

Section 3

Application Summary

The **Application Summary** shall include a brief description of the facility and its process, the type of permit application, the applicable regulation (i.e. 20.2.72.200.A.X, or 20.2.73 NMAC) under which the application is being submitted, and any air quality permit numbers associated with this site. If this facility is to be collocated with another facility, provide details of the other facility including permit number(s). In case of a revision or modification to a facility, provide the lowest level regulatory citation (i.e. 20.2.72.219.B.1.d NMAC) under which the revision or modification is being requested. Also describe the proposed changes from the original permit, how the proposed modification will effect the facility's operations and emissions, de-bottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

Routine or predictable emissions during Startup, Shutdown, and Maintenance (SSM): Provide an overview of how SSM emissions are accounted for in this application. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.nmenv.state.nm.us/aqb/permit/app_form.html) for more detailed instructions on SSM emissions.

The Western Refining Wingate Facility is owned and operated by Western Refining Southwest, Inc. (Western). Western is proposing to modify the Western Refining Wingate Facility NSR Permit (1313-M5R4) through a Significant Revision (20.2.72.219.D NMAC). The following paragraph details the changes being requested in this application.

Currently the facility is authorized as a gas processing plant including loading and unloading liquefied petroleum gas (LPG), such as propane, butane, and natural gasoline to and from pressurized storage tanks to railcars or trucks. With this application, Western is seeking authorization to change the primary function of the facility to a crude oil transloading facility. As a result, the facility is now categorized under the SIC code for petroleum bulk stations and terminals (SIC code 5171) instead of under the category for natural gas liquids (SIC code 1321).

In addition to the crude transloading operations, Western will install a vapor combustion unit and two external floating roof tanks. The modifications and additions of new emission sources will result in emissions more than one (1) pound per hour, Western is submitting this Significant Revision under 20.2.72.219.D.1.a. Also multiple units at the facility will be removed and are noted in the below Table 1. With the removal of the units at the facility, there are significant plant-wide emissions reductions for all criteria pollutants with the exception of an increase in SO₂ and VOC emissions.

The required sections of the current Universal Application form set for significant revisions are included in this permit application. Table 1 below is a list of regulated emission sources. The table describes proposed updates to this facility.

Table 1. List of Emission Sources		
Emission Source	Description	Updates
7	Vogt Class VV-35; 91 MMBtu/hr Natural Gas Boiler with a manufacture and installation date of 1961	Propose to remove these units from the facility. Emissions for the facility were updated accordingly.
11	Fugitive emissions associated with the vapor recovery unit	
12	Fugitive emissions associated with the Mega Fractionalization Train	
16	Truck rack system	Emissions from this unit has been previously reviewed and approved. No changes are being requested.
18	Butamer unit	
19	NSX-G-108; 207 MMBtu/hr Natural Gas Boiler with a manufacture and installation date of 1998	Propose to remove this unit from the facility. Emissions for the facility were updated accordingly.
20	Fugitive emissions associated with propane storage	Emissions from these units have been previously reviewed and approved.

21	Fugitive emissions associated with isobutane storage	No changes are being requested.
22	Fugitive emissions associated with n-butane storage	
23	Fugitive emissions associated with pentane storage	
24	Fugitive emissions associated with ethyl mercaptan storage and injection system	Emissions from these units have been previously reviewed and approved. No changes are being requested.
25	Fugitive emissions associated with product pumping system	
26	Emissions associated with blowdown from loading hoses	
27	84 MMBtu/hr Rental Boiler	Propose to remove these units from the facility. Emissions for the facility were updated accordingly.
28	84 MMBtu/hr Rental Boiler	
29	168 MMBtu/hr Rental Boiler	
Haul-Rd	Facility Haul Roads	Haul road emissions from truck traffic for this facility are accounted for with this revision.
TR-HOSE	Hose disconnect fugitive emissions from crude truck unloading operations	Emissions from this activity are added to the facility with this revision.
RC-FUG	Fugitive emissions associated with crude rail loading	Emissions from the Rail Loading activities are added to the facility with this revision.
RC-LOAD	Rail loading emissions captured by the VCU	
RC-UNCAP	Rail loading emissions uncaptured by the VCU	
RC-HOSE	Hose disconnect fugitive emissions from crude rail loading operations	
TK-1	120,000 bbl Crude Storage External Floating Roof Tanks	Tank emissions were added to the facility with this revision.
TK-2		
VCU-1	Vapor Combustion Unit	Emissions from this unit was added to this facility with this revision.
SSM/M	Startup, Shutdown, Maintenance and Malfunction emissions	Existing unchanged emissions that were permitted per the Implementation Guidance for Permitting SSM Emissions and Excess Emissions document.
TK-DEGAS	Roof Landing Filling Losses, Roof Landing Standing Losses, and Degassing Losses	Standing losses, Filling losses, & Degassing losses associated with the tanks were added to the facility with this revision
TK-BLAST	Abrasive Blasting Events	These will be exempt activities under 20.2.72.202.B.5. Calculations for these events are provided in Section 6 of this application.
TK-PAINT	Painting Events	
FP-1	South Fire Pump Engine with a manufacture and construction date of 09/1982	No changes are being requested with this revision. These units do not have permitted emission limits as they are considered exempt under 20.2.72.202.B.3. Units FP-1, FP-2, and EG-1 are subject to the requirements under 40 CFR 63, Subpart ZZZZ. Unit FP-2 is also subject to the requirements under NSPS JJJJ.
FP-2	North Fire Pump Engine with a manufacture date of 1980 and reconstruction date of 04/2007.	
EG-1	Emergency Diesel Caterpillar RICE Generator	

Section 4

Process Flow Sheet

A **process flow sheet** and/or block diagram indicating the individual equipment, all emission points and types of control applied to those points. The unit numbering system should be consistent throughout this application.

A process flow sheet is attached.

Section 5

Plot Plan Drawn To Scale

A **plot plan drawn to scale** showing emissions points, roads, structures, tanks, and fences of property owned, leased, or under direct control of the applicant. This plot plan must clearly designate the restricted area as defined in UA1, Section 1-D.12. The unit numbering system should be consistent throughout this application.

A plot plan is attached.

Section 6

All Calculations

Show all calculations used to determine both the hourly and annual controlled and uncontrolled emission rates. All calculations shall be performed keeping a minimum of three significant figures. Document the source of each emission factor used (if an emission rate is carried forward and not revised, then a statement to that effect is required). If identical units are being permitted and will be subject to the same operating conditions, submit calculations for only one unit and a note specifying what other units to which the calculations apply. All formulas and calculations used to calculate emissions must be submitted. The "Calculations" tab in the UA2 has been provided to allow calculations to be linked to the emissions tables. Add additional "Calc" tabs as needed. If the UA2 or other spread sheets are used, all calculation spread sheet(s) shall be submitted electronically in Microsoft Excel compatible format so that formulas and input values can be checked. Format all spread sheets and calculations such that the reviewer can follow the logic and verify the input values. Define all variables. If calculation spread sheets are not used, provide the original formulas with defined variables. Additionally, provide subsequent formulas showing the input values for each variable in the formula. All calculations, including those calculations are imbedded in the Calc tab of the UA2 portion of the application, the printed Calc tab(s), should be submitted under this section.

