Agrium

7 June 2022

Mr. Aaron Simpson
Alaska Department of Environmental Conservation
Division of Air Quality
410 Willoughby Avenue, Suite 303
Juneau, Alaska 99811-1800

Re: Permit Extension Request
Air Quality Control Construction Permit AQ0083CPT07
Kenai Nitrogen Operations
Kenai, Alaska

Dear Mr. Simpson:

Agrium U.S. Inc. (Agrium) was issued Air Quality Control Construction Permit AQ0083CPT07 on 26 March 2021 for the proposed restart of a portion of its Kenai Nitrogen Operations (KNO) fertilizer operation in Kenai, Alaska. Agrium requests that the Alaska Department of Environmental Conservation (ADEC) extend this permit for an additional eighteen (18) months to allow more time to commence construction as authorized by this permit. Additional information concerning this request is provided below.

## Background

In May 2020 Agrium submitted a Prevention of Significant Deterioration (PSD) permit application to restart portions of the KNO fertilizer plant. This resulted in the issuance of Air Quality Construction Permit AQ0083CPT07 on 26 March 2021. Although Agrium has worked to secure necessary natural gas contracts for the facility since the issuance of this permit, for a variety of reasons these negotiations are still on-going. Agrium continues to believe that it will ultimately be able to obtain contracts for sufficient natural gas in order to assure viable operations at KNO. Agrium does not, however, wish to begin construction on the modifications necessary to the plant, which will involve a substantial capital investment, until such time as it has contractual assurances that sufficient natural gas is available to operate the facility at target production levels.

While Agrium is hopeful that it will be able to secure the desired contracts in the near future, the delay in securing necessary contracts will delay the date by which Agrium will wish to begin operation of the plant, resulting in the need to delay the date by which

construction will commence. An extension for an additional eighteen (18) months will allow time for negotiations to continue to secure necessary natural gas contracts.

## Construction Permit and PSD Commence Construction Requirements

Condition 2 of the Construction Permit issued by ADEC specifies that "the Permittee shall commence construction of the modification to the stationary source authorized under Construction Permit AQ0083CPT07 within 18 months of the issuance of the permit unless granted an extension in writing from the Department". Likewise, PSD rules contained in 40 CFR 52.21(r)(2) specify that approval to construct will become invalid if construction is not commenced within 18 months of permit issuance.

Neither the Construction nor PSD rule language provides any details on the appropriate content of an extension request or the information the Administrator may require in granting such an extension.

## EPA Guidance

Current EPA guidance on the circumstances under which a PSD permit may be extended is contained in a memorandum from Stephen Page dated 31 January 2014 (Extension Memorandum)[1]. As described in the Extension Memorandum and in accordance with 40 C.F.R. 52.21(r)(2), EPA indicates that such extensions should be evaluated on a case-by-case basis, and that such requests should be made in advance of the end of the 18-month period for commencing construction. The Extension Memorandum indicates that an extensive reevaluation of BACT and the air quality impacts analysis "should generally not be necessary for a first permit extension request". The Extension Memorandum specifies that the applicant should provide a detailed justification as to the reasons that the extension is necessary.

## BACT Update

Although EPA guidance states that an extensive reevaluation of BACT is not required as a part of the first permit extension request, Agrium has researched the RACT/BACT/LAER Clearinghouse (RBLC) to identify any permits issued since the date of the KNO Construction Permit that might contain a more stringent Best Available Control Technology (BACT) emission limit than was established for KNO. The results of this search for the principal emission units at KNO are discussed briefly below:

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[1] "Guidance on Extension of Prevention of Significant Deterioration (PSD) Permits under 40 CFR 52.21(r)(2)", Stephen D. Page, Director Office of Air Quality Planning and Standards, to Regional Air Division Directors, 31 January 2014.

- Primary Reformer (Unit 12) – New permit limits have been added to the RBLC database for El Dorado Chemical Company (AR-0170) and Midwest Fertilizer Company LLC (IN-0324). The BACT limits contained in these permits are no more stringent than limits contained in permits that were reviewed as a part of the BACT analysis submitted with the KNO permit application.

- CO2 Vent (Unit 14) – New permit limits have been added to the RBLC database for El Dorado Chemical Company (AR-0170) and Midwest Fertilizer Company LLC (IN-0324). The BACT limits contained in these permits are no more stringent than limits contained in permits that were reviewed as a part of the BACT analysis submitted with the KNO permit application.

- Urea Granulation (Units 35 and 36) – No new RBLC entries were identified in the database for urea granulation units.

- Package Boilers (Units 44, 48, and 49) – The current RBLC summary includes a number of new entries for sources with boilers or process heaters with a heat input above 100 mmBtu/hr but less than 250 mmBtu/hr. The BACT limits contained in these permits are no more stringent than limits contained in permits that were reviewed as a part of the BACT analysis submitted with the KNO permit application.

- Solar Turbine/Generator Sets (Units 55, 56, 57, 58, and 59) – New permit limits have been added to the RBLC database for Norfolk Naval Shipyard (RBLC VA-0333) and Sabine Pass LNG Terminal (LA-0375). The BACT limits contained in these permits are no more stringent than limits contained in permits that were reviewed as a part of the BACT analysis submitted with the KNO permit application.

- Urea Ship Loading (Unit 47) – No recent permits were identified with BACT emission limits for urea ship loading.

- Urea Material Handling Units (Unit 47A, 47B, 47C, and 47D) – One new permit limit has been added to the RBLC database for Pallas Nitrogen LLC (OH-0368) with BACT limits for urea transfer operations. The BACT limit contained in this permit is no more stringent than limits contained in permits that were reviewed as a part of the BACT analysis submitted with the KNO permit application.

Based on the summary of RBLC listings reviewed, no new permits have been issued since the date of the Construction Permit for KNO that contain BACT limits that are more stringent than those reviewed as a part of the BACT determination for KNO. An updated RBLC listing (with new entries denoted in red font) is provided as an attachment to this request.

## Air Quality Impact Analysis

As a part of its PSD application, KNO provided an air quality impact analysis demonstrating that the project would not result in an ambient impact that exceeded permissible increments under PSD rules nor would the project cause an exceedance of National Ambient Air Quality Standards (NAAQS). Although EPA guidance does not indicate that the air quality impact analysis must be revisited as a part of a first request for an extension to a PSD permit, KNO has reevaluated air quality in the area of its site as a part of this request.

KNO reviewed the ADEC web site to identify Construction Permits for major sources that had been issued since the PSD permit was issued to KNO in March 2021. KNO identified no Title I Construction Permits that have been issued since the date of its permit in March 2021.

The region surrounding KNO has experienced little change in population since the PSD permit was issued in March 2021, nor have any significant plant expansions occurred in the area since this time. As a consequence of the fact that there has been no significant growth in the area over the past eighteen months, KNO believes that air quality data collected to characterize the area are still an accurate representation of background air quality.

## Summary

As described in detail above, the extension request is being filed due to the fact that Agrium has not been able to secure necessary contracts to assure that natural gas will be available at the time the plant would wish to begin operations. Agrium requests that the date by which it must commence construction be extended by 18 months to allow Agrium to secure necessary contracts prior to commencing construction on modifications necessary. This would extend the date by which construction must commence from 26 September 2022 to 26 March 2024.

If you have any questions regarding this request, please contact Dave Jordan of ERM at (513) 830-9035.

