -10

in Hg).

6.2.7 Once sample collection is complete, record the final sample canister vacuum, sample collection time, and sample ID on the data sheet. Connect the FID analyzer to the stripping chamber air exhaust and record the final total VOC concentration.

6.2.8 Where the possibility of condensibles exists in a sample, the sample container may be heated above the stripping chamber temperature to help assure a representative sample analysis. Copies of field data sheets should be included with the samples so the laboratory is aware of the conditions at which the samples were collected.

6.2.9 Upon receipt of the sample(s) and prior to analysis, the laboratory must check and record the vacuum of the canister(s) to determine if any leakage has occurred. Dilution air (meeting the specifications of Section 3.1.1) should only be added to the canister at the laboratory performing the analysis and after the canister vacuum has been recorded.

6.2.10 If Tedlar™ bags are acceptable (see Section 3.5.1) for the target compounds then follow the procedures in Steps 6.2.1 through 6.2.9 with the following exceptions:

6.2.10.1 References to canister vacuum/pressure are not applicable to Tedlar™ bags.

6.2.10.2 Flow rate into the sample bag may be controlled by placing a rotameter downstream of the bubbler and controlling the flow rate of the bypass. Maintain a bypass flow of approximately 1.5 to 2.0 liter/min to fill the bag at approximately 0.5 to 1.0 liter/min.

6.2.10.3 Tedlar™ bags must be at least 10 liter size.

6.2.10.4 Tedlar™ bags shall be filled to approximately 80% capacity during sampling.

6.2.10.5 If sample dilution is required, dilution gas should not be added to the bag. Instead, a known volume of gas may be extracted from the bag and diluted with a known volume of zero air.

6.2.11 The sample(s) obtained for speciation analysis shall be analyzed according to the procedures in either EPA Method 18 (Title 40 Code of Federal Regulations Part 60 Appendix A) or Compendium Method TO-14A (US EPA Compendium of Methods for Determination of Toxic Organic Compounds in Ambient Air, EPA Document Number 625/R96/010B).

6.2.11.1 The target list of compounds for the analyses shall be determined by permit or regulatory requirements. In the absence of such requirements, a target list shall be generated based on a presurvey sample and analysis by GC/MS. Subject to TCEQ approval, process knowledge may also be used to generate a target list for the analysis.

6.2.11.2 All unidentified compounds detected beyond the target compounds shall be quantified based an appropriate surrogate, such as propane.

6.2.11.3 Calibration of the GC system for speciation analyses shall be

performed according to Section 4.2.

6.2.12 Appropriate chain of custody documents should be completed and accompany all canister and Tedlar™ bag samples, even in cases where a single company performs sampling and analysis.

6.2.13 Average the stripping chamber air and water flow rates and the stripping chamber temperature. Follow the calculations described in Section 7.0 to determine the air strippable concentration and, if applicable, the mass emission rate for each compound in the water matrix.

7.0 Calculations.

7.1 Calculation of the concentration of air strippable compound(s) in the water matrix is by the following equation:

Equation 7-1

$$C = \frac{M \times (P \times 0.03342 \frac{atm}{inHg}) \times b \times c}{R \times (T + 273) \times a}$$

Where:

a = Sample water flow rate, ml/min.
b = Stripping air flow rate, ml/min.
c = Concentration of compound in the stripped air, ppmv, from the FID analyzer or GC results. The total VOC result from the FID analyzer may be corrected based on the background check from either the zero air or water blank check, but only from the pretest background check. Post-test background checks may include residual contamination from the current test run. In no case shall the total VOC concentration by the FID analyzer be corrected by more than 1.0 ppmv as methane.
C = Concentration of air strippable compound in the water matrix, part-per-million by weight (ppmw).
M = Molecular weight of the compound, g/mol.
P = Pressure in the stripping chamber, in Hg (typically assumed to be same as atmospheric pressure).
R = 82.054 ml-atm/mol-K.
T = Stripping chamber temperature, ^{o}C.

The equation is a material balance and the value "C" represents the concentration in ppmw of the compound in the water matrix that was stripped and does not represent the total concentration of the compound in the water matrix prior to air stripping. The concentration of stripped VOC in the air is on a volume basis, but the concentration of strippable VOC in the water is on a weight basis in a liquid phase; so the concentration value will appear much

higher for the air phase.

7.2 Molecular weight. For total VOC based on the portable FID analyzer procedure in Section 6.1, calculate total VOC concentration in the water and emission rate based on the molecular weight of methane, unless an alternative reference calibration standard is approved by the TCEQ. For speciated VOC results based on procedures in Section 6.2, calculate individual compound concentrations and emission rates based on the respective compound molecular weights.

7.3 Calculation of VOC mass emission rate(s) from the concentration of strippable VOCs in the water and the water circulation rate:

Equation 7-2

$$E = C \times F \times \frac{60\,\text{min}}{hr} \times \frac{8.337 lb}{gallon} \times \frac{1}{1{,}000{,}000\,ppm}$$

Where:
C = Concentration of air strippable compound in the water matrix, part-per-million by weight (ppmw).
E = Mass emission rate of VOCs, lb/hr.
F = Water circulation rate of source, gallons/min.

7.4 Calculation of methane concentration in stripped air equivalent to a mass emission rate or action level (see Section 5.5.2.1.3). Equations 7-1 and 7-2 above are combined as follows:

Equation 7-3

$$c' = \frac{R \times (T + 273) \times a}{16.04 \frac{lb}{mol} \times (P \times 0.03342 \frac{atm}{inHg}) \times b} \times \frac{E' \times 1{,}000{,}000\,ppm}{F \times 8.337 \frac{lb}{gallon} \times 60 \frac{\text{min}}{hr}}$$

Where:
E’ = Allowable mass emission rate of VOCs or action level, lb/hr.
c’ = Methane concentration in the stripped air equivalent to emission limit or action level, ppmv.

16.04 = Molecular weight of methane, lb/mol. If a different calibration gas is used for the portable FID analyzer, such as ethylene, use the appropriate molecular weight.

8.0 Use of Portable GC for Field Speciation Analysis. A portable GC, calibrated for a specific suite of compounds, may be used in place of a FID analyzer, in which case the calculations remain the same and the final result is the concentrations of speciated air strippable compounds in the water matrix.

8.1 Setup. Same as Section 5.1, except calibration procedures for field GC analysis will follow Section 4.2.

8.2 Blank/Background Check. Same as Section 5.5.

8.2.1 Note: In some situations where very low detection for specific compounds is required, it may be preferable to check for background using the field GC.

8.3 Sample Measurement. Same as Section 6.1 with the following exceptions:

8.3.1 The FID analyzer can be used during the stabilization period to monitor the air stripping apparatus effluent. Alternatively, the GC can be used to monitor during the stabilization period; however, such an approach may drastically increase the time needed.

8.3.2 A test shall consist of three separate injection/analyses of the stripped gases.

9.0 References.

9.1 Vernon, W. D. et. al., "A Device for Measuring Volatile Organic Carbon Emissions from Cooling Towers Water," Journal of Air Pollution Control Association, December, 1981, pages 1280-1282.

9.2 United States Environmental Protection Agency Method 18 "Measurement of Gaseous Organic Compound Emissions by Gas Chromatography," Code of Federal Regulations, Title 40, Part 60, Appendix A, as amended through October 17, 2000 (65 FR 61744).

9.3 United States Environmental Protection Agency Method 21 "Determination of Volatile Organic Compound Leaks," Code of Federal Regulations, Title 40, Part 60, Appendix A, as amended through October 17, 2000 (65 FR 61744).

9.4 United States Environmental Protection Agency Compendium Method TO-14A "Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using Specially Prepared Canisters with Subsequent Analysis by Gas Chromatography," Compendium of

Methods for Determination of Toxic Organic Compounds in Ambient Air, EPA Document Number 625/R96/010B, January 1999.

Figure 1

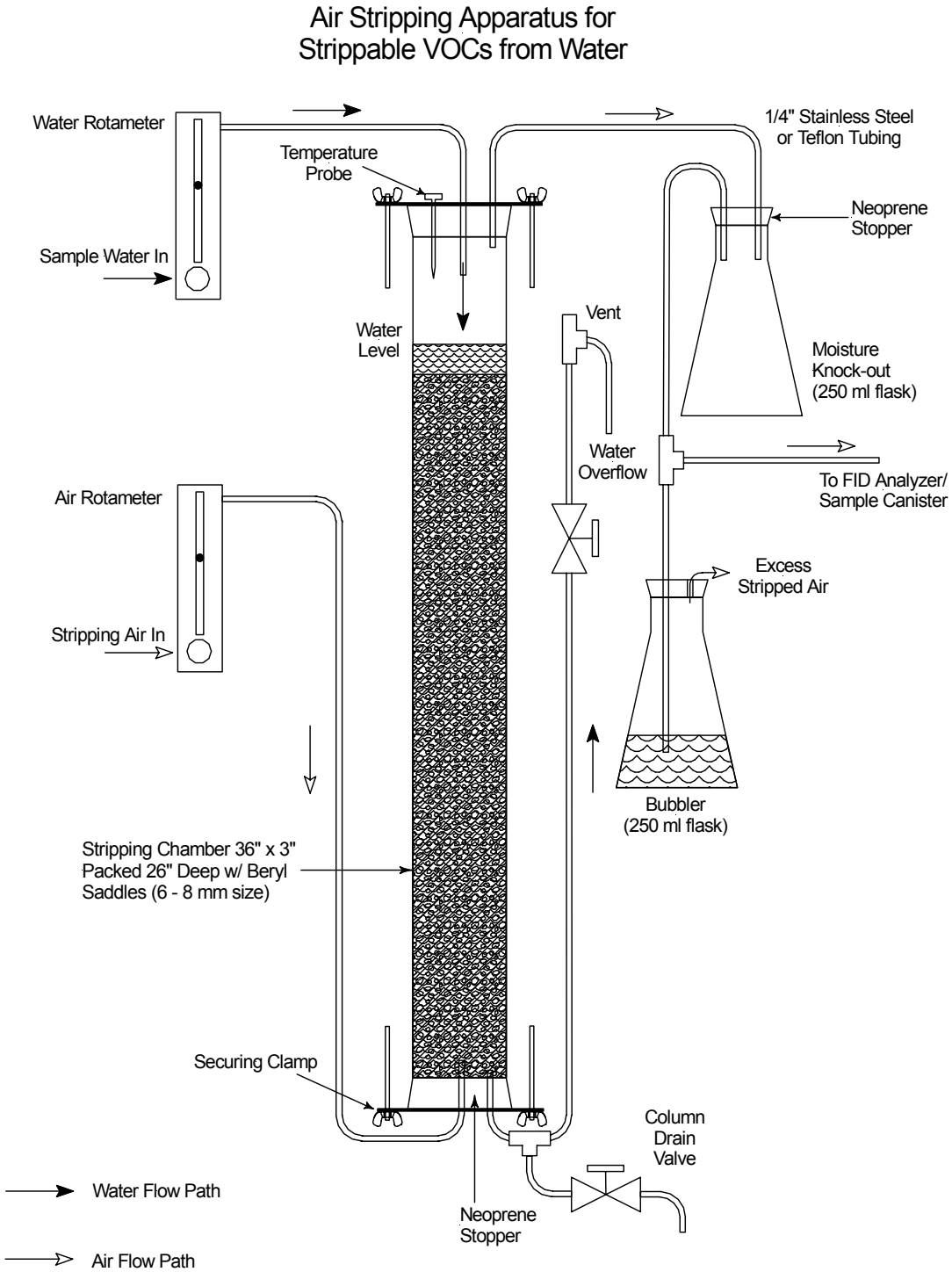
Air Stripping Apparatus for
Strippable VOCs from Water
Water Rotameter
Sample Water In
Temperature Probe
1/4" Stainless Steel or Teflon Tubing
Neoprene Stopper
Water Level
Vent
Moisture Knock-out (250 ml flask)
Water Overflow
To FID Analyzer/ Sample Canister
Air Rotameter
Stripping Air In
Excess Stripped Air
Bubbler (250 ml flask)
Stripping Chamber 36" x 3" Packed 26" Deep w/ Beryl Saddles (6 - 8 mm size)
Securing Clamp
Column Drain Valve
Neoprene Stopper
Water Flow Path
Air Flow Path

Figure 2

Air Stripping Apparatus
Stripping Chamber End Cap Design

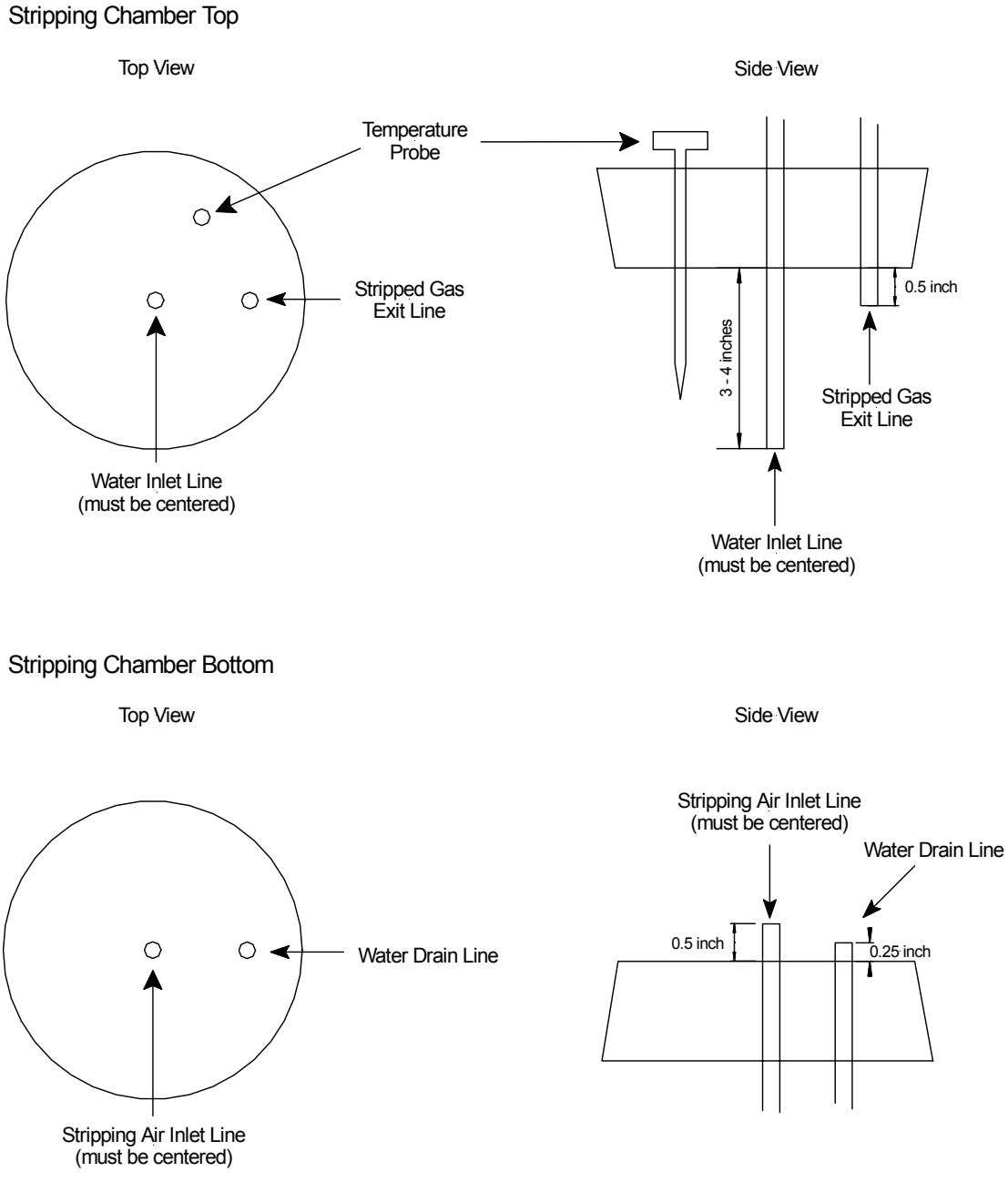

Figure 3
Air Strippable VOCs in Water
FID Analyzer Measurement Data Sheet

Regulated Entity: _____
Regulated Entity No: _____
Air Account No: _____
Instrument Model: _____
Unit Name: _____
Instrument Serial No: _____
EPN/FIN ID No: _____
Operator(s): _____
Process Description: _____
Certified Gas Value: Zero: _____
Date/Time: _____
Mid-level: _____
Barometric Pressure: _____
High-level: _____
Process Water Flow: _____
FID Response Zero: _____
Zero Air Background VOC: _____
Mid-level: _____
Zero Water Background VOC: _____
High-level: _____
Stabilization Time: _____
Expected VOC(s): _____

Time*	Air Stripping Apparatus Data			FID Reading (ppmv, wet)	Comments
	Water Flow (ml/min)	Air Flow (ml/min)	Temp. (°C)		
Average					

* Data recording time (after stabilization period), recorded as actual time of day.

Figure 4

Air Strippable VOCs in Water
Canister Sampling Data Sheet

Regulated Entity: _____
Air Account No: _____
Unit Name: _____
EPN/FIN ID No: _____
Process Description: _____
Date/Time: _____
Canister ID: _____
Sample ID: _____
Barometric Pressure: _____
Ambient Temperature: _____
Stabilization Time: _____
Process Water Flow: _____

Regulated Entity No: _____
Instrument Model: _____
Instrument Serial No: _____
Operator(s): _____
Certified Gas Value: Zero: _____
High-level: _____
FID Response Zero: _____
High-level: _____
Zero Air Background VOC: _____
Zero Water Background VOC: _____
Expected VOC(s): _____

Time*	Air Stripping Apparatus Data			Canister Flow Rate, if applicable (cc/min)	Canister Vacuum (mm Hg)	FID Reading, (ppmv, wet)	Comments
	Water (ml/min)	Air (ml/min)	Temp. (°C)				
Average							

* Data recording time (after stabilization period), recorded as actual time of day.

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Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 9/5/25)	O2114	RN103919817

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1592-31	114897	106.261, 106.262	02/13/2014
1592-90	132981	106.478	01/12/2016
CPC-FIXMNT	132981	106.263	01/12/2016
F-160	132981	106.261, 106.262	01/12/2016
1592-WWLOAD	134693	106.261, 106.262	09/03/2015
1592-WWFRAC	134693	106.261, 106.262	09/03/2015
F-1592-31	135701	106.261, 106.262	09/17/2018
NAO-KOLOAD	136457	106.261, 106.262	12/09/2015
F-160	139001	106.261, 106.262	03/23/2016
1592-WWLOAD	139001	106.261, 106.262	03/23/2016
F-1592-31	140351	106.261, 106.262	06/22/2016
TOTES	140351	106.261, 106.262	06/22/2016
F-1592-31	143865	106.261, 106.262	12/05/2016
LOAD-TOTE	143865	106.261, 106.262	12/05/2016
F-1592-31	150060	106.261, 106.262	03/07/2018
F-1592-31	151216	106.261, 106.262	04/25/2018
F-1592-31	151993	106.261, 106.262	06/27/2018
F-1592-31	152085	106.261, 106.262	06/22/2018
F-160	153141	106.261, 106.262	11/06/2018
F-1592-31	154060	106.261, 106.262	01/17/2019
Z-1101	154060	106.261, 106.262	01/17/2019
L1798-40	154060	106.261, 106.262	01/17/2019
F-1592-31	156170	106.261, 106.262	04/19/2019

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12/11/24 (Updated 9/5/25)	**O2114**	**RN103919817**

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1594	156170	106.261, 106.262	04/19/2019
F-1798-30, F-130	156170	106.261, 106.262	04/19/2019
F-1592-31	157396	106.261, 106.262	07/30/2019
TOTE BIN	157396	106.472	07/30/2019
F-1592-31, F-160	160298	106.261, 106.262	04/03/2020
F-1795-66, F1594	160298	106.261, 106.262	04/03/2020
MEOHTOTE	160298	106.473	04/03/2020
S-920CC, S-948CC	160298	106.472	04/03/2020
F-1592-31	160762	106.261, 106.262	04/17/2020
F-1594	160762	106.261, 106.262	04/17/2020
F-1798-30, F-130	160762	106.261, 106.262	04/17/2020
CB-710	160762	106.261, 106.262	04/17/2020
PK-906	160762	106.261, 106.262	04/17/2020
CB-710	162317	106.261, 106.262	08/21/2020
F-160	162317	106.261, 106.262	08/21/2020
F-160	163272	106.261, 106.262	11/19/2020
F-1594	164559	106.261, 106.262	04/09/2021
F-1592-31	164559	106.261, 106.262	04/09/2021
F-1798-30, F-130	164559	106.261, 106.262	04/09/2021
F-1795-66	164559	106.261, 106.262	04/09/2021
PK-830	166760	106.261, 106.262	11/18/2021
PK-906	166760	106.261, 106.262	11/18/2021
FB-702	167637	106.262	01/17/2023
F-1592-31	168528	106.261	05/12/2022

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Date	Permit Number	Regulated Entity Number
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Unit ID No.	Registration No.	PBR No.	Registration Date
F-130	168528	106.261	05/12/2022
Z-101	168528	106.261	05/12/2022
MeOH Cart	168528	106.261	05/12/2022
F-1592-31	169772	106.261, 106.262	09/08/2022
CB-701	169772	106.261, 106.262	09/08/2022
MeOH Load	169772	106.261, 106.262	09/08/2022
F-1594	170570	106.261, 106.262	10/12/2022
F-1592-31, F-160	170856	106.261, 106.262	11/23/2022
F-1594	170856	106.261, 106.262	11/23/2022
F-1592-31	172149	106.261, 106.262	04/06/2023
1592ANAL	172149	106.261, 106.262	04/06/2023
1592-16	172149	106.261, 106.262	04/06/2023
F-1592-31	172309	106.261, 106.262	04/28/2023
F-1798-30, F-130	172323	106.261	05/05/2023
F-1594	172323	106.261	05/05/2023
F-1795-66	172323	106.261	05/05/2023
F-1592-31	172323	106.261	05/05/2023
F-1594	172386	106.261, 106.262	04/17/2023
F-1592-31	172585	106.261, 106.262	05/04/2023
F-1594	172772	106.261, 106.262	05/23/2023
F-1592-31	172825	106.261, 106.262	05/30/2023
F-1795-66	172825	106.261, 106.262	05/30/2023
F-1592-31	172943	106.261, 106.262	06/05/2023

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Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 9/5/25)	**O2114**	**RN103919817**

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1594	173153	106.261, 106.262	06/23/2023
Tote-AF1, Tote-AF2	173153	106.472	06/23/2023
F-1594	173206	106.261, 106.262	07/27/2023
PK-905	173206	106.261, 106.262	07/27/2023
F-1592-31	173299	106.261, 106.262	07/13/2023
F-1594	173299	106.261, 106.262	07/13/2023
F-1594	173448	106.261, 106.262	08/04/2023
F-1798-30, F-1891, F-130	174183	106.261, 106.262	11/03/2023
F-1594	174183	106.261, 106.262	11/03/2023
F-1592-31	174183	106.261, 106.262	11/03/2023
FB-204	174273	106.261, 106.262	11/02/2023
F-1592-31	174273	106.261, 106.262	11/02/2023
F-1891	174389	106.262	10/24/2023
F-1594, 1594-SSAN, F-1595	**174540**	**106.261, 106.262**	**11/28/2023**
1595-Totes	**174540**	**106.472**	**11/28/2023**
F-1592-31	**174685**	**106.261,106.262**	**12/05/2023**
F-160	**174900**	**106.261,106.262**	**01/17/2024**
F-1592-31	**175222**	**106.261,106.262**	**02/14/2024**
F-160	**175614**	**106.261,106.262**	**03/25/2024**

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Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
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Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 9/5/25)	O2114	RN103919817

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1798-30, F-130, F-1891, F-160, F-1594, F-1592-31, F-1795-66	175899	106.261,106.262	05/09/2024
G-202A, G-202B	174272	106.263	04/29/2024
F-1594, F-1891	176836	106.261,106.262	07/15/2024
F-160, F-1592-31	176480	106.261,106.262	08/29/2024
F-1594, PK-905	177331	106.261,106.262	09/18/2024
F-1795-66, 1795-46, 1795-44, 127WW, PROPAO1795	177511	106.262	10/01/2024
1795-47, 1795-48, 127U, 1795-51, 1795-38, 1795-39, PROPAO1795	177511	106.472	10/01/2024
PROPAO1795	177511	106.476	10/01/2024
F-1592-31	177876	106.261, 106.262	11/05/2024

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Table B: Claimed (not registered) Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 9/5/25)	O2114	RN103919817

Unit ID No.	PBR No.	Version No./Date
LPAOWW	106.472	9/4/2000
LWAX	106.472	9/4/2000
UNLOAD	106.472, 106.473	9/4/2000
P-1576	106.511	9/4/2000
MSS-PBR	106.263	11/1/2001
PIPELINE	106.355	11/1/2001
EF-751	106.371	9/4/2000
AD-611CC	106.472	9/4/2000
1592DG, INSTRDG1, INSTRDG2	106.454	11/1/2001
F-1592-31, L-1092-NH3	**106.472**	**9/4/2000**
FB-702	106.472	9/4/2000
GASTK	106.473	9/4/2000
FB-202	106.473	3/14/1997
FB-707	106.478	9/4/2000
1000-GE-105, 1092-GE-940, EG-101, GA-934, GE-930	106.511	9/4/2000
FB-202	60	4/4/1975
Z-1104	106.371	9/4/2000
Z-1104TEMP	**106.371**	**9/4/2000**
TK-207	106.472	9/4/2000
TK-208	106.472	9/4/2000
TK-403	106.473	9/4/2000
Z-104	**106.371**	**9/4/2000**
1592-SEALOIL	**106.472**	**9/4/2000**

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Table C: Claimed (not registered) Permits By Rule (30 TAC Chapter 106) for Insignificant Sources for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 9/5/25)	O2114	RN103919817

