



Modi, Beena J <beena.j.modi@wv.gov>

RE: [EXTERNAL] R30-09900112-2024

1 message

Adams, Tina N. <tadams3@marathonpetroleum.com>
To: "Modi, Beena J" <beena.j.modi@wv.gov>

Wed, Feb 21, 2024 at 3:54 PM

I've entered the numbers below. These have not been submitted to SLEIS yet but aren't expected to change.

Thanks,

Tina

From: Modi, Beena J <beena.j.modi@wv.gov>
Sent: Monday, February 12, 2024 5:01 PM
To: Adams, Tina N. <tadams3@marathonpetroleum.com>
Subject: [EXTERNAL] R30-09900112-2024

Hi Tina,

Could you please fill out the missing numbers in the table below?

Thanks,

Beena Modi

Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2023 Actual Emissions
Carbon Monoxide (CO)	0.00	0.00
Nitrogen Oxides (NO _x)	0.00	0.00
Particulate Matter (PM _{2.5})	0.04	0.03
Particulate Matter (PM ₁₀)	0.42	0.25
Total Particulate Matter (TSP)	1.6	0.93
Sulfur Dioxide (SO ₂)	0.00	0.00

Volatile Organic Compounds (VOC)	7.5	0.19
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PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2023 Actual Emissions
1,3-Butadiene	0.00	0.00
Benzene	0.00	0.00



Modi, Beena J <beena.j.modi@wv.gov>

R30-09900112-2023

1 message

Modi, Beena J <beena.j.modi@wv.gov>

Sun, Oct 1, 2023 at 11:47 AM

To: jmrichert@marathonpetroleum.com, "Adams, Tina N." <tadams3@marathonpetroleum.com>

Your Title V renewal application for a permit to operate the above referenced facility was received by this Division on September 5 , 2023. After review of said application, it has been determined that the application is administratively complete as submitted. Therefore, the above referenced facility qualifies for an Application Shield.

The applicant has the duty to supplement or correct the application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant shall provide additional information as necessary to address any requirements that become applicable to the source after the date it filed a complete application but prior to release of a draft permit.

The submittal of a complete application shall not affect the requirement that any source have all **preconstruction permits** required under the rules of the Division.

If during the processing of this application it is determined that additional information is necessary to evaluate or take final action on this application, a request for such information will be made in writing with a reasonable deadline for a response. Until which time as your renewal permit is issued or denied, please continue to operate this facility in accordance with 45CSR30, section 6.3.c. which states: *If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.* This protection shall cease to apply if, subsequent to the completeness determination made pursuant to paragraph 6.1.d. of 45CSR30 and as required by paragraph 4.1.b., the applicant fails to submit by the deadline specified in writing any additional information identified as being needed to process the application.

Please remember, **failure of the applicant to timely submit information required or requested to process the application may cause the Application Shield to be revoked.** Should you have any questions regarding this determination, please call me at (304)926-0499 ext. 41283.

Sincerely,

Beena Modi

Title V Permit Engineer

Beena.j.modi@wv.gov

Division of Air Quality Permit Application Submittal

Please find attached a permit application for :

[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only):
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only):
- Type of NSR Application (check all that apply):
 - Construction
 - Modification
 - Class I Administrative Update
 - Class II Administrative Update
 - Relocation
 - Temporary
 - Permit Determination
- Type of 45CSR30 (TITLE V) Application:
 - Title V Initial
 - Title V Renewal
 - Administrative Amendment**
 - Minor Modification**
 - Significant Modification**
 - Off Permit Change

****If the box above is checked, include the Title V revision information as ATTACHMENTS to the combined NSR/Title V application.**
- Payment Type:
 - Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
 - Check (Make checks payable to: WVDEP – Division of Air Quality)
Mail checks to:
WVDEP – DAQ – Permitting
Attn: NSR Permitting Secretary
601 57th Street, SE
Charleston, WV 25304
- If the permit writer has any questions, please contact (all that apply):
 - Responsible Official/Authorized Representative
 - Name:
 - Email:
 - Phone Number:
 - Company Contact
 - Name:
 - Email:
 - Phone Number:
 - Consultant
 - Name:
 - Email:
 - Phone Number:

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.



Catlettsburg Refining, LLC
A subsidiary of Marathon Petroleum Company LP

11631 U.S. Route 23
P.O. Box 1492
Catlettsburg, KY 41129
Tel: 606.921.6200
Fax: 606.921.3500

September 15, 2023

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

ELECTRONIC SUBMITTAL – DEPAirQualityReports@wv.gov

RE: MPLX Terminal and Storage, LLC
Butane Storage Cavern
Permit No. R30-09900112-2019
Title V Renewal Application

Dear Director:

MPLX Terminal and Storage, LLC (MPLX) owns and operates a butane storage cavern (Cavern) in Kenova, West Virginia. While the Cavern is not a major source by its own accord, West Virginia Department of Environmental Protection (WVDEP) Division of Air Quality (DAQ) considers the MPLX's Butane Cavern in Kenova, WV, and Catlettsburg Refining, LLC's Catlettsburg Refinery in Catlettsburg, KY to be a single source for Clean Air Act permitting purposes and as a result, considers the Cavern to be a major source of HAPs requiring an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

The facility currently operates in accordance with WVDAQ Title V Operating Permit R30-09900112-2019, issued April 23, 2019, and expires April 23, 2024. Please find attached the Renewal Application for the Butane Cavern which is being submitted at least 6 months prior (October 23, 2023) to the permit expiration date.

Note the following attachments listed in the General Application form of the application are not applicable to the Butane Cavern and are not included.