Tank Flashing Calculations: The information provided to the AQB shall include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., NOI, permit, or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis. If Hysis is used, all relevant input parameters shall be reported, including separator pressure, gas throughput, and all other relevant parameters necessary for flashing calculation.

SSM Calculations: It is the applicant's responsibility to provide an estimate of SSM emissions or to provide justification for not doing so. In this Section, provide emissions calculations for Startup, Shutdown, and Routine Maintenance (SSM) emissions listed in the Section 2 SSM and/or Section 22 GHG Tables and the rationale for why the others are reported as zero (or left blank in the SSM/GHG Tables). Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.nmenv.state.nm.us/aqb/permit/app_form.html) for more detailed instructions on calculating SSM emissions. If SSM emissions are greater than those reported in the Section 2, Requested Allowables Table, modeling may be required to ensure compliance with the standards whether the application is NSR or Title V. Refer to the Modeling Section of this application for more guidance on modeling requirements.

Glycol Dehydrator Calculations: The information provided to the AQB shall include the manufacturer's maximum design recirculation rate for the glycol pump. If GRI-Glycalc is used, the full input summary report shall be included as well as a copy of the gas analysis that was used.

Road Calculations: Calculate fugitive particulate emissions and enter haul road fugitives in Tables 2-A, 2-D and 2-E for:

1. If you transport raw material, process material and/or product into or out of or within the facility and have PER emissions greater than 0.5 tpy.
2. If you transport raw material, process material and/or product into or out of the facility more frequently than one round trip per day.

Significant Figures:

A. All emissions standards are deemed to have at least two significant figures, but not more than three significant figures.

B. At least 5 significant figures shall be retained in all intermediate calculations.

C. In calculating emissions to determine compliance with an emission standard, the following rounding off procedures shall be used:

- (1) If the first digit to be discarded is less than the number 5, the last digit retained shall not be changed;
- (2) If the first digit discarded is greater than the number 5, or if it is the number 5 followed by at least one digit other than the number zero, the last figure retained shall be increased by one unit; **and**
- (3) If the first digit discarded is exactly the number 5, followed only by zeros, the last digit retained shall be rounded upward if it is an odd number, but no adjustment shall be made if it is an even number.
- (4) The final result of the calculation shall be expressed in the units of the standard.

Control Devices: In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the control device

regardless if the applicant takes credit for the reduction in emissions. The applicant can indicate in this section of the application if they chose to not take credit for the reduction in emission rates. For notices of intent submitted under 20.2.73 NMAC, only uncontrolled emission rates can be considered to determine applicability unless the state or federal Acts require the control. This information is necessary to determine if federally enforceable conditions are necessary for the control device, and/or if the control device produces its own regulated pollutants or increases emission rates of other pollutants.

Existing Unchanged Units:

The following units are unchanged with this application and have been previously reviewed and approved:

- 16 – Truck Rack System
- 18 – Butamer
- 20 – Propane Storage and Rail Loading
- 21 – Isobutane Storage and Rail Loading
- 22 – n-Butane Storage and Rail Loading
- 23 – Pentanes Storage and Rail Loading
- 24 – Ethyl Mercaptan Storage & Injection System
- 25 – Product Pumping System
- 26 – Blowdown From Loading Hose

The above units are all fugitive sources and based on Emission Factors from the EPA Protocol for Equipment Leak Emission Estimates except for the blowdown from loading hose emissions.

Crude Oil Storage Tanks emissions (units TK-1, TK-2, TK-DEGAS Emissions, TK-BLAST, and TK-PAINT)

The tank emission calculations for this facility were completed using the calculation methodology of a similar Western facility. Working and breathing emissions from the storage tanks were calculated using TANKS 4.0.9d. The TANKS 4.0.9d emission report is included in Section 7. All input parameters and output data obtained from the TANKS software are provided in this section. Working and breathing losses were calculated assuming that the maximum daily throughput at the rail rack is handled through each individual tank. This approach was used to estimate tank emissions and tank turnovers to ensure a conservative estimate of potential emissions. HAPs were calculated using TANKS 4.0.9d with the default HAP speciation for crude oil. H₂S emissions were based on the maximum expected H₂S concentration of the crude oil received at the facility.

Landing loss emissions consist of two parts: Standing-loss emissions and refilling-loss emissions. In addition to tank roof landing, tank degassing may also occur. For the purposes of the calculations, it was conservatively assumed that there will be one landing per year. Equations used to calculate the aforementioned emissions are based on a drain dry design of the tank and are included in Section 7.

Total tank hourly landing emissions were calculated as the maximum of landing loss, degassing loss, and refilling loss. Total tank annual landing emissions were calculated as the sum of standing loss, degassing loss, and refilling loss.

Tank abrasive blasting emissions were based on US EPA AP-42, Chapter 13.2.6, Abrasive blasting.

Tank painting emissions were based on TCEQ guidance.

Truck Unloading emissions (unit TR-HOSE)

The hourly and daily throughput of the crude oil unloading operation at the truck rack is provided in this section. H₂S emissions were calculated using maximum annual throughput and maximum expected H₂S concentration of the crude oil received at the facility.

Fugitive VOC emissions are generated when the truck unloading operation is completed and the hose is disconnected from the truck. Fugitive emissions from hose disconnection are calculated based on the physical parameters of the hose and the characteristics of material, as well as the pressure used to push the material out of the truck. Hourly hose disconnection fugitive VOC emissions from the unloading of each material are calculated based on VOC emissions per truck and the number of trucks unloaded per hour. Annual hose disconnection fugitive VOC emissions from the unloading of each material are calculated based on VOC emissions per truck and the number of trucks unloaded per year. These fugitive emissions are represented under unit TR-HOSE and were estimated using the throughput for crude truck unloading and the following assumptions:

- The hose will be capped as soon as it is disconnected from the truck
- All of the vapor from the soft hose is released (worst case emissions)
- All of the vapor from the pipe above atmospheric pressure (14.7 psia) is released.

Rail Loading emissions (units RC-LOAD, RC-UNCAP, RC-HOSE, and RC-FUG)

Loading emissions will be controlled by the VCU. The annual uncontrolled rail loading emissions (unit RC-LOAD) sent to the VCU were estimated using AP-42 Section 5.2, Equation 1 and the maximum annual throughput rate. All input parameters for the rail loading emission calculations are included in this section. Since the vapor collection efficiency was assumed to be 98.7%, unit RC-UNCAP was added to the facility to account for the uncaptured rail loading emissions. HAP emissions were estimated by multiplying the HAP output from TANKS 4.0.9d by a ratio of the loading VOC losses to working and breathing emissions.

Fugitive emissions from the railcar loading of crude oil (unit RC-FUG) were estimated using factors from Table 2-4, Oil & Gas Production Operations Average Emission Factors from the EPA Protocol for Equipment Leak Emission Estimates.