PBR No.	Version No./Date
106.122	09/04/2000

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 9/5/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	114897	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1592-90	106.478	132981	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
CPC-FIXMNT	106.263	132981	Keep records on-site of the type and reason for MSS activity, the processes and equipment involved; date, time, and duration of the activity or facility operation; and the air contaminants and amounts which are emitted as a result of the activity or facility operation per 106.263(g)(1)-(4). MSS emissions are recorded by the end of the month following the month during which the MSS activity occurred; these emissions are summed monthly, and the rolling 12-month emissions record is updated on a monthly basis to demonstrate compliance with the limits in 106.4 and 106.263(f). Calculated emissions are kept on-site.
F-160	106.261, 106.262	132981	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Date	Permit Number	Regulated Entity Number
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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
1592-WWLOAD	106.261, 106.262	134693	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
1592-WWFRAC	106.261, 106.262	134693	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
F-1592-31	106.261, 106.262	135701	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
NAO-KOLOAD	106.261, 106.262	136457	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-160	106.261, 106.262	139001	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1592-WWLOAD	106.261, 106.262	139001	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	140351	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
TOTES	106.261, 106.262	140351	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	143865	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
LOAD-TOTE	106.261, 106.262	143865	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	150060	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	151216	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	151993	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	152085	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-160	106.261, 106.262	153141	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	154060	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
Z-1101	106.261, 106.262	154060	This flare is monitored as required by Special Conditions 9, 24, and 41-56 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
L1798-40	106.261, 106.262	154060	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.261, 106.262, and 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	156170	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	156170	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1798-30, F-130	106.261, 106.262	156170	Emissions from fugitive component leaks are minimized through the the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition No. 15 (F-1798-30); and the 28RCT LDAR program as detailed in Special Condition No. 16 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	157396	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
TOTE BIN	106.472	157396	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1592-31, F-160	106.261, 106.262	160298	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1795-66, F-1594	106.261, 106.262	160298	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair (LDAR) program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 (F1795-66) and the 28LAER LDAR program as detailed in Special Condition No. 24 of NSR Permit No. 1504A (F-1594). Both permits are found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
MEOHTOTE	106.473	160298	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
S-920CC, S-948CC	106.472	160298	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1592-31	106.261, 106.262	160762	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	160762	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1798-30, F-130	106.261, 106.262	160762	Emissions from fugitive component leaks are minimized through the 28RCT Leak Detection and Repair (LDAR) program as detailed in Special Condition No. 15 (F-130), and the 28VHP LDAR programs as detailed in Special Condition No. 35-36 of NSR Permit No. 37063, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
CB-710	106.261, 106.262	160762	This flare is monitored as required by Special Conditions 14 and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
PK-906	106.261, 106.262	160762	The natural gas usage and waste gas flow is monitored and recorded to ensure compliance with emissions limitations.
CB-710	106.261, 106.262	162317	This flare is monitored as required by Special Conditions 14 and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-160	106.261, 106.262	162317	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160	106.261, 106.262	163272	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1798-30, F-130	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition Nos. 35-36 (F-1798-30) and through the 28RCT LDAR program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1795-66	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
PK-830	106.261, 106.262	166760	Emissions of NH3, NOx, and CO from this boiler are continuously monitored using a CEMS according to the requirements of Special Condition No. 19 of NSR Permit No. 1504A found in Attachment B of Title V Permit No. O2114. Fuel gas usage and composition are also monitored. The boiler is monitored according to the requirements of NSPS Db and MACT DDDDD.
PK-906	106.261, 106.262	166760	The natural gas usage and waste gas flow is monitored and recorded to ensure compliance with emissions limitations.
FB-702	106.262	167637	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261	168528	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-130	106.261	168528	Emissions from fugitive component leaks are minimized through the 28RCT Leak Detection and Repair (LDAR) program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
Z-101	106.261	168528	This flare is monitored as required by Special Condition Nos. 9, 24, and 41-56 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
MeOH Cart	106.261	168528	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1592-31	106.261, 106.262	169772	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
CB-701	106.261, 106.262	169772	This flare is monitored as required by Special Conditions 11, 14, and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
MeOH Load	106.261, 106.262	169772	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1594	106.261, 106.262	170570	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31, F-160	106.261, 106.262	170856	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	170856	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	172149	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1592ANAL	106.261, 106.262	172149	Hours of operation recorded to ensure compliance with emissions calculations.
1592-16	106.261, 106.262	172149	This flare is monitored as required by Special Conditions 11, 14, and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	172309	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1798-30, F-130	106.261	172323	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition Nos. 35-36 (F-1798-30), and through the 28RCT LDAR program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261	172323	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1795-66	106.261	172323	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261	172323	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	172386	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	172585	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	172772	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	172825	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1795-66	106.261, 106.262	172825	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	172943	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	173153	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
Tote-AF1, Tote-AF2	106.472	173153	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1594	106.261, 106.262	173206	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
PK-905	106.261, 106.262	173206	This flare is monitored as required by Special Condition No. 14 of NSR Permit No. 1504A and AMOC 32 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	173299	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	173299	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	173448	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1798-30, F-1891, F-130	106.261, 106.262	174183	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition No. 35-36 (F-1798-30) and Special Condition No. 16 (F-1891), and through the 28RCT LDAR program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	174183	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	174183	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
G-202A, G-202B	106.263	174272	Keep records on-site of the type and reason for MSS activity, the processes and equipment involved; date, time, and duration of the activity or facility operation; and the air contaminants and amounts which are emitted as a result of the activity or facility operation per 106.263(g)(1)-(4). MSS emissions are recorded by the end of the month following the month during which the MSS activity occurred; these emissions are summed monthly, and the rolling 12-month emissions record is updated on a monthly basis to demonstrate compliance with the limits in 106.4 and 106.263(f). Calculated emissions are kept on-site.
FB-204	106.261, 106.262	174273	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	174273	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1891	106.262	174389	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition No. 16 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594, F-1595	106.261, 106.262	174540	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1594-SSAN	106.261, 106.262	174540	Hours of operation recorded to ensure compliance with emissions calculations.
1595-Totes	106.472	174540	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261,106.262	174685	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160	106.261,106.262	174900	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261,106.262	175222	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160	106.261,106.262	175614	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1798-30, F-130, F-1891, F-160, F-1594, F-1592-31, F-1795-66	**106.261,106.262**	**175899**	**Emissions from fugitive component leaks are minimized through the 28RCT Leak Detection and Repair (LDAR) program as detailed in Special Condition No. 15 (F-130), the 28VHP and 28CNTQ LDAR program as detailed in Special Condition No. 16 (F-1891), the 28VHP and 28CNTQ LDAR programs as detailed in Special Condition Nos. 35-36 (F-1798-30), and the 28VHP LDAR program as detailed in Special Condition No. 35 (F-1795-66) of NSR Permit No. 37063; the 28VHP and 28CNTQ LDAR programs as detailed in Special Condition Nos. 22-23 (F-160 & F-1592-31), and the 28LAER LDAR program as detailed in Special Condition No. 24 (F-1594) of NSR Permit No. 1504A. Both permits can be found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permits specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.**

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594, F-1891	106.261,106.262	176836	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair (LDAR) program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A and the 28VHP LDAR program as detailed in Special Condition No. 16 of NSR Permit No. 37063, both found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permits specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160, F-1592-31	106.261,106.262	176480	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261,106.262	177331	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
PK-905	106.261,106.262	177331	This flare is monitored as required by Special Condition No. 14 of NSR Permit No. 1504A and AMOC 32 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1795-66	106.262	177511	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1795-46, 1795-44, 127WW	106.262	177511	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
1795-47, 1795-48, 127U, 1795-51, 1795-38, 1795-39	106.472	177511	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
PROPAO1795	**106.476**	**177511**	**A description of the tank or container with pressure sufficient at all times to prevent vapor or gas loss to the atmosphere or vapor control system is recorded.**
F-1592-31	**106.261, 106.262**	**177876**	**Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.**
LPAOWW	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
LWAX	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
UNLOAD	106.472, 106.473	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
P-1576	106.511	9/4/2000	Engine runtime hours are recorded and maintained to ensure compliance with the PBR and the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
MSS-PBR	106.263	11/1/2001	Keep records on-site of the type and reason for MSS activity, the processes and equipment involved; date, time, and duration of the activity or facility operation; and the air contaminants and amounts which are emitted as a result of the activity or facility operation per 106.263(g)(1)-(4). MSS emissions are recorded by the end of the month following the month during which the MSS activity occurred; these emissions are summed monthly, and the rolling 12-month emissions record is updated on a monthly basis to demonstrate compliance with the limits in 106.4 and 106.263(f). Calculated emissions are kept on-site.
PIPELINE	106.355	11/1/2001	Records of pipeline maintenance and purging activities are maintained to demonstrate compliance with 106.355(5)(A)-(D).

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
EF-751	106.371	9/4/2000	The cooling tower flow rate and the amount of total dissolved solids are recorded to ensure compliance with emissions calculations. The cooling tower water is monitored at least monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.
AD-611CC	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
1592DG, INSTRDG1, INSTRDG2	106.454	11/1/2001	Recurring visual inspection to ensure cover is closed when parts are not being handled in cleaner and that waste solvents are stored in covered containers. Records of total solvent makeup are maintained on a monthly basis.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	**106.472**	**9/4/2000**	**Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.**
L-1092-NH3	**106.472**	**9/4/2000**	**Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.**
FB-702	106.472	9/4/2000	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.2 equations for floating roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
GASTK	106.473	9/4/2000	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
FB-202	106.473	3/14/1997	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
FB-707	106.478	9/4/2000	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
1000-GE-105, 1092-GE-940, EG-101, GA-934, GE-930	106.511	9/4/2000	Engine runtime hours are recorded and maintained to ensure compliance with the PBR and the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
FB-202	60	4/4/1975	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
Z-104	106.371	9/4/2000	The cooling tower flow rate and the amount of total dissolved solids are recorded to ensure compliance with emissions calculations. The cooling tower water is monitored at least monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.
TK-207	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
TK-208	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
TK-403	106.473	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
PROPAO1795	106.262	177511	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
PROPAO1795	106.472	177511	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
1592-SEALOIL	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
Z-1104	106.371	9/4/2000	The cooling tower flow rate and the amount of total dissolved solids are recorded to ensure compliance with emissions calculations. The cooling tower water is monitored at least monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.
Z-1104TEMP	106.371	9/4/2000	The cooling tower flow rate and the amount of total dissolved solids are recorded to ensure compliance with emissions calculations. The cooling tower water is monitored at least monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.

From: Cromer, Colton <cromec@cpchem.com>
Sent: Monday, August 25, 2025 5:19 PM
To: Carolyn Maus
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Confirmed receipt. We have already started working the follow-up questions – so hopefully we can gather a response before 9/8. Thanks!

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796
Baytown, TX 77521-9570

From: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Sent: Monday, August 25, 2025 3:13 PM
To: Cromer, Colton <cromec@cpchem.com>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Hi Colton,

I have prepared a revised WDP based on your prior responses to my questions and your WDP comments. The WDP is available via TCEQ's secure FTP server, at https://ftps.tceq.texas.gov/index.php. I have shared it with you and Daniel Guthrie there. (You are welcome to pass the file along to anyone that needs it. Or, if you would like me to share directly with anyone else via the FTP, that person can create an account with their email and you can let me know.) The file will remain there for 7 days (available until 09/01/2025) so please save the file to another location for your work. If you need to submit comments or other mark-ups on the document itself, you may send it back to me via that same FTP server, or you can submit a smaller portion of the document via email.

I also have a few follow-up questions listed below. Please review the revised WDP and provide any additional comments, as well as a response to these questions, by **Monday, September 8, 2025**.

1) I have added in the updates related to units 1592-18 and 1592-18a. I had not included these in the first WDP because I thought that these changes were being authorized by the pending NSR amendment that you all had opted to "pull out" of this Title V project. (I saw that the edited OP-2 still included the two units, minus the NSR action, but I thought that might have been an error.) If the changes to attributes/requirements for these units are the result of the changes being authorized by that amendment, we cannot include them in the permit at this time. Please confirm in your response if these changes are authorized by the NSR action so I can determine whether to keep them or remove.
2) Regarding the alternative requirements for Z-1104 and Z-1104TEMP (related to Chapter 115, HRVOC Cooling Towers), I understand that the alternative monitoring has already been approved, and that previous applications already indicated the alternative was being used for Z-1104. I also understand that you are not asking to change that method. However, the issue is that the approval letter for that alternative requirement should have always been included in the permit, and it does not appear to be there. Since the same alternative is being used for the new unit Z-1104TEMP, we need to correct that in this project. Please provide me the approval letter for this alternative so I can add it to the Alternative Requirement section of the permit.
3) I removed the MACT FFFF requirements for PROPAO1795 since you indicated the facility modifications are not being pursued right now. Since we aren't adding requirements, I put the existing permit shield back in the permit. Please confirm that is correct.
4) Thanks for clearing up most of the PBR discrepancies between different forms. As a result, I made the updates listed below (all other items were already correct in the first WDP). Please confirm these rows are now correct in the NSR Authorization References by Emission Unit table.
    a. Added registration no. 177876 for 106.261/11/01/2003 and 106.262/11/01/2003 to F-1594 and F-1592-31.
    b. Added 106.472/09/04/2000 to F-1592-31.
    c. Added registration no. 177511 for 106.262/11/01/2003, 106.472/09/04/2000, and 106.476/09/04/2000 to PROPAO1795.
5) These are the remaining questions regarding PBRs. This will involve additional updates to the OP-PBRSUP, so just a reminder to re-date and re-submit all four tables as a set when providing the corrections.
    a. For F-1891, you confirmed that registration nos. 160762, 164559, 168528, 170570, and 172323 were consolidated into NSR 37063/N178M2 and no longer authorized emissions from this unit. While they were removed from the OP-PBRSUP for F-1891, the OP-SUMR row for this unit still includes them. Please update the OP-SUMR.

b. You also listed registration 156170 as one of those that was consolidated for F-1891. Based on what I saw in the NSR project, it seemed like that registration was still being used for F-1891. In addition, it is still in your OP-SUMR row for that unit, and it is still on Table A of the OP-PBRSUP (in the same row as F-1798-30 and F-130). Could you double-check this? If it is still in use for F-1891, then just add F-1891 back to Table D of the OP-PBRSUP to the row with F-1798-30 and F-130. If it is not in use for F-1891, then please remove F-1891 from that row of Table A and remove the registration number from F-1891's row on the OP-SUMR.
c. On Table A of the OP-PBRSUP, one of the rows for registration no. 160298 includes unit F-1595-66. I believe this should be F-1795-66. Please correct this. (The corresponding Table D row is fine.)
d. Table B of the OP-PBRSUP includes rows for Z-1104 and Z-1104TEMP authorized by 106.371/09/04/2000. Please add corresponding rows to Table D.
e. The OP-SUMR row for F-1594 included registration no. 177876 (for 106.261/11/01/2003 & 106.262/11/01/2003). However, the OP-PBRSUP did not list this for F-1594 on Table A or D. Please correct either the OP-SUMR or OP-PBRSUP as needed.

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1400


How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey [links.govdelivery.com]

From: Carolyn Maus
Sent: Friday, August 22, 2025 2:11 PM
To: Cromer, Colton <cromec@cpchem.com>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Hi Colton,

Thanks for checking in. You haven't missed anything – my management was just approving the follow-up questions I will be including with your revised WDP. I'll be sending that all to you this afternoon. I'll put all the information in the email but the actual permit will be on the FTP server due to size, like before.

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1400


How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey [links.govdelivery.com]

From: Cromer, Colton <cromec@cpchem.com>
Sent: Thursday, August 21, 2025 2:59 PM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Carolyn – verifying I hadn't overlooked an email. We have a pending NSR amendment that is currently in the final WDP review cycle stages that we expect to be finalized in the next 1-2 weeks that's associated FOP O2114.

CPChem is hoping that we can finalize Project 37501 soon so we can start working on the next list of projects. Thanks.

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796

Baytown, TX 77521-9570

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From: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Sent: Tuesday, August 5, 2025 12:03 PM
To: Cromer, Colton <cromec@cpchem.com>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Hi Colton,

My apologies – you didn't miss anything from me, but I missed your earlier email. So far, I've updated the working draft permit based on your comments and responses. I am just double-checking that all the discrepancies on the OP-PBRSUP form have been resolved and then I'll be able to send the revised WDP back to you to check. I expect to have that ready this week.

Feel free to contact me with any other questions.

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1300


How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey [links.govdelivery.com]

From: Cromer, Colton <cromec@cpchem.com>
Sent: Tuesday, August 5, 2025 11:08 AM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Carolyn – curious if you have an update on status of the Project 37501- it's quite possible I overlooked an email.

Hope you are having a good week 😊

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796
Baytown, TX 77521-9570

From: Cromer, Colton
Sent: Thursday, July 24, 2025 2:29 PM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>; CED DL Air Engineering <CBAirGroup@cpchem.com>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Carolyn – checking on the status of Project 37501. Let me know if you have a status update to share with us.

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796
Baytown, TX 77521-9570

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Texas Commission on Environmental Quality

Title V Existing

2114

Site Information (Regulated Entity)

What is the name of the permit area to be authorized?	OLEFIN UNITS
Does the site have a physical address?	Yes
Physical Address	
Number and Street	9500 INTERSTATE 10 E
City	BAYTOWN
State	TX
ZIP	77521
County	HARRIS
Latitude (N) (##.######)	29.813055
Longitude (W) (-###.######)	94.938611
Primary SIC Code	2869
Secondary SIC Code	
Primary NAICS Code	32511
Secondary NAICS Code	
Regulated Entity Site Information	
What is the Regulated Entity's Number (RN)?	RN103919817
What is the name of the Regulated Entity (RE)?	CHEVRON PHILLIPS CHEMICAL CEDAR BAYOU PLANT
Does the RE site have a physical address?	Yes
Physical Address	
Number and Street	9500 INTERSTATE 10 E
City	BAYTOWN
State	TX
ZIP	77521
County	HARRIS
Latitude (N) (##.######)	29.8175
Longitude (W) (-###.######)	-94.933888
Facility NAICS Code	
What is the primary business of this entity?	INDUSTRIAL CHEMICAL MANUFACTURING PLANT

Customer (Applicant) Information

How is this applicant associated with this site?	Owner Operator
What is the applicant's Customer Number (CN)?	CN600303614
Type of Customer	Corporation
Full legal name of the applicant:	
Legal Name	Chevron Phillips Chemical Company LP
Texas SOS Filing Number	13487011
Federal Tax ID	731587712
State Franchise Tax ID	17315877120

State Sales Tax ID	
Local Tax ID	
DUNS Number	152975665
Number of Employees	501+
Independently Owned and Operated?	No

Responsible Official Contact

Person TCEQ should contact for questions about this application:	
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	BRYAN
Middle	
Last	CANFIELD
Suffix	
Credentials	
Title	SENIOR VICE PRESIDENT MANUFACTURING
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	10001 SIX PINES DR
Routing (such as Mail Code, Dept., or Attn:)	
City	THE WOODLANDS
State	TX
ZIP	77380
Phone (###-###-####)	8328134445
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	canficb@cpchem.com

Duly Authorized Representative Contact

Person TCEQ should contact for questions about this application	
Select existing DAR contact or enter a new contact.	DIRK PERRIN(CHEVRON PHILLIP...)
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	DIRK
Middle	
Last	PERRIN
Suffix	
Credentials	
Title	PLANT MANAGER
Enter new address or copy one from list	
Mailing Address	

Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	9500 INTERSTATE 10 E
Routing (such as Mail Code, Dept., or Attn:)	
City	BAYTOWN
State	TX
Zip	77521
Phone (###-###-####)	2814216578
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	2814216169
E-mail	perrid@cpchem.com

Technical Contact

Person TCEQ should contact for questions about this application:	
Select existing TC contact or enter a new contact.	New Contact
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	Colton
Middle	D
Last	Cromer
Suffix	
Credentials	
Title	Environmental - Air Team Supervisor
Enter new address or copy one from list:	RE Physical Address
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	9500 INTERSTATE 10 E
Routing (such as Mail Code, Dept., or Attn:)	
City	BAYTOWN
State	TX
ZIP	77521
Phone (###-###-####)	2814216741
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	cbairgroup@cpchem.com

Title V General Information - Existing

1) Permit Type:	SOP
2) Permit Latitude Coordinate:	29 Deg 48 Min 47 Sec
3) Permit Longitude Coordinate:	94 Deg 56 Min 19 Sec
4) Is this submittal a new application or an update to an existing application?	New Application
4.1. What type of permitting action are you applying for?	Administrative Revision

4.1.1. Are there any permits that should be voided upon issuance of this permit application through permit conversion?	No
4.1.2. Are there any permits that should be voided upon issuance of this permit application through permit consolidation?	No
5) Who will electronically sign this Title V application?	Duly Authorized Representative
6) Does this application include Acid Rain Program or Cross-State Air Pollution Rule requirements?	No

Title V Attachments Existing

Attach OP-1 (Site Information Summary)

Attach OP-2 (Application for Permit Revision/Renewal)

Attach OP-REQ1 (Application Area-Wide Applicability Determinations and General Information)

Attach OP-REQ2 (Negative Applicable Requirement Determinations)

Attach OP-REQ3 (Applicable Requirements Summary)

Attach OP-PBRSUP (Permits by Rule Supplemental Table)

Attach OP-SUMR (Individual Unit Summary for Revisions)

Attach OP-MON (Monitoring Requirements)

Attach OP-UA (Unit Attribute) Forms

If applicable, attach OP-AR1 (Acid Rain Permit Application)

Attach OP-CRO2 (Change of Responsible Official Information)

[File Properties]

File Name	OP_CRO2_OPCRO2 SIGNED 05-21-2025.pdf
Hash	A44645B3495D593037854F5E14FF335DAFA306386C9BD27AEDF1C3557F2595E9
MIME-Type	application/pdf

Attach OP-DEL (Delegation of Responsible Official)

Attach any other necessary information needed to complete the permit.

An additional space to attach any other necessary information needed to complete the permit.

Expedite Title V

1) Per Texas Health and Safety Code, Section 382.05155, does the applicant want to expedite	No

the processing of this application?

Certification

I certify that I am the Duly Authorized Representative for this application and that, based on information and belief formed after reasonable inquiry, the statements and information on this form are true, accurate, and complete.

1. I am Dirk Perrin, the owner of the STEERS account ER075610.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcemer of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Title V Existing 2114.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEC

OWNER OPERATOR Signature: Dirk Perrin OWNER OPERATOR

Account Number:	ER075610
Signature IP Address:	68.171.198.51
Signature Date:	2025-07-30
Signature Hash:	2C540391995D727FA5F51DF20743244E70075C7DD1EC66C9230431593ACFBD5D
Form Hash Code at time of Signature:	BB7B3291CD27C2BB075684FFB93CE90EAA130DFDFEBD6DB8BE2620E406BD0D83

Submission

Reference Number:	The application reference number is 804386
Submitted by:	The application was submitted by ER075610/Dirk Perrin
Submitted Timestamp:	The application was submitted on 2025-07-30 at 09:07:57 CDT
Submitted From:	The application was submitted from IP address 68.171.198.51
Confirmation Number:	The confirmation number is 667885
Steers Version:	The STEERS version is 6.92
Permit Number:	The permit number is 2114

Additional Information

Application Creator: This account was created by Colton D Cromer

Form OP-CRO2
Change of Responsible Official Information
Federal Operating Permit Program

The Texas Commission on Environmental Quality (TCEQ) shall be notified of a new appointment or administrative information change (e.g., address, phone number, title) for a Responsible Official (RO), Designated Representative (DR), or Alternate Designated Representative (ADR) in the next submittal. This form satisfies the requirements for notification (a revised Certificate of Representation must also be submitted to the U.S. Environmental Protection agency for changes in the DR and ADR). After the initial submittal, if there is a change of Duly Authorized Representative (DAR) appointment or administrative information changes for the DAR, include a revised Form OP-DEL (Delegation of Responsible Official) with the next submittal to TCEQ.

I. Identifying Information
Account No.: BL-0758-C
Regulated Entity Number: RN 100825249
Customer Reference Number: CN 600303614
Permit Number: O2151
Area Name: Sweeny Complex, Olefins and NGL Assets
Company: Chevron Phillips Chemical Company LP
II. Change Type
Action Type: ☐ New Appointment ☒ Administrative Information Change
Contact Type **(only one response accepted per form)**: ☒ Responsible Official ☐ Designated Representative *(Acid Rain Program and/or CSAPR sources only)* ☐ Alternate Designated Representative *(Acid Rain Program and/or CSAPR sources only)*

Form OP-CRO2
Change of Responsible Official Information
Federal Operating Permit Program

III. Responsible Official/Designated Representative/Alternate Designated Representative Information
Conventional Title: ☒ Mr. ☐ Mrs. ☐ Ms. ☐ Dr.
Name (Driver's License/STEERS): Bryan Canfield
Title: EVP of Manufacturing and Projects
Appointment Effective Date:
Telephone Number:
Fax Number.:
Company Name:
Mailing Address: 9500 Lakeside Blvd
City: The Woodlands
State: TX
ZIP Code: 77381
Email Address:

Form OP-CRO2
Change of Responsible Official Information
Federal Operating Permit Program

IV. Certification of Truth, Accuracy, and Completeness
This certification does not extend to information, which is designated by TCEQ as information for reference only.
I, Bryan Canfield, certify that based on information and belief formed Reasonable inquiry, the statement and information stated above are true, accurate, and complete.
Signature:
Signature Date: 5/21/25

Change of Responsible Official
Federal Operating Permit Program
(Extension)

V. Additional Identifying Information
Account No.: BL-0044-C
Regulated Entity Number: RN 102200482
Customer Reference Number: CN 600303614
Permit Number: O2710
Area Name: Clemens Terminal
Account Number: BL-0758-C
Regulated Entity Number: RN 100825249
Customer Reference Number: CN 600303614
Permit Number: O3961
Area Name: Polyethylene Units 40 and 41 and 1-Hexene Unit
Account Number: OC-0012-Q
Regulated Entity Number: RN 100215615
Customer Reference Number: CN 600303614
Permit No.: O1310
Area Name: Orange Plant
Account Number: JE-0508_W
Regulated Entity Number: RN 100209857
Customer Reference Number: CN 600303614
Permit Number: O1235
Area Name: Port Arthur Plant
Account Number: HG-0310-V
Regulated Entity Number: RN 103919817
Customer Reference Number: CN 600303614
Permit Number: O2114
Area Name: Olefins Unit

Change of Responsible Official
Federal Operating Permit Program
(Extension)

V. Additional Identifying Information
Account No.: HG-0566-H
Regulated Entity Number: RN 102018322
Customer Reference Number: CN 600303614
Permit Number: O1315
Area Name: Pasadena Plastics Plant, Polyethylene Units
Account Number: HW-0013C
Regulated Entity Number: RN 102320850
Customer Reference Number: CN 600303614
Permit Number: O2164
Area Name: Borger Plant
Account Number: HG-0310-V
Regulated Entity Number: RN 103919817
Customer Reference Number: CN 600303614
Permit No.: O2114
Area Name: Olefins Units
Account Number: HG-0310-V
Regulated Entity Number: RN 103919817
Customer Reference Number: CN 600303614
Permit Number: O2115
Area Name: Polyethylene Unit (PEU 1792)
Account Number: HG-0310-V
Regulated Entity Number: RN 103919817
Customer Reference Number: CN 600303614
Permit Number: O2370
Area Name: Polyethylene Unit (PEU 1799)

Change of Responsible Official
Federal Operating Permit Program
(Extension)

V. Additional Identifying Information
Account No.: HG-0310-V
Regulated Entity Number: RN 103919817
Customer Reference Number: CN 600303614
Permit Number: O3247
Area Name: Polyethylene Unit 1796
Account Number:
Regulated Entity Number: RN
Customer Reference Number: CN
Permit Number:
Area Name:
Account Number:
Regulated Entity Number: RN
Customer Reference Number: CN
Permit No.:
Area Name:
Account Number:
Regulated Entity Number: RN
Customer Reference Number: CN
Permit Number:
Area Name:
Account Number:
Regulated Entity Number: RN
Customer Reference Number: CN
Permit Number:
Area Name:

From: Cromer, Colton <cromec@cpchem.com>
Sent: Wednesday, June 25, 2025 5:21 PM
To: Carolyn Maus
Cc: daniel.guthrie; CED DL Air Engineering
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]
Attachments: 2025-06-25 Responses to Unresolved Items - O2114.pdf

Carolyn – please find CPChem's response to each of the Unresolved Items in the attached file. The referenced updated application forms have been provided via the TCEQ FTP site and shared with your email address.

In addition, please note that during our review the OP-2 Table 2 Revisions No.1 and No.2 related to Unit IDs 1592-18/18a did not appear to be incorporated into the WDP you shared, or included in the list of changes you provided below. CPChem would like to progress those revisions with this permitting action. Please give me a call if you have questions.