- Attachment F – Schedule of Compliance Form
- Attachment G – Air Pollution Control Device Form
- Attachment H – Compliance Assurance Monitoring Form

September 15, 2023

Page 2

If upon your review, you determine that any additional information is needed or if you have any questions regarding the renewal application, please contact Tina Adams at 606-921-3389 or TAdams3@marathonpetroleum.com.

Respectfully,



Jay M. Richert
Vice President
MPLX Terminal and Storage, LLC

Attachments

tna/wje/gdn
 

cc: USEPA Region 3 via CEDRI

MPLX Terminal and Storage, LLC
Butane Storage Cavern
Kenova, WV
ID# 099-00112
Title V Renewal Application
Table of Contents

General Application Form

Attachment A – Aerial Map

Attachment B – Plot Plan

Attachment C – Detailed Process Flow Diagram

Attachment D – Equipment Table

Attachment E – Emission Unit Form

Attachment F – Not Applicable (not included)

Attachment G – Not Applicable (not included)

Attachment H – Not Applicable (not included)

Attachment I – Supporting Emission Calculations



**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL
PROTECTION**

DIVISION OF AIR QUALITY

601 57th Street SE

Charleston, WV 25304

Phone: (304) 926-0475

www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. Name of Applicant (As registered with the WV Secretary of State's Office):	2. Facility Name or Location:
3. DAQ Plant ID No.:	4. Federal Employer ID No. (FEIN):
5. Permit Application Type: <input type="checkbox"/> Initial Permit When did operations commence? <input type="checkbox"/> Permit Renewal What is the expiration date of the existing permit? <input type="checkbox"/> Update to Initial/Renewal Permit Application	
6. Type of Business Entity: <input type="checkbox"/> Corporation <input type="checkbox"/> Governmental Agency <input type="checkbox"/> LLC <input type="checkbox"/> Partnership <input type="checkbox"/> Limited Partnership	7. Is the Applicant the: <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input type="checkbox"/> Both If the Applicant is not both the owner and operator, please provide the name and address of the other party.
8. Number of onsite employees:	
9. Governmental Code: <input type="checkbox"/> Privately owned and operated; 0 <input type="checkbox"/> County government owned and operated; 3 <input type="checkbox"/> Federally owned and operated; 1 <input type="checkbox"/> Municipality government owned and operated; 4 <input type="checkbox"/> State government owned and operated; 2 <input type="checkbox"/> District government owned and operated; 5	
10. Business Confidentiality Claims Does this application include confidential information (per 45CSR31)? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY" guidance.	

11. Mailing Address		
Street or P.O. Box:		
City:	State:	Zip:
Telephone Number:	Fax Number:	

12. Facility Location (Physical Address)		
Street:	City:	County:
UTM Easting: km	UTM Northing: km	Zone: <input type="checkbox"/> 17 or <input type="checkbox"/> 18
Directions:		
Portable Source? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Is facility located within a nonattainment area? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, for what air pollutants?	
Is facility located within 50 miles of another state? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the affected state(s).	
Is facility located within 100 km of a Class I Area¹? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the area(s).	
If no, do emissions impact a Class I Area¹? <input type="checkbox"/> Yes <input type="checkbox"/> No		
¹ <i>Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.</i>		

13. Contact Information		
Responsible Official:		Title:
Street or P.O. Box:		
City:	State:	Zip:
Telephone Number:	Cell Number:	
E-mail address:		
Environmental Contact:		Title:
Street or P.O. Box:		
City:	State:	Zip:
Telephone Number:	Cell Number:	
E-mail address:		
Application Preparer:		Title:
Company:		
Street or P.O. Box:		
City:	State:	Zip:
Telephone Number:	Cell Number:	
E-mail address:		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC

Provide a general description of operations.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

19. Non Applicability Determinations (Continued) - Attach additional pages as necessary.

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

20. Facility-Wide Applicable Requirements (Continued) - Attach additional pages as necessary.

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the Schedule of Compliance Form as ATTACHMENT F.

21. Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit <i>(if any)</i>

22. Inactive Permits/Obsolete Permit Conditions

Permit Number	Date of Issuance MM/DD/YYYY	Permit Condition Number

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	
Nitrogen Oxides (NO _x)	
Lead (Pb)	
Particulate Matter (PM _{2.5}) ¹	
Particulate Matter (PM ₁₀) ¹	
Total Particulate Matter (TSP)	
Sulfur Dioxide (SO ₂)	
Volatile Organic Compounds (VOC)	
Hazardous Air Pollutants ²	Potential Emissions
Regulated Pollutants other than Criteria and HAP	Potential Emissions

¹PM_{2.5} and PM₁₀ are components of TSP.
²For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO ₂ lasers, used only on metals and other materials which do not emit HAP in the process.
<input type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input type="checkbox"/>	18. Emergency road flares.
<input type="checkbox"/>	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO _x , SO ₂ , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:

24. Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	<p>20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:</p>
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input type="checkbox"/>	26. Fire suppression systems.
<input type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.

24. Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
<input type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input type="checkbox"/>	51. Steam cleaning operations.
<input type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input type="checkbox"/>	54. Steam vents and safety relief valves.
<input type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the Title V Equipment Table and provide it as ATTACHMENT D .
26. Emission Units
For each emission unit listed in the Title V Equipment Table , fill out and provide an Emission Unit Form as ATTACHMENT E .
For each emission unit not in compliance with an applicable requirement, fill out a Schedule of Compliance Form as ATTACHMENT F .
27. Control Devices
For each control device listed in the Title V Equipment Table , fill out and provide an Air Pollution Control Device Form as ATTACHMENT G .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the Compliance Assurance Monitoring (CAM) Form(s) for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as ATTACHMENT H .