There will also be fugitive emissions from disconnecting the hoses connected to the rail car following each transfer. These fugitive emissions are represented under unit RC-HOSE and were estimated using the throughput for crude railcar loading and the following assumptions:

- The hose will be capped as soon as it is disconnected from the railcar
- All of the vapor from the soft hose is released (worst case emissions)
- All of the vapor from the pipe above atmospheric pressure (14.7 psia) is released.

All H₂S emissions associated with rail car crude loading were calculated using each unit's respective throughput and maximum expected H₂S concentration of the crude oil received at the facility.

Vapor Combustion Unit emissions (unit VCU-1)

Emissions from railcar loading will be sent to the VCU. Pilot emissions for NO_x and CO were based on TNRCC RG-109 emission factors. Hourly pilot emissions were calculated assuming a maximum VCU flow rate.

The VOC, NO_x, and CO emission calculations for the VCU loading operations were carried out using manufacturer guaranteed emission factors. PM emissions were calculated using emission factors from AP-42, Table 1.4-2. H₂S emissions were based on the maximum expected H₂S concentration of the crude oil received at the facility. For SO₂ emissions, a 100% conversion rate from H₂S to SO₂ was assumed.

Haul road emissions (unit Haul-Rd)

Paved haul road emissions were calculated using Equation 1, Equation 2, Table 13.2.1-2, and Figure 13.2.1-1 of AP-42, Section 13.2.1.

Startup, Shutdown, Maintenance, & Malfunction emissions (unit SSM/M)

Emissions for SSM/M events were unchanged with this revision. The existing 10 tpy limit allowed for SSM/Malfunction per paragraph 2.e) of "Implementation Guidance for Permitting SSM Emissions and Excess Emissions" document issued 10 January 2011 was carried forward from the previous permit application.

Section 7

Information Used To Determine Emissions

Information Used to Determine Emissions shall include the following:

- If manufacturer data are used, include specifications for emissions units and control equipment, including control efficiencies specifications and sufficient engineering data for verification of control equipment operation, including design drawings, test reports, and design parameters that affect normal operation.
 - If test data are used, include a copy of the complete test report. If the test data are for an emissions unit other than the one being permitted, the emission units must be identical. Test data may not be used if any difference in operating conditions of the unit being permitted and the unit represented in the test report significantly effect emission rates.
 - If the most current copy of AP-42 is used, reference the section and date located at the bottom of the page. Include a copy of the page containing the emissions factors, and clearly mark the factors used in the calculations.
 - If an older version of AP-42 is used, include a complete copy of the section.
 - If an EPA document or other material is referenced, include a complete copy.
 - Fuel specifications sheet.
 - If computer models are used to estimate emissions, include an input summary (if available) and a detailed report, and a disk containing the input file(s) used to run the model. For tank-flashing emissions, include a discussion of the method used to estimate tank-flashing emissions, relative thresholds (i.e., permit or major source (NSPS, PSD or Title V)), accuracy of the model, the input and output from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis.
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The following information used to determine emissions is attached:

- **Crude Oil Storage Tanks (units TK-1 & TK-2)**
 - TANKS 4.0.9d report
- **Crude Oil Storage Tanks (TK-BLAST & TK-PAINT)**
 - AP-42, Section 13.2.6
 - TCEQ's Painting Basics and Emissions Calculations for TCEQ Air Quality Permit Applications, November 5, 2012
 - MSDS
- **Haul Road Emissions (unit Haul-Rd)**
 - AP-42, Section 13.2.1
- **Fugitive emissions**
 - EPA Protocol for Equipment Leak Emission Estimates (11/95)
- **Crude Oil Loading & Unloading emissions**
 - AP-42, Section 5.2
- **Vapor Combustion Unit Emissions (unit VCU-1)**
 - TNRCC RG-109
 - Manufacturer Specification sheet
 - AP-42, Table 1.4-2

Section 8

Map(s)

A map such as a 7.5 minute topographic quadrangle showing the exact location of the source. The map shall also include the following:

The UTM or Longitudinal coordinate system on both axes	An indicator showing which direction is north
A minimum radius around the plant of 0.8km (0.5 miles)	Access and haul roads
Topographic features of the area	Facility property boundaries
The name of the map	The area which will be restricted to public access
A graphical scale	

A map showing the location of the facility is attached.

Section 9

Proof of Public Notice

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC)

(This proof is required by: 20.2.72.203.A.14 NMAC “Documentary Proof of applicant’s public notice”)

I have read the AQB “Guidelines for Public Notification for Air Quality Permit Applications”

This document provides detailed instructions about public notice requirements for various permitting actions. It also provides public notice examples and certification forms. Material mistakes in the public notice will require a re-notice before issuance of the permit.

Unless otherwise allowed elsewhere in this document, the following items document proof of the applicant’s Public Notification. Please include this page in your proof of public notice submittal with checkmarks indicating which documents are being submitted with the application.

New Permit and **Significant Permit Revision** public notices must include all items in this list.

Technical Revision public notices require only items 1, 5, 9, and 10.

Per the Guidelines for Public Notification document mentioned above, include:

1. A copy of the certified letter receipts with post marks (20.2.72.203.B NMAC)
 2. A list of the places where the public notice has been posted in at least four publicly accessible and conspicuous places, including the proposed or existing facility entrance. (e.g: post office, library, grocery, etc.)
 3. A copy of the property tax record (20.2.72.203.B NMAC).
 4. A sample of the letters sent to the owners of record.
 5. A sample of the letters sent to counties, municipalities, and Indian tribes.
 6. A sample of the public notice posted and a verification of the local postings.
 7. A table of the noticed citizens, counties, municipalities and tribes and to whom the notices were sent in each group.
 8. A copy of the public service announcement (PSA) sent to a local radio station and documentary proof of submittal.
 9. A copy of the classified or legal ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
 10. A copy of the display ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
 11. A map with a graphic scale showing the facility boundary and the surrounding area in which owners of record were notified by mail. This is necessary for verification that the correct facility boundary was used in determining distance for notifying land owners of record.
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All required items for public notice are attached.

Section 10

Written Description of the Routine Operations of the Facility

A written description of the routine operations of the facility. Include a description of how each piece of equipment will be operated, how controls will be used, and the fate of both the products and waste generated. For modifications and/or revisions, explain how the changes will affect the existing process. In a separate paragraph describe the major process bottlenecks that limit production. The purpose of this description is to provide sufficient information about plant operations for the permit writer to determine appropriate emission sources.

In this application, the facility's main operation became crude transloading. As a result, the facility is now categorized under the SIC code for petroleum bulk stations and terminals (SIC code 5171) instead of under the category for natural gas liquids (SIC code 1321).

Prior to this application, the plant has shutdown the gas processing operation. With this application, the facility's main operation will become crude transloading. Crude oil will be transferred from trucks or pipeline to two storage tanks. From the storage tanks, crude oil will be unloaded into railcars to be transferred off-site. The storage tanks will be equipped with an external floating roof to minimize emissions from working and breathing losses. The facility retains the Butamer, storage and loading/unloading facility for LPG.