Thanks,

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796
Baytown, TX 77521-9570

From: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Sent: Tuesday, June 10, 2025 12:09 PM
To: Cromer, Colton <cromec@cpchem.com>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>
Subject: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Good morning, Colton,

Unresolved Items:

1) Form OP-REQ1: Please submit corrected pages to address the following items.

   a. In section XII.F (page 88), only VOC was listed as a pollutant for nonattainment permits N148M2 and N178M2. While the most recent projects only involved nonattainment review for VOC, based on what I see for prior NSR projects, there was also nonattainment review for NOx for these. Therefore, I believe both pollutants should remain listed.

      Response: The most recent projects on N148M2 and N178M2 involved nonattainment NSR for NOx only, however prior iterations of these permits involved nonattainment NSR for both VOC and NOx. Therefore, VOC has been added to the OP-REQ1 section XII.F (page 88).

   b. Also, for N178M2, since we are incorporating the 09/30/2024 action for its associated minor NSR permit 37063, that new date should be used for N178M2 also. (It is understood that this action did not trigger nonattainment review but because both permits are in the same document, we reference the same issuance in the FOP.)

      Response: The issuance date for N178M2 has been updated to 9/30/2024.

   c. In section XII.H (page 89) the issuance date for NSR 1504A was pending. Since you opted to pull out that NSR action from this minor revision, please correct this page to have the prior date of 09/28/2023.

      Response: The issuance date for NSR Permit 1504A has been updated to the most recent permit issuance date, 9/28/2023.

2) Form OP-SUMR:

   a. I have added the additional PBR registration numbers that were bolded on the OP-PBRSUP to the unit IDs that appear in the permit. However, please list those unit IDs on the OP-SUMR with the PBR registrations in the proper format (106.XXX/MM/DD/YYYY [registration number]) so I can ensure all info is correct. If a unit ID is not in the permit, then you do not need to list it – it will remain on the OP-PBRSUP only.

      Response: The OP-SUMR has been updated as requested.

   b. For unit PROPAO1795, the PBR registration 177511 should be listed using this format on the OP-SUMR: 106.XXX/MM/DD/YYYY [177511]. That way I know which of the several PBRs under that registration apply to this specific unit.

      Response: The OP-SUMR has been updated as requested.

3) Form OP-PBRSUP:

   a. Table A did not include PROPAO1795 in the rows that listed PBR registration 177511. Please update Table A to include PROPAO1795 wherever needed. Also, please add PROPAO1795 to Table D.

      Response: OP-PBRSUP Table A and Table D have been updated.

   b. I did not see 106.476 anywhere on the OP-PBRSUP. Please add to Table A or B with any affected unit IDs as appropriate, as well as Table D.

      Response: 106.476 was utilized as part of registration no. 177511. This registration no and rule reference have been added to Table A and Table D for PROPAO1795.

   c. The form included registration no. 172386 for unit F-1594 and registration no. 172825 for unit F-1592-31. These were not new since the last project, but I noticed that the effective permit did not show them for these units. I've updated the WDP, but if this was an error, please correct any affected tables of the OP-PBRSUP. On the other hand, if

these authorizations are correct, please include them on the OP-SUMR for these unit IDs as confirmation.

Response: Registration No. 172386 for unit F-1594 and 172825 for unit F-1592-31 have been added to the OP-SUMR.

d. For the 09/30/2024 project for NSR 37063/N178M2, the file said that registrations 160762, 164559, 168528, 170570, and 172323 were consolidated for F-1891 only and so for that unit, the emissions are no longer authorized by those PBR registrations. Therefore, should F-1891 be removed from those rows on Tables A and D? I removed these registration numbers from F-1891 in the WDP, but I can put back if needed.

Response: As part of the 9/30/2024 NSR project on 37063/N178M2, fugitive emissions associated with F-1891 that were authorized by PBRs 156170, 160762, 164559, 168528, 170570, and 172323 were incorporated by consolidation into 37063/N178M2. Therefore, we have removed these rows from Tables A and D of the OP-PBRSUP.

e. Table A does not include a line for unit F-1592-31 for registration no. 132981 (106.261 and 106.262) but Table D does include this row. Correct whichever table is in error. If the registration should be added to the permit, please also put this unit on the OP-SUMR.

Response: F-1592-31 was erroneously included in the OP-PBRSUP Table D for registration no. 132981. Registration No. 132981 does not authorize emissions from this unit ID. This line item has been removed from the OP-PBRSUP Table D.

f. For the row in Table A for unit 1592-90 for registration no. 132981, PBRs 106.261, 106.262, and 106.478 are listed. However, in the corresponding row in Table D, only 106.478 is listed. Correct whichever table is in error.

Response: Table A was updated for unit 1592-90 for registration no 132981 to include only 106.478 to align with Table D, which is correct.

g. For the row in Table A for registration no. 156170 (units F-1798-30, F-1891, F-130), the table has F-1894 instead of F-1891. Please correct.

Response: This update has been made.

h. Table A has two rows for registration no. 174272 (106.263) for units G-202A and G-202B. One row has the registration date of 10/12/2023 and the other has the registration date of 04/29/2024. There only needs to be one row with the most recent registration date.

Response: The line containing the earlier registration date for G-202A and G-202B has been removed.

i. For the row in Table A for registration no. 175899, the first unit ID is listed as 1798-30 but I believe it should be F-1798-30. Please correct.

Response: This update has been made.

j. For the rows in Table A for registration nos. 174685, 175222, 175899, 176480, and 177876, I believe unit ID 1592-31 should be F-1592-31. Please correct. Also, in Table D, the row for registration no. 177876 lists 1592-31, so please correct to F-1592-31. (The rest of the Table D rows are fine.)

Response: This update has been made.

k. For the rows in Table A for registration nos. 175899 and 177511, I believe unit ID 1795-66 should be F-1795-66. Please correct.

Response: This update has been made.

l. Table A has a row for registration no. 177511 for 106.472 that lists units 1795-47, 1795-48, 127U, 1795-51, 1795-38, and 1795-39. However, there is no corresponding row in Table D. Please add that.

Response: A row for 177511 for units 1795-47, 1795-48, 127U, 1795-51, 1795-38, and 1795-39 has been added to Table D.

m. Table D has the row for unit Z-104 and 106.371, but the corresponding row is missing from Table B. Please add that.

Response: Z-104 and 106.371 have been added to Table B.

n. Table B has a row for units 1592-31 and L-1092-NH3 for 106.472/9/1/1998. First, 1592-31 should be F-1592-31. Second, 9/1/1998 is not a valid effective date for this PBR. The PBR was adopted to be effective on 03/14/1997 and amended to be effective on 09/04/2000, so the date would need to be one of those. The date needs to be updated on both Table B and D. Finally, Table D has an additional row for 1592-31 and 106.472, and that one uses 09/04/2000 as the effective date, so that just needs to be consolidated with the other Table D row for this PBR/unit. Once you determine the effective date needed, please list F-1592-31 on the OP-SUMR with the PBR included so I can add to the permit. (The other unit doesn't need to be on the OP-SUMR since it is not in the permit – it will just be on the OP-PBRSUP.)

Response: The Unit ID for F-1592-31 has been corrected for this PBR and the effective date has been updated to 09/04/2000 in Table A and Table D. Table D has also been updated to remove the additional instance of this F-1592-31 and 106.472 entry. Finally, we have updated the OP-SUMR to include this PBR.

o. For any changes to the OP-PBRSUP for the items above, please re-date all four tables and submit as a set, regardless of which tables are affected.

Response: All four tables have been redated and submitted as part of this response. In addition, a new unit ID (1592-SEALOIL) has been created and added to the OP-PBRSUP Tables B and D, authorized by 106.472.

4) OP-UA13:

a. The existing data for unit Z-1104 had 07/08/2005 entered for the Approved Monitoring ID No. question on Table 3a (Chapter 115, HRVOC Cooling Towers), which would suggest some alternative requirements are approved. However, all the approval letters currently in the permit do not appear to relate to the cooling tower. Please confirm if there is an alternative approved and if so, please provide the letter so I can include it.

Response: This approved monitoring method has been approved based on prior versions of the permit and the underlying statement of basis. The statement of basis for the significant revision that was issued on 09/25/2024 contained a reference to this alternative monitoring method. CPChem does not request any changes to this method that was previously approved.

b. If there is an approved alternative, and if the same will also be used for Z-1104TEMP, please add that approval date in the Approved Alternative Monitoring ID No. on the UA form for Z-1104TEMP.

Response: CPChem intends to use the same alternative monitoring plan for Z-1104TEMP.

5) OP-UA60: Please fill out Tables 5a-5c for MACT FFFF for PROPAO1795. This will give us data for the Statement of Basis. (I recognize that our form and flowchart are not fully up-to-date yet with rule amendments but this provides the starting point. I have added/removed citations as needed so your permit will be consistent with your OP-REQ3.)

Response: The MON (MACT FFFF) applicability for PROPAO1795 originally submitted in the application is being removed from the application at this time as the facility modifications are no longer being pursued at this time. An updated OP-2 Table 2 has been provided.

From: cromec@cpchem.com
Sent: Wednesday, June 25, 2025 5:20 PM
To: Carolyn Maus
Subject: Shared files from cromec@cpchem.com

Follow Up Flag: Follow up
Flag Status: Completed

One or more files have been shared with you from cromec@cpchem.com. Login to https://ftps.tceq.texas.gov to retrieve the files. Files will be available until 07/02/2025.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 6/25/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
1	MS-C	No	1592-18	OP-REQ3 OP-UA15	1504A	Add and update applicable requirements as detailed on the attached unit attribute forms and Form OP-REQ3.
2	MS-C	No	1592-18A	OP-REQ3 OP-UA15	1504A	Add and update applicable requirements as detailed on the attached unit attribute forms and Form OP-REQ3.
3	MS-A	Yes	Z-1104TEMP	OP-SUMR OP-REQ3 OP-UA13	106.371/09/04/2000	Add to permit a temporary cooling tower to operate while cooling tower Z-1104 undergoes construction (> 6 months). Add HRVOC regulatory applicability to the permit for this cooling tower.
4	MS-C	No	PROPAO1795	OP-SUMR ~~OP-REQ3~~ ~~OP-UA1~~	37063 **177511**	~~Add 40 CFR 63 Subpart FFFF (MON) applicability to units affected by new co-catalyst trial conducted 09/16/24 - 09/28/24, per citations on OP-REQ3 Tbl 1.~~ Add permit by rule authorization as noted in OP-SUMR and incorporate into OP-PBRSUP.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 6/25/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
5	MS-A	No	Z-1104	OP-SUMR	106.371/09/04/2000	Incorporate unregistered PBR 106.371 for authorization of in-kind replacement of existing cooling tower. The replacement cooling tower is authorized for the same circulation rate, but is equipped with improved drift eliminators. No unit attributes or applicable requirements are affected by these changes.
6	MS-A	No	F-1594	OP-SUMR	177331 177876 1504A	Incorporate PBR Registration Nos. 177331 & 177876, which each authorized additional fugitive components. (Equipment leak fugitives authorized under NSR Permit No. 1504A.) No unit attributes or applicable requirements are affected by these changes.
7	MS-A	No	SITEWIDE	OP-SUMR	37063	Incorporate the most recent version of NSR 37063. No unit attributes or applicable requirements are affected by these changes.
8	MS-C	No	SITEWIDE	OP-1	-	Update Technical Contact per OP-1.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 6/25/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
9	MS-C	No	1594WWENG	OP-REQ3	106.512/06/13/2001	Remove Unit ID from permit. Unit was removed from site in 2023.
10	MS-C	No	GRPDIST97	OP-REQ3	-	Remove SOP Index No. 60NNN-03 as an operating scenario for this source. The vents in this group no longer vent to a boiler/process heater.
11	MS-C	No	GRPDIST98	OP-REQ3	-	Remove SOP Index No. 60NNN-02 as an operating scenario for this source. The vents in this group no longer vent to a boiler/process heater.
12	MS-A	N/A	Multiple	N/A	Various	Update the NSR authorizations for several units as shown on OP- SUMR to incorporate updates to the OP-PBRSUP form.

Texas Commission on Environmental Quality
Federal Operating Permit Program
Individual Unit Summary for Revisions
Form OP-SUMR
Table 1

Date	Permit No.	Regulated Entity No.
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit/Process AI	Unit/Process Revision No.	Unit/Process ID No.	Unit/Process Applicable Form	Unit/Process Name/Description	Unit/Process CAM	Preconstruction Authorizations 30 TAC Chapter 116/ 30 TAC Chapter 106	Preconstruction Authorizations Title I
A	3	Z-1104TEMP	OP-SUMR OP-REQ3 OP-UA13	1798 Temporary Cooling Tower		106.371/09/04/2000	
	4	PROPAO1795	OP-SUMR OP-REQ3 OP-UA1	PAO 1795 Process Unit		37063 **106.262/11/01/2003 [177511]** **106.472/09/04/2000 [177511]** **106.476/09/04/2000 [177511]**	N178M2
	5	Z-1104	OP-SUMR	1798 Cooling Tower		37063 **106.371/09/04/2000**	N178M2
	6	F-1594	OP-UA12	Fugitives		1504A 106.261/11/01/2003 [156170, 160298, 160762, 164559, 170570, 170856, 172323, **172386,** 172772, 173153, 173206, 173299, 173448, 174183, **174540, 175899, 176836, 177331, 177876**] 106.262/11/01/2003 [156170, 160298, 160762, 164559, 170570, 170856, **172386,** 172772, 173153, 173206, 173299, 173448, 174183, **174540, 175899, 176836, 177331, 177876**]	GHGPSDTX9 PSDTX748M1 N148M2
	12	F-1592-31	OP-UA12	ETHYLENE UNIT (EU 1592) PROCESS FUGITIVES		1504A, 106.261/11/01/2003 [114897, 135701, 140351, 143865, 150060, 151216, 151993, 152085, 154060, 156170, 157396, 160298, 160762, 164559, 168528, 169772, 170856, 172149, 172309, 172323, 172585, 172943, **172825,** 173299, 174183, 174273, **174685, 175222, 175899, 176480, 177876**], 106.262/11/01/2003 [114897, 135701, 140351, 143865, 150060, 151216, 151993, 152085, 154060, 156170, 157396, 160298, 160762, 164559, 169772, 170856, 172149, 172309, 172585, **172825,** 172943, 173299, 174183, 174273, **174685, 175222, 175899, 176480, 177876**] **106.472/09/04/2000**	PSDTX748M1, N148M2

Texas Commission on Environmental Quality
Federal Operating Permit Program
Individual Unit Summary for Revisions
Form OP-SUMR
Table 1

Date	Permit No.	Regulated Entity No.
12/11/24 (Updated 6/25/25)	O2114	RN103919817

Unit/Process AI	Unit/Process Revision No.	Unit/Process ID No.	Unit/Process Applicable Form	Unit/Process Name/Description	Unit/Process CAM	Preconstruction Authorizations 30 TAC Chapter 116/ 30 TAC Chapter 106	Preconstruction Authorizations Title I
	12	F-160	OP-UA12	UTILITIES AREA PROCESS FUGITIVES		1504A, 106.261/11/01/2003 [132981, 139001, 153141, 160298, 162317, 163272, 170856, **174900, 175614, 175899, 176480**], 106.262/11/01/2003 [132981, 139001, 153141, 160298, 162317, 163272, 170856, **174900, 175614, 175899, 176480**]	PSDTX748M1, N148M2
	12	F-1798-30	OP-UA12	NAOU 1798 PROCESS FUGITIVES		37063, 106.261/11/01/2003 [156170, 160762, 164559, 172323, 174183, **175899**], 106.262/11/01/2003 [156170, 160762, 164559, 174183, **175899**]	N178M2
	12	F-130	OP-UA12	NAOU 1791/1797 PROCESS FUGITIVES		37063, 106.261/11/01/2003 [156170, 160762, 164559, 168528, 172323, 174183, **175899**], 106.262/11/01/2003 [156170, 160762, 164559, 174183, **175899**]	N178M2
	12	F-1891	OP-UA12	1-HEXENE UNIT FUGITIVES		37063, 106.261/11/01/2003 [156170, 160762, 164559, 168528, 170570, 172323, 174183, **175899, 176836**], 106.262/11/01/2003 [156170, 160762, 164559, 170570, 174183, 174389, **175899, 176836**]	N178M2
	12	F-1795-66	OP-UA12	PAOU 1795 PROCESS FUGITIVES		37063, 106.261/11/01/2003 [160298, 164559, 172323, 172825, **175899**], 106.262/11/01/2003 [160298, 164559, 172825, **175899, 177511**]	N178M2
	12	PK-905	OP-UA7	FLARE		1504A, 106.261/11/01/2003 [173206, **177331**], 106.262/11/01/2003 [173206, **177331**]	GHGPSDTX9, PSDTX748M1, N148M2

Texas Commission on Environmental Quality
Miscellaneous Unit Attributes
Form OP-UA1 (Page 1)
Federal Operating Permit Program

Date:	**12/11/24 (Updated 6/25/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**

Unit ID No.	SOP/GOP Index No.	Unit Type	Date Constructed/Placed in Service	Functionally Identical Replacement	Maximum Rated Capacity	Technical Information and Unit Description
~~PROPAO1975~~	~~63FFFF-MCPU~~	~~PRO~~				~~Add requirements for MON MCPU process unit applicability (applicable only during trial period from 9/16/2024 to 9/28/2024). The citations in bold are being added as a result of the latest MON rule updates (RTR and reconsideration).~~

Date	Permit No.	Regulated Entity No.
06/20/2025	**O2114**	**RN103919817**

For SOP applications, answer ALL questions unless otherwise directed.
♦ For GOP applications, answer ONLY these questions unless otherwise directed.

XII. NSR Authorizations (Attach additional sheets if necessary for sections XII.E-J.)

E. PSD Permits and PSD Major Pollutants

Permit No.	Issuance Date	Pollutant(s):	Permit No.	Issuance Date	Pollutant(s):
GHGPSDTX9	06/12/2020	GHG			
PSDTX748M1	09/28/2023	$PM_{2.5}$, NO_X, CO			

If PSD Permits are held for the application area, please complete the Major NSR Summary Table located under the Technical Forms heading at: www.tceq.texas.gov/permitting/air/titlev/site/site_experts.html.

F. Nonattainment (NA) Permits and NA Major Pollutants

Permit No.	Issuance Date	Pollutant(s):	Permit No.	Issuance Date	Pollutant(s):
N148M2	09/28/2023	VOC, NO_X			
N178M2	09/30/2024	VOC, NO_X			
N224	09/28/2023	VOC			

If NA Permits are held for the application area, please complete the Major NSR Summary Table located under the Technical Forms heading at: www.tceq.texas.gov/permitting/air/titlev/site/site_experts.html.

G. NSR Authorizations with FCAA § 112(g) Requirements

NSR Permit No.	Issuance Date	NSR Permit No.	Issuance Date	NSR Permit No	Issuance Date

Date	Permit No.	Regulated Entity No.
06/20/2025	**O2114**	**RN103919817**

For SOP applications, answer ALL questions unless otherwise directed.
♦ For GOP applications, answer ONLY these questions unless otherwise directed.

XII. NSR Authorizations (continued) - (Attach additional sheets if necessary for sections XII.E-J.)

♦ **H. Title 30 TAC Chapter 116 Permits, Special Permits, Standard Permits, Other Authorizations (Other Than Permits By Rule, PSD Permits, NA Permits) for the Application Area**

Authorization No.	Issuance Date	Authorization No.	Issuance Date	Authorization No.	Issuance Date
1504A	**09/28/2023**	135086	09/28/2023		
37063	**09/30/2024**	163274	12/09/2020		
83791	09/28/2023	169895	05/02/2023		
120563	06/20/2023	171826	03/15/2023		

♦ **I. Permits by Rule (30 TAC Chapter 106) for the Application Area**
A list of selected Permits by Rule (previously referred to as standard exemptions) that are required to be listed in the FOP application is available in the instructions.

PBR No.	Version No./Date	PBR No.	Version No./Date	PBR No.	Version No./Date
60	04/04/1975	106.472	09/04/2000		
106.122	09/04/2000	106.473	03/14/1997		
106.261	11/01/2003	106.473	09/04/2000		
106.262	11/01/2003	**106.476**	**09/04/2000**		
106.263	11/01/2001	106.478	09/04/2000		
106.355	11/01/2001	106.511	09/04/2000		
106.371	09/04/2000	~~106.512~~	~~06/13/2001~~		
106.454	11/01/2001				

♦ **J. Municipal Solid Waste and Industrial Hazardous Waste Permits with an Air Addendum**

Permit No.	Issuance Date	Permit No.	Issuance Date	Permit No.	Issuance Date

Applicable Requirements Summary
Form OP-REQ3 (Page 1)
Federal Operating Permit Program
Table 1a: Additions

Date:	**12/11/24 (Updated 6/25/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
1	1592-18	OP-REQ3 OP-UA15	R5720-3	Highly Reactive VOC	30 TAC Chapter 115, HRVOC Vent Gas	§115.722(c)(1) §115.722(c)(3) §115.725(n) [G]§115.725(l) §115.725(a)(3) [G]§115.726(a)(2) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)
1	1592-18	OP-REQ3 OP-UA15	R5121-07	VOC	30 TAC Chapter 115, Vent Gas	§115.127(a)(2)(B) [G]§115.122(a)(4) §115.127(a)(2)
2	1592-18A	OP-REQ3 OP-UA15	R5720-3	Highly Reactive VOC	30 TAC Chapter 115, HRVOC Vent Gas	§115.722(c)(1) §115.722(c)(3) §115.725(n) [G]§115.725(l) §115.725(a)(3) [G]§115.726(a)(2) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)

Applicable Requirements Summary
Form OP-REQ3 (Page 1)
Federal Operating Permit Program
Table 1a: Additions

Date:	**12/11/24 (Updated 6/25/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
2	1592-18A	OP-REQ3 OP-UA15	R5121-07	VOC	30 TAC Chapter 115, Vent Gas	§115.127(a)(2)(B) [G]§115.122(a)(4) §115.127(a)(2)
3	Z-1104TEMP	OP-SUMR OP-REQ3 OP-UA13	R5760	VOC	30 TAC Chapter 115, Subchapter H	§115.761(c)(1) §115.761(c)(3) §115.766(i)
~~4~~	~~PROPAO1795~~	~~OP-SUMR~~ ~~OP-REQ3~~ ~~OP-UA1~~	~~63FFFF MCPU~~	~~112(B) HAPS~~	~~40 CFR Part 63, Subpart FFFF~~	~~§63.2440(a)~~ ~~**§63.2450(a)(2)**~~ ~~§63.2450(l)~~ ~~**§63.2450(u)**~~ ~~**[G]§63.2450(v)**~~

Applicable Requirements Summary
Form OP-REQ3 (Page 1)
Federal Operating Permit Program
Table 1a: Additions

Date:	**12/11/24 (Updated 6/25/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
~~4 (cont'd)~~	~~PROPAO1795 (cont'd)~~		~~63FFFF-MCPU (cont'd)~~			

Applicable Requirements Summary
Form OP-REQ3 (Page 2)
Federal Operating Permit Program
Table 1b: Additions

Date:	**12/11/24 (Updated 6/25/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
1	1592-18	R5720-3	Highly Reactive VOC	§115.725(a)(5) §115.725(a)(3) §115.725(a)(3)(B) [T]§115.725(a) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)	[G]§115.726(h) [G]§115.726(i) §115.726(j)(1) §115.726(j)(2) §115.726(b)(1) §115.726(b)(2)-(3)	§115.725(n) §115.725(a)(5) [G]§115.726(a)(2) [G]§115.725(a)(4)
1	1592-18	OP-REQ3 OP-UA15	R5121-07	[G]§115.125 §115.126(2) §115.126(3)(C)	§115.126 §115.126(2) §115.126(3) §115.126(3)(C)	None
2	1592-18A	R5720-3	Highly Reactive VOC	§115.725(a)(5) §115.725(a)(3) §115.725(a)(3)(B) [T]§115.725(a) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)	[G]§115.726(h) [G]§115.726(i) §115.726(j)(1) §115.726(j)(2) §115.726(b)(1) §115.726(b)(2)-(3)	§115.725(n) §115.725(a)(5) [G]§115.726(a)(2) [G]§115.725(a)(4)

Applicable Requirements Summary
Form OP-REQ3 (Page 2)
Federal Operating Permit Program
Table 1b: Additions

Date:	**12/11/24 (Updated 6/25/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
2	1592-18A	OP-REQ3 OP-UA15	R5121-07	[G]§115.125 §115.126(2) §115.126(3)(C)	§115.126 §115.126(2) §115.126(3) §115.126(3)(C)	None
3	Z-1104TEMP	R5760	VOC	§115.764(c) §115.764(f)	§115.766(a)(1) §115.766(a)(2) §115.766(a)(3) §115.766(a)(5) §115.766(a)(6) §115.766(c) §115.766(g) §115.766(h) §115.766(i)(1)	§115.766(i)(2)
~~4~~	~~PROPAO1795~~	~~63FFFF-MCPU~~	~~112(B) HAPS~~	~~§63.2445(d)~~ **~~[G]§63.2450(v)~~**	~~§63.2525~~ ~~§63.2525(a)~~ ~~[G]§63.2525(b)~~ ~~§63.2525(f)~~ **~~[G]§63.2525(p)~~**	~~§63.2435(d)~~ ~~§63.2445(e)~~ ~~§63.2450(g)(5)~~ ~~§63.2450(m)~~ ~~§63.2450(m)(1)~~ ~~§63.2450(m)(2)~~ ~~§63.2515(a)~~ ~~§63.2515(b)(2)~~ ~~§63.2515(c)~~ **~~§63.2515(d)~~** ~~§63.2520(a)~~ ~~[G]§63.2520(b)~~ ~~[G]§63.2520(d)~~

Applicable Requirements Summary
Form OP-REQ3 (Page 2)
Federal Operating Permit Program
Table 1b: Additions

Date:	**12/11/24 (Updated 6/25/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
~~4 (cont'd)~~	~~PROPAO1795 (cont'd)~~	~~63FFFF MCPU (cont'd)~~				~~§63.2520(e)~~ ~~§63.2520(e)(1)~~ ~~§63.2520(e)(2)~~ ~~§63.2520(e)(3)~~ ~~§63.2520(e)(4)~~ ~~§63.2520(e)(5)~~ ~~§63.2520(e)(5)(i)~~ ~~[G]§63.2520(e)(5)(ii)~~ ~~[G]§63.2520(e)(5)(iii)~~ ~~§63.2520(e)(6)~~ ~~§63.2520(e)(7)~~ ~~§63.2520(e)(9)~~ ~~[G]§63.2520(e)(10)~~ ~~**[G]§63.2520(e)(14)**~~

Permit By Rule Supplemental Table (Page 1)
Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	O2114	RN103919817

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1592-31	114897	106.261, 106.262	02/13/2014
1592-90	132981	106.478	01/12/2016
CPC-FIXMNT	132981	106.263	01/12/2016
F-160	132981	106.261, 106.262	01/12/2016
1592-WWLOAD	134693	106.261, 106.262	09/03/2015
1592-WWFRAC	134693	106.261, 106.262	09/03/2015
F-1592-31	135701	106.261, 106.262	09/17/2018
NAO-KOLOAD	136457	106.261, 106.262	12/09/2015
F-160	139001	106.261, 106.262	03/23/2016
1592-WWLOAD	139001	106.261, 106.262	03/23/2016
F-1592-31	140351	106.261, 106.262	06/22/2016
TOTES	140351	106.261, 106.262	06/22/2016
F-1592-31	143865	106.261, 106.262	12/05/2016
LOAD-TOTE	143865	106.261, 106.262	12/05/2016
F-1592-31	150060	106.261, 106.262	03/07/2018
F-1592-31	151216	106.261, 106.262	04/25/2018
F-1592-31	151993	106.261, 106.262	06/27/2018
F-1592-31	152085	106.261, 106.262	06/22/2018
F-160	153141	106.261, 106.262	11/06/2018
F-1592-31	154060	106.261, 106.262	01/17/2019
Z-1101	154060	106.261, 106.262	01/17/2019
L1798-40	154060	106.261, 106.262	01/17/2019
F-1592-31	156170	106.261, 106.262	04/19/2019

