

## SPECIAL CONDITIONS

### PERMIT NUMBER 84802

#### Emission Standards – Maximum Allowable Emission Rates

1. This permit covers only those sources of emissions listed in Table 1 (Emission Point Summary). Those sources are limited to the emission rates listed in the “Emission Sources - Maximum Allowable Emission Rates,” Table (MAERT) which is part of Permit Number 84802. **(09/11)**
2. Emissions from this facility must not cause or contribute to a condition of “air pollution” as defined in Section 382.003 of the Texas Health and Safety Code Ann. or violate § 382.085 of the Texas Health and Safety Code Ann. If the Executive Director of the TCEQ determines that such a condition or violation occurs, the permittee shall implement additional abatement measures as necessary to control or prevent the condition or violation.
3. Title 30 Texas Administrative Code (30 TAC) Chapter 111, is not applicable to the emissions from EPN Numbers X011 X015, X022, X023, X026, X029, X030, Y005, Y006, Y007, Y008, Y009, Y010, Y011, Y012, Y013 and Y014, as these are not stationary vents. The emission rates from these units are limited by this permit.
4. All emission control systems for F022 PS 1, F022 PS 2, F022 PS 3, I015NR, I016SR and T028P1-shall be operating as specified in the application (December 22, 2010) on which this permit was amended before process operations can be conducted. **(09/11)**
5. The chemicals emitted from units identified in Table 1 are limited to those identified in the permit application dated December 22, 2010. This permit condition does not authorize the modification of an existing facility or the construction of a new facility at the site or the increase of emissions represented in the permit application. New chemicals may be added through the use of the procedure below, or 30 TAC Chapter 106, or 30 TAC Chapter 116 **(09/11)**.
  - A. Short-term (pounds per hour [lb/hr]) and annual (TPY) emissions and calculations shall be completed for each chemical at each affected source. Emission rates (ER) shall be calculated in accordance with the methods as documented in the permit application dated December 22, 2010. The calculated ER shall not exceed the maximum allowable emission rates table.
  - B. The Effect Screening Level (ESL) for the material shall be obtained from the current TCEQ ESL list or by written request to the TCEQ Toxicology Section.

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C. The total emissions of any new chemical from all emission points in this permit must satisfy one of the following conditions:

(1) The total maximum ER from all sources is less than 0.04 lb/hr and the ESL greater than 2 ug/m<sup>3</sup>; or

(2)  $(ER/ESL)_N \leq (ER/ESL)_E$

$(ER/ESL)_N$  = maximum hourly ER of new compound(s) divided by its ESL

$(ER/ESL)_E$  = the highest ratio of any previously authorized compounds hourly ER divided by its ESL)

This may only be used for one emission point at a time.

D. The permit holder shall maintain records of the information below and the demonstrations in steps A through C above. The following documentation is required for each compound:

(1) Chemical name(s), composition, and chemical abstract registry number if available.

(2) Molecular weight.

(3) The unit where the chemical is to be emitted and the emission control device to be utilized if any.

(4) The date the new chemical is first emitted.

Specified Exclusions, Compliance Schedules and Requirements

6. The indicated sources are subject to the following exclusions and requirements:

A. As the sources associated with EPNs T024B1, T024B2, T024B3, and T024B4 meet the definition of "gas-fired boilers" as defined at 40 CFR §63.11237, these units are subject to the exclusion from requirements found in 40 CFR §63.11195.

B. As the source associated with EPN H018 is operated consistent with the provisions of 40 CFR §60.2887 and 40 CFR §60.2993, it will be excluded from the requirements associated with any regulations developed under either a State

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Implementation Plan (SIP) or Federal Implementation Plan (FIP) for 40 CFR Part 60, Subpart FFFF

- C. As the sources associated with EPNs Y003, Y004, R022E1, R001E2, and R001E3 meet the definition of “Emergency Stationary RICE” as defined at 40 CFR §63.6675, those units are subject to the compliance schedule and requirements for such units found in 40CFR §63, Subpart ZZZZ, and 30 TAC §113.1090.