Section 11

Source Determination

Source submitting under 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC

Sources applying for a construction permit, PSD permit, or operating permit shall evaluate surrounding and/or associated sources (including those sources directly connected to this source for business reasons) and complete this section. Responses to the following questions shall be consistent with the Air Quality Bureau's permitting guidance, Single Source Determination Guidance, which may be found on the Applications Page in the Permitting Section of the Air Quality Bureau website.

Typically, buildings, structures, installations, or facilities that have the same SIC code, that are under common ownership or control, and that are contiguous or adjacent constitute a single stationary source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes. Submission of your analysis of these factors in support of the responses below is optional, unless requested by NMED.

A. Identify the emission sources evaluated in this section (list and describe):

See Table 2-A.

B. Apply the 3 criteria for determining a single source:

SIC Code: Surrounding or associated sources belong to the same 2-digit industrial grouping (2-digit SIC code) as this facility, **OR** surrounding or associated sources that belong to different 2-digit SIC codes are support facilities for this source.

Yes No

Common Ownership or Control: Surrounding or associated sources are under common ownership or control as this source.

Yes No

Contiguous or Adjacent: Surrounding or associated sources are contiguous or adjacent with this source.

Yes No

C. Make a determination:

The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "YES" boxes should be checked. If in "A" above you evaluated other sources as well, you must check **AT LEAST ONE** of the boxes "NO" to conclude that the source, as described in the application, is the entire source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.

The source, as described in this application, **does not** constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe):

Section 12

Section 12.A

PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

A PSD applicability determination for all sources. For sources applying for a significant permit revision, apply the applicable requirements of 20.2.74.AG and 20.2.74.200 NMAC and to determine whether this facility is a major or minor PSD source, and whether this modification is a major or a minor PSD modification. It may be helpful to refer to the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the EPA New Source Review Workshop Manual to determine if the revision is subject to PSD review.

A. This facility is:

- a minor PSD source before and after this modification (if so, delete C and D below).
- a major PSD source before this modification. This modification will make this a PSD minor source.
- an existing PSD Major Source that has never had a major modification requiring a BACT analysis.
- an existing PSD Major Source that has had a major modification requiring a BACT analysis
- a new PSD Major Source after this modification.

B. This facility **is not** one of the listed 20.2.74.501 Table I – PSD Source Categories. Please see the PSD applicability determination below. The project emissions (before netting) for this project are as follows [see Table 2 in 20.2.74.502 NMAC for a complete list of significance levels]:

- a. NOx: **XX.X** TPY
- b. CO: **XX.X** TPY
- c. VOC: **XX.X** TPY
- d. SOx: **XX.X** TPY
- e. TSP (PM): **XX.X** TPY
- f. PM10: **XX.X** TPY
- g. PM2.5: **XX.X** TPY
- h. Fluorides: **XX.X** TPY
- i. Lead: **XX.X** TPY
- j. Sulfur compounds (listed in Table 2): **XX.X** TPY
- k. GHG: **XX.X** TPY

C. **Netting is not required (project is not significant).**

D. **BACT is not required for this modification, as this application is a minor modification.**

E. If this is an existing PSD major source, or any facility with emissions greater than 250 TPY (or 100 TPY for 20.2.74.501 Table 1 – PSD Source Categories), determine whether any permit modifications are related, or could be considered a single project with this action, and provide an explanation for your determination whether a PSD modification is triggered.

Below is the major source determination for the Wingate Facility.

In this application, the facility's main operation became crude transloading. As a result, the facility is categorized under the SIC code for petroleum bulk stations and terminals (SIC code 5171) instead of under the category for natural gas liquids (SIC code 1321). A petroleum bulk station and terminal is not historically considered one of the 28 named source categories listed in Section 169 of the CAA (Table A-1).

The butamer deisobutanizer unit at the facility is subject to 40 CFR 60 Subparts NNN and RRR which are both synthetic organic manufacturing industry regulations. Usually, facilities that are subject to Subparts NNN and RRR are considered “chemical processing facilities” signifying the facility is one of the 28 named source categories. However, n-butane or iso-butane, which are the products of the butamer deisobutanizer, are not listed chemicals under the major SIC code group 28 for chemicals and allied products. Therefore, the only applicable SIC code for the butamer deisobutanizer is 1321 for natural gas liquids which is not historically considered one of the 28 named source categories.

Since the Wingate facility is a crude loading facility and is not considered one of the 28 named source categories and the butamer deisobutanizer unit is identified under the SIC code of 1321, the facility nor any units at the facility can be considered as one of the 28 named source categories. The aforementioned argument implies that the facility threshold to meet PSD major source status is 250 tpy. Furthermore, if the butamer deisobutanizer unit was considered one of the 28 named source categories, the facility as a whole must stay under the 250 tpy threshold before reaching PSD major source status as long as the butamer deisobutanizer unit by itself is not a major source. This is the case with the butamer deisobutanizer unit at the facility. The following paragraphs explain this statement in a more detailed fashion.

The New Source Review Workshop Manual – Prevention of Significant Deterioration and Nonattainment Area Permitting provided by the EPA contains a section discussing the above situation. The EPA manual states the following:

“A situation frequently occurs in which an emissions unit that is included in the 28 listed source categories (and so is subject to a 100 tpy threshold), is located within a parent source whose primary activity is not on the list (and is therefore subject to a 250 tpy threshold). A source which, when considered alone, would be major (and hence subject to PSD) cannot “hide” within a different and less restrictive source category in order to escape applicability.” (Page A. 23)

The manual continues to state:

“As an example, a proposed coal mining operation will use an on-site coal cleaning plant with a thermal dryer. The source will be defined as a coal mine because the cleaning plant will only treat coal from the mine. The mine's potential to emit (including emissions from the thermal dryer) is less than 250 tpy for every regulated pollutant; therefore, it is a “minor” source. The estimated emissions from the thermal dryer, however, will be 150 tpy particulate matter. Thermal dryers are included in the list of 28 source categories that are subject to the 100 tpy major source threshold. Consequently, the thermal dryer would be considered an emissions unit that by itself is a major source and therefore is subject to PSD review, even though the primary activity is not.” (Page A. 23)

From the above excerpts in the EPA manual, a determination can be made. If the butamer unit is considered to be one of the 28 listed source categories located within a parent source whose primary activity is not on the list and the butamer unit is below the 100 tpy threshold, the butamer unit by itself is not a major source and is therefore not subject to PSD review. The facility as a whole must stay under the 250 tpy threshold to not be subject to PSD review.

The facility does not meet the definition of “petroleum storage and transfer units with a total storage capacity exceeding 300,000bbls.” The two crude tanks at the facility only add up to a 240,000 bbls. The crude tanks are the only named category source in respect to the definition of “petroleum and storage transfer with a total storage capacity exceeding 300,000 bbls.” Upon review of the term “petroleum” as defined in 40 CFR 60, Subparts J, K, Ka, and Kb, it is our determination that the named category was limited to crude oil removed from the earth and the oils derived from tar sand, shale, and coal. All other storage tanks at the facility are butane, propane and pentane storage tanks which are not defined as petroleum storage tanks since the petroleum definition is limited to crude oil. These butane, propane and pentane storage tank capacities should not be included when determining if the facility meets the definition of “petroleum and storage transfer with a total storage capacity exceeding 300,000 bbls.” Since the two storage tanks at the facility do not exceed the capacity of 300,000 bbls, the facility is not considered a category source under “petroleum and storage transfer with a total storage capacity exceeding 300,000 bbls.”