Sincerely,

Fred Werth
Manager, Kenai Plant

cc: Ted Hartman, Nutrien
David Jordan, ERM

Enclosure: RBLC Update

# Attachment – RBLC Update

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Cooling Tower" - All Results Included
**Unit 40 - Cooling Tower**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| BIG RIVER STEEL LLC | AR-0168 | 3/17/2021 | TPM | Contact Cooling Tower | 0.0010 | % DRIFT LOSS | Drift Eliminators Low TDS |
| BIG RIVER STEEL LLC | AR-0168 | 3/17/2021 | TPM10 | Contact Cooling Tower | 0.0010 | % DRIFT LOSS | Drift Eliminators Low TDS |
| BIG RIVER STEEL LLC | AR-0168 | 3/17/2021 | TPM2.5 | Contact Cooling Tower | 0.0010 | % DRIFT LOSS | Drift Eliminators Low TDS |
| BIG RIVER STEEL LLC | AR-0168 | 3/17/2021 | Visible Emissions (VE) | Contact Cooling Tower | 5.0000 | % | Drift Eliminators Low TDS |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | FPM | SN-212 Cooling Tower | 0.0005 | % DRIFT LOSS | High efficiency Drift/mist eliminator |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | TPM10 | SN-212 Cooling Tower | 0.0005 | % DRIFT LOSS | High efficiency Drift/mist eliminator |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | TPM2.5 | SN-212 Cooling Tower | 0.0005 | % DRIFT LOSS | High efficiency Drift/mist eliminator |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | FPM | Cooling Towers | 0.0005 | DRIFT LOSS | Drift Eliminators Low TDS |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | TPM10 | Cooling Towers | 0.0005 | | Drift Eliminators Low TDS |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | TPM2.5 | Cooling Towers | 0.0005 | DRIFT LOSS | Drift Eliminators Low TDS |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | Visible Emissions (VE) | Cooling Towers | 5.0000 | % | Drift Eliminators Low TDS |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | FPM | Mechanical Draft Auxiliary Cooling System | 0.0005 | % DRIFT RATE | Certified drift rate < 0.0005% |
| SHELL ROCK SOY PROCESSING | *IA-0117 | 3/17/2021 | TPM | Cooling Tower | 0.2600 | LB/HR, PM, PM10 AND PM2.5 | Drift Eliminator |
| SHELL ROCK SOY PROCESSING | *IA-0117 | 3/17/2021 | TPM | Cooling Tower | 0.0000 | %, OPACITY | Drift Eliminator |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | TPM10 | ten cell evaporative cooling tower EU-010 | 2000.0000 | MG/L, AVERAGED ON A MONTHLY BASIS | shall be controlled by high efficiency drift eliminators; The cooling tower (EU-010) shall be designed to meet a 0.0005% drift |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | TPM2.5 | ten cell evaporative cooling tower EU-010 | 2000.0000 | MG/L, AVERAGED ON A MONTHLY BASIS | shall be controlled by high efficiency drift eliminators; The cooling tower (EU-010) shall be designed to meet a 0.0005% drift |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-01 - Melt Shop ICW Cooling Tower | 0.3600 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-01 - Melt Shop ICW Cooling Tower | 1.5600 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-01 - Melt Shop ICW Cooling Tower | 0.2700 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-01 - Melt Shop ICW Cooling Tower | 1.1600 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-01 - Melt Shop ICW Cooling Tower | 0.0008 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-01 - Melt Shop ICW Cooling Tower | 0.0035 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-02 - Melt Shop DCW Cooling Tower | 0.0400 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-02 - Melt Shop DCW Cooling Tower | 0.1900 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-02 - Melt Shop DCW Cooling Tower | 0.0300 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-02 - Melt Shop DCW Cooling Tower | 0.1400 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-02 - Melt Shop DCW Cooling Tower | 0.0001 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-02 - Melt Shop DCW Cooling Tower | 0.0004 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-03 - Rolling Mill ICW Cooling Tower | 0.0600 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-03 - Rolling Mill ICW Cooling Tower | 0.2500 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-03 - Rolling Mill ICW Cooling Tower | 0.0400 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-03 - Rolling Mill ICW Cooling Tower | 0.1900 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-03 - Rolling Mill ICW Cooling Tower | 0.0001 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-03 - Rolling Mill ICW Cooling Tower | 0.0006 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-04 - Rolling Mill DCW Cooling Tower | 0.1700 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-04 - Rolling Mill DCW Cooling Tower | 0.7500 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-04 - Rolling Mill DCW Cooling Tower | 0.1200 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-04 - Rolling Mill DCW Cooling Tower | 0.5100 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-04 - Rolling Mill DCW Cooling Tower | 0.0004 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-04 - Rolling Mill DCW Cooling Tower | 0.0016 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-05 - Rolling Mill Quench/ACC Cooling Tower | 0.7800 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-05 - Rolling Mill Quench/ACC Cooling Tower | 3.4100 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-05 - Rolling Mill Quench/ACC Cooling Tower | 0.5400 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Cooling Tower" - All Results Included
**Unit 40 - Cooling Tower**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-05 - Rolling Mill Quench/ACC Cooling Tower | 2.3500 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-05 - Rolling Mill Quench/ACC Cooling Tower | 0.0017 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-05 - Rolling Mill Quench/ACC Cooling Tower | 0.0075 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-06 - Light Plate Quench DCW Cooling Tower | 0.0600 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-06 - Light Plate Quench DCW Cooling Tower | 0.2600 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-06 - Light Plate Quench DCW Cooling Tower | 0.0400 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-06 - Light Plate Quench DCW Cooling Tower | 0.1900 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-06 - Light Plate Quench DCW Cooling Tower | 0.0001 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-06 - Light Plate Quench DCW Cooling Tower | 0.0006 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-07 - Heavy Plate Quench DCW Cooling Tower | 0.0200 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-07 - Heavy Plate Quench DCW Cooling Tower | 0.1000 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-07 - Heavy Plate Quench DCW Cooling Tower | 0.0200 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-07 - Heavy Plate Quench DCW Cooling Tower | 0.0700 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-07 - Heavy Plate Quench DCW Cooling Tower | 0.0001 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-07 - Heavy Plate Quench DCW Cooling Tower | 0.0002 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-08 - Air Separation Plant Cooling Tower | 0.1000 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | FPM | EP 09-08 - Air Separation Plant Cooling Tower | 0.4600 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-08 - Air Separation Plant Cooling Tower | 0.0800 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM10 | EP 09-08 - Air Separation Plant Cooling Tower | 0.3400 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-08 - Air Separation Plant Cooling Tower | 0.0002 | LB/HR | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| NUCOR STEEL BRANDENBURG | KY-0110 | 7/23/2020 | TPM2.5 | EP 09-08 - Air Separation Plant Cooling Tower | 0.0010 | TON/YR, 12-MONTH ROLLING | High Efficiency Mist Eliminator. The mist eliminator drift loss shall be maintained at 0.001% or less to total gpm. |
| WESTLAKE VINYLS, INC.- PVC PLANT | KY-0112 | 11/13/2020 | FPM | Cooling Tower [EU 31] | 0.1250 | LBS/HOUR, MONTHLY BASIS | 1. State-of-the-art, high-efficiency drift eliminators with a drift rate specified at 0.0005% percent of the circulating water rate; 2. Monitoring and limiting total dissolved solids in the circulating water; and 3. Proper equipment operation, and maintenance. BACT: 1. Using non-contact cooling water system; and 2. Monthly monitoring of vinyl chloride monomer (VCM) or VOC concentration in the cooling water |
| WESTLAKE VINYLS, INC.- PVC PLANT | KY-0112 | 11/13/2020 | TPM10 | Cooling Tower [EU 31] | 0.0790 | LBS/HOUR, MONTHLY BASIS | 1. State-of-the-art, high-efficiency drift eliminators with a drift rate specified at 0.0005% percent of the circulating water rate; 2. Monitoring and limiting total dissolved solids in the circulating water; and 3. Proper equipment operation, and maintenance. BACT: 1. Using non-contact cooling water system; and 2. Monthly monitoring of vinyl chloride monomer (VCM) or VOC concentration in the cooling water |
| WESTLAKE VINYLS, INC.- PVC PLANT | KY-0112 | 11/13/2020 | TPM2.5 | Cooling Tower [EU 31] | 0.0003 | LBS/HOUR, MONTHLY BASIS | 1. State-of-the-art, high-efficiency drift eliminators with a drift rate specified at 0.0005% percent of the circulating water rate; 2. Monitoring and limiting total dissolved solids in the circulating water; and 3. Proper equipment operation, and maintenance. BACT: 1. Using non-contact cooling water system; and 2. Monthly monitoring of vinyl chloride monomer (VCM) or VOC concentration in the cooling water |
| WESTLAKE VINYLS, INC.- PVC PLANT | KY-0112 | 11/13/2020 | VOC | Cooling Tower [EU 31] | 3.9000 | PPMV OF VOC, 12-MONTH ROLLING BASIS | 1. State-of-the-art, high-efficiency drift eliminators with a drift rate specified at 0.0005% percent of the circulating water rate; 2. Monitoring and limiting total dissolved solids in the circulating water; and 3. Proper equipment operation, and maintenance |
| WESTLAKE VINYLS, INC.- PVC PLANT | KY-0112 | 11/13/2020 | VOC | Cooling Tower [EU 31] | 50.0000 | PPBW OF VCM, 12-MONTH ROLLING BASIS | 1. State-of-the-art, high-efficiency drift eliminators with a drift rate specified at 0.0005% percent of the circulating water rate; 2. Monitoring and limiting total dissolved solids in the circulating water; and 3. Proper equipment operation, and maintenance |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | Laminar Cooling Tower - Hot Mill Cells (EP 03-09) | 0.2700 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | Laminar Cooling Tower - Hot Mill Cells (EP 03-09) | 1.1800 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | Laminar Cooling Tower - Hot Mill Cells (EP 03-09) | 0.1900 | LB/HR | Mist Eliminator, 0.001% drift loss |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Cooling Tower" - All Results Included