Permit By Rule Supplemental Table (Page 1)
Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	O2114	RN103919817

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1594	156170	106.261, 106.262	04/19/2019
F-1798-30, F-1891, F-130	156170	106.261, 106.262	04/19/2019
F-1592-31	157396	106.261, 106.262	07/30/2019
TOTE BIN	157396	106.472	07/30/2019
F-1592-31, F-160	160298	106.261, 106.262	04/03/2020
F-1595-66, F1594	160298	106.261, 106.262	04/03/2020
MEOHTOTE	160298	106.473	04/03/2020
S-920CC, S-948CC	160298	106.472	04/03/2020
F-1592-31	160762	106.261, 106.262	04/17/2020
F-1594	160762	106.261, 106.262	04/17/2020
F-1798-30, F-130	160762	106.261, 106.262	04/17/2020
CB-710	160762	106.261, 106.262	04/17/2020
PK-906	160762	106.261, 106.262	04/17/2020
CB-710	162317	106.261, 106.262	08/21/2020
F-160	162317	106.261, 106.262	08/21/2020
F-160	163272	106.261, 106.262	11/19/2020
F-1594	164559	106.261, 106.262	04/09/2021
F-1592-31	164559	106.261, 106.262	04/09/2021
F-1798-30, F-130	164559	106.261, 106.262	04/09/2021
F-1795-66	164559	106.261, 106.262	04/09/2021
PK-830	166760	106.261, 106.262	11/18/2021
PK-906	166760	106.261, 106.262	11/18/2021
FB-702	167637	106.262	01/17/2023
F-1592-31	168528	106.261	05/12/2022

Permit By Rule Supplemental Table (Page 1)
Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	O2114	RN103919817

Unit ID No.	Registration No.	PBR No.	Registration Date
F-130	168528	106.261	05/12/2022
Z-101	168528	106.261	05/12/2022
MeOH Cart	168528	106.261	05/12/2022
F-1592-31	169772	106.261, 106.262	09/08/2022
CB-701	169772	106.261, 106.262	09/08/2022
MeOH Load	169772	106.261, 106.262	09/08/2022
F-1594	170570	106.261, 106.262	10/12/2022
F-1592-31, F-160	170856	106.261, 106.262	11/23/2022
F-1594	170856	106.261, 106.262	11/23/2022
F-1592-31	172149	106.261, 106.262	04/06/2023
1592ANAL	172149	106.261, 106.262	04/06/2023
1592-16	172149	106.261, 106.262	04/06/2023
F-1592-31	172309	106.261, 106.262	04/28/2023
F-1798-30, F-130	172323	106.261	05/05/2023
F-1594	172323	106.261	05/05/2023
F-1795-66	172323	106.261	05/05/2023
F-1592-31	172323	106.261	05/05/2023
F-1594	172386	106.261, 106.262	04/17/2023
F-1592-31	172585	106.261, 106.262	05/04/2023
F-1594	172772	106.261, 106.262	05/23/2023
F-1592-31	172825	106.261, 106.262	05/30/2023
F-1795-66	172825	106.261, 106.262	05/30/2023
F-1592-31	172943	106.261, 106.262	06/05/2023

Permit By Rule Supplemental Table (Page 1)
Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1594	173153	106.261, 106.262	06/23/2023
Tote-AF1, Tote-AF2	173153	106.472	06/23/2023
F-1594	173206	106.261, 106.262	07/27/2023
PK-905	173206	106.261, 106.262	07/27/2023
F-1592-31	173299	106.261, 106.262	07/13/2023
F-1594	173299	106.261, 106.262	07/13/2023
F-1594	173448	106.261, 106.262	08/04/2023
F-1798-30, F-1891, F-130	174183	106.261, 106.262	11/03/2023
F-1594	174183	106.261, 106.262	11/03/2023
F-1592-31	174183	106.261, 106.262	11/03/2023
FB-204	174273	106.261, 106.262	11/02/2023
F-1592-31	174273	106.261, 106.262	11/02/2023
F-1891	174389	106.262	10/24/2023
F-1594, 1594-SSAN, F-1595	**174540**	**106.261, 106.262**	**11/28/2023**
1595-Totes	**174540**	**106.472**	**11/28/2023**
F-1592-31	**174685**	**106.261,106.262**	**12/05/2023**
F-160	**174900**	**106.261,106.262**	**01/17/2024**
F-1592-31	**175222**	**106.261,106.262**	**02/14/2024**
F-160	**175614**	**106.261,106.262**	**03/25/2024**
F-1798-30, F-130, F-1891, F-160, F-1594, F-1592-31, F-1795-66	**175899**	**106.261,106.262**	**05/09/2024**
G-202A, G-202B	**174272**	**106.263**	**04/29/2024**

Permit By Rule Supplemental Table (Page 1)
Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	O2114	RN103919817

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1594, F-1891	176836	106.261,106.262	07/15/2024
F-160, F-1592-31	176480	106.261,106.262	08/29/2024
F-1594, PK-905	177331	106.261,106.262	09/18/2024
F-1795-66, 1795-46, 1795-44, 127WW, PROPAO1795	177511	106.262	10/01/2024
1795-47, 1795-48, 127U, 1795-51, 1795-38, 1795-39, PROPAO1795	177511	106.472	10/01/2024
PROPAO1795	177511	106.476	10/01/2024
F-1592-31	177876	106.261, 106.262	11/05/2024

Permit By Rule Supplemental Table (Page 2)
Table B: Claimed (not registered) Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	O2114	RN103919817

Unit ID No.	PBR No.	Version No./Date
LPAOWW	106.472	9/4/2000
LWAX	106.472	9/4/2000
UNLOAD	106.472, 106.473	9/4/2000
P-1576	106.511	9/4/2000
MSS-PBR	106.263	11/1/2001
PIPELINE	106.355	11/1/2001
EF-751	106.371	9/4/2000
AD-611CC	106.472	9/4/2000
1592DG, INSTRDG1, INSTRDG2	106.454	11/1/2001
F-1592-31, L-1092-NH3	**106.472**	**9/4/2000**
FB-702	106.472	9/4/2000
GASTK	106.473	9/4/2000
FB-202	106.473	3/14/1997
FB-707	106.478	9/4/2000
1000-GE-105, 1092-GE-940, EG-101, GA-934, GE-930	106.511	9/4/2000
FB-202	60	4/4/1975
Z-1104	106.371	9/4/2000
Z-1104TEMP	**106.371**	**9/4/2000**
TK-207	106.472	9/4/2000
TK-208	106.472	9/4/2000
TK-403	106.473	9/4/2000
Z-104	**106.371**	**9/4/2000**
1592-SEALOIL	**106.472**	**9/4/2000**

Permit By Rule Supplemental Table (Page 3)
Table C: Claimed (not registered) Permits By Rule (30 TAC Chapter 106) for Insignificant Sources for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	O2114	RN103919817

PBR No.	Version No./Date
106.122	09/04/2000

Permit By Rule Supplemental Table (Page 4)
Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	114897	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1592-90	106.478	132981	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

Permit By Rule Supplemental Table (Page 4)
Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
CPC-FIXMNT	106.263	132981	Keep records on-site of the type and reason for MSS activity, the processes and equipment involved; date, time, and duration of the activity or facility operation; and the air contaminants and amounts which are emitted as a result of the activity or facility operation per 106.263(g)(1)-(4). MSS emissions are recorded by the end of the month following the month during which the MSS activity occurred; these emissions are summed monthly, and the rolling 12-month emissions record is updated on a monthly basis to demonstrate compliance with the limits in 106.4 and 106.263(f). Calculated emissions are kept on-site.
F-160	106.261, 106.262	132981	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

Permit By Rule Supplemental Table (Page 4)
Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
1592-WWLOAD	106.261, 106.262	134693	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
1592-WWFRAC	106.261, 106.262	134693	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
F-1592-31	106.261, 106.262	135701	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

Permit By Rule Supplemental Table (Page 4)
Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
NAO-KOLOAD	106.261, 106.262	136457	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-160	106.261, 106.262	139001	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1592-WWLOAD	106.261, 106.262	139001	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

Permit By Rule Supplemental Table (Page 4)
Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	140351	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
TOTES	106.261, 106.262	140351	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

Permit By Rule Supplemental Table (Page 4)
Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	143865	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
LOAD-TOTE	106.261, 106.262	143865	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

Permit By Rule Supplemental Table (Page 4)
Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	150060	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	151216	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	151993	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	152085	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-160	106.261, 106.262	153141	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	154060	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
Z-1101	106.261, 106.262	154060	This flare is monitored as required by Special Conditions 9, 24, and 41-56 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
L1798-40	106.261, 106.262	154060	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.261, 106.262, and 106.4.

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	156170	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	156170	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1798-30, F-130	106.261, 106.262	156170	Emissions from fugitive component leaks are minimized through the the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition No. 15 (F-1798-30); and the 28RCT LDAR program as detailed in Special Condition No. 16 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	157396	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
TOTE BIN	106.472	157396	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1592-31, F-160	106.261, 106.262	160298	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1795-66, F-1594	106.261, 106.262	160298	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair (LDAR) program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 (F1795-66) and the 28LAER LDAR program as detailed in Special Condition No. 24 of NSR Permit No. 1504A (F-1594). Both permits are found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
MEOHTOTE	106.473	160298	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
S-920CC, S-948CC	106.472	160298	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1592-31	106.261, 106.262	160762	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	160762	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1798-30, F-130	106.261, 106.262	160762	Emissions from fugitive component leaks are minimized through the 28RCT Leak Detection and Repair (LDAR) program as detailed in Special Condition No. 15 (F-130), and the 28VHP LDAR programs as detailed in Special Condition No. 35-36 of NSR Permit No. 37063, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
CB-710	106.261, 106.262	160762	This flare is monitored as required by Special Conditions 14 and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
PK-906	106.261, 106.262	160762	The natural gas usage and waste gas flow is monitored and recorded to ensure compliance with emissions limitations.
CB-710	106.261, 106.262	162317	This flare is monitored as required by Special Conditions 14 and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-160	106.261, 106.262	162317	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160	106.261, 106.262	163272	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1798-30, F-130	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition Nos. 35-36 (F-1798-30) and through the 28RCT LDAR program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1795-66	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
PK-830	106.261, 106.262	166760	Emissions of NH3, NOx, and CO from this boiler are continuously monitored using a CEMS according to the requirements of Special Condition No. 19 of NSR Permit No. 1504A found in Attachment B of Title V Permit No. O2114. Fuel gas usage and composition are also monitored. The boiler is monitored according to the requirements of NSPS Db and MACT DDDDD.
PK-906	106.261, 106.262	166760	The natural gas usage and waste gas flow is monitored and recorded to ensure compliance with emissions limitations.
FB-702	106.262	167637	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261	168528	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-130	106.261	168528	Emissions from fugitive component leaks are minimized through the 28RCT Leak Detection and Repair (LDAR) program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
Z-101	106.261	168528	This flare is monitored as required by Special Condition Nos. 9, 24, and 41-56 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
MeOH Cart	106.261	168528	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1592-31	106.261, 106.262	169772	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
CB-701	106.261, 106.262	169772	This flare is monitored as required by Special Conditions 11, 14, and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
MeOH Load	106.261, 106.262	169772	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1594	106.261, 106.262	170570	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31, F-160	106.261, 106.262	170856	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	170856	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	172149	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1592ANAL	106.261, 106.262	172149	Hours of operation recorded to ensure compliance with emissions calculations.
1592-16	106.261, 106.262	172149	This flare is monitored as required by Special Conditions 11, 14, and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	172309	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1798-30, F-130	106.261	172323	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition Nos. 35-36 (F-1798-30), and through the 28RCT LDAR program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261	172323	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1795-66	106.261	172323	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261	172323	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	172386	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	172585	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	172772	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	172825	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1795-66	106.261, 106.262	172825	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	172943	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	173153	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
Tote-AF1, Tote-AF2	106.472	173153	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1594	106.261, 106.262	173206	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
PK-905	106.261, 106.262	173206	This flare is monitored as required by Special Condition No. 14 of NSR Permit No. 1504A and AMOC 32 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
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Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	173299	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	173299	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Date	Permit Number	Regulated Entity Number
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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	173448	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1798-30, F-1891, F-130	106.261, 106.262	174183	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition No. 35-36 (F-1798-30) and Special Condition No. 16 (F-1891), and through the 28RCT LDAR program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	174183	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	174183	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
G-202A, G-202B	106.263	174272	Keep records on-site of the type and reason for MSS activity, the processes and equipment involved; date, time, and duration of the activity or facility operation; and the air contaminants and amounts which are emitted as a result of the activity or facility operation per 106.263(g)(1)-(4). MSS emissions are recorded by the end of the month following the month during which the MSS activity occurred; these emissions are summed monthly, and the rolling 12-month emissions record is updated on a monthly basis to demonstrate compliance with the limits in 106.4 and 106.263(f). Calculated emissions are kept on-site.
FB-204	106.261, 106.262	174273	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Date	Permit Number	Regulated Entity Number
12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	174273	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1891	106.262	174389	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition No. 16 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594, F-1595	106.261, 106.262	174540	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1594-SSAN	106.261, 106.262	174540	Hours of operation recorded to ensure compliance with emissions calculations.
1595-Totes	106.472	174540	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Texas Commission on Environmental Quality

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12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261,106.262	174685	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160	106.261,106.262	174900	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261,106.262	175222	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160	106.261,106.262	175614	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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12/11/24 (Updated 6/25/25)	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1798-30, F-130, F-1891, F-160, F-1594, F-1592-31, F-1795-66	**106.261,106.262**	**175899**	**Emissions from fugitive component leaks are minimized through the 28RCT Leak Detection and Repair (LDAR) program as detailed in Special Condition No. 15 (F-130), the 28VHP and 28CNTQ LDAR program as detailed in Special Condition No. 16 (F-1891), the 28VHP and 28CNTQ LDAR programs as detailed in Special Condition Nos. 35-36 (F-1798-30), and the 28VHP LDAR program as detailed in Special Condition No. 35 (F-1795-66) of NSR Permit No. 37063; the 28VHP and 28CNTQ LDAR programs as detailed in Special Condition Nos. 22-23 (F-160 & F-1592-31), and the 28LAER LDAR program as detailed in Special Condition No. 24 (F-1594) of NSR Permit No. 1504A. Both permits can be found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permits specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.**

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594, F-1891	106.261,106.262	176836	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair (LDAR) program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A and the 28VHP LDAR program as detailed in Special Condition No. 16 of NSR Permit No. 37063, both found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permits specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160, F-1592-31	106.261,106.262	176480	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261,106.262	177331	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
PK-905	106.261,106.262	177331	This flare is monitored as required by Special Condition No. 14 of NSR Permit No. 1504A and AMOC 32 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1795-66	106.262	177511	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1795-46, 1795-44, 127WW	106.262	177511	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
1795-47, 1795-48, 127U, 1795-51, 1795-38, 1795-39	106.472	177511	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
PROPAO1795	**106.476**	**177511**	**A description of the tank or container with pressure sufficient at all times to prevent vapor or gas loss to the atmosphere or vapor control system is recorded.**
F-1592-31	**106.261, 106.262**	**177876**	**Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.**
LPAOWW	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
LWAX	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
UNLOAD	106.472, 106.473	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
P-1576	106.511	9/4/2000	Engine runtime hours are recorded and maintained to ensure compliance with the PBR and the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
MSS-PBR	106.263	11/1/2001	Keep records on-site of the type and reason for MSS activity, the processes and equipment involved; date, time, and duration of the activity or facility operation; and the air contaminants and amounts which are emitted as a result of the activity or facility operation per 106.263(g)(1)-(4). MSS emissions are recorded by the end of the month following the month during which the MSS activity occurred; these emissions are summed monthly, and the rolling 12-month emissions record is updated on a monthly basis to demonstrate compliance with the limits in 106.4 and 106.263(f). Calculated emissions are kept on-site.
PIPELINE	106.355	11/1/2001	Records of pipeline maintenance and purging activities are maintained to demonstrate compliance with 106.355(5)(A)-(D).

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
EF-751	106.371	9/4/2000	The cooling tower flow rate and the amount of total dissolved solids are recorded to ensure compliance with emissions calculations. The cooling tower water is monitored at least monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.
AD-611CC	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
1592DG, INSTRDG1, INSTRDG2	106.454	11/1/2001	Recurring visual inspection to ensure cover is closed when parts are not being handled in cleaner and that waste solvents are stored in covered containers. Records of total solvent makeup are maintained on a monthly basis.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	**106.472**	**9/4/2000**	**Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.**
L-1092-NH3	**106.472**	**9/4/2000**	**Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.**
FB-702	106.472	9/4/2000	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.2 equations for floating roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
GASTK	106.473	9/4/2000	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
FB-202	106.473	3/14/1997	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
FB-707	106.478	9/4/2000	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
1000-GE-105, 1092-GE-940, EG-101, GA-934, GE-930	106.511	9/4/2000	Engine runtime hours are recorded and maintained to ensure compliance with the PBR and the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
FB-202	60	4/4/1975	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
Z-104	106.371	9/4/2000	The cooling tower flow rate and the amount of total dissolved solids are recorded to ensure compliance with emissions calculations. The cooling tower water is monitored at least monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.
TK-207	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
TK-208	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
TK-403	106.473	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
PROPAO1795	106.262	177511	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
PROPAO1795	106.472	177511	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
1592-SEALOIL	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

From: Carolyn Maus
Sent: Monday, June 16, 2025 4:07 PM
To: Cromer, Colton
Cc: daniel.guthrie; CED DL Air Engineering
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Hi Colton,

Yes, June 25 will be fine for your response. I'll make a note to look out for it then.

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1400


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From: Cromer, Colton <cromec@cpchem.com>
Sent: Monday, June 16, 2025 3:44 PM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>; CED DL Air Engineering <CBAirGroup@cpchem.com>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Carolyn – greatly appreciate you sending us the WDP.

As we are working through the review and unresolved items list you sent, while also balancing other TCEQ deadlines for separate requests, could you please grant a one-week extension until **June 25, 2025** for a response?

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916

Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796
Baytown, TX 77521-9570

From: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Sent: Tuesday, June 10, 2025 12:09 PM
To: Cromer, Colton <cromec@cpchem.com>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>
Subject: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Good morning, Colton,

I have conducted a technical review of the minor revision application for Chevron Phillips Chemical Company, LP, Cedar Bayou Chemical Complex, Olefin Units. I have created an electronic copy of the Working Draft Permit (WDP). This permit is too large to attach to email so it is available on our FTP server – access information is provided below. This WDP contains the TCEQ determination of applicable requirements based on the information submitted in your application, and any updates provided. Here are the changes that have been made:

From: Daniel Guthrie <daniel.guthrie@tricordconsulting.com>
Sent: Tuesday, June 10, 2025 3:05 PM
To: Carolyn Maus
Cc: Cromer, Colton
Subject: Re: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Thanks, Carolyn. I was able to retrieve it and opened the file up with no issues.

Thanks,

~ Daniel Guthrie

TRICORD CONSULTING, LLC

402A West Palm Valley Blvd. PMB348

Round Rock, TX 78664

Office and Fax: (888) 900-0746 x 755

Cell: (512) 653-5091

E-mail: Daniel.Guthrie@TRICORDconsulting.com

Web: www.TRICORDconsulting.com

On Tue, Jun 10, 2025 at 2:00 PM Carolyn Maus <carolyn.maus@tceq.texas.gov> wrote:

> Alright, just shared the WDP with Daniel over the FTP server also. Please let me know if there are any problems with the file.
>
> Carolyn Maus, P.E.
>
> Air Permits Division
>
> Texas Commission on Environmental Quality
>
> P.O. Box 13087, MC 163

Austin, TX 78711

Phone: (512) 239-6204

Fax: (512) 239-1400


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---

From: Carolyn Maus
Sent: Tuesday, June 10, 2025 1:55 PM
To: Cromer, Colton <cromec@cpchem.com>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Sure, I can do that in a few minutes.

Carolyn Maus, P.E.

Air Permits Division

Texas Commission on Environmental Quality

P.O. Box 13087, MC 163

Austin, TX 78711

Phone: (512) 239-6204

Fax: (512) 239-1400

From: Cromer, Colton <cromec@cpchem.com>
Sent: Tuesday, June 10, 2025 1:41 PM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>
Subject: RE: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Carolyn – is it possible to also share the WDP FTP with Daniel Guthrie as well?

I can confirm receipt and was able to download on our end, but it will ease in file transfer, if you don't mind 😊

Colton Cromer

Environmental - Air Team Supervisor

Direct: 281.421.6741

Mobile: 832.784.5916

Personal: 713.822.7985

Email: cromec@cpchem.com

Cedar Bayou Plant

Chevron Phillips Chemical Company LP

9500 I-10 East, Exit 796

Baytown, TX 77521-9570

From: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Sent: Tuesday, June 10, 2025 12:09 PM
To: Cromer, Colton <cromec@cpchem.com>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>
Subject: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex [**EXTERNAL**]

Good morning, Colton,

I have conducted a technical review of the minor revision application for Chevron Phillips Chemical Company, LP, Cedar Bayou Chemical Complex, Olefin Units. I have created an electronic copy of the Working Draft Permit (WDP). This permit is too large to attach to email so it is available on our FTP server – access information is provided below. This WDP contains the TCEQ determination of applicable requirements based on the information submitted in your application, and any updates provided. Here are the changes that have been made:

From: Carolyn Maus
Sent: Tuesday, June 10, 2025 12:09 PM
To: Cromer, Colton
Cc: Daniel Guthrie
Subject: Working Draft Permit Review -- FOP O2114/Project 37501, Chevron Phillips Chemical Company, LP/Cedar Bayou Chemical Complex
Attachments: Unresolved Items - O2114.docx

Good morning, Colton,

I have conducted a technical review of the minor revision application for Chevron Phillips Chemical Company, LP, Cedar Bayou Chemical Complex, Olefin Units. I have created an electronic copy of the Working Draft Permit (WDP). This permit is too large to attach to email so it is available on our FTP server – access information is provided below. This WDP contains the TCEQ determination of applicable requirements based on the information submitted in your application, and any updates provided. Here are the changes that have been made:

1. Updated Special Terms and Conditions (MACT FFFF terms, plus date and project number reference in term 23 for OP-PBRSUP submittal).
2. Removed unit 1594WWENG.
3. Added unit Z-1104TEMP.
4. Removed the requested NSPS NNN operating scenarios for GRPDIST97 and GRPDIST98.
5. Added MACT FFFF requirements to PROPAO1795. Due to this, I also had to remove the permit shield.
6. Updated issuance date for NSR 37063/N178M2 to 09/30/2024.
7. Updated Major NSR Summary Table for NSR 37063/N178M2 – only change is date and the emissions for F-1891.
8. Updated areawide list of preconstruction authorizations to include 106.476/09/04/2000 and to remove 106.512/06/13/2001. Also removed 106.122 because this is considered to authorize insignificant sources so it not one of the PBRs required to be listed in the permit document. (You correctly have it on Table C of the OP-PBRSUP, so it still documented as being used.)
9. Updated preconstruction authorizations for Z-1104, F-1594, F-1592-31, and F-1891. (See attached questions.)
10. Updated preconstruction authorizations for multiple units to include new PBR registrations from OP-PBRSUP.

The WDP is available via TCEQ's secure FTP server, at https://ftps.tceq.texas.gov/index.php. I have shared it with Colton Cromer there. (Colton, you are welcome to pass the file along to anyone that needs it. Or, if you would like me to share directly with anyone else via the FTP, that person can create an account with their email and you can let me know.) The file will remain there for 7 days (available until 06/17/2025) so please save the file to another location for your work. If you need to submit comments or other mark-ups on the document itself, you

may send it back to me via that same FTP server, or you can submit a smaller portion of the document via email.

Please review the WDP and submit to me any comments you have on the working draft permit by **Wednesday, June 18, 2025**. Please submit a written response by this deadline, even if you are not making any comments on the content of the WDP. In addition, **please address the questions on the attached Unresolved Items list** with your WDP response. (If you need more time than this, that is fine and you can request an extension. We just have some internal goals of clearing out minor revisions this summer so we've been instructed to start with shorter deadlines.)

Please review the second portion of the "SOP Technical Review Fact Sheet" located at http://www.tceq.texas.gov/assets/public/permitting/air/Guidance/Title_V/sop_wdp_factsheet.pdf. This guidance contains important information regarding WDP review and comment procedures.

Note that a Certification by Responsible Official (Form OP-CRO1) for any uncertified application information, including application updates supporting the WDP comments, is required. After final review of the WDP, additional changes supported by application updates may require certification. I will advise you of these changes at a later date. Prior to transmittal of the Public Notice/Announcement Authorization Package, a duly signed OP-CRO1 form may be required which includes the specific dates or time-period of all submitted application documentation that was not previously certified. I will advise you of this requirement prior to sending the Public Notice/Announcement Authorization.

Application updates may now be submitted through Title V STEERS. Any application updates that are submitted by the RO/DAR through STEERS are certified and do not require the submittal of an original signature OP-CRO1. Application updates that are provided through email or physical mail require certification using an original signature OP-CRO1.

Please notify me when these updates have been submitted.

As required on Form OP-1, question IV.D, please remember the FOP application and all application updates must be submitted to EPA Region 6 at R6AirPermitsTX@epa.gov and to the TCEQ regional office having jurisdiction. This submittal information can be found on our website at Where to Submit FOP Applications and Permit-Related Documents.

Contact me if you have any questions regarding the guidelines, the project schedule, or any other details regarding your application or permit.

Thank you for your cooperation.