Section 13

Discussion Demonstrating Compliance With Each Applicable State & Federal Regulation

Provide a discussion demonstrating compliance with applicable state & federal regulation. If there is a state or federal regulation (other than those listed here) for your facility's source category that does not apply to your facility, but seems on the surface that it should apply, add the regulation to the appropriate table below and provide the analysis. Examples of regulatory requirements that may or may not apply to your facility include 40 CFR 60 Subpart OOO (crushers), 40 CFR 63 Subpart HHH (HAPs), or 20.2.74 NMAC (PSD major sources). We don't want a discussion of every non-applicable regulation, but if there is questionable applicability, explain why it does not apply. All input cells should be filled in, even if the response is 'No' or 'N/A'.

In the "Justification" column, identify the criteria that are critical to the applicability determination, numbering each. For each unit listed in the "Applies to Unit No(s)" column, after each listed unit, include the number(s) of the criteria that made the regulation applicable. For example, TK-1 & TK-2 would be listed as: TK-1 (1, 3, 4), TK-2 (1, 2, 4). Doing so will provide the applicability criteria for each unit, while also minimizing the length of these tables.

As this table will become part of the SOB, please do not change the any formatting in the table, especially the width of the table.

If this application includes any proposed exemptions from otherwise applicable requirements, provide a narrative explanation of these proposed exemptions. These exemptions are from specific applicable requirements, which are spelled out in the requirements themselves, not exemptions from 20.2.70 NMAC or 20.2.72 NMAC.

Table for Applicable STATE REGULATIONS:

<u>STATE REGULATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m ³ , 3. VOL)
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	X	-	Yes	-	20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.
20.2.7 NMAC	Excess Emissions	X	-	Yes	-	All Title V major sources are subject to Air Quality Control Regulations, as defined in 20.2.7 NMAC, and are thus subject to the requirements of this regulation. Also listed as applicable in NSR Permit 1313M5R1.
20.2.33 NMAC	Gas Burning Equipment - Nitrogen Dioxide	-	-	Yes	X	This facility does not have existing gas burning equipment having a heat input of greater than 1,000,000 million British Thermal Units per year per unit. There are no equipment at the facility subject to 20.2.33 NMAC.
20.2.34 NMAC	Oil Burning Equipment: NO ₂	-	-	Yes	X	This facility does not have oil burning equipment (external combustion emission sources, such as oil fired boilers and heaters) having a heat input of greater than 1,000,000 million British Thermal Units per year per unit.
20.2.35 NMAC	Natural Gas Processing	-	-	-	X	This facility is not subject to the requirements of NMAC 2.35 for "New Natural Gas Processing Plants for which a modification

<u>STATE REGULATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m ³ , 3. VOL)
	Plant – Sulfur					commenced on or after July 1, 1974.
20.2.37 NMAC	Petroleum Processing Facilities	-	-	No	X	This facility is not subject to the requirements of NMAC 2.37 for “New Natural Gas Processing Plants for which a modification commenced on or after July 1, 1974.
20.2.38 NMAC	Hydrocarbon Storage Facil.	-	-	No	X	This facility does not meet the applicability criteria of this regulation.
20.2.39 NMAC	Sulfur Recovery Plant - Sulfur	-	-	No	X	This facility is not a sulfur recovery plant, as defined.
20.2.61.109 NMAC	Smoke & Visible Emissions	-	VCU-1	No	-	This regulation establishes controls on smoke and visible emissions from certain sources. Unit VCU-1 is subject to this regulation. The facility will meet all applicable requirements under this regulation.
20.2.70 NMAC	Operating Permits	X	All	Yes	-	Source is currently permitted as major for NO _x and VOCs. This application will reduce NO _x emissions below the major source threshold.
20.2.71 NMAC	Operating Permit Fees	X	All	Yes	-	This regulation establishes a schedule of operating permit emission fees. This facility is subject to 20.2.70 NMAC and is in turn subject to 20.2.71 NMAC.
20.2.72 NMAC	Construction Permits	X	All	Yes	-	This facility is subject to 20.2.72 NMAC and NSR Permit number: 1313-M5-R4
20.2.73 NMAC	NOI & Emissions Inventory Requirements	X	All	Yes	-	Emissions Inventory Reporting: 20.2.73.300 NMAC applies. All Title V major sources meet the applicability requirements of 20.2.73.300 NMAC.
20.2.74 NMAC	Permits – PSD	-	-	Yes	X	This facility is not PSD major as defined by: (1) Any stationary source listed in Table 1 of this Part (20.2.74.501 NMAC) which emits, or has the potential to emit, emissions equal to or greater than one hundred (100) tons per year of any regulated pollutant; or (2) Any stationary source not listed in Table 1 of this Part (20.2.74.501 NMAC) and which emits or has the potential to emit two hundred fifty (250) tons per year or more of any regulated pollutant; or (3) Any physical change that would occur at a stationary source not otherwise qualifying under paragraphs (1) or (2) of subsection Z of 20.2.74.7 NMAC if the change would constitute a major stationary source by itself; (4) A major source that is major for volatile organic compounds shall be considered major for ozone; (5) The fugitive emissions of a stationary source shall not be included in determining for any of the purposes of this section whether it is a major stationary source, unless the source belongs to one of the stationary source categories found in Table 1 of this Part (20.2.74.501 NMAC) or any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act.
20.2.75 NMAC	Construction Permit Fees	X	-	Yes	-	This facility is subject to 20.2.72 NMAC and is in turn subject to the requirements of 20.2.75 NMAC.
20.2.77 NMAC	New Source Performance	X	Unit 18 (Desobutanizer Reactor) TK-1 and	Yes	-	This is a stationary source which is subject to the requirements of 40 CFR Part 60, as amended through September 23, 2013.

<u>STATE REGULATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m ³ , 3. VOL)
			TK-2			
20.2.78 NMAC	Emission Standards for HAPS	N/A	-	Yes	X	NESHAP M would apply in the case of asbestos demolition.
20.2.79 NMAC	Permits – Nonattainment Areas	-	-	Yes	X	This regulation establishes the requirements for obtaining a nonattainment area permit. This facility is not located in a nonattainment area and is therefore not subject to this regulation.
20.2.80 NMAC	Stack Heights	-	-	Yes	X	This regulation establishes requirements for the evaluation of stack heights and other dispersion techniques. This regulation does not apply as the facility is not equipped with any stacks that exceed Good Engineering Practice (GEP).
20.2.82 NMAC	MACT Standards for source categories of HAPS	-	EG-1, FP-1, FP-2	Yes	X	This regulation applies to the facility's emergency generator and fire pumps.