**Unit 40 - Cooling Tower**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | Laminar Cooling Tower - Hot Mill Cells (EP 03-09) | 0.8700 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | Laminar Cooling Tower - Hot Mill Cells (EP 03-09) | 0.0006 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | Laminar Cooling Tower - Hot Mill Cells (EP 03-09) | 0.0026 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | Direct Cooling Tower-Caster & Roughing Mill Cells (EP 03-10) | 0.1700 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | Direct Cooling Tower-Caster & Roughing Mill Cells (EP 03-10) | 0.7500 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | Direct Cooling Tower-Caster & Roughing Mill Cells (EP 03-10) | 0.1200 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | Direct Cooling Tower-Caster & Roughing Mill Cells (EP 03-10) | 0.5500 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | Direct Cooling Tower-Caster & Roughing Mill Cells (EP 03-10) | 0.0004 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | Direct Cooling Tower-Caster & Roughing Mill Cells (EP 03-10) | 0.0020 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | Melt Shop #2 Cooling Tower (indirect) (EP 03-11) | 0.3900 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | Melt Shop #2 Cooling Tower (indirect) (EP 03-11) | 1.7100 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | Melt Shop #2 Cooling Tower (indirect) (EP 03-11) | 0.2900 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | Melt Shop #2 Cooling Tower (indirect) (EP 03-11) | 1.2700 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | Melt Shop #2 Cooling Tower (indirect) (EP 03-11) | 0.0008 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | Melt Shop #2 Cooling Tower (indirect) (EP 03-11) | 0.0030 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | Cold Mill Cooling Tower (EP 03-12) | 0.1400 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | Cold Mill Cooling Tower (EP 03-12) | 0.6000 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | Cold Mill Cooling Tower (EP 03-12) | 0.0940 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | Cold Mill Cooling Tower (EP 03-12) | 0.4100 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | Cold Mill Cooling Tower (EP 03-12) | 0.0003 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | Cold Mill Cooling Tower (EP 03-12) | 0.0013 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | Air Separation Plant Cooling Tower (EP 03-13) | 0.0800 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | Air Separation Plant Cooling Tower (EP 03-13) | 0.3700 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | Air Separation Plant Cooling Tower (EP 03-13) | 0.0700 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | Air Separation Plant Cooling Tower (EP 03-13) | 0.3200 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | Air Separation Plant Cooling Tower (EP 03-13) | 0.0002 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | Air Separation Plant Cooling Tower (EP 03-13) | 0.0008 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | DCW Auxiliary Cooling Tower (EP 03-14) | 0.0600 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | FPM | DCW Auxiliary Cooling Tower (EP 03-14) | 0.2700 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | DCW Auxiliary Cooling Tower (EP 03-14) | 0.0500 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM10 | DCW Auxiliary Cooling Tower (EP 03-14) | 0.2100 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | DCW Auxiliary Cooling Tower (EP 03-14) | 0.0001 | LB/HR | Mist Eliminator, 0.001% drift loss |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 4/19/2021 | TPM2.5 | DCW Auxiliary Cooling Tower (EP 03-14) | 0.0006 | TON/YR, 12-MONTH ROLLING | Mist Eliminator, 0.001% drift loss |
| FG LA COMPLEX | LA-0364 | 1/6/2020 | TPM10 | Cooling Towers | 0.0010 | % | High efficiency drift eliminators and low TDS cooling water. |
| FG LA COMPLEX | LA-0364 | 1/6/2020 | TPM2.5 | Cooling Towers | 0.0010 | % | High efficiency drift eliminators and low TDS cooling water. |
| TITANIUM DIOXIDE PLANT | LA-0367 | 11/17/2020 | TPM10 | Cooling Tower | 0.0005 | % | High efficiency drift eliminators |
| TITANIUM DIOXIDE PLANT | LA-0367 | 11/17/2020 | TPM2.5 | Cooling Tower | 0.0005 | % | High efficiency drift eliminators |
| SHINTECH PLAQUEMINES PLANT 1 | LA-0379 | 5/4/2021 | TPM | C/A Cooling Tower | 0.0800 | LB/MM GAL | Good design, maintenance and mist eliminators. |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Cooling Tower" - All Results Included
**Unit 40 - Cooling Tower**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| SHINTECH PLAQUEMINES PLANT 1 | LA-0379 | 5/4/2021 | TPM10 | C/A Cooling Tower | 0.0800 | LB/MM GAL | Good design, maintenance and mist eliminators. |
| GARYVILLE REFINERY | LA-0385 | 2/11/2021 | TPM10 | Cooling Towers | 0.0000 | | High Efficiency Drift Eliminators |
| GARYVILLE REFINERY | LA-0385 | 2/11/2021 | TPM2.5 | Cooling Towers | 0.0000 | | High Efficiency Drift Eliminators |
| GARYVILLE REFINERY | LA-0385 | 2/11/2021 | VOC | Cooling Towers | 0.0000 | | Periodic monitoring cooling water as specified by 40 CFR 63 Subpart CC (for EQT0213 and EQT0397) |
| GARYVILLE REFINERY | LA-0385 | 2/11/2021 | Hydrogen Sulfide | Cooling Towers | 0.0000 | | Periodic monitoring cooling water as specified by 40 CFR 63 Subpart CC (for EQT0213 and EQT0397) |
| PORT ARTHUR REFINERY | TX-0873 | 2/4/2020 | VOC | COOLING TOWER | 0.0000 | | NON CONTACT DESIGN |
| PORT ARTHUR REFINERY | TX-0873 | 2/4/2020 | TPM | COOLING TOWER | 0.0000 | | DRIFT ELIMINATORS |
| PORT ARTHUR REFINERY | TX-0873 | 2/4/2020 | TPM10 | COOLING TOWER | 0.0000 | | DRIFT ELIMINATORS |
| PORT ARTHUR REFINERY | TX-0873 | 2/4/2020 | TPM2.5 | COOLING TOWER | 0.0000 | | DRIFT ELIMINATORS |
| PORT ARTHUR ETHANE CRACKER UNIT | TX-0876 | 2/6/2020 | VOC | COOLING TOWER | 0.0800 | PPMW | Non-contact design and sampling of strippable VOC |
| PORT ARTHUR ETHANE CRACKER UNIT | TX-0876 | 2/6/2020 | FPM | COOLING TOWER | 1200.0000 | PPM, TDS | DRIFT ELIMINATORS |
| PORT ARTHUR ETHANE CRACKER UNIT | TX-0876 | 2/6/2020 | FPM10 | COOLING TOWER | 1200.0000 | PPM, TDS | DRIFT ELIMINATORS |
| PORT ARTHUR ETHANE CRACKER UNIT | TX-0876 | 2/6/2020 | FPM2.5 | COOLING TOWER | 1200.0000 | PPM, TDS | DRIFT ELIMINATORS |
| SWEENY REFINERY | TX-0877 | 1/8/2020 | VOC | COOLING TOWER | 0.0800 | PPMW | non-contact design; the VOC in water will be monitored monthly per Appendix P; and identified leaks will be repaired as soon as possible, but before next scheduled shutdown, or shutdown triggered by 0.08 ppmw cooling water VOC concentration. Circulation rate 32000 gal/min |
| EXXONMOBIL BEAUMONT REFINERY | TX-0881 | 1/10/2020 | TPM10 | COOLING TOWERS | 0.0000 | | High efficiency drift eliminators to control drift to no more than 0.005%. |
| EXXONMOBIL BEAUMONT REFINERY | TX-0881 | 1/10/2020 | TPM2.5 | COOLING TOWERS | 0.0000 | | High efficiency drift eliminators to control drift to no more than 0.005%. |
| MONT BELVIEU NGL FRACTIONATION UNIT | TX-0886 | 3/31/2020 | VOC | COOLING TOWER | 0.7000 | LB/MMGAL, HOURLY | Monthly cooling water monitoring using air stripping |
| MONT BELVIEU NGL FRACTIONATION UNIT | TX-0886 | 3/31/2020 | VOC | COOLING TOWER | 0.3000 | LB/MMGAL, ANNUAL | Monthly cooling water monitoring using air stripping |
| ORANGE POLYETHYLENE PLANT | TX-0888 | 4/23/2020 | VOC | COOLING TOWERS | 0.7000 | LB/MMGAL | Use of a non-contact cooling tower design and monthly monitoring. |
| ORANGE POLYETHYLENE PLANT | TX-0888 | 4/23/2020 | Carbon Dioxide Equivalent (CO2e) | COOLING TOWERS | 0.0000 | | Use of a non-contact cooling tower design and monthly monitoring. |
| ORANGE POLYETHYLENE PLANT | TX-0888 | 4/23/2020 | TPM | COOLING TOWERS | 0.0000 | | DRIFT ELIMINATORS |
| ORANGE POLYETHYLENE PLANT | TX-0888 | 4/23/2020 | TPM10 | COOLING TOWERS | 0.0000 | | DRIFT ELIMINATORS |
| ORANGE POLYETHYLENE PLANT | TX-0888 | 4/23/2020 | TPM2.5 | COOLING TOWERS | 0.0000 | | DRIFT ELIMINATORS |
| SWEENY OLD OCEAN FACILITIES | TX-0889 | 8/8/2020 | Carbon Dioxide Equivalent (CO2e) | cooling tower | 0.0000 | | Good operational practices, non-contact |
| CHEVRON PHILLIPS CHEMICAL SWEENY COMPLEX | TX-0894 | 10/30/2020 | VOC | Cooling Tower (EPN 81-05-9202) | 0.0000 | | The cooling tower will have a non-contact design and will be monitored continuously for VOC equipment leaks in accordance with 30 TAC 115.764(a)(2) requirements. The leaks discovered from this monitoring shall be repaired as soon as possible, but no later than the next scheduled shutdown, or a shutdown triggered by a 0.08 ppmw cooling water VOC concentration. |
| MOTIVA POLYETHYLENE MANUFACTURING COMPLEX | TX-0904 | 9/9/2020 | VOC | COOLING TOWER | 0.0800 | PPMW | Non-contact design and sampling of strippable VOC |
| MOTIVA POLYETHYLENE MANUFACTURING COMPLEX | TX-0904 | 9/9/2020 | TPM | COOLING TOWER | 1200.0000 | PPMW | Non-contact design and DRIFT ELIMINATORS |
| MOTIVA POLYETHYLENE MANUFACTURING COMPLEX | TX-0904 | 9/9/2020 | TPM10 | COOLING TOWER | 1200.0000 | PPMW | Non-contact design and DRIFT ELIMINATORS |
| MOTIVA POLYETHYLENE MANUFACTURING COMPLEX | TX-0904 | 9/9/2020 | TPM2.5 | COOLING TOWER | 0.0000 | | Non-contact design and DRIFT ELIMINATORS |
| DIAMOND GREEN DIESEL PORT ARTHUR FACILITY | TX-0905 | 9/16/2020 | VOC | COOLING TOWER | 0.0000 | | Non-contact design and sampling of strippable VOC |
| DIAMOND GREEN DIESEL PORT ARTHUR FACILITY | TX-0905 | 9/16/2020 | TPM | COOLING TOWER | 0.0000 | | DRIFT ELIMINATORS 0.001% |
| DIAMOND GREEN DIESEL PORT ARTHUR FACILITY | TX-0905 | 9/16/2020 | TPM10 | COOLING TOWER | 0.0000 | | DRIFT ELIMINATORS 0.001% |
| DIAMOND GREEN DIESEL PORT ARTHUR FACILITY | TX-0905 | 9/16/2020 | TPM2.5 | COOLING TOWER | 0.0000 | | DRIFT ELIMINATORS 0.001% |
| MONT BELVIEU FRACTIONATOR | TX-0912 | 2/5/2021 | VOC | COOLING TOWER | 0.0000 | | drift eliminators with 0.0005% maximum drift |
| UNIT 5 | TX-0915 | 3/17/2021 | TPM | COOLING TOWER | 60000.0000 | PPM, TDS | Drift eliminators – 0.0005% |
| UNIT 5 | TX-0915 | 3/17/2021 | TPM10 | COOLING TOWER | 60000.0000 | PPM, TDS | Drift eliminators – 0.0005% |
| UNIT 5 | TX-0915 | 3/17/2021 | TPM2.5 | COOLING TOWER | 60000.0000 | PPM, TDS | Drift eliminators – 0.0005% |
| FORMOSA POINT COMFORT PLANT | TX-0929 | 10/15/2021 | VOC | COOLING TOWER | 0.0000 | | This cooling tower is non-contact design. Monthly monitoring of VOC content of the cooling water in addition to a VOC leak detection system will be implemented. |
| CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | VOC | Cooling Tower | 3.1000 | PPMVD | Monthly VOC monitoring required. Leak action level (for new sources) defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 3.1 ppmv. Non-contact design. |
| CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | TPM | Cooling Tower | 0.0000 | | Drift eliminators required. Maximum drift 0.0005 percent. TDS limit of 3,500 ppmw in the cooling water. Daily sampling for TDS required, or weekly TDS sampling is allowed if conductivity is monitored daily and a TDS to conductivity ratio is established. |
| CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | TPM10 | Cooling Tower | 0.0000 | | Drift eliminators required. Maximum drift 0.0005 percent. TDS limit of 3,500 ppmw in the cooling water. Daily sampling for TDS required, or weekly TDS sampling is allowed if conductivity is monitored daily and a TDS to conductivity ratio is established. |
| CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | TPM2.5 | Cooling Tower | 0.0000 | | Drift eliminators required. Maximum drift 0.0005 percent. TDS limit of 3,500 ppmw in the cooling water. Daily sampling for TDS required, or weekly TDS sampling is allowed if conductivity is monitored daily and a TDS to conductivity ratio is established. |