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1400

How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

Unresolved Items:

1) Form OP-REQ1: Please submit corrected pages to address the following items.
   a. In section XII.F (page 88), only VOC was listed as a pollutant for nonattainment permits N148M2 and N178M2. While the most recent projects only involved nonattainment review for VOC, based on what I see for prior NSR projects, there was also nonattainment review for NOx for these. Therefore, I believe both pollutants should remain listed.
   b. Also, for N178M2, since we are incorporating the 09/30/2024 action for its associated minor NSR permit 37063, that new date should be used for N178M2 also. (It is understood that this action did not trigger nonattainment review but because both permits are in the same document, we reference the same issuance in the FOP.)
   c. In section XII.H (page 89) the issuance date for NSR 1504A was pending. Since you opted to pull out that NSR action from this minor revision, please correct this page to have the prior date of 09/28/2023.
2) Form OP-SUMR:
   a. I have added the additional PBR registration numbers that were bolded on the OP-PBRSUP to the unit IDs that appear in the permit. However, please list those unit IDs on the OP-SUMR with the PBR registrations in the proper format (106.XXX/MM/DD/YYYY [registration number]) so I can ensure all info is correct. If a unit ID is not in the permit, then you do not need to list it – it will remain on the OP-PBRSUP only.
   b. For unit PROPAO1795, the PBR registration 177511 should be listed using this format on the OP-SUMR: 106.XXX/MM/DD/YYYY [177511]. That way I know which of the several PBRs under that registration apply to this specific unit.
3) Form OP-PBRSUP:
   a. Table A did not include PROPAO1795 in the rows that listed PBR registration 177511. Please update Table A to include PROPAO1795 wherever needed. Also, please add PROPAO1795 to Table D.
   b. I did not see 106.476 anywhere on the OP-PBRSUP. Please add to Table A or B with any affected unit IDs as appropriate, as well as Table D.
   c. The form included registration no. 172386 for unit F-1594 and registration no. 172825 for unit F-1592-31. These were not new since the last project, but I noticed that the effective permit did not show them for these units. I've updated the WDP, but if this was an error, please correct any affected tables of the OP-PBRSUP. On the other hand, if these authorizations are correct, please include them on the OP-SUMR for these unit IDs as confirmation.
   d. For the 09/30/2024 project for NSR 37063/N178M2, the file said that registrations 160762, 164559, 168528, 170570, and 172323 were consolidated for F-1891 only and so for that unit, the emissions are no longer authorized by those PBR registrations. Therefore, should F-1891 be removed from those rows on Tables A and D? I removed these registration numbers from F-1891 in the WDP, but I can put back if needed.
   e. Table A does not include a line for unit F-1592-31 for registration no. 132981 (106.261 and 106.262) but Table D does include this row. Correct whichever table is in error. If the registration should be added to the permit, please also put this unit on the OP-SUMR.
   f. For the row in Table A for unit 1592-90 for registration no. 132981, PBRs 106.261, 106.262, and 106.478 are listed. However, in the corresponding row in Table D, only 106.478 is listed. Correct whichever table is in error.

g. For the row in Table A for registration no. 156170 (units F-1798-30, F-1891, F-130), the table has F-1894 instead of F-1891. Please correct.

h. Table A has two rows for registration no. 174272 (106.263) for units G-202A and G-202B. One row has the registration date of 10/12/2023 and the other has the registration date of 04/29/2024. There only needs to be one row with the most recent registration date.

i. For the row in Table A for registration no. 175899, the first unit ID is listed as 1798-30 but I believe it should be F-1798-30. Please correct.

j. For the rows in Table A for registration nos. 174685, 175222, 175899, 176480, and 177876, I believe unit ID 1592-31 should be F-1592-31. Please correct. Also, in Table D, the row for registration no. 177876 lists 1592-31, so please correct to F-1592-31. (The rest of the Table D rows are fine.)

k. For the rows in Table A for registration nos. 175899 and 177511, I believe unit ID 1795-66 should be F-1795-66. Please correct.

l. Table A has a row for registration no. 177511 for 106.472 that lists units 1795-47, 1795-48, 127U, 1795-51, 1795-38, and 1795-39. However, there is no corresponding row in Table D. Please add that.

m. Table D has the row for unit Z-104 and 106.371, but the corresponding row is missing from Table B. Please add that.

n. Table B has a row for units 1592-31 and L-1092-NH3 for 106.472/9/1/1998. First, 1592-31 should be F-1592-31. Second, 9/1/1998 is not a valid effective date for this PBR. The PBR was adopted to be effective on 03/14/1997 and amended to be effective on 09/04/2000, so the date would need to be one of those. The date needs to be updated on both Table B and D. Finally, Table D has an additional row for 1592-31 and 106.472, and that one uses 09/04/2000 as the effective date, so that just needs to be consolidated with the other Table D row for this PBR/unit. Once you determine the effective date needed, please list F-1592-31 on the OP-SUMR with the PBR included so I can add to the permit. (The other unit doesn't need to be on the OP-SUMR since it is not in the permit – it will just be on the OP-PBRSUP.)

o. For any changes to the OP-PBRSUP for the items above, please re-date all four tables and submit as a set, regardless of which tables are affected.

4) OP-UA13:

a. The existing data for unit Z-1104 had 07/08/2005 entered for the Approved Monitoring ID No. question on Table 3a (Chapter 115, HRVOC Cooling Towers), which would suggest some alternative requirements are approved. However, all the approval letters currently in the permit do not appear to relate to the cooling tower. Please confirm if there is an alternative approved and if so, please provide the letter so I can include it.

b. If there is an approved alternative, and if the same will also be used for Z-1104TEMP, please add that approval date in the Approved Alternative Monitoring ID No. on the UA form for Z-1104TEMP.

5) OP-UA60: Please fill out Tables 5a-5c for MACT FFFF for PROPAO1795. This will give us data for the Statement of Basis. (I recognize that our form and flowchart are not fully up-to-date yet with rule amendments but this provides the starting point. I have added/removed citations as needed so your permit will be consistent with your OP-REQ3.)

From: Carolyn Maus
Sent: Wednesday, June 4, 2025 4:56 PM
To: Cromer, Colton
Cc: daniel.guthrie; Pledger, Matthew H; CED DL Air Engineering
Subject: Re: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Hi Colton,

Thanks for the form! I'll be able to send you the WDP this week once I remove the changes that are being excluded.

Sincerely,

Carolyn Maus, P.E.
Operating Permits
TCEQ Air Permits Division
(512) 239-6204

From: Cromer, Colton <cromec@cpchem.com>
Sent: Wednesday, June 4, 2025 8:48 AM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>; Pledger, Matthew H <PLEDGM@cpchem.com>; CED DL Air Engineering <CBAirGroup@cpchem.com>
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Carolyn – please see an updated OP-2 Table 2 to reflect the removal of incorporation of an amendment to NSR 1504A (TCEQ Project No. 378824) with Project No. 37501. As has been discussed, CPChem plans to incorporate the NSR amendment with a future project for SOP O-2114.

With incorporation of this change, do you have an expected timeframe for providing a WDP?

Colton Cromer
Environmental - Air Team Supervisor

From: Cromer, Colton <cromec@cpchem.com>
Sent: Wednesday, June 4, 2025 8:48 AM
To: Carolyn Maus
Cc: daniel.guthrie; Pledger, Matthew H; CED DL Air Engineering
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]
Attachments: 2025_06_2 OP-2 Table 2.pdf

Carolyn – please see an updated OP-2 Table 2 to reflect the removal of incorporation of an amendment to NSR 1504A (TCEQ Project No. 378824) with Project No. 37501. As has been discussed, CPChem plans to incorporate the NSR amendment with a future project for SOP O-2114.

With incorporation of this change, do you have an expected timeframe for providing a WDP?

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796
Baytown, TX 77521-9570

From: Cromer, Colton
Sent: Monday, April 28, 2025 2:02 PM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>; Pledger, Matthew H <PLEDGM@cpchem.com>; CED DL Air Engineering <CBAirGroup@cpchem.com>
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Carolyn – as mentioned, we have prepared an updated OP-2 Table 2 and OP-REQ3 Table 2 to reflect removal of two (2) operating scenarios from the permit. The changes/additions on both forms have been highlighted in yellow.

Is it also possible to update the Technical Contact from Matt Pledger to myself (recently joined CPChem), as I will be taking over this project on our side (snipped below).

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 6/2/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
1	MS-C	No	1592-18	OP-REQ3 OP-UA15	1504A	Add and update applicable requirements as detailed on the attached unit attribute forms and Form OP-REQ3.
2	MS-C	No	1592-18A	OP-REQ3 OP-UA15	1504A	Add and update applicable requirements as detailed on the attached unit attribute forms and Form OP-REQ3.
3	MS-A	Yes	Z-1104TEMP	OP-SUMR OP-REQ3 OP-UA13	106.371/09/04/2000	Add to permit a temporary cooling tower to operate while cooling tower Z-1104 undergoes construction (> 6 months). Add HRVOC regulatory applicability to the permit for this cooling tower.
4	MS-C	No	PROPAO1795	OP-SUMR OP-REQ3 OP-UA1	37063 **177511**	Add 40 CFR 63 Subpart FFFF (MON) applicability to units affected by new co-catalyst trial conducted 09/16/24 - 09/28/24, per citations on OP-REQ3 Tbl 1.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 6/2/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
5	MS-A	No	Z-1104	OP-SUMR	106.371/09/04/2000	Incorporate unregistered PBR 106.371 for authorization of in-kind replacement of existing cooling tower. The replacement cooling tower is authorized for the same circulation rate, but is equipped with improved drift eliminators. No unit attributes or applicable requirements are affected by these changes.
6	MS-A	No	F-1594	OP-SUMR	177331 177876 1504A	Incorporate PBR Registration Nos. 177331 & 177876, which each authorized additional fugitive components. (Equipment leak fugitives authorized under NSR Permit No. 1504A.) No unit attributes or applicable requirements are affected by these changes.
7	MS-A	No	SITEWIDE	OP-SUMR	37063	Incorporate the most recent version of NSR 37063. No unit attributes or applicable requirements are affected by these changes.
8	MS-C	No	SITEWIDE	OP-1	-	Update Technical Contact per OP-1.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 6/2/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
9	MS-C	No	1594WWENG	OP-REQ3	106.512/06/13/2001	Remove Unit ID from permit. Unit was removed from site in 2023.
10	MS-C	No	GRPDIST97	OP-REQ3	-	Remove SOP Index No. 60NNN-03 as an operating scenario for this source. The vents in this group no longer vent to a boiler/process heater.
11	MS-C	No	GRPDIST98	OP-REQ3	-	Remove SOP Index No. 60NNN-02 as an operating scenario for this source. The vents in this group no longer vent to a boiler/process heater.

From: Daniel Guthrie <daniel.guthrie@tricordconsulting.com>
Sent: Friday, May 30, 2025 4:35 PM
To: Carolyn Maus
Cc: Cromer, Colton; Pledger, Matthew H; CED DL Air Engineering; Hicks, Julie L
Subject: Re: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Hi Carolyn,

Thank you for your time this afternoon to discuss the current minor revision to permit O-2114, TCEQ Project No. 37501. As we discussed we have an update related to this project which will remove two revision requests.

In our original application we proposed to incorporate the NSR updates associated with the amendment to NSR Permit 1504A, TCEQ Project No. 378824. While we anticipated that this project would be issued by this point in time, the project has been delayed due to unforeseen circumstances. CPChem does not want to wait on the issuance of TCEQ Project No. 378824 for the FOP to be updated with the other requested changes. Therefore we plan to update revision numbers 1 & 2 to remove the incorporation of the pending NSR permit.

We appreciate your consideration of this request. We will provide an updated OP-2 for this application next week that reflects the removal of this item from the scope.

Thanks,

~ Daniel Guthrie

TRICORD CONSULTING, LLC

402A West Palm Valley Blvd. PMB348

Round Rock, TX 78664

Office and Fax: (888) 900-0746 x 755

Cell: (512) 653-5091

E-mail: Daniel.Guthrie@TRICORDconsulting.com

Web: www.TRICORDconsulting.com

On Tue, Apr 29, 2025 at 9:09 AM Carolyn Maus <carolyn.maus@tceq.texas.gov> wrote:

> Hi Colton,

Thanks for providing these updates. I will make sure to incorporate these into the working draft permit before I send it out for your review.

I can definitely update the technical contact. I will make a note for myself that you are the new contact and will have our database updated with your information below.

From: Cromer, Colton <cromec@cpchem.com>
Sent: Tuesday, May 20, 2025 10:28 AM
To: Carolyn Maus
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Carolyn – thanks for the update and reminder on the public announcement pre-requisite. Thank you!

Thanks,

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796
Baytown, TX 77521-9570

From: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Sent: Monday, May 19, 2025 8:14 PM
To: Cromer, Colton <cromec@cpchem.com>
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Hi Colton,

I'm almost ready to send you all the WDP for this project – I had to step aside for a bit to work on a response-to-comments for another permit that got public comments. I should be able to get the WDP out to you this week. Based on the revisions we made, I plan to give you all a 2-week period to review the WDP, which can be adjusted if needed. Then I will address any comments, and after it goes through our internal quality /management review, we send the project to public announcement and EPA review. Those periods occur concurrently, and due to the required timeline of 45 days for EPA review, it is typically about 60 days from sending out the public announcement package until project issuance.

Now, the one additional factor with this project is that part of the revisions involve incorporating a pending NSR action. This is the pending amendment you have for NSR 1504A, project number 378824. That project has to be issued before we can send this Title V revision to public announcement. Since the NSR permits are incorporated by reference, they must be available

during the public comment period in case someone wanted to look at those documents, and so they must be complete. So on my end, we do as much work as we can (WDP review, management review, etc.) up until the public announcement phase, and then we wait for the NSR project to be issued before proceeding. We would need to do any updates needed for the Major NSR Summary Table as a result of that NSR amendment also.

Hope that helps and let me know if you have more questions about the timeline.

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1300


How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey [links.govdelivery.com]

From: Cromer, Colton <cromec@cpchem.com>
Sent: Thursday, May 15, 2025 3:08 PM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Carolyn – checking back in on status of Project Number 37501 😊

We have a few other NSR permitting actions that will require a significant revision of SOP O-2114 that are currently in the queue that based on the timing of those NSR Actions will need to have this project finalized prior to starting the revision of the project. We are not asking to expand the current scope of your project, but we are trying to establish a timeframe for the future TV actions.

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796

Baytown, TX 77521-9570

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From: Cromer, Colton
Sent: Tuesday, April 29, 2025 9:15 AM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Thanks! Looking forward to working with you on this and I'm sure future projects 😊

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796
Baytown, TX 77521-9570

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From: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Sent: Tuesday, April 29, 2025 9:09 AM
To: Cromer, Colton <cromec@cpchem.com>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>; Pledger, Matthew H <PLEDGM@cpchem.com>; CED DL Air Engineering <CBAirGroup@cpchem.com>
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Hi Colton,

Thanks for providing these updates. I will make sure to incorporate these into the working draft permit before I send it out for your review.

I can definitely update the technical contact. I will make a note for myself that you are the new contact and will have our database updated with your information below.

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1400


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From: Cromer, Colton <cromec@cpchem.com>
Sent: Monday, April 28, 2025 2:02 PM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>; Pledger, Matthew H <PLEDGM@cpchem.com>; CED DL Air Engineering <CBAirGroup@cpchem.com>
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Carolyn – as mentioned, we have prepared an updated OP-2 Table 2 and OP-REQ3 Table 2 to reflect removal of two (2) operating scenarios from the permit. The changes/additions on both forms have been highlighted in yellow.

Is it also possible to update the Technical Contact from Matt Pledger to myself (recently joined CPChem), as I will be taking over this project on our side (snipped below).

From: Cromer, Colton <cromec@cpchem.com>
Sent: Monday, April 28, 2025 2:02 PM
To: Carolyn Maus
Cc: daniel.guthrie; Pledger, Matthew H; CED DL Air Engineering
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]
Attachments: 2025_04_28 O2114 Regen Minor Revision Updated Forms.pdf

Carolyn – as mentioned, we have prepared an updated OP-2 Table 2 and OP-REQ3 Table 2 to reflect removal of two (2) operating scenarios from the permit. The changes/additions on both forms have been highlighted in yellow.

Is it also possible to update the Technical Contact from Matt Pledger to myself (recently joined CPChem), as I will be taking over this project on our side (snipped below).

VII. Technical Contact Identifying Information *(Complete if different from RO.)*	
Technical Contact Name Prefix:	(☑ Mr. ☐ Mrs. ☐ Ms. ☐Dr.)
Technical Contact Full Name:	~~Matthew Pledger~~ Colton Cromer
Technical Contact Title:	~~Environmental Engineer~~ Environmental – Air Team Supervisor
Employer Name:	Chevron Phillips Chemical Company, LP
Mailing Address:	9500 Interstate 10 East
City:	Baytown
State:	TX
ZIP Code:	77521
Territory:	
Country:	USA
Foreign Postal Code:	
Internal Mail Code:	
Telephone No.:	~~281-421-6239~~ 281-421-6741
Fax No.:	
E-mail:	cbairgroup@cpchem.com

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796

Baytown, TX 77521-9570

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From: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Sent: Wednesday, April 16, 2025 9:58 PM
To: Cromer, Colton <cromec@cpchem.com>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>; CED DL Air Engineering <CBAirGroup@cpchem.com>
Subject: RE: Updates to Project Number 37501: SOP-O2114 [**EXTERNAL**]

Hi Colton,

Yes, if there are just a few additional items we can add them into this project. Your WDP is the next one on my list to complete but I can wait a bit so you can send me the extra information.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 4/28/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
1	MS-C	No	1592-18	OP-REQ3 OP-UA15	1504A	Add and update applicable requirements as detailed on the attached unit attribute forms and Form OP-REQ3. Incorporate pending NSR amendment (NSR Permit No. 1504A, TCEQ Project No. 378824).
2	MS-C	No	1592-18A	OP-REQ3 OP-UA15	1504A	Add and update applicable requirements as detailed on the attached unit attribute forms and Form OP-REQ3. Incorporate pending NSR amendment (NSR Permit No. 1504A, TCEQ Project No. 378824).
3	MS-A	Yes	Z-1104TEMP	OP-SUMR OP-REQ3 OP-UA13	106.371/09/04/2000	Add to permit a temporary cooling tower to operate while cooling tower Z-1104 undergoes construction (> 6 months). Add HRVOC regulatory applicability to the permit for this cooling tower.
4	MS-C	No	PROPAO1795	OP-SUMR OP-REQ3 OP-UA1	37063 **177511**	Add 40 CFR 63 Subpart FFFF (MON) applicability to units affected by new co-catalyst trial conducted 09/16/24 - 09/28/24, per citations on OP-REQ3 Tbl 1.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 4/28/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
5	MS-A	No	Z-1104	OP-SUMR	106.371/09/04/2000	Incorporate unregistered PBR 106.371 for authorization of in-kind replacement of existing cooling tower. The replacement cooling tower is authorized for the same circulation rate, but is equipped with improved drift eliminators. No unit attributes or applicable requirements are affected by these changes.
6	MS-A	No	F-1594	OP-SUMR	177331 177876 1504A	Incorporate PBR Registration Nos. 177331 & 177876, which each authorized additional fugitive components. (Equipment leak fugitives authorized under NSR Permit No. 1504A.) No unit attributes or applicable requirements are affected by these changes.
7	MS-A	No	SITEWIDE	OP-SUMR	37063	Incorporate the most recent version of NSR 37063. No unit attributes or applicable requirements are affected by these changes.
8	MS-C	No	SITEWIDE	OP-1	-	Update Technical Contact per OP-1.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/11/24 (Updated 4/28/25)**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
9	MS-C	No	1594WWENG	OP-REQ3	106.512/06/13/2001	Remove Unit ID from permit. Unit was removed from site in 2023.
10	MS-C	No	GRPDIST97	OP-REQ3	-	Remove SOP Index No. 60NNN-03 as an operating scenario for this source. The vents in this group no longer vent to a boiler/process heater.
11	MS-C	No	GRPDIST98	OP-REQ3	-	Remove SOP Index No. 60NNN-02 as an operating scenario for this source. The vents in this group no longer vent to a boiler/process heater.

Applicable Requirements Summary
Federal Operating Permit Program
Form OP-REQ3 (Page 3)
Table 2a: Deletions

Date:	**12/11/24 (Updated 4/28/25)**	Regulated Entity No.:	RN103919817	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
9	1594WWENG	OP-REQ3	R7ICI-01	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(B)

Applicable Requirements Summary
Federal Operating Permit Program
Form OP-REQ3 (Page 3)
Table 2a: Deletions

Date:	**12/11/24 (Updated 4/28/25)**	Regulated Entity No.:	RN103919817	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
9	1594WWENG	OP-REQ3	R7ICI-01	NOx	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) §117.310(a)(9)(E)(iv)(III) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) [G]§ 117.310(f) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(2)(C) § 117.340(p)(3)
9	1594WWENG	OP-REQ3	60IIII-1	CO	40 CFR Part 60, Subpart IIII	§ 60.4204(b) § 1039.102 § 60.4201(a) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4218

Applicable Requirements Summary
Federal Operating Permit Program
Form OP-REQ3 (Page 3)
Table 2a: Deletions

Date:	**12/11/24 (Updated 4/28/25)**	Regulated Entity No.:	RN103919817	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
9	1594WWENG	OP-REQ3	60IIII-1	NMHC and NOx	40 CFR Part 60, Subpart IIII	§ 60.4204(b) § 1039.102 § 60.4201(a) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4218
9	1594WWENG	OP-REQ3	60IIII-1	PM	40 CFR Part 60, Subpart IIII	§ 60.4204(b) § 1039.102 § 60.4201(a) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4218
9	1594WWENG	OP-REQ3	60IIII-1	PM (Opacity)	40 CFR Part 60, Subpart IIII	§ 60.4204(b) § 1039.105(b)(1) § 1039.105(b)(2) § 1039.105(b)(3) § 60.4201(a) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4218
9	1594WWENG	OP-REQ3	63ZZZZ-1	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)

Applicable Requirements Summary
Federal Operating Permit Program
Form OP-REQ3 (Page 3)
Table 2a: Deletions

Date:	**12/11/24 (Updated 4/28/25)**	Regulated Entity No.:	RN103919817	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
10	GRPDIST97	OP-REQ3	60NNN-03	VOC/TOC	40 CFR Part 60, Subpart NNN	§ 60.662(a) § 63.983(a)(3) § 63.983(a)(3)(ii)
11	GRPDIST98	OP-REQ3	60NNN-02	VOC/TOC	40 CFR Part 60, Subpart NNN	§ 60.662(a) § 63.983(a)(3) § 63.983(a)(3)(ii)

Applicable Requirements Summary
Form OP-REQ3 (Page 4)
Federal Operating Permit Program
Table 2b: Deletions

Date:	**12/11/24 (Updated 4/28/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
9	1594WWENG	OP-REQ3	R7ICI-01	CO	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(a)(2)(C) § 117.340(h) § 117.8000(b) § 117.8000(c) § 117.8000(c)(2) § 117.8000(c)(3) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8140(a) § 117.8140(a)(1) § 117.8140(a)(2) § 117.8140(a)(2)(A) [G]§117.8140(a)(2)(B) § 117.8140(b)	§ 117.345(a) § 117.345(f) [G]§ 117.345(f)(10) § 117.345(f)(3) § 117.345(f)(3)(A) § 117.345(f)(3)(A)(ii) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7)

Applicable Requirements Summary
Form OP-REQ3 (Page 4)
Federal Operating Permit Program
Table 2b: Deletions

Date:	**12/11/24 (Updated 4/28/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
9	1594WWENG	OP-REQ3	R7ICI-01	NOx	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(a)(2)(C) § 117.340(h) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.340(p)(2)(A) § 117.340(p)(2)(B) § 117.340(p)(2)(C) § 117.8000(b) § 117.8000(c) § 117.8000(c)(1) § 117.8000(c)(3) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8140(a) § 117.8140(a)(1) § 117.8140(a)(2) § 117.8140(a)(2)(A) [G]§117.8140(a)(2)(B) § 117.8140(b)	§ 117.345(a) § 117.345(f) [G]§ 117.345(f)(10) § 117.345(f)(3) § 117.345(f)(3)(A) § 117.345(f)(3)(A)(ii) § 117.345(f)(3)(B) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) § 117.340(p)(2)(D) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7)
9	1594WWENG	OP-REQ3	60IIII-1	CO	None	None	None

Applicable Requirements Summary
Form OP-REQ3 (Page 4)
Federal Operating Permit Program
Table 2b: Deletions

Date:	**12/11/24 (Updated 4/28/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
9	1594WWENG	OP-REQ3	60IIII-1	NMHC and NOx	None	None	None
9	1594WWENG	OP-REQ3	60IIII-1	PM	None	None	None
9	1594WWENG	OP-REQ3	60IIII-1	PM (Opacity)	None	None	None
9	1594WWENG	OP-REQ3	63ZZZZ-1	112(B) HAPS	None	None	None

Applicable Requirements Summary
Form OP-REQ3 (Page 4)
Federal Operating Permit Program
Table 2b: Deletions

Date:	**12/11/24 (Updated 4/28/25)**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
10	GRPDIST97	OP-REQ3	60NNN-03	VOC/TOC	§ 60.663(c) § 60.663(c)(2) § 60.664(a) § 60.664(b) § 60.664(b)(1) § 60.664(b)(2) § 60.664(b)(3) [G]§ 60.664(b)(4) § 63.983(a)(3) § 63.983(a)(3)(ii) ** See Alternative Requirement	§ 60.663(c)(2) § 60.665(b) § 60.665(b)(2) § 60.665(b)(2)(i) § 60.665(b)(2)(ii) § 60.665(c) § 60.665(c)(3) § 60.665(c)(4) § 60.705(s) § 63.983(a)(3)(ii) [G]§ 63.998(d)(1)	§ 60.665(a) § 60.665(b) § 60.665(b)(2) § 60.665(b)(2)(i) § 60.665(b)(2)(ii) § 60.665(c) § 60.665(c)(3) § 60.665(c)(4) § 60.665(k) § 60.665(l) § 60.665(l)(1) § 60.665(l)(2)
11	GRPDIST98	OP-REQ3	60NNN-02	VOC/TOC	§ 60.663(c) § 60.663(c)(2) § 60.664(a) § 60.664(b) § 60.664(b)(1) § 60.664(b)(2) § 60.664(b)(3) [G]§ 60.664(b)(4) § 63.983(a)(3) § 63.983(a)(3)(ii) ** See Alternative Requirement	§ 60.663(c)(2) § 60.665(b) § 60.665(b)(2) § 60.665(b)(2)(i) § 60.665(b)(2)(ii) § 60.665(c) § 60.665(c)(3) § 60.665(c)(4) § 60.705(s) § 63.983(a)(3)(ii) [G]§ 63.998(d)(1)	§ 60.665(a) § 60.665(b) § 60.665(b)(2) § 60.665(b)(2)(i) § 60.665(b)(2)(ii) § 60.665(c) § 60.665(c)(3) § 60.665(c)(4) § 60.665(k) § 60.665(l) § 60.665(l)(1) § 60.665(l)(2)

From: Carolyn Maus
Sent: Wednesday, April 16, 2025 9:58 PM
To: Cromer, Colton
Cc: daniel.guthrie; CED DL Air Engineering
Subject: RE: Updates to Project Number 37501: SOP-O2114

Hi Colton,

Yes, if there are just a few additional items we can add them into this project. Your WDP is the next one on my list to complete but I can wait a bit so you can send me the extra information. If you can send me the updates by 4/28/2025 that would work out fine.

Please let me know if you have more specific questions.

Sincerely,

Carolyn Maus, P.E.
Air Permits Division
Texas Commission on Environmental Quality
P.O. Box 13087, MC 163
Austin, TX 78711
Phone: (512) 239-6204
Fax: (512) 239-1400


How are we doing? Fill out our online customer satisfaction survey at www.tceq.texas.gov/customersurvey

---

From: Cromer, Colton <cromec@cpchem.com>
Sent: Monday, April 14, 2025 8:20 AM
To: Carolyn Maus <carolyn.maus@tceq.texas.gov>
Cc: daniel.guthrie <daniel.guthrie@tricordconsulting.com>; CED DL Air Engineering <CBAirGroup@cpchem.com>
Subject: Updates to Project Number 37501: SOP-O2114

Carolyn – we have a few minor additional items that would expand the scope of the application submitted on 12/17/ 2024, that we would appreciate consideration in this permit activity since we haven't received a WDP yet. After talking with our consultant (Daniel Guthrie) he mentioned that we should reach out to you to see if we could propose some additions into the scope of your project vs. opening another permitting action.

The minor updates to application may take us until end of next week to process and submit but wanted to check the availability timeline on the associated project (**Proj. No. 37501**) to see if you would consider any additions at this time. Feel free to give me a call if you have any questions and happy to provide information as it relates to the items – my contact information is below.