Table for Applicable FEDERAL REGULATIONS:

<u>FEDERAL REGULATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION:
40 CFR 50	NAAQS	X	-	Yes	-	40 CFR 50 establishes National Ambient Air Quality Standards (NAAQS). The facility meets all applicable national ambient air quality standards for NO _x , CO, SO ₂ , H ₂ S, PM ₁₀ , and PM _{2.5} under this regulation.
NSPS 40 CFR 60, Subpart A	General Provisions	X	-	Yes	-	This regulation defines general provisions for relevant standards that have been set under this part. The facility is subject to this regulation because 40 CFR 60, Subpart KKK and Subpart Kb applies.
NSPS 40 CFR60.40 a, Subpart Da	Subpart Da, Performance Standards for Electric Utility Steam Generating Units	-	-	Yes	X	This regulation establishes standards of performance for electric utility steam generating units. This regulation does not apply as there are no electric utility steam generating units at this facility.
NSPS 40 CFR60.40b Subpart Db	Electric Utility Steam Generating Units	-	-	Yes	X	(a) The affected facility to which this subpart applies is each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour). This regulation does not apply because the facility does not operate any industrial-commercial-institutional steam generating units.
NSPS 40 CFR 60, Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	-	-	Yes	X	Not applicable as no facility petroleum liquid storage vessels commenced construction, reconstruction, or modification after May 18, 1978 and prior to July 23, 1984.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	-	Units TK-1, TK-2	Yes	-	This facility has storage vessels, emission units TK-1 and TK-2, with a capacity greater than or equal to 75 cubic meters (m ³) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

FEDERAL REGULATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION:
NSPS 40 CFR 60.330 Subpart GG	Stationary Gas Turbines	-	-	Yes	X	Not applicable as this facility does not have any stationary gas turbines.
NSPS 40 CFR 60, Subpart KKK	Leaks of VOC from Onshore Gas Plants	-	-	Yes	X	This regulation defines standards of performance for equipment leaks of VOC emissions from onshore natural gas processing plants for which construction, reconstruction, or modification commenced after January 10, 1984, and on or before August 23, 2011. The facility is not a natural gas processing plant.
NSPS 40 CFR Part 60 Subpart LLL	Standards of Performance for Onshore Natural Gas Processing: SO₂ Emissions	-	-	Yes	X	The facility is a natural gas processing plant, but does not include a sweetening unit followed by a sulfur recovery unit.
NSPS 40 CFR Part 60 Subpart NNN	Standards of Performance for VOC Emissions from Synthetic Organic Chemical Manufacturing Industry Distillation Operations	-	Unit 18 (Desobutanizer Reactor)	Yes	-	The affected source is a facility which was constructed, modified, or reconstruction commenced after December 30, 1983. The Butamer Deisobutanizer at this facility produces VOC emissions from synthetic organic chemical manufacturing industry distillation operations.
NSPS 40 CFR Part 60 Subpart RRR	Standards of Performance for VOC Emissions from Synthetic Organic Chemical Manufacturing Industry Reactor Processes	-	Unit 18 (Desobutanizer Reactor)	-	-	The deisobutanizer reactors at this facility produces VOC emissions from synthetic organic chemical manufacturing industry distillation operations.
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution	-	-	Yes	X	The facility is not subject to this regulation because it does not contain equipment that meet the definition of an affected facility.
NSPS 40 CFR Part 60 Subpart JJJ		-	FP-2	Yes	-	This regulation establishes standards of performance for stationary spark ignition combustion engines. Unit FP-2 is a 320 hp emergency stationary RICE which was reconstructed after June 12, 2006 and hence, the facility is subject to this regulation.
NESHAP 40 CFR 61 Subpart A	General Provisions	X potentially	-	Yes	-	This part applies to the owner or operator of any stationary source for which a standard is prescribed under this part. There is one potentially applicable NESHAP (see discussion of 40 CFR 61, Subpart M below).

FEDERAL REGULATIONS CITATION	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION:
NESHAP 40 CFR 61 Subpart M	National Emission Standards for Asbestos	X potentially	-	Yes	-	Although this standard does not apply to this facility under routine operating conditions, in the case of asbestos demolition, subpart M would apply.
NESHAP 40 CFR 61 Subpart E	National Emission Standards for Mercury	-	-	Yes	X	The activities regulated by this subpart are not present at this facility.
NESHAP 40 CFR 61 Subpart V	National Emission Standards for Equipment Leaks (Fugitive Emission Sources)	-	-	Yes	X	Not applicable as facility equipment does not operate in VHAP service. VHAP service means a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 10 percent by weight of VHAP. VHAP means a substance regulated under this subpart for which a standard for equipment leaks of the substance has been promulgated. Benzene is a VHAP (See 40 CFR 61 Subpart J).
MACT 40 CFR 63, Subpart A	General Provisions	-	Units EG-1, FP-1, FP-2	Yes	-	This regulation defines general provisions for relevant standards that have been set under this part. The facility is subject to this regulation because MACT ZZZZ applies.
MACT 40 CFR 63.760 Subpart HH	Oil and Natural Gas Production Facilities	-	-	Yes	X	This regulation establishes national emission standards for hazardous air pollutants from oil and natural gas production facilities. This facility is not subject to the requirements of 40 CFR 63 Subpart HH since it is a minor source for HAPs and is not equipped with any affected area sources as described pursuant to this MACT.
MACT 40 CFR 63 Subpart HHH		-	-	Yes	X	This facility is not subject to the requirements of 40 CFR 63 Subpart HHH since it is a minor source for HAPs and is not equipped with any affected area sources as described pursuant to this MACT.
MACT 40 CFR 63, Subpart EEEE		-	-	Yes	X	The facility is not a major source of HAPs so it will not be subject to 40 CFR 63, Subpart EEEE.
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	-	Units EG-1, FP-1, FP-2	Yes	-	This regulation defines national emissions standards for HAPs for stationary reciprocating Internal Combustion Engines. Unit FP-2 is an existing unit which was reconstructed after June 12, 2006. It is a commercial emergency stationary RICE located at an area source of HAP emissions and meets the requirements of NSPS JJJJ. Units FP-1 and EG-1 are existing emergency RICE located at an area source of HAP emissions and are therefore exempt from requirements of this subpart.
MACT 40 CFR 63, Subpart BBBBBB	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities	-	-	Yes	X	Not subject to MACT BBBBBB since the facility does not meet the definition of an affected source.