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

Note: This Certification must be signed by a responsible official as defined in 45CSR§30-2.38.

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

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

Responsible official (type or print)

Name:	Title:
-------	--------

Responsible official's signature:

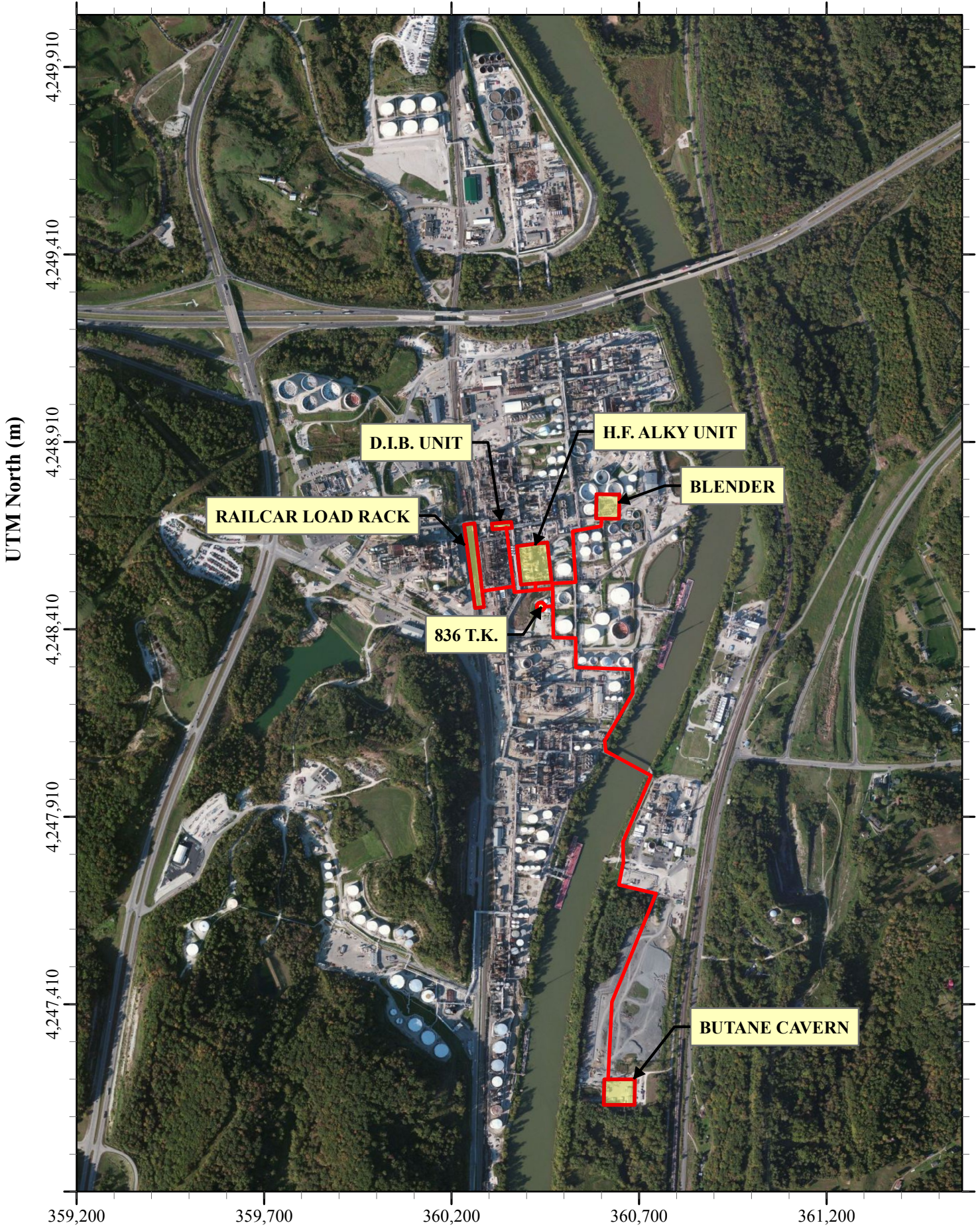
Signature: Jay M. J. Richert Signature Date: _____
(Must be signed and dated in blue ink or have a valid electronic signature)

Note: Please check all applicable attachments included with this permit application:

- | | |
|--------------------------|---|
| <input type="checkbox"/> | ATTACHMENT A: Area Map |
| <input type="checkbox"/> | ATTACHMENT B: Plot Plan(s) |
| <input type="checkbox"/> | ATTACHMENT C: Process Flow Diagram(s) |
| <input type="checkbox"/> | ATTACHMENT D: Equipment Table |
| <input type="checkbox"/> | ATTACHMENT E: Emission Unit Form(s) |
| <input type="checkbox"/> | ATTACHMENT F: Schedule of Compliance Form(s) |
| <input type="checkbox"/> | ATTACHMENT G: Air Pollution Control Device Form(s) |
| <input type="checkbox"/> | ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s) |