| ROEHM AMERICA BAY CITY SITE | TX-0931 | 12/16/2021 | VOC | Cooling Tower | 0.0000 | | Non-contact design and sampling of strippable VOC |
| ROEHM AMERICA BAY CITY SITE | TX-0931 | 12/16/2021 | TPM | Cooling Tower | 0.0000 | | Drift eliminators with 0.001% drift |
| ROEHM AMERICA BAY CITY SITE | TX-0931 | 12/16/2021 | TPM10 | Cooling Tower | 0.0000 | | Drift eliminators with 0.001% drift |
| ROEHM AMERICA BAY CITY SITE | TX-0931 | 12/16/2021 | TPM2.5 | Cooling Tower | 0.0000 | | Drift eliminators with 0.001% drift |
| NACERO PENWELL FACILITY | TX-0933 | 11/17/2021 | VOC | Cooling tower | 0.0800 | PPMW | Non-contact design and sampling of strippable VOC |
| NACERO PENWELL FACILITY | TX-0933 | 11/17/2021 | TPM | Cooling tower | 5000.0000 | PPM | Drift eliminators with 0.001% drift |
| NACERO PENWELL FACILITY | TX-0933 | 11/17/2021 | TPM10 | Cooling tower | 0.0000 | | Drift eliminators with 0.001% drift |
| NACERO PENWELL FACILITY | TX-0933 | 11/17/2021 | TPM2.5 | Cooling tower | 0.0000 | | Drift eliminators with 0.001% drift |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Cooling Tower" - All Results Included
**Unit 40 - Cooling Tower**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| MAIDSVILLE | *WV-0033 | 1/5/2022 | TPM | Cooling Tower | 2.1600 | LB/HR | Drift Eliminator to 0.0005% |
| | | | | | | | |
| Nucor Steel Kankakee, Inc. | IL-0126 | 11/1/2018 updated 2/19/2019 | TPM (PM, PM10 and PM2.5) | Cooling Tower | 0.0010 | Weight % | Drift Eliminator (BACT-PSD) 4500.00 gallons/minute throughput |
| Nucor Steel Kankakee, Inc. | IL-0126 | 11/1/2018 updated 2/19/2019 | TPM (PM, PM10 and PM2.5) | Cooling Tower | 4000 | total dissolved solid | Drift Eliminator (BACT-PSD) 4500.00 gallons/minute throughput |
| Nucor Steel Kankakee, Inc. | IL-0126 | 11/1/2018 updated 2/19/2019 | TPM (PM, PM10 and PM2.5) | Cooling Tower | 0.79 | tpy 12-month rolling basis | Permit Limit |
| | | | | | | | |
| Knauf Insulation, Inc. - Albion Facility | MI-0437 | 10/10/2018 updated 2/19/2019 | FPM | EU-COOLTOWER (Cooling Tower) | 0.39 | tpy 12-month rolling basis | Drift Eliminator (99.0 % efficient) (BACT-PSD-SIP) 1500.00 gallons/minute throughput |
| Knauf Insulation, Inc. - Albion Facility | MI-0437 | 10/10/2018 updated 2/19/2019 | TPM10 | EU-COOLTOWER (Cooling Tower) | 0.39 | tpy 12-month rolling basis | Drift Eliminator (99.0 % efficient) (BACT-PSD-SIP) |
| Knauf Insulation, Inc. - Albion Facility | MI-0437 | 10/10/2018 updated 2/19/2019 | TPM2.5 | EU-COOLTOWER (Cooling Tower) | 0.39 | tpy 12-month rolling basis | Drift Eliminator (99.0 % efficient) (BACT-PSD-SIP) |
| Knauf Insulation, Inc. - Albion Facility | MI-0437 | 10/10/2018 updated 2/19/2019 | FPM | EU-COOLTOWER (Cooling Tower) | 2200 | PPM by weight monthly | Drift Eliminator (99.0 % efficient) (BACT-PSD-SIP) |
| Knauf Insulation, Inc. - Albion Facility | MI-0437 | 10/10/2018 updated 2/19/2019 | TPM10 | EU-COOLTOWER (Cooling Tower) | 2200 | PPM by weight monthly | Drift Eliminator (99.0 % efficient) (BACT-PSD-SIP) |
| Knauf Insulation, Inc. - Albion Facility | MI-0437 | 10/10/2018 updated 2/19/2019 | TPM2.5 | EU-COOLTOWER (Cooling Tower) | 2200 | PPM by weight monthly | Drift Eliminator (99.0 % efficient) (BACT-PSD-SIP) |
| Knauf Insulation, Inc. - Albion Facility | MI-0437 | 10/10/2018 updated 2/19/2019 | FPM | EU-COOLTOWER (Cooling Tower) | 0.005 | % drift rate or less | Drift Eliminator (99.0 % efficient) (BACT-PSD-SIP) Vendor certification of drift rate required |
| Knauf Insulation, Inc. - Albion Facility | MI-0437 | 10/10/2018 updated 2/19/2019 | TPM10 | EU-COOLTOWER (Cooling Tower) | 0.005 | % drift rate or less | Drift Eliminator (99.0 % efficient) (BACT-PSD-SIP) Vendor certification of drift rate required |
| Knauf Insulation, Inc. - Albion Facility | MI-0437 | 10/10/2018 updated 2/19/2019 | TPM2.5 | EU-COOLTOWER (Cooling Tower) | 0.005 | % drift rate or less | Drift Eliminator (99.0 % efficient) (BACT-PSD-SIP) Vendor certification of drift rate required |
| | | | | | | | |
| Premcor Refining Group - Valero Port Arthur Refinery | TX-0847 (draft) | 9/16/2018 updated 2/14/2019 | VOC | Cooling Tower/Heat Exchange System | 0.08 | PPMW | Noncontact (BACT-PSD) |
| Premcor Refining Group - Valero Port Arthur Refinery | TX-0847 (draft) | 9/16/2018 updated 2/14/2019 | TPM10 | Cooling Tower/Heat Exchange System | 0.001 | % drift rate or less | Drift Eliminators (BACT-PSD) |
| Premcor Refining Group - Valero Port Arthur Refinery | TX-0847 (draft) | 9/16/2018 updated 2/14/2019 | TPM2.5 | Cooling Tower/Heat Exchange System | 0.001 | % drift rate or less | Drift Eliminators (BACT-PSD) |
| | | | | | | | |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018 updated 2/19/2019 | FPM | EUCOOLINGTWR: Cooling Tower (14 cell wet mechanical draft cooling tower) | 4.03 | lb/hr hourly | High Efficiency Drift/Mist Eliminators (BACT-PSD) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018 updated 2/19/2019 | FPM | EUCOOLINGTWR: Cooling Tower (14 cell wet mechanical draft cooling tower) | 0.0005 | % drift rate or less | High Efficiency Drift/Mist Eliminators (BACT-PSD) Vendor certification of drift rate required |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018 updated 2/19/2019 | FPM | EUCOOLINGTWR: Cooling Tower (14 cell wet mechanical draft cooling tower) | 3000 | PPM TDS by weight monthly | Permit Limit |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018 updated 2/19/2019 | TPM10 | EUCOOLINGTWR: Cooling Tower (14 cell wet mechanical draft cooling tower) | 0.48 | lb/hr | High Efficiency Drift/Mist Eliminators (BACT-PSD) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018 updated 2/19/2019 | TPM10 | EUCOOLINGTWR: Cooling Tower (14 cell wet mechanical draft cooling tower) | 0.0005 | % drift rate or less | High Efficiency Drift/Mist Eliminators (BACT-PSD) Vendor certification of drift rate required |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018 updated 2/19/2019 | TPM10 | EUCOOLINGTWR: Cooling Tower (14 cell wet mechanical draft cooling tower) | 3000 | PPM TDS by weight monthly | Permit Limit |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018 updated 2/19/2019 | TPM2.5 | EUCOOLINGTWR: Cooling Tower (14 cell wet mechanical draft cooling tower) | 0.48 | lb/hr | High Efficiency Drift/Mist Eliminators (BACT-PSD) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018 updated 2/19/2019 | TPM2.5 | EUCOOLINGTWR: Cooling Tower (14 cell wet mechanical draft cooling tower) | 0.0005 | % drift rate or less | High Efficiency Drift/Mist Eliminators (BACT-PSD) Vendor certification of drift rate required |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018 updated 2/19/2019 | TPM2.5 | EUCOOLINGTWR: Cooling Tower (14 cell wet mechanical draft cooling tower) | 3000 | PPM TDS by weight monthly | Permit Limit |
| | | | | | | | |
| Dow Chemical - LHC-9 | TX-0841 | 7/1/2018 updated 2/19/2019 | FPM | Cooling Tower/Heat Exchange System | 0.005 | % efficiency | Drift Eliminators (BACT-PSD) |
| Dow Chemical - LHC-9 | TX-0841 | 7/1/2018 updated 2/19/2019 | TPM10 | Cooling Tower/Heat Exchange System | 0.005 | % efficiency | Drift Eliminators (BACT-PSD) |
| Dow Chemical - LHC-9 | TX-0841 | 7/1/2018 updated 2/19/2019 | TPM2.5 | Cooling Tower/Heat Exchange System | 0.005 | % efficiency | Drift Eliminators (BACT-PSD) |
| | | | | | | | |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | FPM | EUCOOLTOWER (North Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 5.59 | tpy 12-month rolling basis | High Efficiency Drift/Mist Eliminators (BACT-PSD) (170,000 gal/min) |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | FPM | EUCOOLTOWER (North Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 0.0005 | % drift rate or less | High Efficiency Drift/Mist Eliminators (BACT-PSD) Vendor certification of drift rate required |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Cooling Tower" - All Results Included
**Unit 40 - Cooling Tower**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | FPM | EUCOOLTOWER (North Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 3000 | PPM TDS by weight monthly | Permit Limit |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM10 | EUCOOLTOWER (North Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 2.85 | tpy 12-month rolling basis | High Efficiency Drift/Mist Eliminators (BACT-PSD) (170,000 gal/min) |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM10 | EUCOOLTOWER (North Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 0.0005 | % drift rate or less | High Efficiency Drift/Mist Eliminators (BACT-PSD) Vendor certification of drift rate required |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM10 | EUCOOLTOWER (North Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 3000 | PPM TDS by weight monthly | Permit Limit |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM2.5 | EUCOOLTOWER (North Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 2.85 | tpy 12-month rolling basis | High Efficiency Drift/Mist Eliminators (BACT-PSD) (170,000 gal/min) |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM2.5 | EUCOOLTOWER (North Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 0.0005 | % drift rate or less | High Efficiency Drift/Mist Eliminators (BACT-PSD) Vendor certification of drift rate required |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM2.5 | EUCOOLTOWER (North Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 3000 | PPM TDS by weight monthly | Permit Limit |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | FPM | EUCOOLTOWER (South Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 5.59 | tpy 12-month rolling basis | High Efficiency Drift/Mist Eliminators (BACT-PSD) (170,000 gal/min) |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | FPM | EUCOOLTOWER (South Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 0.0005 | % drift rate or less | High Efficiency Drift/Mist Eliminators (BACT-PSD) Vendor certification of drift rate required |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | FPM | EUCOOLTOWER (South Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 3000 | PPM TDS by weight monthly | Permit Limit |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM10 | EUCOOLTOWER (South Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 2.85 | tpy 12-month rolling basis | High Efficiency Drift/Mist Eliminators (BACT-PSD) (170,000 gal/min) |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM10 | EUCOOLTOWER (South Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 0.0005 | % drift rate or less | High Efficiency Drift/Mist Eliminators (BACT-PSD) Vendor certification of drift rate required |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM10 | EUCOOLTOWER (South Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 3000 | PPM TDS by weight monthly | Permit Limit |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM2.5 | EUCOOLTOWER (South Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 2.85 | tpy 12-month rolling basis | High Efficiency Drift/Mist Eliminators (BACT-PSD) (170,000 gal/min) |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM2.5 | EUCOOLTOWER (South Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 0.0005 | % drift rate or less | High Efficiency Drift/Mist Eliminators (BACT-PSD) Vendor certification of drift rate required |
| Marshall Energy Center LLC MEC North, LLC and MEC South LLC | MI-0433 | 6/29/2018 updated 2/19/2019 | TPM2.5 | EUCOOLTOWER (South Plant): Cooling Tower (8 cell wet mechanical draft cooling tower) | 3000 | PPM TSD by weight monthly | High Efficiency Drift/Mist Eliminators (Permit) (170,000 gal/min) |