Thanks,

Colton Cromer
Environmental - Air Team Supervisor

Direct: 281.421.6741
Mobile: 832.784.5916
Personal: 713.822.7985
Email: cromec@cpchem.com

Cedar Bayou Plant
Chevron Phillips Chemical Company LP
9500 I-10 East, Exit 796
Baytown, TX 77521-9570

Carolyn Thomas

From: Daniel Guthrie <daniel.guthrie@tricordconsulting.com>
Sent: Wednesday, December 18, 2024 10:24 AM
To: Carolyn Thomas
Cc: CED DL Air Engineering; Laura Blohm Carr
Subject: O-2114 Project No. 37501 - OP CRO1
Attachments: 2024_12_18 OP-CRO1.pdf

Hello Carolyn,

The attached OP-CRO1 was submitted as an update to an existing project via STEERS this morning and was assigned Reference No. 730679. Please let us know if you need anything else to continue the review of this project.

Thanks,

~ Daniel Guthrie

TRICORD CONSULTING, LLC

402A West Palm Valley Blvd. PMB348

Round Rock, TX 78664

Office and Fax: (888) 900-0746 x 755

Cell: (512) 653-5091

E-mail: Daniel.Guthrie@TRICORDconsulting.com

Web: www.TRICORDconsulting.com

Form OP-CRO1
Certification by Responsible Official
Federal Operating Permit Program
Texas Commission on Environmental Quality

All initial issuance, revision, renewal, and reopening permit application submittals requiring certification must be addressed using this form. Updates to site operating permit (SOP) and temporary operating permit (TOP) applications, other than public notice verification materials, must be certified prior to authorization of public notice or start of public announcement. Updates to general operating permit (GOP) applications must be certified prior to receiving an authorization to operate under a GOP.

I. Identifying Information	
RN: RN103919817	
CN: CN600303614	
Account No.: HG-0310-V	
Permit No.: O2114	
Project No.: 37501	
Area Name: Olefins Unit	
Company Name: Chevron Phillips Chemical Company LP	
II. Certification Type *(Please mark appropriate box)*	
☐ Responsible Official Representative	☒ Duly Authorized Representative
III. Submittal Type *(Please mark appropriate box) (Only one response can be accepted per form)*	
☐ SOP/TOP Initial Permit Application	☒ Permit Revision, Renewal, or Reopening
☐ GOP Initial Permit Application	☐ Update to Permit Application
☐ Other:	

Form OP-CRO1
Certification by Responsible Official
Federal Operating Permit Program
Texas Commission on Environmental Quality

All initial issuance, revision, and renewal permit application submittals requiring certification must be accompanied by this form. Updates to acid rain or CSAPR (other than public notice verification materials) must be certified prior to authorization of public notice for the draft permit.

IV. Certification of Truth
This certification does not extend to information which is designated by TCEQ as information for reference only.
I, Dirk Perrin certify that I am the DAR *(Certifier Name printed or typed)* *(RO or DAR)* and that, based on information and belief formed after reasonable inquiry, the statements and information dated during the time period or on the specific date(s) below, are true, accurate, and complete: *Note: Enter Either a Time Period or Specific Date(s) for each certification. This section must be completed. The certification is not valid without documentation date(s).*
Time Period: From_____ to _____ *(Start Date)* *(End Date)*
Specific Dates: December 16, 2024 ____ _____ *(Date 1)* *(Date 2)* *(Date 3)* *(Date 4)*
_____ _____ *(Date 5)* *(Date 6)*
Signature: Signed via STEERS Signature Date: _____ Title: Plant Manager

Texas Commission on Environmental Quality

Title V Existing

2114

Site Information (Regulated Entity)

What is the name of the permit area to be authorized?	OLEFIN UNITS
Does the site have a physical address?	Yes
Physical Address	
Number and Street	9500 INTERSTATE 10 E
City	BAYTOWN
State	TX
ZIP	77521
County	HARRIS
Latitude (N) (##.######)	29.813055
Longitude (W) (-###.######)	94.938611
Primary SIC Code	2869
Secondary SIC Code	
Primary NAICS Code	32511
Secondary NAICS Code	
Regulated Entity Site Information	
What is the Regulated Entity's Number (RN)?	RN103919817
What is the name of the Regulated Entity (RE)?	CHEVRON PHILLIPS CHEMICAL CEDAR BAYOU PLANT
Does the RE site have a physical address?	Yes
Physical Address	
Number and Street	9500 INTERSTATE 10 E
City	BAYTOWN
State	TX
ZIP	77521
County	HARRIS
Latitude (N) (##.######)	29.8175
Longitude (W) (-###.######)	-94.933888
Facility NAICS Code	
What is the primary business of this entity?	INDUSTRIAL CHEMICAL MANUFACTURING PLANT

Customer (Applicant) Information

How is this applicant associated with this site?	Owner Operator
What is the applicant's Customer Number (CN)?	CN600303614
Type of Customer	Corporation
Full legal name of the applicant:	
Legal Name	Chevron Phillips Chemical Company LP
Texas SOS Filing Number	13487011
Federal Tax ID	731587712
State Franchise Tax ID	17315877120

State Sales Tax ID	
Local Tax ID	
DUNS Number	152975665
Number of Employees	501+
Independently Owned and Operated?	No

Responsible Official Contact

Person TCEQ should contact for questions about this application:	
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	BRYAN
Middle	
Last	CANFIELD
Suffix	
Credentials	
Title	SENIOR VICE PRESIDENT MANUFACTURING
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	10001 SIX PINES DR
Routing (such as Mail Code, Dept., or Attn:)	
City	THE WOODLANDS
State	TX
ZIP	77380
Phone (###-###-####)	8328134445
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	canficb@cpchem.com

Duly Authorized Representative Contact

Person TCEQ should contact for questions about this application	
Select existing DAR contact or enter a new contact.	DIRK PERRIN(CHEVRON PHILLIP...)
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	DIRK
Middle	
Last	PERRIN
Suffix	
Credentials	
Title	PLANT MANAGER
Enter new address or copy one from list	
Mailing Address	

Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	9500 INTERSTATE 10 E
Routing (such as Mail Code, Dept., or Attn:)	
City	BAYTOWN
State	TX
Zip	77521
Phone (###-###-####)	2814216578
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	2814216169
E-mail	perrid@cpchem.com

Technical Contact

Person TCEQ should contact for questions about this application:	
Select existing TC contact or enter a new contact.	MATTHEW PLEDGER(CHEVRON PHILLIP...)
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	MATTHEW
Middle	
Last	PLEDGER
Suffix	
Credentials	
Title	ENVIRONMENTAL ENGINEER
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	9500 INTERSTATE 10 E
Routing (such as Mail Code, Dept., or Attn:)	
City	BAYTOWN
State	TX
ZIP	77521
Phone (###-###-####)	2814216239
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	cbairgroup@cpchem.com

Title V General Information - Existing

1) Permit Type:	SOP
2) Permit Latitude Coordinate:	29 Deg 48 Min 47 Sec
3) Permit Longitude Coordinate:	94 Deg 56 Min 19 Sec
4) Is this submittal a new application or an update to an existing application?	Update
4.1. Select the permit/project number for which this update should be applied.	2114-37501

5) Who will electronically sign this Title V application?	Duly Authorized Representative
6) Does this application include Acid Rain Program or Cross-State Air Pollution Rule requirements?	No

Title V Attachments Existing

Attach OP-1 (Site Information Summary)

Attach OP-2 (Application for Permit Revision/Renewal)

Attach OP-ACPS (Application Compliance Plan and Schedule)

Attach OP-REQ1 (Application Area-Wide Applicability Determinations and General Information)

Attach OP-REQ2 (Negative Applicable Requirement Determinations)

Attach OP-REQ3 (Applicable Requirements Summary)

Attach OP-PBRSUP (Permits by Rule Supplemental Table)

Attach OP-SUMR (Individual Unit Summary for Revisions)

Attach OP-MON (Monitoring Requirements)

Attach OP-UA (Unit Attribute) Forms

If applicable, attach OP-AR1 (Acid Rain Permit Application)

Attach OP-CRO2 (Change of Responsible Official Information)

Attach OP-DEL (Delegation of Responsible Official)

Attach Void Request Form

Attach any other necessary information needed to complete the permit.

[File Properties]

File Name	2024_12_18 OP-CRO1.pdf
Hash	B0C65A4AF8BD9B86D3D0EFFEE26F8AFC1576354B82A5D3E770D3B80BCE40C066
MIME-Type	application/pdf

An additional space to attach any other necessary information needed to complete the permit.

Certification

I certify that I am the Duly Authorized Representative for this application and that, based on information and belief formed after reasonable inquiry, the statements and information on this form are true, accurate, and complete.

1. I am Dirk Perrin, the owner of the STEERS account ER075610.

2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcemer of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Title V Existing 2114.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEC

OWNER OPERATOR Signature: Dirk Perrin OWNER OPERATOR

Account Number:	ER075610
Signature IP Address:	64.152.249.22
Signature Date:	2024-12-18
Signature Hash:	516117CC4D3579EC1484239212BCE712AF07B67925E6B50DE1A5AF6F70A4E75F
Form Hash Code at time of Signature:	934707175D0F0916295F63D822CEE44AE4C3811464A695BA6A30D3DFF1A55978

Submission

Reference Number:	The application reference number is 730679
Submitted by:	The application was submitted by ER075610/Dirk Perrin
Submitted Timestamp:	The application was submitted on 2024-12-18 at 06:31:25 CST
Submitted From:	The application was submitted from IP address 64.152.249.22
Confirmation Number:	The confirmation number is 601126
Steers Version:	The STEERS version is 6.84
Permit Number:	The permit number is 2114

Additional Information

Application Creator: This account was created by Daniel Guthrie

Carolyn Thomas

From: Carolyn Thomas
Sent: Tuesday, December 17, 2024 1:10 PM
To: canficb@cpchem.com; cbairgroup@cpchem.com
Subject: FW: STEERS Title V Application Submittal (New Application) [2114/37501- Streamlined Rev- Chevron Phillips

We have received your application for the facility mentioned above, and it is currently under review. The following item(s) are required before we can declare the application administratively complete:

The application has not been certified at this time. Dirk Perrin does not appear to be the Responsible Official.

Please send the form CRO1 to my attention with the signature date of 12/1/2024.

Thank you,
Carolyn Thomas
Air Permits Initial Review Team
Air Permits Division, MC 161
Office of Air Texas Commission on Environmental Quality
Phone: (512) 239-5127
Fax: (512) 233-0973
E-mail: carolyn.thomas@tceq.texas.gov
Web site: www.tceq.texas.gov
Please consider whether it is necessary to print this e-mail.
How are we doing? www.tceq.texas.gov/customersurvey

-----Original Message-----
From: TVAPPS <tvapps@tceq.texas.gov>
Sent: Tuesday, December 17, 2024 7:03 AM
To: Carolyn Thomas <Carolyn.Thomas@tceq.texas.gov>
Subject: FW: STEERS Title V Application Submittal (New Application) [2114/37501- Streamlined Rev- Chevron Phillips

Carolyn,
Please process.
-Nancy

-----Original Message-----
From: steers@tceq.texas.gov <steers@tceq.texas.gov>
Sent: Tuesday, December 17, 2024 6:15 AM
To: RFCAIR12 <RFCAIR12@tceq.texas.gov>; air_permits@pcs.hctx.net; TVAPPS <tvapps@tceq.texas.gov>
Subject: STEERS Title V Application Submittal (New Application)

The TV-E application has been successfully submitted by BRYAN CANFIELD. The submittal was received at 12/17/2024 06:14 AM.

The Reference number for this submittal is 727990

The confirmation number for this submittal is 599975.

The Area ID for this submittal is 2114.
The Project ID for this submittal is 37501.
The hash code for this submittal is 5102A868C4695EFEFC7E3A43FE078DB976622676A2DC8F4D593B764638023D16.

You may access the original application submittal and the notice of final action documents from the COR Viewer which is available at https://ida.tceq.texas.gov/steersstaff/index.cfm?fuseaction=openadmin.submitlog&newsearch=yes.

If you have any questions, please contact the STEERS Help Line at 512-239-6925 or by e-mail at steers@tceq.texas.gov.

Texas Commission on Environmental Quality

Title V Existing

2114

Site Information (Regulated Entity)

What is the name of the permit area to be authorized?	OLEFIN UNITS
Does the site have a physical address?	Yes
Physical Address	
Number and Street	9500 INTERSTATE 10 E
City	BAYTOWN
State	TX
ZIP	77521
County	HARRIS
Latitude (N) (##.######)	29.813055
Longitude (W) (-###.######)	94.938611
Primary SIC Code	2869
Secondary SIC Code	
Primary NAICS Code	32511
Secondary NAICS Code	
Regulated Entity Site Information	
What is the Regulated Entity's Number (RN)?	RN103919817
What is the name of the Regulated Entity (RE)?	CHEVRON PHILLIPS CHEMICAL CEDAR BAYOU PLANT
Does the RE site have a physical address?	Yes
Physical Address	
Number and Street	9500 INTERSTATE 10 E
City	BAYTOWN
State	TX
ZIP	77521
County	HARRIS
Latitude (N) (##.######)	29.8175
Longitude (W) (-###.######)	-94.933888
Facility NAICS Code	
What is the primary business of this entity?	INDUSTRIAL CHEMICAL MANUFACTURING PLANT

Customer (Applicant) Information

How is this applicant associated with this site?	Owner Operator
What is the applicant's Customer Number (CN)?	CN600303614
Type of Customer	Corporation
Full legal name of the applicant:	
Legal Name	Chevron Phillips Chemical Company LP
Texas SOS Filing Number	13487011
Federal Tax ID	731587712
State Franchise Tax ID	17315877120

State Sales Tax ID	
Local Tax ID	
DUNS Number	152975665
Number of Employees	501+
Independently Owned and Operated?	No

Responsible Official Contact

Person TCEQ should contact for questions about this application:	
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	BRYAN
Middle	
Last	CANFIELD
Suffix	
Credentials	
Title	SENIOR VICE PRESIDENT MANUFACTURING
Enter new address or copy one from list:	
Mailing Address	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	10001 SIX PINES DR
Routing (such as Mail Code, Dept., or Attn:)	
City	THE WOODLANDS
State	TX
ZIP	77380
Phone (###-###-####)	8328134445
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	canficb@cpchem.com

Technical Contact

Person TCEQ should contact for questions about this application:	
Select existing TC contact or enter a new contact.	New Contact
Organization Name	CHEVRON PHILLIPS CHEMICAL COMPANY LP
Prefix	MR
First	Matthew
Middle	
Last	Pledger
Suffix	
Credentials	
Title	Environmental Engineer
Enter new address or copy one from list:	Site Physical Address
Mailing Address	

Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	9500 INTERSTATE 10 E
Routing (such as Mail Code, Dept., or Attn:)	
City	BAYTOWN
State	TX
ZIP	77521
Phone (###-###-####)	2814216239
Extension	
Alternate Phone (###-###-####)	
Fax (###-###-####)	
E-mail	cbairgroup@cpchem.com

Title V General Information - Existing

1) Permit Type:	SOP
2) Permit Latitude Coordinate:	29 Deg 48 Min 47 Sec
3) Permit Longitude Coordinate:	94 Deg 56 Min 19 Sec
4) Is this submittal a new application or an update to an existing application?	New Application
4.1. What type of permitting action are you applying for?	Streamlined Revision
4.1.1. Are there any permits that should be voided upon issuance of this permit application through permit conversion?	No
4.1.2. Are there any permits that should be voided upon issuance of this permit application through permit consolidation?	No
5) Does this application include Acid Rain Program or Cross-State Air Pollution Rule requirements?	No

Title V Attachments Existing

Attach OP-1 (Site Information Summary)

Attach OP-2 (Application for Permit Revision/Renewal)

Attach OP-REQ1 (Application Area-Wide Applicability Determinations and General Information)

Attach OP-REQ2 (Negative Applicable Requirement Determinations)

Attach OP-REQ3 (Applicable Requirements Summary)

Attach OP-PBRSUP (Permits by Rule Supplemental Table)

Attach OP-SUMR (Individual Unit Summary for Revisions)

Attach OP-MON (Monitoring Requirements)

Attach OP-UA (Unit Attribute) Forms

If applicable, attach OP-AR1 (Acid Rain Permit Application)

Attach OP-CRO2 (Change of Responsible Official Information)

Attach OP-DEL (Delegation of Responsible Official)

Attach any other necessary information needed to complete the permit.

[File Properties]

File Name	2024_12_16 O2114 Regen Minor Revision Application.pdf
Hash	60A1E789ECB6EA6CA71739C5FB36BCAF2EB4A467EACC8D44F322F57530CAF9FD
MIME-Type	application/pdf

An additional space to attach any other necessary information needed to complete the permit.

Expedite Title V

1) Per Texas Health and Safety Code, Section 382.05155, does the applicant want to expedite the processing of this application?	No

Certification

I certify that I am the Responsible Official for this application and that, based on information and belief formed after reasonable inquiry, the statements and information on this form are true, accurate, and complete.

1. I am Dirk Perrin, the owner of the STEERS account ER075610.
2. I have the authority to sign this data on behalf of the applicant named above.
3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcemer of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
8. I am knowingly and intentionally signing Title V Existing 2114.
9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEC

OWNER OPERATOR Signature: Dirk Perrin OWNER OPERATOR

Account Number:	ER075610
Signature IP Address:	64.152.249.22
Signature Date:	2024-12-17
Signature Hash:	516117CC4D3579EC1484239212BCE712AF07B67925E6B50DE1A5AF6F70A4E75F
Form Hash Code at time of Signature:	5102A868C4695EFEFC7E3A43FE078DB976622676A2DC8F4D593B764638023D16

Submission

Reference Number:	The application reference number is 727990
Submitted by:	The application was submitted by ER075610/Dirk Perrin
Submitted Timestamp:	The application was submitted on 2024-12-17 at 06:14:30 CST
Submitted From:	The application was submitted from IP address 64.152.249.22
Confirmation Number:	The confirmation number is 599975
Steers Version:	The STEERS version is 6.84
Permit Number:	The permit number is 2114

Additional Information

Application Creator: This account was created by Sam Sparks

9548 East Fwy, Baytown, TX 77029

December 16, 2024

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

Subject: **Minor Revision Package for Site Operating Permit (SOP) O2114**
Chevron Phillips Chemical Company, LP
Cedar Bayou Facility, Baytown, Harris County
RN103919817; CN600303614; TCEQ Acct. No. HG-0310-V

To Whom It May Concern:

The Chevron Phillips Chemical Company, LP (CPChem) is submitting this minor revision application for Site Operating Permit (SOP) No. O2114 for the Cedar Bayou Facility located in Baytown, Harris County, Texas.

In accordance with TCEQ's Site Operating Permit Revision Application Guidance Document, the application includes the following:

- Form OP-1: Site Information Summary;
- Form OP-REQ1: Area-Wide Applicability Determinations (pgs. 68-71, 88-89 only); and
- Form OP-2 Table 1: Application for Permit Revision/Renewal.

All sources remain unchanged from the most current version of the permit, except for the revisions outlined in the following forms:

- Form OP-2 Table 2: Application for Permit Revision/Renewal;
- Form OP-SUMR: Individual Unit Summary for Revisions;
- Form OP-REQ3: Applicable Requirements Summary;
- Form OP-UA1: Miscellaneous Unit Attributes;
- Form OP-UA13: Industrial Process Cooling Tower Attributes;
- Form OP-UA15: Emission Point/Stationary Vent/Distillation Operation Vent/ Process Vent Attributes; and
- Form OP-PBRSUP: Permit by Rule Supplemental Table.

Please note that only a partial OP-REQ1 is provided with this application. Pages 68-71 have been included to represent changes in applicability relating to Section VII. AA., "Subpart FFFF - National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Production and Processes (MON)." Pages 88-89 are included to update the Federal New Source Review (NSR), minor NSR, and Permit by Rule (PBR) authorizations at the site. There are no changes to the remaining sections of the OP-REQ1.

If you have any questions or require additional information regarding this submittal, please contact Mr. Matthew Pledger via email at cbairgroup@cpchem.com or via telephone at (281) 421-6239.

Sincerely,

Julie Hicks
Environmental Superintendent
Chevron Phillips Chemical Company, LP

Enclosures

cc: TCEQ Region 12 – via Electronic Submittal (via STEERS)
Latrice Babin, Ph.D., Executive Director, Harris County Pollution Control Services Department, 101 South Richey, Suite H Pasadena, Texas 77506

EPA Region 6 – via Electronic Submittal to R6AirPermitsTX@epa.gov

Federal Operating Permit Application
Site Information Summary
Form OP-1 (Page 1)
Texas Commission on Environmental Quality

Please print or type all information. Direct any questions regarding this application form to the Air Permits Division at (512) 239-1250. Address written inquiries to the Texas Commission on Environmental Quality, Office of Air, Air Permits Division (MC 163), P.O. Box 13087, Austin, Texas 78711-3087.

I. Company Identifying Information	
A. Company Name:	**Chevron Phillips Chemical Company, LP**
B. Customer Reference Number (CN):	**CN600303614**
C. Submittal Date *(mm/dd/yyyy)* :	**12/16/24**
II. Site Information	
A. Site Name:	**Cedar Bayou Chemical Complex**
B. Regulated Entity Reference Number (RN):	**RN103919817**
C. Indicate affected state(s) required to review permit application: *(Check the appropriate box[es]).*	
☐ AR ☐ CO ☐ KS ☐ LA ☐ NM ☐ OK ☑ N/A	
D. Indicate all pollutants for which the site is a major source based on the site's potential to emit: *(Check the appropriate box[es].)*	
☑ VOC ☑ NO_X ☑ SO_2 ☐ PM_{10} ☑ CO ☐ Pb ☑ HAPS	
Other: **PM**	
E. Is the source a non-major source subject to the Federal Operating Permit Program?	☐ YES ☑ NO
F. Is the site within a local program area jurisdiction?	☑ YES ☐ NO
G. Will emissions averaging be used to comply with any Subpart of 40 CFR Part 63?	☐ YES ☑ NO
H. Indicate the 40 CFR Part 63 Subpart(s) that will use emissions averaging:	
III. Permit Type	
A. Type of Permit Requested: *(Select only one response)*	
☑ Site Operating Permit (SOP) ☐ Temporary Operating Permit (TOP) ☐ General Operating Permit (GOP)	

Federal Operating Permit Application
Site Information Summary
Form OP-1 (Page 2)
Texas Commission on Environmental Quality

IV. Initial Application Information *(Complete for Initial Issuance Applications only.)*			
A. Is this submittal an abbreviated or a full application?	☐ Abbreviated	☐ Full	
B. If this is a full application, is the submittal a follow-up to an abbreviated application?	☐ YES	☐ NO	
C. If this is an abbreviated application, is this an early submittal for a combined SOP and Acid Rain permit?	☐ YES	☐ NO	
D. Has a copy of this application been submitted (or is being submitted) to EPA? (Refer to the form instructions for additional information.)	☐ YES	☐ NO	
E. Has the required Public Involvement Plan been included with this application?	☐ YES	☐ NO	
V. Confidential Information			
A. Is confidential information submitted in conjunction with this application?	☐ YES	☑ NO	
VI. Responsible Official (RO)			
RO Name Prefix:	(☑ Mr. ☐ Mrs. ☐Ms. ☐Dr.)		
RO Full Name:	**Bryan Canfield**		
RO Title:	**Senior Vice President Manufacturing**		
Employer Name:	**Chevron Phillips Chemical Company, LP**		
Mailing Address:	**10001 Six Pines Dr**		
City:	**The Woodlands**		
State:	**TX**		
ZIP Code:	**77380**		
Territory:			
Country:	**USA**		
Foreign Postal Code:			
Internal Mail Code:			
Telephone No.:			
Fax No.:			
E-mail:	canficb@cpchem.com		

Federal Operating Permit Application
Site Information Summary
Form OP-1 (Page 3)
Texas Commission on Environmental Quality

VII. Technical Contact Identifying Information *(Complete if different from RO.)*	
Technical Contact Name Prefix:	(☑ Mr. ☐ Mrs. ☐ Ms. ☐Dr.)
Technical Contact Full Name:	**Matthew Pledger**
Technical Contact Title:	**Environmental Engineer**
Employer Name:	**Chevron Phillips Chemical Company, LP**
Mailing Address:	**9500 Interstate 10 East**
City:	**Baytown**
State:	**TX**
ZIP Code:	**77521**
Territory:	
Country:	**USA**
Foreign Postal Code:	
Internal Mail Code:	
Telephone No.:	**281-421-6239**
Fax No.:	
E-mail:	cbairgroup@cpchem.com

VIII. Reference Only Requirements *(For reference only.)*		
A. State Senator:	**Brandon Creighton (District 4)**	
B. State Representative:	**Briscoe Cain (District 128)**	
C. Has the applicant paid emissions fees for the most recent agency fiscal year (Sept. 1 - August 31)?		☑ YES ☐ NO ☐ N/A
D. Is the site subject to bilingual notice requirements pursuant to 30 TAC § 122.322?		☑ YES ☐ NO
E. Indicate the alternate language(s) in which public notice is required:		**Spanish**

Federal Operating Permit Application
Site Information Summary
Form OP-1 (Page 4)
Texas Commission on Environmental Quality

IX. Off-Site Permit Request *(Optional for applicants requesting to hold the FOP and records at an off-site location.)*	
A. Office/Facility Name:	
B. Physical Address:	
City:	
State:	
ZIP Code:	
Territory:	
Country:	
Foreign Postal Code:	
C. Physical Location:	
D. Contact Name Prefix: (☐ Mr. ☐ Mrs. ☐ Ms. ☐Dr.)	
Contact Full Name:	
E. Telephone No.:	
X. Application Area Information	
A. Area Name:	**Olefins Unit**
B. Physical Address:	**9500 Interstate 10 East**
City:	**Baytown**
State:	**TX**
ZIP Code:	**77521**
C. Physical Location:	
D. Nearest City:	
E. State:	
F. ZIP Code:	

Federal Operating Permit Application
Site Information Summary
Form OP-1 (Page 5)
Texas Commission on Environmental Quality

X. Application Area Information *(continued)*	
G. Latitude (nearest second):	**29° 48' 47"**
H. Longitude (nearest second):	**-94° 56' 19"**
I. Are there any emission units that were not in compliance with the applicable requirements identified in the application at the time of application submittal?	☐ YES ☑ NO
J. Indicate the estimated number of emission units in the application area:	**See Permit**
K. Are there any emission units in the application area subject to the Acid Rain Program?	☐ YES ☑ NO
XI. Public Notice *(Complete this section for SOP Applications and Acid Rain Permit Applications only.)*	
A. Name of public place to view application and draft permit:	
B. Physical Address:	
City:	
ZIP Code:	
C. Contact Person (Someone who will answer questions from the public, during the public notice period):	
Contact Name Prefix:	(☐ Mr. ☐ Mrs. ☐ Ms. ☐ Dr.)
Contact Person Full Name:	
Contact Mailing Address:	
City:	
State:	
ZIP Code:	
Territory:	
Country:	
Foreign Postal Code:	
Internal Mail Code:	
Telephone No.:	

Federal Operating Permit Application
Site Information Summary
Form OP-1 (Page 6)
Texas Commission on Environmental Quality

XII. Delinquent Fees and Penalties
Notice: This form will not be processed until all delinquent fees and/or penalties owed to the TCEQ or the Office of Attorney General on behalf of the TCEQ are paid in accordance with the "Delinquent Fee and Penalty Protocol."
Complete Sections XIII and XIV for Acid Rain Permit and CSAPR permit applications only. Please include a copy of the Certificate of Representation submitted to EPA.
XIII. Designated Representative (DR) Identifying Information
DR Name Prefix: (☐ Mr. ☐ Mrs. ☐Ms. ☐Dr.)
DR Full Name:
DR Title:
Employer Name:
Mailing Address:
City:
State:
ZIP Code:
Territory:
Country:
Foreign Postal Code:
Internal Mail Code:
Telephone No.:
Fax No.:
Email:

Federal Operating Permit Application
Site Information Summary
Form OP-1 (Page 7)
Texas Commission on Environmental Quality

Complete Sections XIII and XIV for Acid Rain Permit and CSAPR permit applications only. Please include a copy of the Certificate of Representation submitted to EPA.
XIV. Alternate Designated Representative (ADR) Identifying Information
ADR Name Prefix:: (☐ Mr. ☐ Mrs. ☐ Ms. ☐Dr.)
ADR Full Name:
ADR Title:
Employer Name:
Mailing Address:
City:
State:
ZIP Code:
Territory:
Country:
Foreign Postal Code:
Internal Mail Code:
Telephone No.:
Fax No.:
Email:

Date	Permit No.	Regulated Entity No.
12/16/2024	O2114	RN103919817

For SOP applications, answer ALL questions unless otherwise directed.
♦ For GOP applications, answer ONLY these questions unless otherwise directed.