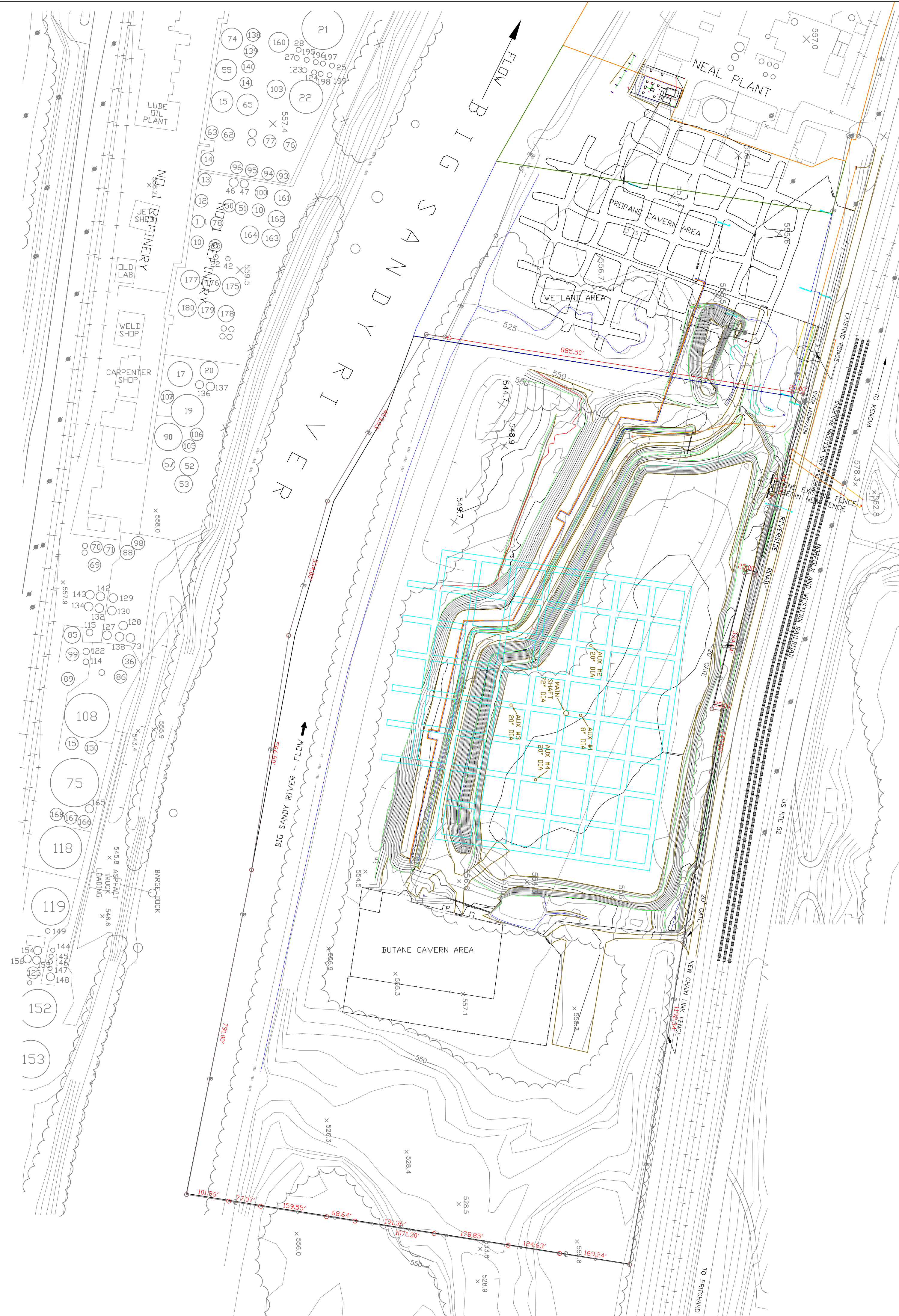
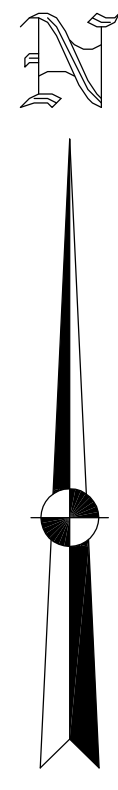
All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

Attachment A - Aerial Map of Butane Cavern



All Coordinates shown in UTM Coordinates,
Zone 17, NAD 83 Datum

UTM East (m)