| Shintech Louisiana, LLC - Plaquemines Plant 1 | LA-0328 | 5/2/2018 updated 2/19/2019 | TPM10 | Cooling Tower 2 (P-35) | 0.0005 | % drift rate or less | Drift Eliminator (BACT-PSD, OPERATING PERMIT) (26,000 gal/min) |
| Shintech Louisiana, LLC - Plaquemines Plant 1 | LA-0328 | 5/2/2018 updated 2/19/2019 | TPM2.5 | Cooling Tower 2 (P-35) | 0.0005 | % drift rate or less | Drift Eliminator (BACT-PSD, OPERATING PERMIT) (26,000 gal/min) |
| Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018 updated 11/16/2018(draft) | | Cooling Tower | 6250 | mg/l TSD - monthly water quality testing | This is pollution prevention measure. No Controls Feasible (SIP) |
| Entergy Texas Inc - Montgomery County Power Station | TX-0834 | 3/30/2018 updated 2/19/2019 | TPM | Cooling Tower | 0.005 | % efficiency | Drift Eliminators (BACT-PSD)(9,864,000 gal/hr) |
| Entergy Texas Inc - Montgomery County Power Station | TX-0834 | 3/30/2018 updated 2/19/2019 | TPM10 | Cooling Tower | 0.005 | % efficiency | Drift Eliminators (BACT-PSD)(9,864,000 gal/hr) |
| Entergy Texas Inc - Montgomery County Power Station | TX-0834 | 3/30/2018 updated 2/19/2019 | TPM2.5 | Cooling Tower | 0.005 | % efficiency | Drift Eliminators (BACT-PSD)(9,864,000 gal/hr) |
| Exxonmobil Oil Corporation - Exxonmobile Beaumont Refinery | TX-0832 | 1/9/2018 updated 2/19/2019 | TPM | Cooling Towers | 0.005 | % efficiency | Drift Eliminator (BACT-PSD, NSPS Ja, MACT CC) |
| Exxonmobil Oil Corporation - Exxonmobile Beaumont Refinery | TX-0832 | 1/9/2018 updated 2/19/2019 | TPM10 | Cooling Towers | 0.005 | % efficiency | Drift Eliminator (BACT-PSD, NSPS Ja, MACT CC) |
| Exxonmobil Oil Corporation - Exxonmobile Beaumont Refinery | TX-0832 | 1/9/2018 updated 2/19/2019 | TPM2.5 | Cooling Towers | 0.005 | % efficiency | Drift Eliminator (BACT-PSD, NSPS Ja, MACT CC) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Cooling Tower" - All Results Included
**Unit 40 - Cooling Tower**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017 updated 3/8/2018 | FPM | EUCOOLTWR (Cooling Tower--Wet Mechanical Drift) | 0.0006 | % max drift rate (vendor certified) | BACT is to equip and maintain four-cell evaporative cooling tower in series with mechanical chilling to cool turbine inlet air with high efficiency drift eliminators. |
| Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017 updated 3/8/2018 | FPM | EUCOOLTWR (Cooling Tower--Wet Mechanical Drift) | 7700 | PPM TDS by weight | BACT is to equip and maintain four-cell evaporative cooling tower in series with mechanical chilling to cool turbine inlet air with high efficiency drift eliminators. |
| Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017 updated 3/8/2018 | TPM10 | EUCOOLTWR (Cooling Tower--Wet Mechanical Drift) | 0.0006 | % max drift rate (vendor certified) | BACT is to equip and maintain four-cell evaporative cooling tower in series with mechanical chilling to cool turbine inlet air with high efficiency drift eliminators. |
| Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017 updated 3/8/2018 | TPM10 | EUCOOLTWR (Cooling Tower--Wet Mechanical Drift) | 7700 | PPM TDS by weight | BACT is to equip and maintain four-cell evaporative cooling tower in series with mechanical chilling to cool turbine inlet air with high efficiency drift eliminators. |
| Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017 updated 3/8/2018 | TPM2.5 | EUCOOLTWR (Cooling Tower--Wet Mechanical Drift) | 0.0006 | % max drift rate (vendor certified) | BACT is to equip and maintain four-cell evaporative cooling tower in series with mechanical chilling to cool turbine inlet air with high efficiency drift eliminators. |
| Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017 updated 3/8/2018 | TPM2.5 | EUCOOLTWR (Cooling Tower--Wet Mechanical Drift) | 7700 | PPM TDS by weight | BACT is to equip and maintain four-cell evaporative cooling tower in series with mechanical chilling to cool turbine inlet air with high efficiency drift eliminators. |
| Kimberly-Clark Corporation - Mobile Operations - Kimberly-Clark Mobile | AL-0321 | 10/11/2017 updated 5/11/2018 | FPM10 | 803 Cooling Tower | 0.005 | % drift elimination | No Controls Feasible |
| Kimberly-Clark Corporation - Mobile Operations - Kimberly-Clark Mobile | AL-0321 | 10/11/2017 updated 5/11/2018 | FPM10 | 803 Cooling Tower | 1000 | mg/L TDS 12 month avg | No Controls Feasible |
| Kimberly-Clark Corporation - Mobile Operations - Kimberly-Clark Mobile | AL-0321 | 10/11/2017 updated 5/11/2018 | FPM2.5 | 803 Cooling Tower | 0.005 | % drift elimination | No Controls Feasible |
| Kimberly-Clark Corporation - Mobile Operations - Kimberly-Clark Mobile | AL-0321 | 10/11/2017 updated 5/11/2018 | FPM2.5 | 803 Cooling Tower | 1000 | mg/L TDS 12 month avg | No Controls Feasible |
| Knauf Insulation, Inc. - Inwood | WV-0027 | 9/15/2017 updated 5/1/2018 | TPM | Cooling Tower 3 Cells | 0.04 | lb/hr 3-hour avg | 0.005% drift eliminator - Restrict the make-up water to be provided from the local water company or have a TDS of less than 750 ppm by weight. 3 mechanical draft cooling towers. |
| | | | | | | | |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft) | PM | Eighteen Cell Cooling Tower (EU-010) | 2000 | mg/l avg on a monthly basis | High Efficiency Drift Eliminator |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft) | PM | Eighteen Cell Cooling Tower (EU-010) | 0.0005 | % Drift | High Efficiency Drift Eliminator |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft) | PM10 | Eighteen Cell Cooling Tower (EU-010) | 2000 | mg/l avg on a monthly basis | High Efficiency Drift Eliminator |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft) | PM10 | Eighteen Cell Cooling Tower (EU-010) | 0.0005 | % Drift | High Efficiency Drift Eliminator |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft) | PM2.5 | Eighteen Cell Cooling Tower (EU-010) | 2000 | mg/l avg on a monthly basis | High Efficiency Drift Eliminator |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft) | PM2.5 | Eighteen Cell Cooling Tower (EU-010) | 0.0005 | % Drift | High Efficiency Drift Eliminator |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | PM2.5 | Cooling Tower CT-16-1 (EQT032) | 0.001 | lbs/hr | High Efficiency Drift Eliminator |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | PM2.5 | Cooling Tower CT-16-1 (EQT032) | 0.01 | tons/year | High Efficiency Drift Eliminator |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | PM10 | Cooling Towers | 0.0005 | % three one-hour test average | Drift Eliminators (Unit A = 241,843 gpm Unit B = 201,196 gpm Unit C = 72,531 gpm) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | PM2.5 | Cooling Towers | | % three one-hour test average | Drift Eliminators (Unit A = 241,843 gpm Unit B = 201,196 gpm Unit C = 72,531 gpm) |
| Lyondell Chemical Bayport Choate Plant | TX-0823 (draft) | 6/7/17 draft, 8/7/17 update | VOC | Cooling Towers | 4.05 | tpy | VOC leak detection system to identify leaks into the cooling water (LAER) (products and byproducts throughput) |
| Total Petrochemicals & Refining USA, Inc. | TX-0815 (draft) | 1/17/17 draft, 1/26/17 update | VOC | Cooling Towers | 27.95 | tpy | coolint water VOC concentration (non-contact) (MACT XX) (no additional notes) |
| Total Petrochemicals & Refining USA, Inc. | TX-0815 (draft) | 1/17/17 draft, 1/26/17 update | PM10 | Cooling Towers | No numerical limit | No numerical limit | Drift Eliminators (99.999% efficiency) |
| Methanex - Geismar Methanol Plant | LA-0317 | 12/22/16, 4/28/17 update | PM10 | Cooling Towers (I-CT-621, II-CT-621) | 0.001 | % Drift Rate | Drift Eliminators (66000 gpm throughput) |
| Methanex - Geismar Methanol Plant | LA-0317 | 12/22/16, 4/28/17 update | PM2.5 | Cooling Towers (I-CT-621, II-CT-621) | 0.001 | % Drift Rate | Drift Eliminators (66000 gpm throughput) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/16 draft, 7/31/17 update | TPM10 | EUCOOLTWR (Cooling Tower--Wet Mechanical Draft) | 2.37 | tpy 12-month rolling time period | Mist/Drift Eliminators (SIP) (A three-cell wet mechanical draft cooling tower with plume abatement by a dry heat exchanger.) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/16 draft, 7/31/17 update | TPM10 | EUCOOLTWR (Cooling Tower--Wet Mechanical Draft) | 0.005 | % Drift Rate | Mist/Drift Eliminators (SIP) (A three-cell wet mechanical draft cooling tower with plume abatement by a dry heat exchanger.) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/16 draft, 7/31/17 update | TPM2.5 | EUCOOLTWR (Cooling Tower--Wet Mechanical Draft) | 2.37 | tpy 12-month rolling time period | Mist/Drift Eliminators (SIP) (A three-cell wet mechanical draft cooling tower with plume abatement by a dry heat exchanger.) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/16 draft, 7/31/17 update | TPM2.5 | EUCOOLTWR (Cooling Tower--Wet Mechanical Draft) | 0.005 | % Drift Rate | Mist/Drift Eliminators (SIP) (A three-cell wet mechanical draft cooling tower with plume abatement by a dry heat exchanger.) |
| Nucor Steel | IN-0255 | 9/21/16, 10/11/16 update | FPM | Hot Mill Contact Cooling Tower | 0.001 | % Drift Rate | Drift Eliminators (25000 gpm throughput) |
| Nucor Steel | IN-0255 | 9/21/16, 10/11/16 update | FPM | Hot Mill Contact Cooling Tower | 0.38 | lb/hr | Drift Eliminators (25000 gpm throughput) |
| Nucor Steel | IN-0255 | 9/21/16, 10/11/16 update | TPM10 | Hot Mill Contact Cooling Tower | 0.001 | % Drift Rate | Drift Eliminators (25000 gpm throughput) |
| Nucor Steel | IN-0255 | 9/21/16, 10/11/16 update | TPM10 | Hot Mill Contact Cooling Tower | 0.19 | lb/hr | Drift Eliminators (25000 gpm throughput) |
| Nucor Steel | IN-0255 | 9/21/16, 10/11/16 update | TPM2.5 | Hot Mill Contact Cooling Tower | 0.001 | % Drift Rate | Drift Eliminators (25000 gpm throughput) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Cooling Tower" - All Results Included
**Unit 40 - Cooling Tower**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Nucor Steel | IN-0255 | 9/21/16, 10/11/16 update | TPM2.5 | Hot Mill Contact Cooling Tower | 0.001 | lb/hr | Drift Eliminators (25000 gpm throughput) |
| CPV Fairview Energy Center | PA-0310 (draft) | 9/2/16 draft, 7/31/17 update | TPM | Cooling Tower | 0.8 | lb/hr | NSPS (12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator. Permittee shall sample, analyze, and record the circulating water TDS on a monthly basis. TDS solids shall not exceed 1500 ppm.) |
| CPV Fairview Energy Center | PA-0310 (draft) | 9/2/16 draft, 7/31/17 update | TPM | Cooling Tower | 3.4 | tpy 12-month rolling basis | NSPS (12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator. Permittee shall sample, analyze, and record the circulating water TDS on a monthly basis. TDS solids shall not exceed 1500 ppm.) |
| CPV Fairview Energy Center | PA-0310 (draft) | 9/2/16 draft, 7/31/17 update | TPM10 | Cooling Tower | 0.8 | lb/hr | NSPS (12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator. Permittee shall sample, analyze, and record the circulating water TDS on a monthly basis. TDS solids shall not exceed 1500 ppm.) |