VIII.	**Title 40 Code of Federal Regulations Part 63 - National Emission Standards for Hazardous Air Pollutants for Source Categories (continued)**	
[redacted]		
[redacted]		[redacted]
[redacted]		
[redacted]		[redacted]
AA.	**Subpart FFFF - National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Production and Processes (MON)**	
1.	The application area is located at a site that includes process units that manufacture as a primary product one or more of the chemicals listed in 40 CFR § 63.2435(b)(1).	☒ Yes ☐ No
2.	The application area is located at a plant site that is a major source as defined in FCAA § 112(a).	☒ Yes ☐ No
3.	The application area is located at a site that includes miscellaneous chemical manufacturing process units (MCPU) that process, use or generate one or more of the organic hazardous air pollutants listed in § 112(b) of the Clean Air Act or hydrogen halide and halogen HAP. *If the response to Question VIII.AA.1, AA.2 or AA.3 is "No," go to Section VIII.BB.*	☒ Yes ☐ No
4.	The application area includes process vents, storage vessels, transfer racks, or waste streams associated with a miscellaneous chemical manufacturing process subject to 40 CFR 63, Subpart FFFF. *If the response to Question VIII.AA.4 is "No," go to Section VIII.BB.*	☒ Yes ☐ No

Date	Permit No.	Regulated Entity No.
12/16/2024	O2114	RN103919817

For SOP applications, answer ALL questions unless otherwise directed.
♦ For GOP applications, answer ONLY these questions unless otherwise directed.

VIII. Title 40 Code of Federal Regulations Part 63 - National Emission Standards for Hazardous Air Pollutants for Source Categories (continued)		
	AA. Subpart FFFF - National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Production and Processes (MON) (continued)	
5.	The application area includes process wastewater streams. *If the response to Question VIII.AA.5 is "No," go to Question VIII.AA.24.*	☒ Yes ☐ No
6.	The application area includes process wastewater streams, located at existing sources, that are designated as Group 1 or are determined to be Group 1 for compounds listed in Table 8 of 40 CFR Part 63, Subpart G or Table 8 and Table 9 of 40 CFR Part 63, Subpart FFFF, as appropriate.	☐ Yes ☒ No
7.	The application area includes process wastewater streams, located at existing sources, that are Group 2 for compounds listed in Table 8 or Table 8 and Table 9 of 40 CFR Part 63, Subpart FFFF, as appropriate.	☐ Yes ☒ No
8.	The application area includes process wastewater streams, located at new sources, that are designated as Group 1 or are determined to be Group 1 for compounds listed in Table 8 of 40 CFR Part 63, Subpart G or Table 8 and Table 9 of 40 CFR Part 63, Subpart FFFF, as appropriate.	☐ Yes ☒ No
9.	The application area includes process wastewater streams, located at new sources, that are Group 2 for compounds listed in Table 8 or Table 8 and Table 9 of 40 CFR Part 63, Subpart FFFF, as appropriate.	☒ Yes ☐ No
10.	All Group 1 wastewater streams at the site are demonstrated to have a total source mass flow rate of less than 1 MG/yr. *If the response to Question VIII.AA.10 is "Yes," go to Question VIII.AA.24.*	☐ Yes ☒ No
11.	The site has untreated and/or partially treated Group 1 wastewater streams demonstrated to have a total source mass flow rate of less than 1 MG/yr. *If the response to Question VIII.AA.11 is "No," go to Question VIII.AA.13.*	☐ Yes ☒ No
12.	The application area includes waste management units that receive or manage a partially treated Group 1 wastewater stream prior to or during treatment.	☐ Yes ☐ No
13.	Group 1 wastewater streams or residual removed from Group 1 wastewater streams are transferred to an on-site treatment operation that is not owned or operated by the owner or operator of the source generating the waste stream or residual.	☐ Yes ☒ No

Date	Permit No.	Regulated Entity No.
12/16/2024	O2114	RN103919817

For SOP applications, answer ALL questions unless otherwise directed.
♦ For GOP applications, answer ONLY these questions unless otherwise directed.

VIII.	**Title 40 Code of Federal Regulations Part 63 - National Emission Standards for Hazardous Air Pollutants for Source Categories (continued)**	
	AA. Subpart FFFF - National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Production and Processes (MON) (continued)	
14.	Group 1 wastewater streams or residual removed from Group 1 wastewater streams are transferred to an off-site treatment operation. *If the responses to Questions VIII.AA.13 and VIII.AA.14 are both "No," go to Question VIII.AA.20.*	☐ Yes ☒ No
15.	Group 1 wastewater streams are transferred to an offsite treatment facility meeting the requirements of 40 CFR § 63.138(h). *If the response to Question VIII.AA.15 is "No," go to Question VIII.AA.17.*	☐ Yes ☐ No
16.	The option to document in the notification of compliance status report that the wastewater will be treated in a facility meeting the requirements of 40 CFR § 63.138(h) is elected.	☐ Yes ☐ No
17.	Group 1 wastewater streams or residuals with a total annual average concentration of compounds in Table 8 of 40 CFR Part 63, Subpart FFFF less than 50 ppmw are transferred offsite. *If the response to Question VIII.AA.17 is "No," go to Question VIII.AA.19.*	☐ Yes ☐ No
18.	The transferor is demonstrating that less than 5 percent of the HAP in Table 9 of 40 CFR Part 63, Subpart FFFF is emitted from waste management units up to the activated sludge unit.	☐ Yes ☐ No
19.	The application area includes waste management units that receive or manage a Group 1 wastewater stream, or a residual removed from a Group 1 wastewater stream prior to shipment or transport.	☐ Yes ☐ No
20.	The application area includes containers that receive, manage, or treat a Group 1 wastewater stream or a residual removed from a Group 1 wastewater stream.	☐ Yes ☒ No
21.	The application area includes individual drain systems that receive or manage a Group 1 wastewater stream, or a residual removed from a Group 1 wastewater stream. *If the response to Question VIII.AA.21 is "No," go to Question VIII.AA.24.*	☐ Yes ☒ No
22.	The application area includes individual drain systems that are complying with 40 CFR § 63.136 through the use of cover and, if vented, closed vent systems and control devices.	☐ Yes ☐ No

Date	Permit No.	Regulated Entity No.
12/16/2024	O2114	RN103919817

For SOP applications, answer ALL questions unless otherwise directed.
♦ For GOP applications, answer ONLY these questions unless otherwise directed.

VIII. Title 40 Code of Federal Regulations Part 63 - National Emission Standards for Hazardous Air Pollutants for Source Categories (continued)		
	AA. Subpart FFFF - National Emission Standards for Hazardous Air Pollutants for Miscellaneous Organic Chemical Production and Processes (MON) (continued)	
23.	The application area includes individual drain systems that are complying with 40 CFR § 63.136 through the use of water seals or tightly fitting caps or plugs.	☐ Yes ☐ No
24.	The application area includes drains, drain hubs, manholes, lift stations, trenches, or pipes that are part of a chemical manufacturing process unit that meets the criteria of 40 CFR § 63.100(b). *If the response to Question VIII.AA.24 is "No," go to Section VIII.BB.*	☐ Yes ☒ No
25.	The application area includes drains, drain hubs, manholes, lift stations, trenches or pipes (that are part of a miscellaneous chemical manufacturing process unit) that meet the criteria listed in 40 CFR § 63.149(d). *If the response to Question VIII.AA.25 is "No," go to Section VIII.BB.*	☐ Yes ☐ No
26.	The application area includes drains, drain hubs, manholes, lift stations, trenches or pipes that convey water with a total annual average concentration of compounds in table 8 of 40 CFR Part 63, Subpart FFFF is greater than or equal to 10,000 ppmw at any flow rate, and the total annual load of compounds in table 8 of 40 CFR Part 63, Subpart FFFF is greater than or equal to 200 lb/yr.	☐ Yes ☐ No
27.	The application area includes drains, drain hubs, manholes, lift stations, trenches, or pipes that convey water with a total annual average concentration of compounds in table 8 of 40 CFR Part 63, Subpart FFFF is greater than or equal to 1,000 ppmw, and the annual average flow rate is greater than or equal to 1 liter per minute.	☐ Yes ☐ No
28.	The application area includes drains, drain hubs, manholes, lift stations, trenches or pipes that are part of a chemical manufacturing process unit that is subject to the new source requirements of 40 CFR § 63.2445(a); and the equipment conveys water with a combined total annual average concentration of compounds in tables 8 and 9 of 40 CFR Part 63, Subpart FFFF is greater than or equal to 30,000 ppmw, and the combined total annual load of compounds in tables 8 and 9 to this subpart is greater than or equal to 1 tpy.	☐ Yes ☐ No

Date	Permit No.	Regulated Entity No.
12/16/2024	**O2114**	**RN103919817**

For SOP applications, answer ALL questions unless otherwise directed.
♦ For GOP applications, answer ONLY these questions unless otherwise directed.

XII. NSR Authorizations (Attach additional sheets if necessary for sections XII.E-J.)

E. PSD Permits and PSD Major Pollutants

Permit No.	Issuance Date	Pollutant(s):	Permit No.	Issuance Date	Pollutant(s):
GHGPSDTX9	06/12/2020	GHG			
PSDTX748M1	09/28/2023	$PM_{2.5}$, NO_X, CO			

If PSD Permits are held for the application area, please complete the Major NSR Summary Table located under the Technical Forms heading at: www.tceq.texas.gov/permitting/air/titlev/site/site_experts.html.

F. Nonattainment (NA) Permits and NA Major Pollutants

Permit No.	Issuance Date	Pollutant(s):	Permit No.	Issuance Date	Pollutant(s):
N148M2	09/28/2023	NO_X			
N178M2	09/28/2023	NO_X			
N224	09/28/2023	VOC			

If NA Permits are held for the application area, please complete the Major NSR Summary Table located under the Technical Forms heading at: www.tceq.texas.gov/permitting/air/titlev/site/site_experts.html.

G. NSR Authorizations with FCAA § 112(g) Requirements

NSR Permit No.	Issuance Date	NSR Permit No.	Issuance Date	NSR Permit No	Issuance Date

Date	Permit No.	Regulated Entity No.
12/16/2024	**O2114**	**RN103919817**

For SOP applications, answer ALL questions unless otherwise directed.
♦ For GOP applications, answer ONLY these questions unless otherwise directed.

XII. NSR Authorizations (continued) - (Attach additional sheets if necessary for sections XII.E-J.)

♦ **H. Title 30 TAC Chapter 116 Permits, Special Permits, Standard Permits, Other Authorizations (Other Than Permits By Rule, PSD Permits, NA Permits) for the Application Area**

Authorization No.	Issuance Date	Authorization No.	Issuance Date	Authorization No.	Issuance Date
1504A	**TBD**	135086	09/28/2023		
37063	**09/30/2024**	163274	12/09/2020		
83791	09/28/2023	169895	05/02/2023		
120563	06/20/2023	171826	03/15/2023		

♦ **I. Permits by Rule (30 TAC Chapter 106) for the Application Area**

A list of selected Permits by Rule (previously referred to as standard exemptions) that are required to be listed in the FOP application is available in the instructions.

PBR No.	Version No./Date	PBR No.	Version No./Date	PBR No.	Version No./Date
60	04/04/1975	106.472	09/04/2000		
106.122	09/04/2000	106.473	03/14/1997		
106.261	11/01/2003	106.473	09/04/2000		
106.262	11/01/2003	**106.476**	**09/04/2000**		
106.263	11/01/2001	106.478	09/04/2000		
106.355	11/01/2001	106.511	09/04/2000		
106.371	09/04/2000	~~106.512~~	~~06/13/2001~~		
106.454	11/01/2001				

♦ **J. Municipal Solid Waste and Industrial Hazardous Waste Permits with an Air Addendum**

Permit No.	Issuance Date	Permit No.	Issuance Date	Permit No.	Issuance Date

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 1
Texas Commission on Environmental Quality

Date:	**12/16/24**		
Permit No.:	**O2114**		
Regulated Entity No.:	**RN103919817**		
Company / Area Name:	**Chevron Phillips Chemical Company, LP**		
For Submissions to EPA			
Has a copy of this application been submitted (or is being submitted) to EPA?		☑ YES	☐ NO

I. Application Type
Indicate the type of application:
☐ Renewal
☑ Streamlined Revision (Must include provisional terms and conditions as explained in the instructions.)
☐ Significant Revision
☐ Revision Requesting Prior Approval
☐ Administrative Revision
☐ Response to Reopening
II. Qualification Statement

For SOP Revisions Only	☑ YES	☐ NO
For GOP Revisions Only	☐ YES	☐ NO

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 1 *(continued)*
Texas Commission on Environmental Quality

III. Major Source Pollutants (Complete this section if the permit revision is due to a change at the site or a change in regulations.)												
Indicate all pollutants for which the site is a major source based on the site's potential to emit after the change is operated:												
☑	VOC	☑	NO_X	☑	SO_2	☐	PM_{10}	☑	CO	☐	Pb	☑	HAP
Other: **PM**												
IV. Reference Only Requirements *(For reference only)*												
Has the applicant paid emissions fees for the most recent agency fiscal year (September 1-August 31)?								☑	YES	☐	NO	☐	N/A
V. Delinquent Fees and Penalties												
Notice: This form will not be processed until all delinquent fees and/or penalties owed the TCEQ or the Office of the Attorney General on behalf of the TCEQ are paid in accordance with the Delinquent Fee and penalty protocol.												

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/16/24**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
1	MS-C	No	1592-18	OP-REQ3 OP-UA15	1504A	Add and update applicable requirements as detailed on the attached unit attribute forms and Form OP-REQ3. Incorporate pending NSR amendment (NSR Permit No. 1504A, TCEQ Project No. 378824).
2	MS-C	No	1592-18A	OP-REQ3 OP-UA15	1504A	Add and update applicable requirements as detailed on the attached unit attribute forms and Form OP-REQ3. Incorporate pending NSR amendment (NSR Permit No. 1504A, TCEQ Project No. 378824).
3	MS-A	Yes	Z-1104TEMP	OP-SUMR OP-REQ3 OP-UA13	106.371/09/04/2000	Add to permit a temporary cooling tower to operate while cooling tower Z-1104 undergoes construction (> 6 months). Add HRVOC regulatory applicability to the permit for this cooling tower.
4	MS-C	No	PROPAO1795	OP-SUMR OP-REQ3 OP-UA1	37063 **177511**	Add 40 CFR 63 Subpart FFFF (MON) applicability to units affected by new co-catalyst trial conducted 09/16/24 - 09/28/24, per citations on OP-REQ3 Tbl 1.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/16/24**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
5	MS-A	No	Z-1104	OP-SUMR	106.371/09/04/2000	Incorporate unregistered PBR 106.371 for authorization of in-kind replacement of existing cooling tower. The replacement cooling tower is authorized for the same circulation rate, but is equipped with improved drift eliminators. No unit attributes or applicable requirements are affected by these changes.
6	MS-A	No	F-1594	OP-SUMR	177331 177876 1504A	Incorporate PBR Registration Nos. 177331 & 177876, which each authorized additional fugitive components. (Equipment leak fugitives authorized under NSR Permit No. 1504A.) No unit attributes or applicable requirements are affected by these changes.
7	MS-A	No	SITEWIDE	OP-SUMR	37063	Incorporate the most recent version of NSR 37063. No unit attributes or applicable requirements are affected by these changes.
8	MS-C	No	SITEWIDE	OP-1		Update Technical Contact per OP-1.

Federal Operating Permit Program
Application for Permit Revision/Renewal
Form OP-2 - Table 2
Texas Commission on Environmental Quality

Date:	**12/16/24**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**
Company / Area Name:	**Chevron Phillips Chemical Company, LP**

Using the table below, provide a description of the revision.

Revision No.	Revision Code	Unit/Group/Process			NSR Authorization	Description of Changes and Provisional Terms and Conditions
		New Unit	ID No.	Applicable Form		
9	MS-C	No	1594WWENG	OP-REQ3	106.512/06/13/2001	Remove Unit ID from permit. Unit was removed from site in 2023.

Texas Commission on Environmental Quality
Federal Operating Permit Program
Individual Unit Summary for Revisions
Form OP-SUMR
Table 1

Date	Permit No.	Regulated Entity No.
12/16/24	**O2114**	**RN103919817**

Unit/Process AI	Unit/Process Revision No.	Unit/Process ID No.	Unit/Process Applicable Form	Unit/Process Name/Description	Unit/Process CAM	Preconstruction Authorizations 30 TAC Chapter 116/ 30 TAC Chapter 106	Preconstruction Authorizations Title I
A	3	Z-1104TEMP	OP-SUMR OP-REQ3 OP-UA13	1798 Temporary Cooling Tower		106.371/09/04/2000	
	4	PROPAO1795	OP-SUMR OP-REQ3 OP-UA1	PAO 1795 Process Unit		37063 **177511**	N178M2
	5	Z-1104	OP-SUMR	1798 Cooling Tower		37063 **106.371/09/04/2000**	N178M2
	6	F-1594	OP-SUMR	Fugitives		1504A 106.261/11/01/2003 [156170, 160298, 160762, 164559, 170570, 170856, 172323, 172772, 173153, 173206, 173299, 173448, 174183, **177331, 177876**] 106.262/11/01/2003 [156170, 160298, 160762,164559, 170570, 170856, 172772, 173153, 173206, 173299, 173448, 174183, **177331, 177876**]	GHGPSDTX9 PSDTX748M1 N148M2

Applicable Requirements Summary
Form OP-REQ3 (Page 1)
Federal Operating Permit Program
Table 1a: Additions

Date:	**12/16/24**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
1	1592-18	OP-REQ3 OP-UA15	R5720-3	Highly Reactive VOC	30 TAC Chapter 115, HRVOC Vent Gas	§115.722(c)(1) §115.722(c)(3) §115.725(n) [G]§115.725(l) §115.725(a)(3) [G]§115.726(a)(2) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)
1	1592-18	OP-REQ3 OP-UA15	R5121-07	VOC	30 TAC Chapter 115, Vent Gas	§115.127(a)(2)(B) [G]§115.122(a)(4) §115.127(a)(2)
2	1592-18A	OP-REQ3 OP-UA15	R5720-3	Highly Reactive VOC	30 TAC Chapter 115, HRVOC Vent Gas	§115.722(c)(1) §115.722(c)(3) §115.725(n) [G]§115.725(l) §115.725(a)(3) [G]§115.726(a)(2) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)

Applicable Requirements Summary
Form OP-REQ3 (Page 1)
Federal Operating Permit Program
Table 1a: Additions

Date:	**12/16/24**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
2	1592-18A	OP-REQ3 OP-UA15	R5121-07	VOC	30 TAC Chapter 115, Vent Gas	§115.127(a)(2)(B) [G]§115.122(a)(4) §115.127(a)(2)
3	Z-1104TEMP	OP-SUMR OP-REQ3 OP-UA13	R5760	VOC	30 TAC Chapter 115, Subchapter H	§115.761(c)(1) §115.761(c)(3) §115.766(i)

Applicable Requirements Summary
Form OP-REQ3 (Page 1)
Federal Operating Permit Program
Table 1a: Additions

Date:	**12/16/24**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
4	PROPAO1795	OP-SUMR OP-REQ3 OP-UA1	63FFFF-MCPU	112(B) HAPS	40 CFR Part 63, Subpart FFFF	§63.2440(a) **§63.2450(a)(2)** §63.2450(l) **§63.2450(u)** **[G]§63.2450(v)**
4 (cont'd)	PROPAO1795 (cont'd)		63FFFF-MCPU (cont'd)			

Applicable Requirements Summary
Form OP-REQ3 (Page 2)
Federal Operating Permit Program
Table 1b: Additions

Date:	**12/16/24**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
1	1592-18	R5720-3	Highly Reactive VOC	§115.725(a)(5) §115.725(a)(3) §115.725(a)(3)(B) [T]§115.725(a) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)	[G]§115.726(h) [G]§115.726(i) §115.726(j)(1) §115.726(j)(2) §115.726(b)(1) §115.726(b)(2)-(3)	§115.725(n) §115.725(a)(5) [G]§115.726(a)(2) [G]§115.725(a)(4)
1	1592-18	OP-REQ3 OP-UA15	R5121-07	[G]§115.125 §115.126(2) §115.126(3)(C)	§115.126 §115.126(2) §115.126(3) §115.126(3)(C)	None
2	1592-18A	R5720-3	Highly Reactive VOC	§115.725(a)(5) §115.725(a)(3) §115.725(a)(3)(B) [T]§115.725(a) [G]§115.725(a)(4) §115.725(a)(1)(A)-(C)	[G]§115.726(h) [G]§115.726(i) §115.726(j)(1) §115.726(j)(2) §115.726(b)(1) §115.726(b)(2)-(3)	§115.725(n) §115.725(a)(5) [G]§115.726(a)(2) [G]§115.725(a)(4)

Applicable Requirements Summary
Form OP-REQ3 (Page 2)
Federal Operating Permit Program
Table 1b: Additions

Date:	**12/16/24**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
2	1592-18A	OP-REQ3 OP-UA15	R5121-07	[G]§115.125 §115.126(2) §115.126(3)(C)	§115.126 §115.126(2) §115.126(3) §115.126(3)(C)	None
3	Z-1104TEMP	R5760	VOC	§115.764(c) §115.764(f)	§115.766(a)(1) §115.766(a)(2) §115.766(a)(3) §115.766(a)(5) §115.766(a)(6) §115.766(c) §115.766(g) §115.766(h) §115.766(i)(1)	§115.766(i)(2)

Applicable Requirements Summary
Form OP-REQ3 (Page 2)
Federal Operating Permit Program
Table 1b: Additions

Date:	**12/16/24**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**	Area Name:	**Olefins Unit**		

Revision No.	Unit/Group/Process ID No.	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
4	PROPAO1795	63FFFF-MCPU	112(B) HAPS	§63.2445(d) **[G]§63.2450(v)**	§63.2525 §63.2525(a) [G]§63.2525(b) §63.2525(f) **[G]§63.2525(p)**	§63.2435(d) §63.2445(c) §63.2450(g)(5) §63.2450(m) §63.2450(m)(1) §63.2450(m)(2) §63.2515(a) §63.2515(b)(2) §63.2515(c) **§63.2515(d)** §63.2520(a) [G]§63.2520(b) [G]§63.2520(d)
4 (cont'd)	PROPAO1795 (cont'd)	63FFFF-MCPU (cont'd)				§63.2520(e) §63.2520(e)(1) §63.2520(e)(2) §63.2520(e)(3) §63.2520(e)(4) §63.2520(e)(5) §63.2520(e)(5)(i) [G]§63.2520(e)(5)(ii) [G]§63.2520(e)(5)(iii) §63.2520(e)(6) §63.2520(e)(7) §63.2520(e)(9) [G]§63.2520(e)(10) **[G]§63.2520(e)(14)**

Applicable Requirements Summary
Federal Operating Permit Program
Form OP-REQ3 (Page 3)
Table 2a: Deletions

Date:	**12/16/24**	Regulated Entity No.:	RN103919817	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
9	1594WWENG	OP-REQ3	R7ICI-01	CO	30 TAC Chapter 117, Subchapter B	§ 117.310(c)(1) § 117.310(c)(1)(B)

Applicable Requirements Summary
Federal Operating Permit Program
Form OP-REQ3 (Page 3)
Table 2a: Deletions

Date:	**12/16/24**	Regulated Entity No.:	RN103919817	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
9	1594WWENG	OP-REQ3	R7ICI-01	NOx	30 TAC Chapter 117, Subchapter B	§ 117.310(d)(3) § 117.310(a) §117.310(a)(9)(E)(iv)(III) § 117.310(b) [G]§ 117.310(e)(1) § 117.310(e)(2) [G]§ 117.310(e)(3) § 117.310(e)(4) [G]§ 117.310(f) § 117.340(l)(2) § 117.340(p)(1) § 117.340(p)(2)(C) § 117.340(p)(3)

Applicable Requirements Summary
Federal Operating Permit Program
Form OP-REQ3 (Page 3)
Table 2a: Deletions

Date:	**12/16/24**	Regulated Entity No.:	RN103919817	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
9	1594WWENG	OP-REQ3	60IIII-1	CO	40 CFR Part 60, Subpart IIII	§ 60.4204(b) § 1039.102 § 60.4201(a) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4218
9	1594WWENG	OP-REQ3	60IIII-1	NMHC and NOx	40 CFR Part 60, Subpart IIII	§ 60.4204(b) § 1039.102 § 60.4201(a) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4218
9	1594WWENG	OP-REQ3	60IIII-1	PM	40 CFR Part 60, Subpart IIII	§ 60.4204(b) § 1039.102 § 60.4201(a) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4218

Applicable Requirements Summary
Federal Operating Permit Program
Form OP-REQ3 (Page 3)
Table 2a: Deletions

Date:	**12/16/24**	Regulated Entity No.:	RN103919817	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Applicable Regulatory Requirement Name	Applicable Regulatory Requirement Standard(s)
9	1594WWENG	OP-REQ3	60IIII-1	PM (Opacity)	40 CFR Part 60, Subpart IIII	§ 60.4204(b) § 1039.105(b)(1) § 1039.105(b)(2) § 1039.105(b)(3) § 60.4201(a) § 60.4206 § 60.4207(b) [G]§ 60.4211(a) § 60.4211(c) § 60.4218
9	1594WWENG	OP-REQ3	63ZZZZ-1	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)

Applicable Requirements Summary
Form OP-REQ3 (Page 4)
Federal Operating Permit Program
Table 2b: Deletions

Date:	**12/16/24**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
9	1594WWENG	OP-REQ3	R7ICI-01	CO	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(a)(2)(C) § 117.340(h) § 117.8000(b) § 117.8000(c) § 117.8000(c)(2) § 117.8000(c)(3) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8140(a) § 117.8140(a)(1) § 117.8140(a)(2) § 117.8140(a)(2)(A) [G]§117.8140(a)(2)(B) § 117.8140(b)	§ 117.345(a) § 117.345(f) [G]§ 117.345(f)(10) § 117.345(f)(3) § 117.345(f)(3)(A) § 117.345(f)(3)(A)(ii) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7)

Applicable Requirements Summary
Form OP-REQ3 (Page 4)
Federal Operating Permit Program
Table 2b: Deletions

Date:	**12/16/24**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
9	1594WWENG	OP-REQ3	R7ICI-01	NOx	[G]§ 117.335(a)(1) § 117.335(a)(4) § 117.335(b) § 117.335(d) § 117.335(e) § 117.335(g) § 117.340(a)(2)(C) § 117.340(h) § 117.340(l)(2) § 117.340(o)(1) § 117.340(p)(1) § 117.340(p)(2)(A) § 117.340(p)(2)(B) § 117.340(p)(2)(C) § 117.8000(b) § 117.8000(c) § 117.8000(c)(1) § 117.8000(c)(3) § 117.8000(c)(5) § 117.8000(c)(6) [G]§ 117.8000(d) § 117.8140(a) § 117.8140(a)(1) § 117.8140(a)(2) § 117.8140(a)(2)(A) [G]§117.8140(a)(2)(B) § 117.8140(b)	§ 117.345(a) § 117.345(f) [G]§ 117.345(f)(10) § 117.345(f)(3) § 117.345(f)(3)(A) § 117.345(f)(3)(A)(ii) § 117.345(f)(3)(B) § 117.345(f)(9)	§ 117.335(b) § 117.335(g) § 117.340(p)(2)(D) [G]§ 117.345(b) [G]§ 117.345(c) § 117.8010 [G]§ 117.8010(1) § 117.8010(2) § 117.8010(2)(A) § 117.8010(2)(B) § 117.8010(2)(C) § 117.8010(2)(D) [G]§ 117.8010(3) § 117.8010(4) [G]§ 117.8010(5) § 117.8010(6) [G]§ 117.8010(7)

Applicable Requirements Summary
Form OP-REQ3 (Page 4)
Federal Operating Permit Program
Table 2b: Deletions

Date:	**12/16/24**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
9	1594WWENG	OP-REQ3	60IIII-1	CO	None	None	None
9	1594WWENG	OP-REQ3	60IIII-1	NMHC and NOx	None	None	None
9	1594WWENG	OP-REQ3	60IIII-1	PM	None	None	None

Applicable Requirements Summary
Form OP-REQ3 (Page 4)
Federal Operating Permit Program
Table 2b: Deletions

Date:	**12/16/24**	Regulated Entity No.:	**RN103919817**	Permit No.:	**O2114**
Company Name:	**Chevron Phillips Chemical Company, LP**			Area Name:	**Olefins Unit**

Revision No.	Unit/Group/Process ID No.	Unit/Group/Process Applicable Form	SOP/GOP Index No.	Pollutant	Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
9	1594WWENG	OP-REQ3	60IIII-1	PM (Opacity)	None	None	None
9	1594WWENG	OP-REQ3	63ZZZZ-1	112(B) HAPS	None	None	None

Texas Commission on Environmental Quality
Miscellaneous Unit Attributes
Form OP-UA1 (Page 1)
Federal Operating Permit Program

Date:	**12/16/24**
Permit No.:	**O2114**
Regulated Entity No.:	**RN103919817**

Unit ID No.	SOP/GOP Index No.	Unit Type	Date Constructed/Placed in Service	Functionally Identical Replacement	Maximum Rated Capacity	Technical Information and Unit Description
PROPAO1975	63FFFF-MCPU	PRO				Add requirements for MON MCPU process unit applicability (applicable only during trial period from 9/16/2024 to 9/28/2024). The citations in bold are being added as a result of the latest MON rule updates (RTR and reconsideration).