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Table 1: Emission Point Summary

Emission Point No (1)	Source Name (2)
H018	Dual Chamber Incinerator
H025	Plastic Shop
T010	Vehicle Fueling Facilities
Y002	Refrigeration Units
A005	Natural Gas Pipeline
I033 & I034	Van de Graff Generators
Y003	Load Leveling Engines
Y004	Stationary Standby Emergency Engines
I015 NR	HE Formulation North Rotoclone
I016 SR	HE Formulation South Rotoclone
I014FUG	HE Formulation Fugitives
F022 PS-1	HE Synthesis PS-1
F022 PS-2	HE Synthesis PS-2
F022 PS-3	HE Synthesis PS-3
F022 PS-4	HE Synthesis PS-4
F022 Com Fug	HE Synthesis Fugitive
F022 TK1	HE Synthesis TK 1
F022 TK2	HE Synthesis TK 2
F022 TK3	HE Synthesis TK 3
F022 TK4	HE Synthesis TK 4
F022VPC	HE Synthesis Vac Pump Condensate
E002CT	Cooling Tower
D026CT	Cooling Tower
F022CT	Cooling Tower
H005CT	Cooling Tower
I014CT	Cooling Tower
K009CT	Cooling Tower
M004CT	Cooling Tower
O003CT1	Cooling Tower
O003CT2	Cooling Tower
P029CT	Cooling Tower
R024CT	Cooling Tower
R030CT	Cooling Tower
S006CT	Cooling Tower
S009CT1	Cooling Tower
S009CT2	Cooling Tower
F026CT1	Cooling Tower

Emission Point No (1)	Source Name (2)
F026CT2	Cooling Tower
T024B1	Boiler 1
T024B2	Boiler 2
T024B3	Boiler 3
T024B4	Boiler 4
T024T1	Diesel Tank
T029	Vial Crusher
R022E1	Standby Diesel Generators
R022E2	Standby Diesel Generators
R022E3	Standby Diesel Generators
X011	Firing Site
X015	Firing Site
X022	Firing Site
X023	Firing Site
X026	Firing Site
X029	Firing Site
X030	Firing Site
X031A	Firing Site
X031B	Firing Site
E015	Firing Site
E034B	Firing Site
Y005	BG-Burning Pan-1
Y006	BG Tray 1
Y007	BG Tray-2
Y008	BG Tray-3
Y009	BG Tray-4
Y010	BG Tray-5
Y011	BG Tray-6
Y012	BG Burning Pan-7
Y013	BG Tray-8
Y014	BG Tray-9
Y015	BG Flashing Chamber
T028P1	Hazardous Waste Processing
T028P2	Hazardous Waste Processing
B010	Hazardous Waste Storage Unit
B032	Hazardous Waste Storage Unit
W024	Hazardous Waste Storage Unit
W025	Hazardous Waste Storage Unit
T027	Hazardous Waste Storage Unit

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### Operational Conditions

7. Operations at units that emit from Emission Points Y005, Y006, Y007, Y008, Y009, Y010, Y011, Y012, Y013, Y014, Y015, X011, X015, X022, X023, X026, X029, X030, X031A, X031B, E015, and E034B are limited to those materials, and combinations of those materials, listed in the application on which this permit was issued. Other materials may be processed at these units, provided that the permittee meets the following conditions:
  - A. The permittee will determine where among the following classifications the new energetic is most appropriately grouped: inorganic; aromatic energetics (containing a benzene ring); "heterocyclic" energetics containing alternating carbon-nitrogen bonds (e.g., RDX); aliphatic energetics containing a branched straight chain carbon backbone; or a mixture containing two or more energetics from one or more of the classes;
  - B. The permittee will assign the highest (or greatest) relevant and appropriate emission factors within any class to the proposed energetic, as identified in the application on which this permit was issued. New mixtures will be assigned emission factors based on the highest emission factors for the involved classes, adjusted for the relative weight percentage of each class. "Relevant and appropriate," in this context, means that emission of a contaminant may occur, based on process knowledge;
  - C. Emission factors for energetics may be modified from those developed under above paragraph, when:
    - (1) The emission factors for the energetic are published or obtained from a recognized, authoritative source, such as the U. S. Environmental Protection Agency or U.S. Department of Energy or the U.S. Department of Defense; or
    - (2) Thermodynamic modeling is conducted for the energetic based on the methodology described on the application on which this permit is issued.
  - D. Identify the appropriate short-term and long-term Effects Screening Levels (ESLs) for each compound through contact with the TCEQ Toxicology and Risk Assessment Section in Austin.
  - E. Update modeling results submitted to the TCEQ in support of the application on which this permit was issued using TCEQ Modeling Division approved ratioing techniques;