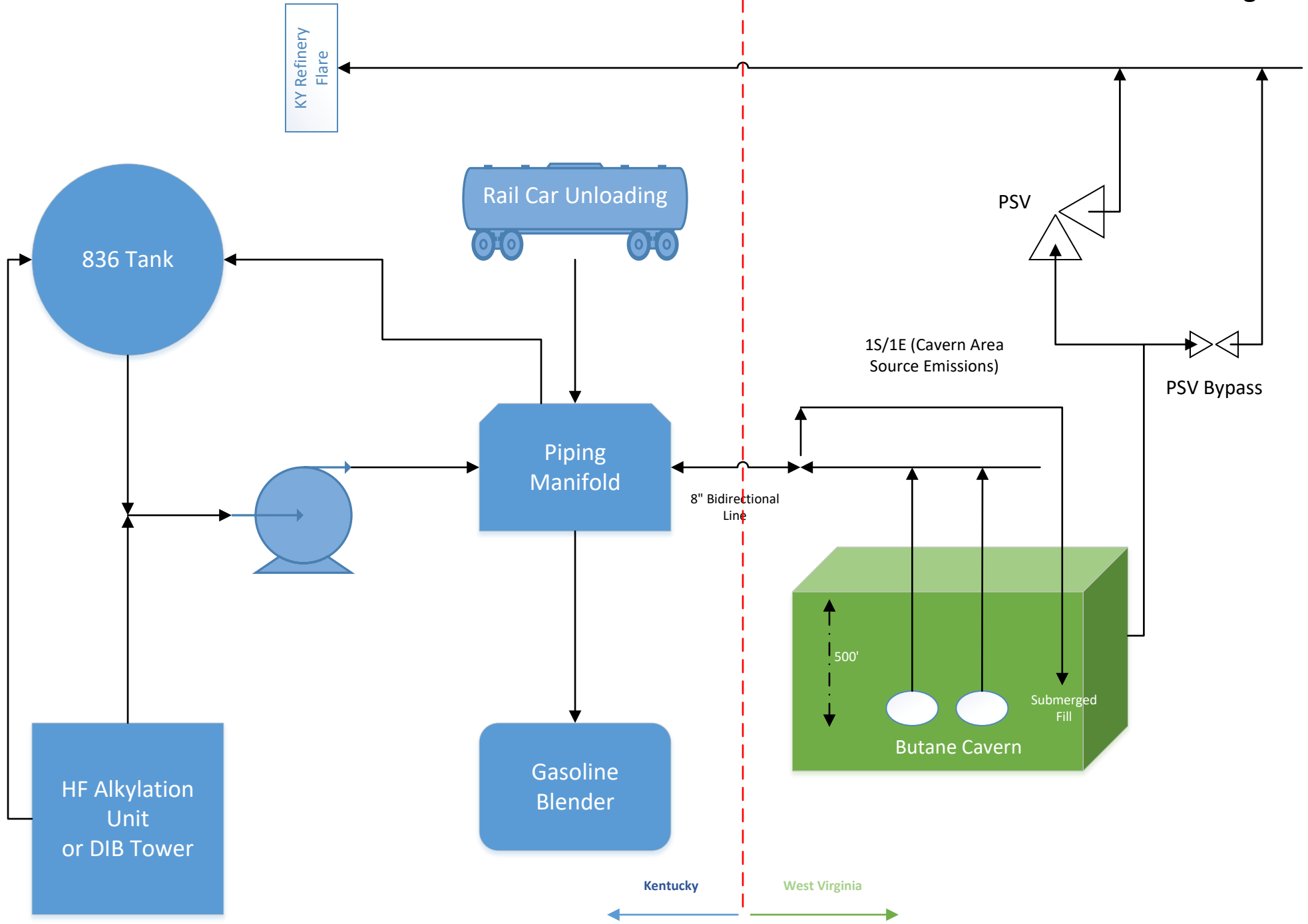
Attachment B - Plot Plan
Butane Cavern

REV.	DATE	BY	DESCRIPTION	APPR.

	CATLETTSBURG REFINING LLC	
	SUBSIDIARY OF MARATHON PETROLEUM COMPANY LLC	

DETAILED PLOT PLAN OF NEAL WEST VIRGINIA		
DRAWN: COOK	WD	
SCALE: 1"=150'	ENG JDB	CK'D BY
DATE: 05/29/18	DWG. 2-1AA-1120-S-A	

Attachment C: Detailed Process Flow Diagram



ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 1S	Emission unit name: HF Alky Unit Fugitive Emissions (WV Scope)	List any control devices associated with this emission unit: NA
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Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Fugitive equipment leak components and fugitive dust from unpaved roads

Manufacturer: NA	Model number: NA	Serial number: NA
Construction date: MM/DD/YYYY 09/01/2006	Installation date: MM/DD/YYYY 09/01/2006	Modification date(s): MM/DD/YYYY NA

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):
NA

Maximum Hourly Throughput: NA	Maximum Annual Throughput: NA	Maximum Operating Schedule: 8760 hours
---	---	--

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating: NA	Type and Btu/hr rating of burners: NA

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

NA

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
NA			

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})	0.06	0.04
Particulate Matter (PM ₁₀)	0.57	0.4
Total Particulate Matter (TSP)	2.13	1.5
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)	1.7	7.5
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
1,3-Butadiene	0.0001	0.0006
Benzene	0.0003	0.001
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).
VOC emission factors are from Protocol for Equipment Leak Emission Estimates (EPA 453/R-65-017), U.S. EPA, November 1995, "Table 2-2: Refinery Average Emission Factors."

VOC control efficiencies for light liquid and gas/vapor valves, connectors, and light liquid pumps are taken from Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017), U.S. EPA, November 1995, "Table G-2: Determination of LDAR Control Effectiveness at Refinery Process Units" for HON LDAR rule (40 CFR Part 63 Subpart H) being developed at the time the protocol was drafted by EPA. Units subject to GGGa/VVa do not monitor connectors, therefore, no efficiency factor is claimed for those units.

HAPs were calculated based on the total VOC and the ppmw concentration of the individual HAP expected in the Butane stream.

PM emissions were calculated using AP-42 Section 13.2.2, Unpaved Roads

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Pursuant to 40 CFR 60.592a(a), the permittee subject to the provisions of 40 CFR 60 Subpart GGGa shall comply with the requirements of 40 CFR 60.482-1a to 60.482-10a as soon as practicable, but no later than 180 days after initial startup.

Pursuant to 40 CFR 60.592a(b), for a given process unit, the permittee may elect to comply with the following requirements as an alternative to the requirements in 40 CFR 60.482-7a. (1) Comply with 40 CFR 60.483-1a. (2) Comply with 40 CFR 60.483-2a. (3) Comply with the Phase III provisions in 40 CFR 63.168, except the permittee may elect to follow the provisions in 40 CFR 60.482-7a(f) instead of 40 CFR 63.168 for any valve that is designated as being leakless.

Pursuant to 40 CFR 60.592a(d), the permittee shall comply with the provisions of 40 CFR 60.485a except as provided in 40 CFR 60.593a.

Pursuant to 40 CFR 60.593a(g), connectors in gas/vapor or requirements in 40 CFR 60.482-11a, provided the permittee complies with 40 CFR 60.482-8a for all connectors, not just those in heavy liquid service.