| CPV Fairview Energy Center | PA-0310 (draft) | 9/2/16 draft, 7/31/17 update | TPM10 | Cooling Tower | 3.4 | tpy | NSPS (12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator. Permittee shall sample, analyze, and record the circulating water TDS on a monthly basis. TDS solids shall not exceed 1500 ppm.) |
| CPV Fairview Energy Center | PA-0310 (draft) | 9/2/16 draft, 7/31/17 update | TPM2.5 | Cooling Tower | 0.4 | lb/hr | NSPS (12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator. Permittee shall sample, analyze, and record the circulating water TDS on a monthly basis. TDS solids shall not exceed 1500 ppm.) |
| CPV Fairview Energy Center | PA-0310 (draft) | 9/2/16 draft, 7/31/17 update | TPM2.5 | Cooling Tower | 1.8 | tpy | NSPS (12-cell mechanical draft wet cooling tower with high-efficiency drift eliminator. Permittee shall sample, analyze, and record the circulating water TDS on a monthly basis. TDS solids shall not exceed 1500 ppm.) |
| Sasol Chemicals - Comonimer-1 Unit | LA-0277 | 9/1/16, 4/28/17 update | VOC | Cooling Tower Y12-800 | | | NESHAP - Comply with requirements of 40 CFR 63.104 (15200 gpm) |
| Sasol Chemicals -Lake Charles Chemical Complex - Comonimer-1 Unit | LA-0319 | 9/1/16, 4/28/17 update | VOC | cooling tower y12-800 | | | NESHAP - Comply with requirements of 40 CFR 63.104 |
| Entergy Louisiana, LLC - St. Charles Power Station | LA-0313 | 8/31/16, 4/28/17 update | FPM10 | SCPS Cooling Tower 1 | 1.24 | lb/hr hourly maximum | High Efficiency Drift Eliminators (164400 gpm) |
| Entergy Louisiana, LLC - St. Charles Power Station | LA-0313 | 8/31/16, 4/28/17 update | FPM10 | SCPS Cooling Tower 1 | 3.61 | tpy annual maximum | High Efficiency Drift Eliminators (164400 gpm) |
| Entergy Louisiana, LLC - St. Charles Power Station | LA-0313 | 8/31/16, 4/28/17 update | FPM10 | SCPS Cooling Tower 1 | 0.005 | % Drift Rate | BACT - High Efficiency Drift Eliminators (164400 gpm) |
| Entergy Louisiana, LLC - St. Charles Power Station | LA-0313 | 8/31/16, 4/28/17 update | FPM2.5 | SCPS Cooling Tower 1 | 1.24 | lb/hr hourly maximum | High Efficiency Drift Eliminators (164400 gpm) |
| Entergy Louisiana, LLC - St. Charles Power Station | LA-0313 | 8/31/16, 4/28/17 update | FPM2.5 | SCPS Cooling Tower 1 | 3.61 | tpy annual maximum | High Efficiency Drift Eliminators (164400 gpm) |
| Entergy Louisiana, LLC - St. Charles Power Station | LA-0313 | 8/31/16, 4/28/17 update | FPM2.5 | SCPS Cooling Tower 1 | 0.005 | % Drift Rate | BACT - High Efficiency Drift Eliminators (164400 gpm) |
| Indorama Ventures Olefins, LLC - Indorama Lake Charles Facility | LA-0314 | 8/3/16, 4/28/17 update | TPM10 | cooling towers - 007 | 0.005 | % Drift Rate | Drift Eliminators (86500 gpm) |
| Indorama Ventures Olefins, LLC - Indorama Lake Charles Facility | LA-0314 | 8/3/16, 4/28/17 update | TPM10 | cooling towers - 007 | 1400 | PPM TDS | Drift Eliminators (86500 gpm) |
| Indorama Ventures Olefins, LLC - Indorama Lake Charles Facility | LA-0314 | 8/3/16, 4/28/17 update | TPM2.5 | cooling towers - 007 | 0.005 | % Drift Rate | Drift Eliminators (86500 gpm) |
| Indorama Ventures Olefins, LLC - Indorama Lake Charles Facility | LA-0314 | 8/3/16, 4/28/17 update | TPM2.5 | cooling towers - 007 | 1400 | PPM TDS | Drift Eliminators (86500 gpm) |
| Indorama Ventures Olefins, LLC - Indorama Lake Charles Facility | LA-0314 | 8/3/16, 4/28/17 update | VOC | cooling towers - 007 | No numeric limit | | NESHAP - monitored as required by 40 CFR 63 subpart XX (86500 gpm) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | FPM | Cooling Tower | 0.685 | lb/hr | BACT, NSPS - High Efficiency Drift Eliminators (One 8-cell, 124,800 gallon per minute (GPM) Mechanical Induced Draft Cooling Tower) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | FPM10 | Cooling Tower | 0.535 | lb/hr | BACT - High Efficiency Drift Eliminators (One 8-cell, 124,800 gallon per minute (GPM) Mechanical Induced Draft Cooling Tower) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | FPM2.5 | Cooling Tower | 0.223 | lb/hr | BACT - High Efficiency Drift Eliminators (One 8-cell, 124,800 gallon per minute (GPM) Mechanical Induced Draft Cooling Tower) |
| Equistar Chemicals, LP - Westlake Facility | LA-0295 | 7/12/16, 9/19/16 update | VOC | CGP Unit Cooling Tower (3-03, EQT 15) | 0.13 | lb/hr hourly maximum | BACT - Monthly hydrocarbon monitoring; maintain equipment to minimize fugitive emissions; repair faulty equipment at the earliest opportunity, but no later than the next scheduled unit shutdown (Annual VOC emissions from the CGP Unit Cooling Tower, along with VOC emissions from a number of other cooling towers not addressed in the PSD permit, are capped at 12.29 TPY (GRP 13). (3000 GPM) |
| Flint Hills Resources Houston Chemical LLC - PL Propylene Houston Olefins Pl | TX-0803 (draft) | 7/12/16 draft, 8/31/16 update | TPM10 | Cooling Tower | 0.001 | % Drift Rate | BACT - Drift Eliminators |
| Flint Hills Resources Houston Chemical LLC - PL Propylene Houston Olefins Pl | TX-0803 (draft) | 7/12/16 draft, 8/31/16 update | TPM2.5 | Cooling Tower | 0.001 | % Drift Rate | BACT - Drift Eliminators |
| Flint Hills Resources Houston Chemical LLC - PL Propylene Houston Olefins Pl | TX-0801 (draft) | 6/24/16 draft, 7/20/16 update | CO2e | Cooling Tower | 0.005 | Drift | BACT - % drift design |
| Florida Power & Light - Okeechobee Clean Energy Center | FL-0356 | 03/09/2016 | TPM | Mechanical draft cooling tower | 0.0005 | % Drift Rate | BACT (Must have certified drift rate no more than 0.0005%) |
| Commercial Metals Company - CMC Steel Oklahoma | OK-0173 | 1/19/16, 7/7/16 update | TPM10 | Cooling Towers | 0.001 | % Drift Rate | BACT - Drift Eliminators (For this analysis, as a simplifying conservative assumption, all of the particulate resulting from the drift is considered to be PM10.Throughput Capacity/Size deemed "Confidential" by applicant.) (The only feasible option at this location is a wet cooling tower with high efficiency drift eliminators (0.001%). The emission rate is somewhat higher than many cooling towers, but the sizes proposed are very much smaller than the cooling towers that are installed at power plants, refineries, etc.) |
| Flopam, Inc. - Flopam Facility | LA-0318 | 1/7/16, 4/28/17 update | TPM10 | Cooling Towers | No numeric limit | | Integrated Drift Eliminators (PSD-LA-747 entered as LA-0240 and PSD-LA-747(M1) entered as LA-0251. LA-0318 is for PSD-747(M2), dated 7/5/12 (add dust collectors, cooling tower, and diesel engines), PSD-747(M3), dated 5/13/13 (no BACT changes), PSD-747(M4), dated 2/10/15 (add a cooling tower and diesel engines), and PSD-747(M5), dated 1/7/16 (add dust collectors)) |
| | | | | | | | |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Cooling Towers | 0.0005 | % Drift | Drift Eliminator |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Cooling Tower | 0.0005 | % Drift | Drift Eliminator |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Cooling Tower" - All Results Included
**Unit 40 - Cooling Tower**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Ohio Valley Resources, LLC | TBD | 9/26/2013 | PM | Cooling Towers | 0.0005 | % Drift | High Efficiency Drift Eliminator |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM | Cooling Tower | 0.0005 | % of total circ flow | Drift/Mist Eliminators |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM | Cooling Tower | 1.5 | lbs/hr | Drift/Mist Eliminators |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM | Cooling Tower | 20% | Reduction | Drift/Mist Eliminators |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Cooling Towers | 0.0005 | % Drift | Drift Eliminator |
| Consolidated Environmental Management Inc. - Nucor Direct Reduction Iron Pl | LA-0248 | 1/27/2011 | PM10 | Process Water Cooling Tower | 0.11 | lbs/hr | BACT is a combination of less than or equal to 1000 milligrams per liter TDS concentration in the culling water and drift eliminators employing a drift maximum of 0.0005% |
| Consolidated Environmental Management Inc. - Nucor Direct Reduction Iron Pl | LA-0248 | 1/27/2011 | PM10 | Process Water Cooling Tower | 0.4 | tons/year | BACT is a combination of less than or equal to 1000 milligrams per liter TDS concentration in the culling water and drift eliminators employing a drift maximum of 0.0005% |
| Consolidated Environmental Management Inc. - Nucor Direct Reduction Iron Pl | LA-0248 | 1/27/2011 | PM10 | Clean Water Cooling Tower | 0.07 | lbs/hr | BACT is a combination of less than or equal to 1000 milligrams per liter TDS concentration in the culling water and drift eliminators employing a drift maximum of 0.0005% |
| Consolidated Environmental Management Inc. - Nucor Direct Reduction Iron Pl | LA-0248 | 1/27/2011 | PM10 | Clean Water Cooling Tower | 0.29 | tons/year | BACT is a combination of less than or equal to 1000 milligrams per liter TDS concentration in the culling water and drift eliminators employing a drift maximum of 0.0005% |
| Entergy Louisiana LLC Ninemile Point Electric Generating Plant | LA-0254 | 8/16/2011 | PM10 | Cooling Tower | 0.0005 | % Drift annual average | High Efficiency Mist Eliminator |
| Entergy Louisiana LLC Ninemile Point Electric Generating Plant | LA-0254 | 8/16/2011 | PM10 | Chiller Cooling Tower | 0.001 | % Drift annual average | High Efficiency Mist Eliminator |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Cooling Tower | 0.0005 | % Drift | Drift Eliminator |
| Koch Nitrogen Company Enid Nitrogen Plant | OK-0124 | 5/1/2008 | PM10 | Cooling Tower | No numeric limit | | High Efficiency Drift Eliminator |
| Ohio Valley Resources, LLC | TBD | 9/26/2013 | PM10 | Cooling Towers | 0.0005 | % Drift | High Efficiency Drift Eliminator |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM10 | Cooling Tower | 0.0005 | % of total circ flow | Drift/Mist Eliminators |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM10 | Cooling Tower | 1.5 | lbs/hr | Drift/Mist Eliminators |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM2.5 | Cooling Towers | 0.0005 | % Drift | Drift Eliminator |
| Entergy Louisiana LLC Ninemile Point Electric Generating Plant | LA-0254 | 8/16/2011 | PM2.5 | Cooling Tower | 0.0005 | % Drift annual average | High Efficiency Mist Eliminator |
| Entergy Louisiana LLC Ninemile Point Electric Generating Plant | LA-0254 | 8/16/2011 | PM2.5 | Chiller Cooling Tower | 0.001 | % Drift annual average | High Efficiency Mist Eliminator |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM2.5 | Cooling Tower | 0.0005 | % Drift | Drift Eliminator |
| Ohio Valley Resources, LLC | TBD | 9/26/2013 | PM2.5 | Cooling Towers | 0.0005 | % Drift | High Efficiency Drift Eliminator |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | Visible Emission | Cooling Towers | 0 | % | Drift Eliminator |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | Visible Emission | Cooling Tower | 0 | % Opacity | Drift Eliminator |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Cooling Towers | No numeric limit | | limit the amount of VOC in treatment chemicals and a drift eliminator |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.
Some facilities are not shown because they are not fertilizer production facilities. These units are not directly comparable because they do not flare common process gas.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "MDEA", "methyl","urea","42.009","61.999" - All Results
**UF-85 Tanks**