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- F. Predicted off-property impacts are to be compared to the Effects Screening Level (ESL) from the most recent ESL list published by the TCEQ. If the compound of concern does not have a published ESL at the time the analysis is initiated, the Commission will designate an appropriate level of this compound;
  - G. If an ESL is exceeded, this permit shall be amended. The permittee will notify the TCEQ of all new energetics or new emission factors for energetics that will be processed in amounts greater than five pounds per year.
8. Containers that emit from Emission Points B010, B032, W024, W025, and T027 shall not be opened at any time except for the purpose of sampling, transferring, treating, or repackaging the material. During such occurrences:
- A. The top of the container(s) shall be opened only for the minimum time necessary to extract a sample or transfer the material. The maximum number of containers that shall be opened per hour in any of the units listed above shall be:
    - (1) Four (4) containers containing carbon disulfide;
    - (2) Eight (8) containers containing trichlorofluoromethane;
    - (3) Ten (10) containers containing chlorofluorocarbons, carbon tetrachloride, ethylene dichloride, methylene chloride (dichloromethane), or ethyl ether;
    - (4) 45 containers of all other authorized materials may be opened per hour in each of any three listed above, or an accumulative total of 135 containers per hour of all other authorized waste may be opened in Units W024, W025, and T027 in any one hour.
9. The operations at Units Y005, Y006, Y007, Y008, Y009, Y010, Y011, Y012, Y013, Y014, and Y015 shall also have the following limitations:
- A. The amount of energetic materials thermally processed shall be limited to 200 tons per year;
  - B. Operations shall not commence before one-half hour after published time of sunrise nor continue past one-half hour before the published time of sunset;
  - C. Operations shall not commence when the sustained wind speed is greater than 13 meters per second or during inclement weather that would contribute to hazards to personnel handling explosives or would prohibit a complete, successful operation;

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- D. Operations shall not occur during times of air stagnation, a condition defined as a persistent air mass in the upper levels with weak winds and lack of precipitation. Determination of this condition will be made with the Pasquill Atmospheric Stability Class system, with the stability class range A-F defined as follows:

Class A: high instability, turbulence and dispersion

Class B: unstable

Class C: slightly stable

Class D: neutral

Class E: stable

Class F: stable

Stability Classes E and F indicate that dispersion of released pollutants will not occur immediately. Provided no Stagnation Advisory, as issued by the National Weather Service, is in effect for the area including the Pantex Plant, facility operations may accordingly proceed during atmospheric conditions characterized by Stability Classes A – D. Facility operations shall not occur during conditions characterized by Stability Classes E or F. **(09/11)**

- E. No more than 1500 pounds (total) of energetic material(s) shall be processed in any one hour period in any combination of these units. All maximum operational amounts per unit will be limited by written DOE directives and provisions of the permit;
- F. For each operation, the permittee shall:
- (1) Observe the operation;
  - (2) Observe the products of the operation for minimum of 30 minutes after flame and/or smoke are last observed;
  - (3) Inspect the unit after the minimum time referenced above and when safe to do so, to ensure complete combustion and the absence of fire and explosive hazards before leaving the Burning Ground.
- G. To determine if events on one or more units can be executed within the same one-hour window, Pantex will:
- (1) Calculate the maximum allowable emission rate for each unit based on the heat release expected from each unit from the appropriate curve;
  - (2) Divide the actual expected emission rate for each unit by the allowable emission rate for each unit;

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- (3) Determine the sum of the fractions calculated in Step (2) for all units. If the sum calculated is less than or equal to 1.0, the event may proceed. If the sum is greater than 1.0, an exceedance of the limit is predicted, and the composition of the operation must be adjusted such that the maximum allowable limit will not be exceeded.

### Recordkeeping Requirements

10. Records shall be maintained of estimated emissions to the atmosphere on a rolling 12-month basis for the emissions points listed in Table 1 entitled "Emission Point Summary" of this Permit. Compliance with "Maximum Allowable Emission Rates" Table shall be determined on a monthly basis and will be based on the methods and emission factors included in the application on which this permit was issued.

The recordkeeping programs for all facilities authorized by this permit shall be established and maintained such that the ability to demonstrate compliance with all short-term and annual emission caps in the MAERT are ensured. Records of process parameters for sources contributing to the allowable emission rate caps, and which may be necessary to demonstrate compliance with them, shall be maintained for a period of two years after the date they were made. These and all other records required by any previous condition of this permit shall be made available to the TCEQ Executive Director or his representative upon request.