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Pursuant to 40 CFR 60.482-1a(e), equipment that the permittee designates as being in VOC service less than 300 hr/yr is excluded from the requirements of 40 CFR 60.482-2a through 60.482-11a if it is identified as required in 40 CFR 60.486a(e)(6) and it meets any of the conditions specified in paragraphs 40 CFR 60.482-1a(e)(1) through (3):

- (1) The equipment is in VOC service only during startup and shutdown, excluding startup and shutdown between batches of the same campaign for a batch process.
- (2) The equipment is in VOC service only during process malfunctions or other emergencies.
- (3) The equipment is backup equipment that is in VOC service only when the primary equipment is out of service.

Pursuant to 40 CFR 60.482-6a(a)(1), each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR 60.482-6a(d) and (e).

Pursuant to 40 CFR 60.482-6a(a)(2), the cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.

Pursuant to 40 CFR 60.482-6a(b), each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) [Continued from previous page]

Pursuant to 40 CFR 60.593a(g) and 40 CFR 60.482–8a(a), if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at connectors in gas/vapor or light liquid service, the permittee shall follow either one of the following procedures:

(1) The permittee shall monitor the equipment within 5 days by the method specified in 40 CFR 60.485a(b) and shall comply with the requirements of 40 CFR 60.482–8a(b) through (d) of this section.

(2) The permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.

Pursuant to 40 CFR 60.592a(e), the permittee shall comply with the provisions of 40 CFR 60.486a and 60.487a.

Pursuant to 40 CFR 60.482-6a(c), when a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with 40 CFR 60.482-6a(a) at all other times.

Pursuant to 40 CFR 60.482-6a(d), open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of 40 CFR 60.482-6a(a), (b), and (c).

Pursuant to 40 CFR 60.482-6a(e), open-ended valves or lines containing materials which would present an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in 40 CFR 60.482-6a(a) through (c) are exempt from the requirements of 40 CFR 60.482-6a(a) through (c).

Pursuant to 40 CFR 60.482-7a(a)(1), each valve shall be monitored monthly to detect leaks by the methods specified in 40 CFR 60.485a(b) and shall comply with 40 CFR 60.482-7a(b) through (e), except as provided in 40 CFR 60.482-7a(f), (g), and (h) and 40 CFR 60.483–1a and 60.483–2a.

Pursuant to 40 CFR 60.482-7a(a)(2), a valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to 40 CFR 60.482-7a(a)(2)(i) or (ii), except for a valve that replaces a leaking valve and except as provided in 40 CFR 60.482-7a(f), (g), and (h) and 40 CFR 60.483–1a and 60.483–2a.

Pursuant to 40 CFR 60.482-9a(a), delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit.

Pursuant to 40 CFR 60.482-9a(b), delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.

Pursuant to 40 CFR 60.482-9a(c), delay of repair for valves and connectors will be allowed if:

(1) The permittee demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and

(2) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 CFR 60.482–10a.

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) [Continued from previous page]

Pursuant to 40 CFR 60.482-9a(e), delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

Pursuant to 40 CFR 60.482-9a(f), when delay of repair is allowed for a leaking valve or connector that remains in service, the valve or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.

Pursuant to 40 CFR 60.593a(g) and 40 CFR 60.482-8a(a), if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at connectors in gas/vapor or light liquid service, the permittee shall follow either one of the following procedures:

- (1) The permittee shall monitor the equipment within 5 days by the method specified in 40 CFR 60.485a(b) and shall comply with the requirements of 40 CFR 60.482-8a(b) through (d) of this section.
- (2) The permittee shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection. Pursuant to 40 CFR 60.592a(e), the permittee shall comply with the provisions of 40 CFR 60.486a and 60.487a.

Are you in compliance with all applicable requirements for this emission unit? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

**Attachment I - Supporting Calculations
MPLX Butane Cavern**

VOC Potential to Emit from Equipment Leaks

Component Type	Service Type	VOC Emission Factor ¹		Component Additions (#)	Uncontrolled VOC Emission Rate ²		Control Efficiency ³ (%)	Controlled VOC Emission Rate ²		Benzene ⁴		1,3-Butadiene ⁴	
		(kg/hr/comp.)	(lb/hr/comp.)		(lb/hr)	(tpy)		(lb/hr)	(tpy)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Valves	Gas/Vapor	0.02680	0.05908	59	3.49	15.27	92%	0.28	1.22				
Valves	Light Liquid	0.01090	0.02403	294	7.06	30.94	88%	0.85	3.71				
Valves	Heavy Liquid	0.00230	0.00507	-	-	-	-	-	-				
Connectors	Gas/LL	0.00025	0.00055	1059	0.58	2.56	-	0.58	2.56				
Connectors	Heavy Liquid	0.00025	0.00055	-	-	-	-	-	-				
Pumps	Light Liquid	0.11400	0.25132	-	-	-	75%	-	-				
Pumps	Heavy Liquid	0.02100	0.04630	-	-	-	-	-	-				
Compressors	Gas/Vapor	0.63600	1.40213	-	-	-	-	-	-				
Pressure Relief Valves	Gas/Vapor	0.16000	0.35274	-	-	-	-	-	-				
Sampling connections	All	0.01500	0.03307	3	0.10	0.43	-	0.10	0.43				
Agitators	All	0.11400	0.25132	-	-	-	-	-	-				
TOTAL					11.13	48.77		1.71	7.49	2.60E-04	1.14E-03	1.30E-04	5.69E-04

¹ Emission factors are from Protocol for Equipment Leak Emission Estimates (EPA 453/R-65-017), U.S. EPA, November 1995, "Table 2-2: Refinery Average Emission Factors."

² Annual emission rates assume the components for the project are in service 8,760 hours per year.