No new entries

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Toyota Motors - Motor Vehicle Assembly Plant | TX-0846 | 9/23/2018(draft) | VOC | Storage Tanks – Very Low Vapor Pressure Non Gasoline Automotive Fluids – Gear Lube, Engine Oil, Diesel fuel, Urea, ATF Etc. <20,000 gal each | 0 | | P2: White fixed roof storage tanks equipped with a submerged fill pipe. use of drain dry construction is required to minimize the emissions from tank entry and inspection. |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | VOC | MDEA Storage Tank | 0.1 | tons/year rolling 12 month total | Nitrogen Gas Blanket |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Urea uf-85 Storage Tank | 0.046 | lb/hr average of 3 stack tests | packed bed scrubber |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Reformer" - Fertilizer Plants only
**Unit 12 - Primary Reformer**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| EL DORADO CHEMICAL COMPANY | AR-0170 | 12/2/2020 | Methane | SN-49 Ammonia Plant Primary Reformer | 0.0099 | LB/MMBTU, 3 HR | Proper Catalyst Selection, Good Operating Practices |
| EL DORADO CHEMICAL COMPANY | AR-0170 | 12/2/2020 | CO2e | SN-49 Ammonia Plant Primary Reformer | 423800 | TONS PER 12 ROLLING MONTHS | good combustion practices and proper design, shall combust natural gas and/or process off gas streams, shall be equipped with the following energy efficiency features: air inlet controls and flue gas heat recovery to pre-heat inlet fuel, inlet air and inlet steam flows, shall be designed to achieve a thermal efficiency of 80% (HHV). |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Reformer Furnace EU-001 | 0.0024 | LB/MMBTU | good combustion practices and proper design |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Reformer Furnace EU-001 | 1.87 | LB/HR | good combustion practices and proper design |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Reformer Furnace EU-001 | 0.0024 | LB/MMBTU | good combustion practices and proper design |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Reformer Furnace EU-001 | 1.87 | LB/HR | good combustion practices and proper design |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Reformer Furnace EU-001 | 59.61 | LB/MMCF | good combustion practices and proper design, shall combust natural gas and/or process off gas streams, shall be equipped with the following energy efficiency features: air inlet controls and flue gas heat recovery to pre-heat inlet fuel, inlet air and inlet steam flows, shall be designed to achieve a thermal efficiency of 80% (HHV). |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Reformer Furnace EU-001 | 399317 | TON/YR, TWELVE CONSECUTIVE MONTH PERIO | good combustion practices and proper design, shall combust natural gas and/or process off gas streams, shall be equipped with the following energy efficiency features: air inlet controls and flue gas heat recovery to pre-heat inlet fuel, inlet air and inlet steam flows, shall be designed to achieve a thermal efficiency of 80% (HHV). |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Reformer Furnace EU-001 | 0.0014 | POUND PER MMBTU | good combustion practices and proper design, shall combust natural gas and/or process off gas streams. |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Reformer Furnace EU-001 | 1.09 | LB/HR | good combustion practices and proper design, shall combust natural gas and/or process off gas streams. |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Reformer Furnace EU-001 | 0.0194 | LB/MMBTU | good combustion practices and proper design, shall combust natural gas and/or off gas streams |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Reformer Furnace EU-001 | 15.13 | LB/HR | good combustion practices and proper design, shall combust natural gas and/or off gas streams |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Reformer Furnace EU-001 | 9 | PPMVD THIRTY-DAY ROLLING AVERAGE | selective catalytic reduction at all times the reformer is in operation, except during startup and shutdown when the catalyst is below its normal operating temperature. |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | CO2e | Primary Reformer Stack RS-16-1 (EQT029) | 363287 | tpy | Energy Efficiency Measure (note: 111.72 kg/MM BTU of CO2, 0.001 kg/MM BTU of CH4, and 0.0001 kg/MM BTU of N2O) |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | CO | Primary Reformer Stack RS-16-1 (EQT029) | 33.26 | lb/hr | Good Combustion Practices (Note: 0.0824 lb/MMBtu of natural gas) |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | CO | Primary Reformer Stack RS-16-1 (EQT029) | 121.41 | tpy | Good Combustion Practices (Note: 0.0824 lb/MMBtu of natural gas) |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | PM2.5 | Primary Reformer Stack RS-16-1 (EQT029) | 3.01 | lb/hr | Good Combustion Practices (Note: 0.00745 lb/MMBtu of natural gas) |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | PM2.5 | Primary Reformer Stack RS-16-1 (EQT029) | 10.99 | tpy | Good Combustion Practices (Note: 0.00745 lb/MMBtu of natural gas) |
| Agrium US, Inc | TX-0814 | 1/5/2017(draft) | CO2e | Reformer Furnace 101-B | 564019 | tpy | Good engineering practices (1100 MMBtu/hr) |
| | | | | | | | |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CH4 | Primary Reformer | 0.0023 | lb/MMBtu average of 3 stack tests | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CH4 | Primary Reformer | 0.0023 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| CF Industries Inc. Donaldsonville Nitrogen Co | LA-0236 | 3/3/2009 | CO | NO. 1,2,3,&4 Ammonia Plant Reformers | 301.29 | tons/year | Optimum combustion control and the use of natural gas as fuel |
| CF Industries Inc. Donaldsonville Nitrogen Co | LA-0236 | 3/3/2009 | CO | NO. 1,2,3,&4 Ammonia Plant Reformers | 303.47 | lb/hr | Optimum combustion control and the use of natural gas as fuel |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Primary Reformer | 0.0194 | lb/MMBtu average of 3 stack tests | Good operating practices & use of natural gas |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Primary Reformer | 90.3 | tpy Rolling 12 month total | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO | Primary Reformer | 0.0194 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO | Primary Reformer | 96.3 | tons/year rolling 12 month total | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Primary Reformer | 43.45 | lb/MMcf 3 hour average | Good Combustion Practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2 | Primary Reformer | 117 | lb/MMBtu 30 day rolling average | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO2 | Primary Reformer | 117 | lb/MMBtu 30 day rolling average | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO2 | Primary Reformer | 59.61 | tons/MMcf 3 hour average | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO2 | Primary Reformer | 515246 | tons per 12 consecutive month period | Good Combustion Practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2e | Primary Reformer | 545674 | tpy Rolling 12 month total | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO2e | Primary Reformer | 596905 | tpy Rolling 12 month total | Good Combustion Practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | N2O | Primary Reformer | 0.0006 | lb/MMBtu average of 3 stack tests | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | N2O | Primary Reformer | 0.0006 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Altoona GTL LLC/Gilberton | PA-0285 | 1/16/2013 | NH3 | Convection Reformers | 5 | PPMVD @ 15%O2, 3 hr average, rolling by 1 hr | SCR |
| Air Products and Chemicals, Inc. | LA-0264 | 9/4/2012 | NOx | Reformers | 48.74 | lb/hr hourly maximum | ULNB and SCR |
| Air Products and Chemicals, Inc. | LA-0264 | 9/4/2012 | NOx | Reformers | 0.015 | lb/MMBtu annual average | ULNB and SCR |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | NOx | Primary Reformer | 9 | ppmv 30 day rolling average | SCR |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | NOx | Primary Reformer | 56 | tons/year rolling 12 month total | SCR |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Primary Reformer | 9 | ppmvd 30 day rolling average | SCR |
| Air Products and Chemicals, Inc. | LA-0264 | 9/4/2012 | PM | Reformers | 11.24 | lb/hr hourly average | Proper equipment designs, good combustion practices, and gaseous fuel |
| Air Products and Chemicals, Inc. | LA-0264 | 9/4/2012 | PM | Reformers | 0.0075 | lb/MMBtu | Proper equipment designs, good combustion practices, and gaseous fuel |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Reformer" - Fertilizer Plants only
**Unit 12 - Primary Reformer**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Altoona GTL LLC/Gilberton | PA-0285 | 1/16/2013 | PM | Convection Reformers | 0.2 | Grains/DSCF | Unknown |
| Altoona GTL LLC/Gilberton | PA-0285 | 1/16/2013 | PM | Reformers | 0.2 | Grains/DSCF | Unknown |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Primary Reformer | 0.0024 | lb/MMBtu average of 3 stack tests | Good operating practices & use of natural gas |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Primary Reformer | 11.2 | tpy Rolling 12 month total | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Primary Reformer | 0.0024 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Primary Reformer | 11.9 | tons/year rolling 12 month total | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM | Primary Reformer | 1.9 | lb/MMcf 3 hour average | Good Combustion Practices |
| Air Products and Chemicals, Inc. | LA-0264 | 9/4/2012 | PM10 | Reformers | 11.24 | lb/hr hourly average | Proper equipment designs, good combustion practices, and gaseous fuel |
| Air Products and Chemicals, Inc. | LA-0264 | 9/4/2012 | PM10 | Reformers | 0.0075 | lb/MMBtu | Proper equipment designs, good combustion practices, and gaseous fuel |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Primary Reformer | 0.0024 | lb/MMBtu average of 3 stack tests | Good operating practices & use of natural gas |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Primary Reformer | 11.2 | tpy Rolling 12 month total | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Primary Reformer | 0.0024 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Primary Reformer | 11.9 | tons/year rolling 12 month total | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM10 | Primary Reformer | 7.6 | lb/MMcf 3 hour average | Good Combustion Practices |
| Air Products and Chemicals, Inc. | LA-0264 | 9/4/2012 | PM2.5 | Reformers | 11.24 | lb/hr hourly average | Proper equipment designs, good combustion practices, and gaseous fuel |
| Air Products and Chemicals, Inc. | LA-0264 | 9/4/2012 | PM2.5 | Reformers | 0.0075 | lb/MMBtu | Proper equipment designs, good combustion practices, and gaseous fuel |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM2.5 | Primary Reformer | 0.0024 | lb/MMBtu average of 3 stack tests | Good operating practices & use of natural gas |
| Navajo Refining Company LLC Navajo Refini | NM-0050 | 12/14/2007 | PM10 | Steam Methane Reformer Heater | 2.52 | lbs/hr hourly | Gaseous Fuel Combustion Only |
| Navajo Refining Company LLC Navajo Refini | NM-0050 | 12/14/2007 | SO2 | Steam Methane Reformer Heater | 2.16 | tpy | Selective Catalytic Reduction |
| Navajo Refining Company LLC Navajo Refini | NM-0050 | 12/14/2007 | SO2 | Steam Methane Reformer Heater | 0.494 | lbs/hr | Selective Catalytic Reduction |
| Navajo Refining Company LLC Navajo Refini | NM-0050 | 12/14/2007 | VOC | Steam Methane Reformer Heater | 0.005 | lb/MMBtu hourly | Gaseous Fuel Combustion Only |
| Navajo Refining Company LLC Navajo Refini | NM-0050 | 12/14/2007 | VOC | Steam Methane Reformer Heater | 1.69 | lbs/hr hourly | Gaseous Fuel Combustion Only |
| Altoona GTL LLC/Gilberton | PA-0285 | 1/16/2013 | SOx | Reformers | 500 | PPMVD expressed as SO2 | Unknown |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | Visible Emissions | Primary Reformer | 0 | % | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | Visible Emissions | Primary Reformer | 0 | % | Good Operation Practices |
| Pryor Plant Chemical Company | OK-0134<br>OK-0135 | 2/23/2009 | PM | Primary Reformer | 1.68 | lbs/hr | Unknown |
| Pryor Plant Chemical Company | OK-0134<br>OK-0135 | 2/23/2009 | PM10 | Primary Reformer | 1.26 | lbs/hr 24-hr | Unknown |
| Pryor Plant Chemical Company | OK-0134<br>OK-0135 | 2/23/2009 | SO2 | Primary Reformer | 1.35 | lb/hr | Natural Gas |
| Pryor Plant Chemical Company | OK-0134<br>OK-0135 | 2/23/2009 | SO2 | Primary Reformer | 0.2 | lb/MMBtu | Natural Gas |
| Pryor Plant Chemical Company | OK-0134<br>OK-0135 | 2/23/2009 | VOC | Primary Reformer | 1.21 | lbs/hr | Unknown |