11. For each event at units Y005, Y006, Y007, Y008, Y009, Y010, Y011, Y012, Y013, Y014, Y015, X011 X015, X022, X023, X026, X029, X030, X031A, X031B, E015, and E034B the Permittee shall record:
  - A. The heat release rate for the operation from the heat of combustion of each energetic;
  - B. The mass or weight of each energetic to be processed;
  - C. The estimated time of the event;
  - D. The date, initiation time of the event, unit name or number on which the event occurred;
  - E. The amount of auxiliary fuel introduced;
  - F. The weight of any other material involved in the event;
  - G. The emissions generated from the event based on the methodology described in the application on which this permit was issued;



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- H. The calculated hourly emission rate using the methods described in the application on which this permit was issued.

### Emission Standards, Fuel Specifications and Work Practices

- 12. Fuel for engines authorized by this permit shall be either sweet natural gas, as defined in the Title 30 Texas Administrative Code Chapter 101, diesel (or No. 2 Fuel Oil) or gasoline. All liquid fuels must be first-run, refinery grade and shall not consist of a blend containing waste oils or solvents. Use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).

### Process Vents and Equipment Leaks

- 13. Requirements for Title 40 of the Code of Federal Regulations Part 264, Subparts AA, BB, and CC:
  - A. The permittee must comply with the requirements of 30 TAC § 335.152(a)(17)/40 CFR Part 264 Subpart AA and 30 TAC § 335.152(a)(18)/40 CFR Part 264 Subpart BB, as applicable;
  - B. The permittee must comply with the requirements of 40 CFR Part 264 Subpart CC, as applicable.

### MSS Conditions

- 14. This permit authorizes the emissions for the maintenance, startup, and shutdown (MSS) activities summarized in the MSS Activity Summary (Attachment A) attached to this permit.

The performance of each MSS activity and the emissions associated with it shall be recorded and include at least the following information:

- A. The physical location at which emissions from the MSS activity occurred, including the emission point number and common name for the point at which the emissions were released into the atmosphere;
- B. The type of MSS activity and the reason for the activity;
- C. The common name and the facility identification number, if applicable, of the facilities at which the MSS activity and emissions occurred;

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- D. The date and time of the MSS activity and its duration;
  - E. The estimated quantity of each air contaminant, or mixture of air contaminants, emitted with the data and methods used to determine it. The emissions shall be estimated using the methods identified in the permit application, consistent with good engineering practice.
  - F. All MSS emissions shall be summed monthly and the rolling 12-month emissions shall be updated on a monthly basis.
15. If the removal of a component for repair or replacement results in an open-ended line or valve, the open ended line is exempt from any NSR permit condition requirement to install a cap, blind flange, plug, or second valve for 24 hours. If the repair or replacement is not completed within 72 hours, the permit holder must comply with either of the following;
- A. A cap, blind flange, plug, or second valve must be installed on the line or valve; or
  - B. The open-ended line or valve shall be monitored on a daily basis to confirm that there is no leakage. This check shall be performed in accordance with the applicable NSR permit condition for fugitive emission monitoring except that the leak threshold shall be any reading greater than background. The results of this daily check shall be recorded.

Date: September 21, 2011

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Attachment A

MSS Activity Summary

<b>Facilities</b>	<b>Description</b>	<b>Emissions Activity</b>	<b>EPN</b>
Refrigeration Units	Repair and Maintenance	Venting to atmosphere	Y002
Natural Gas Pipeline	Repair and Maintenance	Venting to atmosphere	A005
Van de Graff Generators	Repair and Maintenance	Venting to atmosphere	I003 and I004

Date: September 21, 2011

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Attachment B

Facility List

This permit authorizes MSS emissions from the permanent site facilities identified below. Emissions may occur from temporary facilities (frac tanks, containers, vacuum trucks, facilities used for painting or abrasive blasting, portable control devices or controlled recovery systems) to support the MSS activities performed at the permanent site facilities listed below as represented in the permit application. The headings for each group of facilities (Process Units, Tanks, etc) are used in the MSS Activity Summary to identify all facilities in the respective group.

**Process Units**

<u>Description</u>	<u>EPN</u>
Refrigeration Units	Y002
Natural Gas Pipeline	A005
Van de Graff Generators	I003 and I004

Date: September 21, 2011