³ Control efficiencies for light liquid and gas/vapor valves, connectors, and light liquid pumps are taken from Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017), U.S. EPA, November 1995, "Table G-2: Determination of LDAR Control Effectiveness at Refinery Process Units" for HON LDAR rule (40 CFR Part 63 Subpart H) being developed at the time the protocol was drafted by EPA. Units subject to GGGa/VVa do not monitor connectors, therefore, no efficiency factor is claimed for those units.

⁴ Benzene and 1,3-Butadiene emission rates are based on the mass fraction of these compounds expected to be present in the contacting butane process stream (152 ppmw and 76 ppmw for benzene and 1,3-Butadiene, respectively).

Attachment I - Supporting Calculations

MPLX Butane Cavern

Butane Cavern Fugitive Dust Potential to Emit

Parameter	
Vehicle Miles (assumed constant)	
Miles per Round Trip	1
Round Trips per Week	28
Weeks per Year	52
Round Trips per Year	1456
Vehicle Miles per Year	1456
Vehicle Miles in any one hour	1
Emission Factors	
PM 2.5 Final Emission Factor (lb/Vehicle Miles Travelled)	0.057
PM 10 Final Emission Factor (lb/Vehicle Miles Travelled)	0.565
PM 30 Final Emission Factor (lb/Vehicle Miles Travelled)	2.090
PM Emissions (tpy)	
Total PM 2.5 Total Particulate Emissions From Vehicular Dust	0.04
Total PM 10 Total Particulate Emissions From Vehicular Dust	0.4
Total PM 30 Total Particulate Emissions From Vehicular Dust	1.5
PM Emissions (pph)	
Total PM 2.5 Total Particulate Emissions From Vehicular Dust	0.06
Total PM 10 Total Particulate Emissions From Vehicular Dust	0.56
Total PM 30 Total Particulate Emissions From Vehicular Dust	2.09

SILT CONTENT

Assumed Silt Content
6.4

<u>Comparison of gravel vs. dirt</u>			<u>Comparison of East vs. West</u>		
East	S	M	Gravel	--	--
West		--	Dirt	--	M
Overall	S	--	Overall	--	--

In keeping with the findings summarized above, it was decided to provide separate default silt values for gravel and dirt roads, for use throughout the United States (i.e., no distinction between east and west).

	<u>Mean Silt Content</u>
Gravel Roads	6.4 percent
Dirt Roads	11 percent

Emission Factor Documentation
for AP-42 Section 13.2.2, Unpaved
Roads - Final Report Section 4-29

Specification of an appropriate default moisture content for a dry road proved more problematic. The overall mean moisture content in publicly accessible road data set was found as 1.1 percent. Although this value potentially could have provided the default, it was believed that 1.1 percent did not adequately represent the extremes of the data set. The data base contained moisture contents approximately 0.1 to 0.3 percent for roads even in what are not considered "dry" parts of the nation. For example, four samples collected for an emission inventory of Grants Pass, Oregon, ranged from 0.14 to 0.38 percent in moisture content, with a mean value of 0.24 percent. The four Raleigh, North Carolina ("BJ") tests presented in Table 4-32 are associated with moisture contents between 0.07 and 0.1 percent. (In fact, the Raleigh test series provided the lowest moisture contents in the entire data set. By comparison, moisture contents for the desert [the Arizona, Palm Springs and Reno tests in References 6, 1 and 2, respectively] ranged from 0.17 to 0.48 percent.)

Attachment I - Supporting Calculations MPLX Butane Cavern


Butane Cavern Fugitive Dust Potential to Emit

VEHICLE WEIGHT

Assumed Mean Vehicle Weight (tons)	2.3
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2015 Ford F-150 / Curb weight

4,050 to 4,930 lbs



Assumed Mean Man Weight (tons)	0.10
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How much does the average American man weigh? The average American man 20 years old and up weighs **197.9 pounds**. The average waist circumference is 40.2 inches, and the average height is just over 5 feet 9 inches (about 69.1 inches) tall.