Texas Commission on Environmental Quality
Cooling Tower Attributes
Form OP-UA13 (Page 3)
Federal Operating Permit Program

Table 3a: Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115)
Subchapter H, Division 2: Cooling Tower Heat Exchange Systems

Date	Permit No.	Regulated Entity No.
12/16/24	O2114	RN103919817

Unit ID No.	SOP Index No.	Cooling Tower Heat Exchange Systems Exemptions	Alternative Monitoring	Modified Monitoring	Approved Monitoring ID No.
Z-1104TEMP	R5760	NONE	YES	NO	--

Emission Point/Stationary Vent/Distillation Operation Vent/Process Vent Attributes
Form OP-UA15 (Page 3)
Federal Operating Permit Program
Table 2a: Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115)
Subchapter B: Vent Gas Control
Texas Commission on Environmental Quality

Date:	Permit No.:	Regulated Entity No.:
12/16/24	O2114	RN103919817

Emission Point ID No.	SOP/GOP Index No.	Chapter 115 Division	Combustion Exhaust	Vent Type	Total Uncontrolled VOC Weight	Combined 24-Hour VOC Weight	VOC Concentration	VOC Concentration or Emission Rate at Maximum Operating Conditions
1592-18	R5121-07	NO	NO	REGVAPPL		100+	612-	NO
1592-18A	R5121-07	NO	NO	REGVAPPL		100+	612-	NO

Emission Point/Stationary Vent/Distillation Operation Vent/Process Vent Attributes
Form OP-UA15 (Page 4)
Federal Operating Permit Program
Table 2b: Title 30 Texas Administrative Code Chapter 115 (30 TAC Chapter 115)
Subchapter B: Vent Gas Control
Texas Commission on Environmental Quality

Date:	Permit No.:	Regulated Entity No.:
12/16/24	O2114	RN103919817

Emission Point ID No.	SOP Index No.	Alternate Control Requirement	ACR ID No.	Control Device Type	Control Device ID No.
1592-18	R5121-07	NONE			
1592-18A	R5121-07	NONE			

Emission Point/Stationary Vent/Distillation Operation Vent/Process Vent Attributes
Form OP-UA15 (Page 30)
Federal Operating Permit Program
Table 12a: Title 30Texas Administrative Code Chapter 115 (30 TAC Chapter 115)
Subchapter H, Division 1: Highly-Reactive Volatile Organic Compounds-Vent Gas Control
Texas Commission on Environmental Quality

Date:	Permit No.:	Regulated Entity No.:
12/16/24	O2114	RN103919817

Emission Point ID No.	SOP Index No.	HRVOC Concentration	Max Flow Rate	Exempt Date	Vent Gas Stream Control
1592-18	R5720-3	NO	NO		UNCON
1592-18A	R5720-3	NO	NO		UNCON

Emission Point/Stationary Vent/Distillation Operation Vent/Process Vent Attributes
Form OP-UA15 (Page 31)
Federal Operating Permit Program
Table 12b: Title 30Texas Administrative Code Chapter 115 (30 TAC Chapter 115)
Subchapter H, Division 1: Highly-Reactive Volatile Organic Compounds-Vent Gas Control
Texas Commission on Environmental Quality

Date:	Permit No.:	Regulated Entity No.:
12/16/24	O2114	RN103919817

Emission Point ID No.	SOP Index No.	AM	AM ID No.	Minor Modification	Minor Modification ID No.	Process Knowledge	Waived Testing	Testing Requirements
1592-18	R5720-3	NO		NO		YES	NO	725A
1592-18A	R5720-3	NO		NO		YES	NO	725A

Permit By Rule Supplemental Table (Page 1)
Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/16/24	O2114	RN103919817

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1592-31	114897	106.261, 106.262	02/13/2014
1592-90	132981	106.261, 106.262, 106.478	01/12/2016
CPC-FIXMNT	132981	106.263	01/12/2016
F-160	132981	106.261, 106.262	01/12/2016
1592-WWLOAD	134693	106.261, 106.262	09/03/2015
1592-WWFRAC	134693	106.261, 106.262	09/03/2015
F-1592-31	135701	106.261, 106.262	09/17/2018
NAO-KOLOAD	136457	106.261, 106.262	12/09/2015
F-160	139001	106.261, 106.262	03/23/2016
1592-WWLOAD	139001	106.261, 106.262	03/23/2016
F-1592-31	140351	106.261, 106.262	06/22/2016
TOTES	140351	106.261, 106.262	06/22/2016
F-1592-31	143865	106.261, 106.262	12/05/2016
LOAD-TOTE	143865	106.261, 106.262	12/05/2016
F-1592-31	150060	106.261, 106.262	03/07/2018
F-1592-31	151216	106.261, 106.262	04/25/2018
F-1592-31	151993	106.261, 106.262	06/27/2018
F-1592-31	152085	106.261, 106.262	06/22/2018
F-160	153141	106.261, 106.262	11/06/2018
F-1592-31	154060	106.261, 106.262	01/17/2019
Z-1101	154060	106.261, 106.262	01/17/2019
L1798-40	154060	106.261, 106.262	01/17/2019
F-1592-31	156170	106.261, 106.262	04/19/2019

Permit By Rule Supplemental Table (Page 1)
Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/16/24	O2114	RN103919817

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1594	156170	106.261, 106.262	04/19/2019
F-1798-30, F-1894, F-130	156170	106.261, 106.262	04/19/2019
F-1592-31	157396	106.261, 106.262	07/30/2019
TOTE BIN	157396	106.472	07/30/2019
F-1592-31, F-160	160298	106.261, 106.262	04/03/2020
F-1595-66, F1594	160298	106.261, 106.262	04/03/2020
MEOHTOTE	160298	106.473	04/03/2020
S-920CC, S-948CC	160298	106.472	04/03/2020
F-1592-31	160762	106.261, 106.262	04/17/2020
F-1594	160762	106.261, 106.262	04/17/2020
F-1798-30, F-1891, F-130	160762	106.261, 106.262	04/17/2020
CB-710	160762	106.261, 106.262	04/17/2020
PK-906	160762	106.261, 106.262	04/17/2020
CB-710	162317	106.261, 106.262	08/21/2020
F-160	162317	106.261, 106.262	08/21/2020
F-160	163272	106.261, 106.262	11/19/2020
F-1594	164559	106.261, 106.262	04/09/2021
F-1592-31	164559	106.261, 106.262	04/09/2021
F-1798-30, F-1891, F-130	164559	106.261, 106.262	04/09/2021
F-1795-66	164559	106.261, 106.262	04/09/2021
PK-830	166760	106.261, 106.262	11/18/2021
PK-906	166760	106.261, 106.262	11/18/2021
FB-702	167637	106.262	01/17/2023
F-1592-31	168528	106.261	05/12/2022

Permit By Rule Supplemental Table (Page 1)
Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/16/24	O2114	RN103919817

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1891, F-130	168528	106.261	05/12/2022
Z-101	168528	106.261	05/12/2022
MeOH Cart	168528	106.261	05/12/2022
F-1592-31	169772	106.261, 106.262	09/08/2022
CB-701	169772	106.261, 106.262	09/08/2022
MeOH Load	169772	106.261, 106.262	09/08/2022
F-1594	170570	106.261, 106.262	10/12/2022
F-1891	170570	106.261, 106.262	10/12/2022
F-1592-31, F-160	170856	106.261, 106.262	11/23/2022
F-1594	170856	106.261, 106.262	11/23/2022
F-1592-31	172149	106.261, 106.262	04/06/2023
1592ANAL	172149	106.261, 106.262	04/06/2023
1592-16	172149	106.261, 106.262	04/06/2023
F-1592-31	172309	106.261, 106.262	04/28/2023
F-1798-30, F-1891, F-130	172323	106.261	05/05/2023
F-1594	172323	106.261	05/05/2023
F-1795-66	172323	106.261	05/05/2023
F-1592-31	172323	106.261	05/05/2023
F-1594	172386	106.261, 106.262	04/17/2023
F-1592-31	172585	106.261, 106.262	05/04/2023
F-1594	172772	106.261, 106.262	05/23/2023
F-1592-31	172825	106.261, 106.262	05/30/2023
F-1795-66	172825	106.261, 106.262	05/30/2023
F-1592-31	172943	106.261, 106.262	06/05/2023

Permit By Rule Supplemental Table (Page 1)
Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/16/24	**O2114**	**RN103919817**

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1594	173153	106.261, 106.262	06/23/2023
Tote-AF1, Tote-AF2	173153	106.472	06/23/2023
F-1594	173206	106.261, 106.262	07/27/2023
PK-905	173206	106.261, 106.262	07/27/2023
F-1592-31	173299	106.261, 106.262	07/13/2023
F-1594	173299	106.261, 106.262	07/13/2023
F-1594	173448	106.261, 106.262	08/04/2023
F-1798-30, F-1891, F-130	174183	106.261, 106.262	11/03/2023
F-1594	174183	106.261, 106.262	11/03/2023
F-1592-31	174183	106.261, 106.262	11/03/2023
G-202A, G-202B	174272	106.263	10/12/2023
FB-204	174273	106.261, 106.262	11/02/2023
F-1592-31	174273	106.261, 106.262	11/02/2023
F-1891	174389	106.262	10/24/2023
F-1594, 1594-SSAN, F-1595	**174540**	**106.261, 106.262**	**11/28/2023**
1595-Totes	**174540**	**106.472**	**11/28/2023**
1592-31	**174685**	**106.261,106.262**	**12/05/2023**
F-160	**174900**	**106.261,106.262**	**01/17/2024**
1592-31	**175222**	**106.261,106.262**	**02/14/2024**
F-160	**175614**	**106.261,106.262**	**03/25/2024**
1798-30, F-130, F-1891, F-160, F-1594, 1592-31, 1795-66	**175899**	**106.261,106.262**	**05/09/2024**
G-202A, G-202B	**174272**	**106.263**	**04/29/2024**

Permit By Rule Supplemental Table (Page 1)
Table A: Registered Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/16/24	O2114	RN103919817

Unit ID No.	Registration No.	PBR No.	Registration Date
F-1594, F-1891	176836	106.261,106.262	07/15/2024
F-160, 1592-31	176480	106.261,106.262	08/29/2024
F-1594, PK-905	177331	106.261,106.262	09/18/2024
1795-66, 1795-46, 1795-44, 127WW	177511	106.262	10/01/2024
1795-47, 1795-48, 127U, 1795-51, 1795-38, 1795-39	177511	106.472	10/01/2024
1592-31	177876	106.261, 106.262	11/05/2024

Permit By Rule Supplemental Table (Page 2)
Table B: Claimed (not registered) Permits By Rule (30 TAC Chapter 106) for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/16/24	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date
LPAOWW	106.472	9/4/2000
LWAX	106.472	9/4/2000
UNLOAD	106.472, 106.473	9/4/2000
P-1576	106.511	9/4/2000
MSS-PBR	106.263	11/1/2001
PIPELINE	106.355	11/1/2001
EF-751	106.371	9/4/2000
AD-611CC	106.472	9/4/2000
1592DG, INSTRDG1, INSTRDG2	106.454	11/1/2001
1592-31, L-1092-NH3	**106.472**	**9/1/1998**
FB-702	106.472	9/4/2000
GASTK	106.473	9/4/2000
FB-202	106.473	3/14/1997
FB-707	106.478	9/4/2000
1000-GE-105, 1092-GE-940, EG-101, GA-934, GE-930	106.511	9/4/2000
FB-202	60	4/4/1975
Z-1104	106.371	9/4/2000
Z-1104TEMP	**106.371**	**9/4/2000**
TK-207	106.472	9/4/2000
TK-208	106.472	9/4/2000
TK-403	106.473	9/4/2000

Permit By Rule Supplemental Table (Page 3)
Table C: Claimed (not registered) Permits By Rule (30 TAC Chapter 106) for Insignificant Sources for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/16/24	O2114	RN103919817

PBR No.	Version No./Date
106.122	09/04/2000

Permit By Rule Supplemental Table (Page 4)
Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/16/24	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	114897	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	132981	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

Permit By Rule Supplemental Table (Page 4)
Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
Texas Commission on Environmental Quality

Date	Permit Number	Regulated Entity Number
12/16/24	**O2114**	**RN103919817**

Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
1592-90	106.478	132981	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
CPC-FIXMNT	106.263	132981	Keep records on-site of the type and reason for MSS activity, the processes and equipment involved; date, time, and duration of the activity or facility operation; and the air contaminants and amounts which are emitted as a result of the activity or facility operation per 106.263(g)(1)-(4). MSS emissions are recorded by the end of the month following the month during which the MSS activity occurred; these emissions are summed monthly, and the rolling 12-month emissions record is updated on a monthly basis to demonstrate compliance with the limits in 106.4 and 106.263(f). Calculated emissions are kept on-site.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-160	106.261, 106.262	132981	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1592-WWLOAD	106.261, 106.262	134693	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
1592-WWFRAC	106.261, 106.262	134693	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	135701	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
NAO-KOLOAD	106.261, 106.262	136457	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-160	106.261, 106.262	139001	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1592-WWLOAD	106.261, 106.262	139001	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	140351	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
TOTES	106.261, 106.262	140351	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	143865	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
LOAD-TOTE	106.261, 106.262	143865	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	150060	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	151216	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	151993	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	152085	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-160	106.261, 106.262	153141	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	154060	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
Z-1101	106.261, 106.262	154060	This flare is monitored as required by Special Conditions 9, 24, and 41-56 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
L1798-40	106.261, 106.262	154060	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.261, 106.262, and 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	156170	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	156170	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1798-30, F-1891, F-130	106.261, 106.262	156170	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in the Special Condition No. 24 (F-1891); the 28VHP and 28CNTQ LDAR programs as detailed in Special Condition No. 15 (F-1798-30); and the 28RCT LDAR program as detailed in Special Condition No. 16 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	157396	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
TOTE BIN	106.472	157396	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1592-31, F-160	106.261, 106.262	160298	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1795-66, F-1594	106.261, 106.262	160298	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair (LDAR) program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 (F1795-66) and the 28LAER LDAR program as detailed in Special Condition No. 24 of NSR Permit No. 1504A (F-1594). Both permits are found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
MEOHTOTE	106.473	160298	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
S-920CC, S-948CC	106.472	160298	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1592-31	106.261, 106.262	160762	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	160762	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1798-30, F-1891, F-130	106.261, 106.262	160762	Emissions from fugitive component leaks are minimized through the 28RCT Leak Detection and Repair (LDAR) program as detailed in Special Condition No. 15 (F-130), the 28VHP and 28CNTQ LDAR programs as detailed in Special Condition No. 16 (F-1891), and the 28VHP LDAR programs as detailed in Special Condition No. 35-36 of NSR Permit No. 37063, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
CB-710	106.261, 106.262	160762	This flare is monitored as required by Special Conditions 14 and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
PK-906	106.261, 106.262	160762	The natural gas usage and waste gas flow is monitored and recorded to ensure compliance with emissions limitations.
CB-710	106.261, 106.262	162317	This flare is monitored as required by Special Conditions 14 and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-160	106.261, 106.262	162317	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160	106.261, 106.262	163272	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1798-30, F-1891, F-130	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition Nos. 35-36 (F-1798-30) and No. 16 (F-1891), and through the 28RCT LDAR program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1795-66	106.261, 106.262	164559	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
PK-830	106.261, 106.262	166760	Emissions of NH3, NOx, and CO from this boiler are continuously monitored using a CEMS according to the requirements of Special Condition No. 19 of NSR Permit No. 1504A found in Attachment B of Title V Permit No. O2114. Fuel gas usage and composition are also monitored. The boiler is monitored according to the requirements of NSPS Db and MACT DDDDD.
PK-906	106.261, 106.262	166760	The natural gas usage and waste gas flow is monitored and recorded to ensure compliance with emissions limitations.
FB-702	106.262	167637	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261	168528	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1891, F-130	106.261	168528	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition No. 16 (F-1891) and the 28RCT LDAR program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
Z-101	106.261	168528	This flare is monitored as required by Special Condition Nos. 9, 24, and 41-56 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
MeOH Cart	106.261	168528	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1592-31	106.261, 106.262	169772	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
CB-701	106.261, 106.262	169772	This flare is monitored as required by Special Conditions 11, 14, and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
MeOH Load	106.261, 106.262	169772	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
F-1594	106.261, 106.262	170570	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1891	106.261, 106.262	170570	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition No. 16 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31, F-160	106.261, 106.262	170856	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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F-1594	106.261, 106.262	170856	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	172149	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
1592ANAL	106.261, 106.262	172149	Hours of operation recorded to ensure compliance with emissions calculations.
1592-16	106.261, 106.262	172149	This flare is monitored as required by Special Conditions 11, 14, and 40-57 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114, and MACT YY. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.
F-1592-31	106.261, 106.262	172309	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1798-30, F-1891, F-130	106.261	172323	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition Nos. 35-36 (F-1798-30) and Special Condition No. 16 (F-1891), and through the 28RCT LDAR program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261	172323	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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F-1795-66	106.261	172323	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261	172323	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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F-1594	106.261, 106.262	172386	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	172585	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	172772	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	172825	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1795-66	106.261, 106.262	172825	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	172943	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	173153	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
Tote-AF1, Tote-AF2	106.472	173153	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	173206	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
PK-905	106.261, 106.262	173206	This flare is monitored as required by Special Condition No. 14 of NSR Permit No. 1504A and AMOC 32 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	173299	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1594	106.261, 106.262	173299	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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F-1594	106.261, 106.262	173448	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1798-30, F-1891, F-130	106.261, 106.262	174183	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair program as detailed in the Special Condition No. 35-36 (F-1798-30) and Special Condition No. 16 (F-1891), and through the 28RCT LDAR program as detailed in Special Condition No. 15 (F-130) of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261, 106.262	174183	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1592-31	106.261, 106.262	174183	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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G-202A, G-202B	106.263	174272	Keep records on-site of the type and reason for MSS activity, the processes and equipment involved; date, time, and duration of the activity or facility operation; and the air contaminants and amounts which are emitted as a result of the activity or facility operation per 106.263(g)(1)-(4). MSS emissions are recorded by the end of the month following the month during which the MSS activity occurred; these emissions are summed monthly, and the rolling 12-month emissions record is updated on a monthly basis to demonstrate compliance with the limits in 106.4 and 106.263(f). Calculated emissions are kept on-site.
FB-204	106.261, 106.262	174273	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261, 106.262	174273	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-1891	106.262	174389	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition No. 16 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594, F-1595	106.261, 106.262	174540	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1594-SSAN	106.261, 106.262	174540	Hours of operation recorded to ensure compliance with emissions calculations.
1595-Totes	106.472	174540	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261,106.262	174685	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160	106.261,106.262	174900	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1592-31	106.261,106.262	175222	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair (LDAR) programs as detailed in Special Condition Nos. 22-23 of NSR Permit No. 1504A, found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160	106.261,106.262	175614	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1798-30, F-130, F-1891, F-160, F-1594, F-1592-31, F-1795-66	**106.261,106.262**	**175899**	**Emissions from fugitive component leaks are minimized through the 28RCT Leak Detection and Repair (LDAR) program as detailed in Special Condition No. 15 (F-130), the 28VHP and 28CNTQ LDAR program as detailed in Special Condition No. 16 (F-1891), the 28VHP and 28CNTQ LDAR programs as detailed in Special Condition Nos. 35-36 (F-1798-30), and the 28VHP LDAR program as detailed in Special Condition No. 35 (F-1795-66) of NSR Permit No. 37063; the 28VHP and 28CNTQ LDAR programs as detailed in Special Condition Nos. 22-23 (F-160 & F-1592-31), and the 28LAER LDAR program as detailed in Special Condition No. 24 (F-1594) of NSR Permit No. 1504A. Both permits can be found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permits specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.**

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594, F-1891	106.261,106.262	176836	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair (LDAR) program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A and the 28VHP LDAR program as detailed in Special Condition No. 16 of NSR Permit No. 37063, both found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permits specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
F-160, F-1592-31	106.261,106.262	176480	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1594	106.261,106.262	177331	Emissions from fugitive component leaks are minimized through the 28LAER Leak Detection and Repair program as detailed in the Special Condition No. 24 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
PK-905	106.261,106.262	177331	This flare is monitored as required by Special Condition No. 14 of NSR Permit No. 1504A and AMOC 32 found in Attachment B of the Title V Permit No. O2114. This includes minimum combustion zone net heating value and maximum flare tip velocity requirements.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
F-1795-66	106.262	177511	Emissions from fugitive component leaks are minimized through the 28VHP Leak Detection and Repair program as detailed in the Special Condition No. 35 of NSR Permit No. 37063 found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
1795-46, 1795-44, 127WW	106.262	177511	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
1592-31	**106.261, 106.262**	**177876**	**Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.**
LPAOWW	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
LWAX	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
UNLOAD	106.472, 106.473	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.
P-1576	106.511	9/4/2000	Engine runtime hours are recorded and maintained to ensure compliance with the PBR and the limits in 106.4.
MSS-PBR	106.263	11/1/2001	Keep records on-site of the type and reason for MSS activity, the processes and equipment involved; date, time, and duration of the activity or facility operation; and the air contaminants and amounts which are emitted as a result of the activity or facility operation per 106.263(g)(1)-(4). MSS emissions are recorded by the end of the month following the month during which the MSS activity occurred; these emissions are summed monthly, and the rolling 12-month emissions record is updated on a monthly basis to demonstrate compliance with the limits in 106.4 and 106.263(f). Calculated emissions are kept on-site.

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Table D: Monitoring Requirements for registered and claimed PBRs for the Application Area
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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
PIPELINE	106.355	11/1/2001	Records of pipeline maintenance and purging activities are maintained to demonstrate compliance with 106.355(5)(A)-(D).
EF-751	106.371	9/4/2000	The cooling tower flow rate and the amount of total dissolved solids are recorded to ensure compliance with emissions calculations. The cooling tower water is monitored at least monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.
AD-611CC	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
1592DG, INSTRDG1, INSTRDG2	106.454	11/1/2001	Recurring visual inspection to ensure cover is closed when parts are not being handled in cleaner and that waste solvents are stored in covered containers. Records of total solvent makeup are maintained on a monthly basis.
F-1592-31	**106.472**	**9/1/1998**	**Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.**
L-1092-NH3	**106.472**	**9/1/1998**	**Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Use this data and AP-42, Fifth Edition, Volume I Chapter 5.2 (July 2008) equations and emission factors to calculate emissions to demonstrate compliance with the limits in 106.4.**

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
FB-702	106.472	9/4/2000	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.2 equations for floating roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
GASTK	106.473	9/4/2000	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
FB-202	106.473	3/14/1997	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
FB-707	106.478	9/4/2000	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
1000-GE-105, 1092-GE-940, EG-101, GA-934, GE-930	106.511	9/4/2000	Engine runtime hours are recorded and maintained to ensure compliance with the PBR and the limits in 106.4.
FB-202	60	4/4/1975	Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
1592-31	106.472	9/4/2000	Emissions from fugitive component leaks are minimized through the 28VHP and 28CNTQ Leak Detection and Repair programs as detailed in the Special Condition Nos. 22-23 of NSR Permit No. 1504A found in Attachment B of the Title V Permit No. O2114. The LDAR requirements in the NSR permit specify the parameter monitored and the frequency of monitoring. Fugitive components are also monitored according to the requirements found in Applicable Requirements Summary table in the Title V permit.
Z-104	106.371	9/4/2000	The cooling tower flow rate and the amount of total dissolved solids are recorded to ensure compliance with emissions calculations. The cooling tower water is monitored at least monthly for VOC leakage from heat exchangers in accordance with the requirements of the TCEQ Sampling Procedures Manual, Appendix P (dated January 2003 or a later edition) or another air stripping method approved by the TCEQ Executive Director.

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Unit ID No.	PBR No.	Version No./Date -or- Registration No.	Monitoring Requirement
TK-207	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
TK-208	106.472	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.
TK-403	106.473	9/4/2000	Keep annual records on-site of the throughput, liquids loaded or unloaded, and true vapor pressure of liquids. Engineering calculations using AP-42, Fifth Edition, Volume I Chapter 7 (June 2020) Section 7.1.3.1 equations for fixed roof tanks are kept on-site and show maximum possible emissions are below the limits in 106.4.