<u>FEDERAL REGULATIONS CITATION</u>	Title	Applies to Entire Facility	Applies to Unit No(s).	Federally Enforceable	Does Not Apply	JUSTIFICATION:
NESHAP 40 CFR 64	Compliance Assurance Monitoring	-	-	Yes	X	The rail loading (RC-LOAD) is a controlled major source. The VCU-1 is the control device for the rail loading. Since this is an NSR application, CAM applicability will be determined in the Title V application that is submitted for the facility.
NESHAP 40 CFR 68	Chemical Accident Prevention	X	-	Yes	-	This facility is subject to 40 CFR 68 because it handles greater than threshold quantities of certain flammable substances.
Title IV – Acid Rain 40 CFR 72	Acid Rain	-	-	Yes	X	Not applicable as facility is not an Acid Rain Source.
Title IV – Acid Rain 40 CFR 73	Sulfur Dioxide Allowance Emissions	-	-	Yes	X	Not applicable as facility is not an Acid Rain Source.
Title IV – Acid Rain 40 CFR 76	Acid Rain Nitrogen Oxides Emission Reduction Program	-	-	Yes	X	Not applicable as facility is not an Acid Rain Source.
Title VI – 40 CFR 82	Protection of Stratospheric Ozone	-	-	Yes	X	Western owns appliances containing CFCs but Western uses only certified technicians for the maintenance, service, repair, and disposal of appliances and maintains the appropriate records for this requirement. Note: Disposal definition in 82.152: Disposal means the process leading to and including: (1) The discharge, deposit, dumping or placing of any discarded appliance into or on any land or water; (2) The disassembly of any appliance for discharge, deposit, dumping or placing of its discarded component parts into or on any land or water; or (3) The disassembly of any appliance for reuse of its component parts. “Major maintenance, service, or repair means” any maintenance, service, or repair that involves the removal of any or all of the following appliance components: compressor, condenser, evaporator, or auxiliary heat exchange coil; or any maintenance, service, or repair that involves uncovering an opening of more than four (4) square inches of “flow area” for more than 15 minutes.

Section 14

Operational Plan to Mitigate Emissions

(submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

- Title V Sources** (20.2.70 NMAC): By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Emissions During Startups, Shutdowns, and Emergencies** defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) & **Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has developed an **Operational Plan to Mitigate Source Emissions During Malfunction, Startup, or Shutdown** defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- Title V** (20.2.70 NMAC), **NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) & **Nonattainment** (20.2.79 NMAC) **Sources:** By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.
-

Startup and shutdown procedures are either based on manufacturer's recommendations or based on Western's experience with specific equipment. These procedures are designed to proactively address the potential for malfunction to the greatest extent possible. These procedures dictate a sequence of operations that are designed to minimize emissions from the facility during events that result in shutdown and subsequent startup.

Equipment located at this facility is equipped with various safety devices and features that aid in the prevention of excess emissions in the event of an operational emergency. If an operational emergency does occur and excess emissions occur, Western will submit the required Excess Emissions Report as per 20.2.7 NMAC if any excess emissions occur beyond the requested total SSM/M emission limit. Corrective action to eliminate the excess emissions and prevent recurrence in the future will be undertaken as quickly as safety allows.

Section 15

Alternative Operating Scenarios

(submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

Alternative Operating Scenarios: Provide all information required by the department to define alternative operating scenarios. This includes process, material and product changes; facility emissions information; air pollution control equipment requirements; any applicable requirements; monitoring, recordkeeping, and reporting requirements; and compliance certification requirements. Please ensure applicable Tables in this application are clearly marked to show alternative operating scenario.

N/A – No alternative operating scenarios proposed with this application.

Section 16

Air Dispersion Modeling

NSR (20.2.72 NMAC) and PSD (20.2.74 NMAC) Modeling: Provide an air quality **dispersion modeling** demonstration (if applicable) as outlined in the Air Quality Bureau's Dispersion Modeling Guidelines. If air dispersion modeling has been waived for this permit application, attach the AQB Modeling Section modeling waiver documentation.

SSM Modeling: Applicants must conduct dispersion modeling for the total short term emissions using realistic worst case scenarios following guidance from the Air Quality Bureau's dispersion modeling section. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (http://www.nmenv.state.nm.us/aqb/permit/app_form.html) for more detailed instructions on SSM emissions modeling requirements.

Title V (20.2.70 NMAC) Modeling: Title V applications must specify the NSR Permit number for which air quality dispersion modeling was last submitted. Additionally, Title V facilities reporting new SSM emissions require modeling or a modeling waiver to demonstrate compliance with standards.

N/A – Western is submitting a modeling waiver with this application.

Section 17

Compliance Test History

(submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

To show compliance with existing NSR permits conditions, you must submit a compliance test history. The table below provides an example.

The facility does not have compliance test requirements.

Section 20

Other Relevant Information

Other relevant information. Use this attachment to clarify any part in the application that you think needs explaining. Reference the section, table, column, and/or field. Include any additional text, tables, calculations or clarifying information.

Additionally, the applicant may propose specific permit language for AQB consideration. In the case of a revision to an existing permit, the applicant should provide the old language and the new language in track changes format to highlight the proposed changes. If proposing language for a new facility or language for a new unit, submit the proposed operating condition(s), along with the associated monitoring, recordkeeping, and reporting conditions. In either case, please limit the proposed language to the affected portion of the permit.

N/A – No other relevant information.

Section 22

Green House Gas Applicability

(submitting under 20.2.70, 20.2.72, 20.2.73, 20.2.74 NMAC)

Title V (20.2.70 NMAC), NSR (20.2.72 NMAC), NOI (20.2.73 NMAC) and PSD (20.2.74 NMAC) applicants must determine if they are subject to Title V permitting and/or PSD permitting for green house gas (GHG) emissions. GHG emissions are the sum of the aggregate group of six green house gases that include carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). There are two thresholds that must be computed to determine applicability. The first threshold is the sum of GHG mass emissions in TPY. GHG mass emissions are the sum of the total annual tons of green house gases without adjusting with the GWPs. The second threshold is the sum of CO₂ equivalent (CO₂e) emissions in TPY GHG. CO₂e emissions are the sum of the mass emissions of each individual GHG multiplied by its global warming potential (GWP) found in Table A-1 in 40 CFR 98 Mandatory Greenhouse Gas Reporting.

Green House Gas TV and PSD Applicability Determination:

Notice of Intent Sources (20.2.73 NMAC): By checking this box and certifying this application the applicant certifies that the facility, based upon the quantity of stack emissions, including start up, shut down, and maintenance emissions, is not subject to 20.2.70 NMAC or 20.2.74 NMAC for Green House Gas (GHG) Emissions. The Department may request the emissions calculations and other documents supporting this determination.

Minor NSR (20.2.72 NMAC), PSD Major (20.2.74 NMAC), and Title V (20.2.70 NMAC) sources must complete the steps outlined below to determine GHG TV and/or PSD applicability.

1. Calculate existing mass GHG and CO₂e emissions from your source. For PSD purposes, if this is a modification to an existing source, you must also calculate the increase in mass GHG and CO₂e emissions due to the modification. Start up, shut down, and maintenance emissions must be included.
2. See Tables 1 and 2 below and compare your mass GHG and CO₂e emissions to the appropriate category for your source.
3. If your source meets all of the criteria within a category, then you must obtain a PSD permit and/or a Title V permit for green house gas emissions.
4. If this is a GHG Major source with an existing BACT or if this is a permit application for a PSD or Title V permit with GHG above the thresholds in Tables 1 or 2, include the emissions calculations and supporting documents in the appropriate sections of this application unless instructed otherwise in Tables 1 or 2. Report GHG mass and CO₂e emissions in Table 2-P of this application unless instructed otherwise in Tables 1 or 2. Emissions are reported in short tons per year and represent each emission unit's Potential to Emit (PTE).