<https://www.healthline.com> > Wellness Topics > Nutrition

Assumed Total Vehicle Weight (tons)	2.4
--	------------

ROUND TRIP DISTANCES

Assumed Daily Round Trips	4
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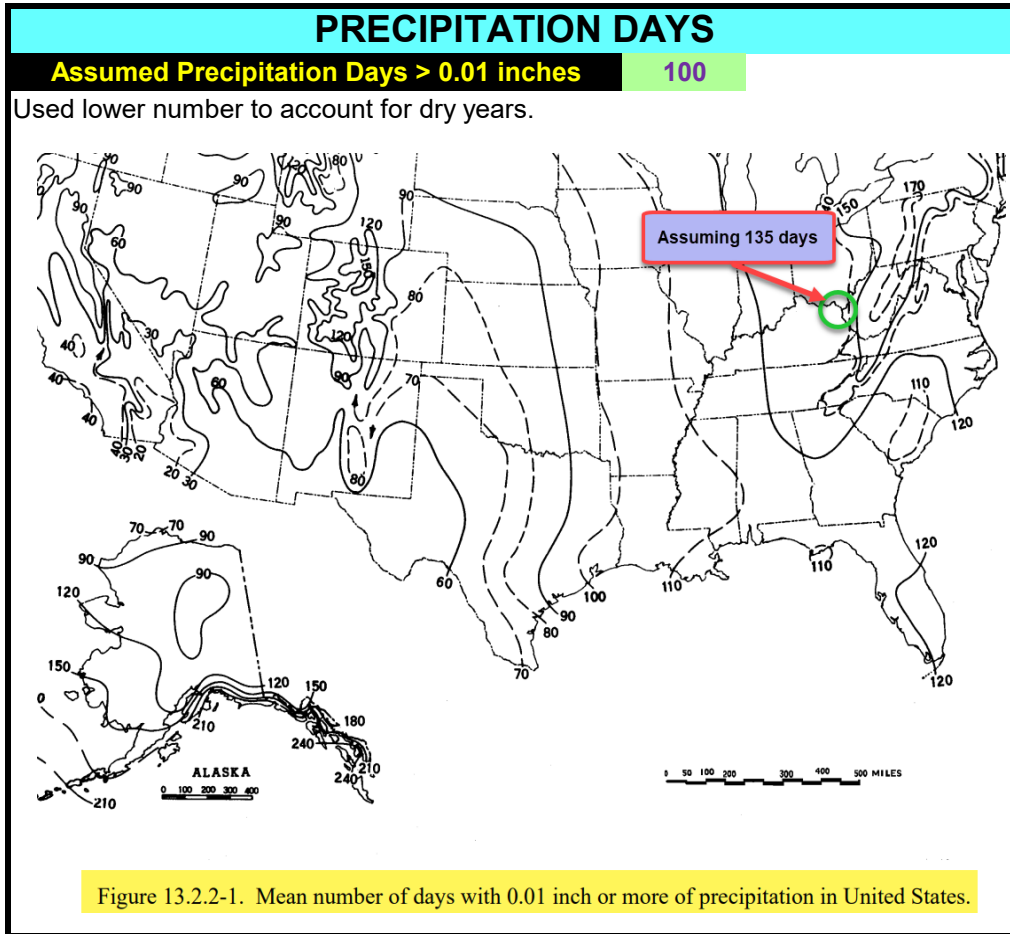
Round Trip Distance - Butane Cavern (Miles)	1
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Attachment I - Supporting Calculations

MPLX Butane Cavern

Butane Cavern Fugitive Dust Potential to Emit



EMISSION FACTOR

PM 2.5 Base Emission Factor	0.0777
PM 10 Base Emission Factor	0.7770
PM 30 Base Emission Factor	2.8782

Table 13.2.2-2. CONSTANTS FOR EQUATIONS 1a AND 1b

Constant	Industrial Roads (Equation 1a)			Public Roads (Equation 1b)		
	PM-2.5	PM-10	PM-30*	PM-2.5	PM-10	PM-30*
k (lb/VMT)	0.15	1.5	4.9	0.18	1.8	6.0
a	0.9	0.9	0.7	1	1	1
b	0.45	0.45	0.45	-	-	-
c	-	-	-	0.2	0.2	0.3
d	-	-	-	0.5	0.5	0.3
Quality Rating	B	B	B	B	B	B

*Assumed equivalent to total suspended particulate matter (TSP)

“-“ = not used in the emission factor equation

Attachment I - Supporting Calculations

MPLX Butane Cavern

Butane Cavern Fugitive Dust Potential to Emit

Table 13.2.2-3. RANGE OF SOURCE CONDITIONS USED IN DEVELOPING EQUATION 1a AND 1b

Emission Factor	Surface Silt Content, %	Mean Vehicle Weight		Mean Vehicle Speed		Mean No. of Wheels	Surface Moisture Content, %
		Mg	ton	km/hr	mph		
Industrial Roads (Equation 1a)	1.8-25.2	1.8-260	2-290	8-69	5-43	4-17 ^a	0.03-13
Public Roads (Equation 1b)	1.8-35	1.4-2.7	1.5-3	16-88	10-55	4-4.8	0.03-13

^a See discussion in text.

For vehicles traveling on unpaved surfaces at industrial sites, emissions are estimated from the following equation:

AP-42 Section 13.2.2-4

$$E = k (s/12)^a (W/3)^b \quad (1a)$$

Where:

- a = constant (see Table 13.2.2-2)
- b = constant (see Table 13.2.2-2)
- k = constant (lb/Vehicle Miles Traveled - see Table 13.2.2-2)
- s = Surface material silt content (%)
- W = Weight of vehicle (tons)

PM 2.5 Rain Corrected Emission Factor	0.0564
PM 10 Rain Corrected Emission Factor	0.5641
PM 30 Rain Corrected Emission Factor	2.0896

Rain as natural mitigation $E_{ext} = E [(365 - P)/365]$ (2)

where:

- E_{ext} = annual size-specific emission factor extrapolated for natural mitigation, lb/VMT
- E = emission factor from Equation 1a or 1b
- P = number of days in a year with at least 0.254 mm (0.01 in) of precipitation (see below)

**Attachment I - Supporting Calculations
MPLX Butane Cavern**

Butane Cavern Fugitive Dust Potential to Emit

Wear & Tear Emission Factor 0.00047

Table 13.2.2-4. EMISSION FACTOR FOR 1980'S VEHICLE FLEET
EXHAUST, BRAKE WEAR AND TIRE WEAR

Particle Size Range ^a	C, Emission Factor for Exhaust, Brake Wear and Tire Wear ^b lb/VMT
PM _{2.5}	0.00036
PM ₁₀	0.00047
PM ₃₀ ^c	0.00047

- ^a Refers to airborne particulate matter (PM-x) with an aerodynamic diameter equal to or less than x micrometers.
- ^b Units shown are pounds per vehicle mile traveled (lb/VMT).
- ^c PM-30 is sometimes termed "suspendable particulate" (SP) and is often used as a surrogate for TSP.

PM 2.5 Total Emission Factor (lb/VMT) 0.0569
PM 2.5 Total Emission Factor (lb/VMT) 0.5646
PM 2.5 Total Emission Factor (lb/VMT) 2.0901