NSR (20.2.72 NMAC), PSD Major (20.2.74 NMAC), and Title V (20.2.70 NMAC): Based upon the GHG applicability criteria in this section the applicant certifies that the source is (check all that apply):

- Title V Minor and PSD Minor for GHG Emissions [The Department may request the emissions calculations and other documents supporting this determination.]
- Title V Major for GHG Emissions
- PSD Major for GHG Emissions

Table 1 - Title V Applicability Criteria

On or after July 1, 2011, newly constructed source, or existing source that does not have a Title V permit	On or after July 1, 2011, modification or Renewal to Existing Title V Source	Requirement
Source emits or has potential to emit (PTE) ≥ 100,000 TPY CO ₂ e and 100 TPY GHG mass basis	Source emits or has PTE of ≥100,000 TPY CO ₂ e and 100 TPY GHG mass basis	For new sources: For a source that meets the criteria on July 1, 2011, submit a Title V permit application no later than June 30, 2012.

Table 1 - Title V Applicability Criteria

		<p>For a source that meets the criteria after July 1, 2011, submit a Title V application within 12 months of becoming subject to the GHG operating permit program (12 months from commencement of operation of the new unit or modification that caused the source to be subject to Title V).</p> <p><u>For existing sources:</u> Include GHG with the next Title V application for a renewal or modification.</p> <p><u>For both new and existing sources:</u> Include in the TV application, GHG emissions calculations and supporting documents, report CO₂e and GHG emissions in Table 2-P, and address any applicable CAA requirements (e.g. PSD BACT, NSPS). If there are no applicable requirements and if GHG emissions have been reported to the Department under 20.2.73 NMAC, the requirements of the previous sentence do not apply, but changes in GHG emissions resulting in GHG emission limits must be calculated and reported in Table 2-P for Title V permit modifications. Typically GHG emission limits would be established only when there is an applicable requirement, such as a PSD GHG BACT or limits taken to be GHG synthetic minor.</p>
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Table 2 - PSD Applicability Criteria

On or After July 1, 2011, New Source	On or After July 1, 2011, Major Modification to Existing PSD Major Source	On or After July 1, 2011, Modification to Existing PSD Minor Source	Requirement
<p>Source is subject to PSD for another pollutant and GHG PTE is \geq than 75,000 tpy CO₂e</p> <p>or</p> <p>GHG PTE is \geq 100,000 TPY CO₂e and \geq 100/250 TPY mass basis</p>	<p>Source is subject to PSD for another regulated pollutant and net GHG emissions increase is \geq 75,000 tpy CO₂e and greater than zero TPY mass basis</p> <p>or</p> <p>existing source has GHG PTE \geq 100,000 TPY CO₂e and \geq 100/250 TPY mass basis and net emissions GHG increase is \geq 75,000 TPY</p>	<p>Actual or potential emissions of GHGs from the modification is \geq 100,000 TPY CO₂e and \geq 100/250 TPY mass basis.</p> <p>Minor PSD sources cannot net out of PSD review.</p>	<p>The source is subject to PSD permitting for GHG emissions and other regulated pollutants that are significant. In the application include GHG emissions calculations and supporting documents, report CO₂e and GHG emissions in Table 2-P, complete a GHG BACT determination, and include the TPY CO₂e and GHG mass emissions in the public notice.</p> <p>Note: If a minor source permit is issued after January 2, 2011, but before July 1, 2011, and construction has not commenced by July 1, 2011, the permit must be</p>

Table 2 - PSD Applicability Criteria

	CO ₂ e and greater than zero TPY mass basis		cancelled, reopened, or an additional PSD permitting action taken, if the approved change/construction would trigger GHG PSD after July 1, 2011.
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Additional Information:**Sources for Calculating GHG Emissions:**

- Manufacturer's Data
- AP-42 Compilation of Air Pollutant Emission Factors at <http://www.epa.gov/ttn/chief/ap42/index.html>
- EPA's Internet emission factor database WebFIRE at <http://cfpub.epa.gov/webfire/>
- Subparts C through UU of 40 CFR 98 Mandatory Green House Gas Reporting except that tons should be reported in short tons rather than in metric tons for the purpose of PSD and TV applicability.
- API Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry. August 2009 or most recent version.
- Sources listed on EPA's NSR Resources for Estimating GHG Emissions at <http://www.epa.gov/nsr/ghgresources.html>:
 - ENERGY STAR Industrial Sector Energy Guides and Plant Energy Performance Indicators (benchmarks) <http://www.energystar.gov>;
 - US EPA National Greenhouse Gas Inventory, <http://epa.gov/climatechange/emissions/usinventoryreport.html>;
 - EPA's Climate Leaders, <http://www.epa.gov/climateleaders/index.html>
 - EPA Voluntary Partnerships of GHG Reductions that include the landfill methane outreach program, the CHP partnership program, the Green Power Partnership, the Coalbed Methane Outreach program, the Natural Gas STAR program, and the Voluntary Aluminum Industrial Partnership.
 - SF Emission Reduction Partnership for the Magnesium Industry <http://www.epa.gov/highwp/magnesium-sf6/index.html>
 - PFC Reduction/Climate Partnership for the Semiconductor Industry <http://www.epa.gov/highwp/semiconductor-pfc/index.html>

Global Warming Potentials (GWP):

Applicants must use the Global Warming Potentials codified in Table A-1 of the most recent version of 40 CFR 98 Mandatory Greenhouse Gas Reporting. Please note that sources not subject to 40 CFR 98 and/or 20.2.300 NMAC may still be subject to the GHG PSD and/or TV permitting. The GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to that of one unit mass of CO₂ over a specified time period.

"Greenhouse gas" for the purpose of this part is defined as the aggregate group of the following six gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. (20.2.70.7.O NMAC, 20.2.74.7.Y NMAC). You may also find GHGs defined in 40 CFR 86.1818-12(a).

Short Tons:

Short tons for GHGs and other regulated pollutants are the standard unit of measure for PSD and title V permitting programs. 40 CFR 98 Mandatory Greenhouse Reporting requires metric tons.

1 metric ton = 1.10231 short tons (per Table A-2 to Subpart A of Part 98 – Units of Measure Conversions)

EPA's GHG Tailoring Rule:

To review EPA's final GHG Tailoring rule and pre-amble, See "Final GHG Tailoring Rule dated May 13, 2010 located on EPA's NSR Regulations Webpage or Federal Register June 3, 2010 Volume 75, No. 106 <http://www.epa.gov/nsr/actions.html>

EPA Permitting Guidance:

EPA's Permitting Guidance for GHG and other GHG information can be found on EPA's NSR Clear Air Act Permitting for Greenhouse Gases webpage.

<http://www.epa.gov/nsr/ghgpermitting.html>

Section 23: Certification

Company Name: _____

I, _____, hereby certify that the information and data submitted in this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this ____ day of _____, _____, upon my oath or affirmation, before a notary of the State of

_____.

*Signature

Date

Printed Name

Title

Scribed and sworn before me on this ____ day of _____, _____.

My authorization as a notary of the State of _____ expires on the

_____ day of _____, _____.

Notary's Signature

Date

Notary's Printed Name

*For Title V applications, the signature must be of the Responsible Official as defined in 20.2.70.7.AE NMAC.