Notes:
Some facilities are not shown because they are not fertilizer production facilities.  These units are not directly comparable because they do not flare common process gas.
Some facilities are not shown because they are not fertilizer production facilities.  These units are not directly comparable because they are not natural gas fired.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "CO2 Vent", "CO2 Stripper" - All Results Included
**Unit 14 - $CO_2$ Vent**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| EL DORADO CHEMICAL COMPANY | AR-0170 | 12/2/2020 | Methane | SN-51 Ammonia Plant CO2 Regenerator | 0.106 | LB/TON NH3, 3-HR | Proper Catalyst Selection, Good Operating Practices |
| EL DORADO CHEMICAL COMPANY | AR-0170 | 12/2/2020 | Methane | SN-51 Ammonia Plant CO2 Regenerator | 6.9 | LB/HR, 3-HR | Proper Catalyst Selection, Good Operating Practices |
| EL DORADO CHEMICAL COMPANY | AR-0170 | 12/2/2020 | CO2e | SN-51 Ammonia Plant CO2 Regenerator | 711000 | TON PER YEAR | Proper Catalyst Selection, Good Operating Practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | CO2 purification process EU 003 | 1.275 | TON/AMMONIA PRODUCED, BASED ON 100% CO2 VENTING. | good operational procedures including the selection of an optimal process catalyst |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | CO2 purification process EU 003 | 831040 | TON/YR, TWELVE CONSECUTIVE MONTH PERIOD | good operational procedures including the selection of an optimal process catalyst |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | CO2 purification process EU 003 | 0.106 | LB/TON AMMONIA PRODUCED, BASED ON 100% CO2 VENTING. | shall be controlled by the use of good operational procedures including the selection of an optimal process catalyst |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | CO2 purification process EU 003 | 0.02 | LB/TON AMMONIA PRODUCED, BASED ON 100% CO2 VENTING. | good operational procedures including the selection of an optimal process catalyst including the selection of an optimal process catalyst |
| Praxair Inc - Praxair Clear Lake Plant | TX-0830 | 10/19/2017 | CO2e | HyCO CO2 Stripper MSS | 0 | | No controls feasible. |
| Praxair Inc - Praxair Clear Lake Plant | TX-0830 | 10/19/2017 | CO | HyCO CO2 Stripper MSS | 3.3 | tpy | No controls feasible. |
| Praxair Inc - Praxair Clear Lake Plant | TX-0827 | 10/19/2017 | CO2e | HyCO CO2 Stripper MSS | 0 | | No controls feasible. Emissions included in sitewide grouped limit |
| Praxair Inc - Praxair Clear Lake Plant | TX-0827 | 10/19/2017 | CO | HyCO CO2 Stripper MSS | 3.3 | tpy | No controls feasible. |
| Agrium US, Inc | TX-0814 | 1/5/2017(draft) | CO2e | CO2 Stripper Vent | 843150 | tpy | Good engineering practices to minimize CO2e emissions, with emissions limited to releasing to the atmoshpere the CO2 with cannot be sold. (730,000 TPY Urea and 702,625 TPY Ammonia Greenhouse gas (GHG) will be controlled by using Carbon dioxide (CO2) as a raw material to produce urea. If the Urea Plant is not operating, the CO2 generated in the ammonia process will be vented to the atmosphere) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | CO | Acid Gas Removal Unit/CO2 Vent | No Numeric Limit | No Numeric Limit | Thermal Oxidizers |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | CO2e | Acid Gas Removal Unit/CO2 Vent | No Numeric Limit | No Numeric Limit | Thermal Oxidizers |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016 (draft), 08/08/2017 update | CO2e | CO2 Stripper Column CO2SC-16-1 (EQT031) | 162511 | tpy | Use of pipeline quality natural gas and good combustion practices. 0.29 Ton CO2e/Metric Ton of NH3 produced. |
| | | | | | | | |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | Acetaldehyde[1] | Carbon Dioxide Regenerator | 1,226,814 | tpy rolling 12 month total | Good operational practices |
| CF Industries Inc. Donaldsonville Nitrogen Complex - Ammonia Plant | LA-0236 | 3/3/2009 | CO | CO2 Vents | 5.59 | lbs/hr | Optimum Catalytic Conversion of CO to CO2 in the high and low shift converters, and continued use of an optimum liquid alkanol amine solution, or other solution to maximize the absorbing of CO2 |
| CF Industries Inc. Donaldsonville Nitrogen Complex - Ammonia Plant | LA-0236 | 3/3/2009 | CO | CO2 Vents | 6.55 | tons/year | Optimum Catalytic Conversion of CO to CO2 in the high and low shift converters, and continued use of an optimum liquid alkanol amine solution, or other solution to maximize the absorbing of CO2 |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Carbon Dioxide Regenerator | 0.02 | lb/ton of NH3 average of 3 stack tests | Good operational practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Carbon Dioxide Regenerator | 9.74 | tpy rolling 12 month total | Good operational practices |
| Iowa Fertilizer company | IA-0105 | 10/26/2012 | CO | CO2 Regenerator | 0.02 | lb/ton of NH3 average of 3 stack tests | Good operational practices |
| Iowa Fertilizer company | IA-0105 | 10/26/2012 | CO | CO2 Regenerator | 9.65 | tpy rolling 12 month total | Good operational practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | CO2 purification process | 0.0117 | lb/ton of NH3 3 hour average | good operational practices and the use of a process catalyst |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | CO | Selexol AGR CO2 Vent | 8.7 | lbs/hr | Thermal Oxidizer (Cat-Ox) |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2 | Carbon Dioxide Regenerator | 1.26 | lb/ton of NH3 30 day rollin g average[2] | Good operational practices |
| Iowa Fertilizer company | IA-0105 | 10/26/2012 | CO2 | CO2 Regenerator | 1.26 | Tons/ton of NH3 rolling 30 day averag | Good operational practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO2 | CO2 purification process | 1.275 | ton/ton of NH3 3 hour average | Good Operational Practices |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | CO2 | Carbon dioxide vent | 3.65 | lbs/hr 1 hour/8 hour | good operation practices |
| Iowa Fertilizer company | IA-0105 | 10/26/2012 | CO2e | CO2 Regenerator | 1,211,847 | tpy rolling 12 month total | Good operational practices |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | NOx | Selexol AGR CO2 Vent | 0.9 | lbs/hr | Thermal Oxidizer (Cat-Ox) |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Carbon Dioxide Regenerator | 0.106 | lb/ton of NH3 average of 3 stack tests | Good operational practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Carbon Dioxide Regenerator | 51.60 | tpy rolling 12 month total | Good operational practices |
| Iowa Fertilizer company | IA-0105 | 10/26/2012 | VOC | CO2 Regenerator | 0.106 | lb/ton of NH3 average of 3 stack tests | Good operational practices |
| Iowa Fertilizer company | IA-0105 | 10/26/2012 | VOC | CO2 Regenerator | 51.2 | tpy rolling 12 month total | Good operational practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | VOC | CO2 purification process | 0.0558 | lb/ton of NH3 3 hour average | low VOC catalyst |

[1] This is not correct according to Chris Roling for the Iowa DNR, most likely CO2e

[2] The units may be incorrect. It might be tons/ton of NH3

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Flare" - Fertilizer Plants only
**Unit 22 - Plants 4 and 5 Small Flare**
**Unit 23 - Plants 4 and 5 Emergency Flare**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | ammonia storage flare EU-016 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | ammonia storage flare EU-016 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | ammonia storage flare EU-016 | 0.068 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | ammonia storage flare EU-016 | 0.37 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | ammonia storage flare EU-016 | 0.0054 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | ammonia storage flare EU-016 | 563 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Front End Flare EU 017 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels used shall be natural gas, Flares shall be designed for and operated with no visible emissions, except for periods not to exceed 5 minutes during any two consecutive hours, Flares shall be operated with a flame present at all times, Flares shall be continuously monitored to assure the presence of a pilot flame with a thermocouple, infrared monitor, or other approved device |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels used shall be natural gas, Flares shall be designed for and operated with no visible emissions, except for periods not to exceed 5 minutes during any two consecutive hours, Flares shall be operated with a flame present at all times, Flares shall be continuously monitored to assure the presence of a pilot flame with a thermocouple, infrared monitor, or other approved device |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Front End Flare EU 017 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels used shall be natural gas, Flares shall be designed for and operated with no visible emissions, except for periods not to exceed 5 minutes during any two consecutive hours, Flares shall be operated with a flame present at all times, Flares shall be continuously monitored to assure the presence of a pilot flame with a thermocouple, infrared monitor, or other approved device |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels used shall be natural gas, Flares shall be designed for and operated with no visible emissions, except for periods not to exceed 5 minutes during any two consecutive hours, Flares shall be operated with a flame present at all times, Flares shall be continuously monitored to assure the presence of a pilot flame with a thermocouple, infrared monitor, or other approved device |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Front End Flare EU 017 | 0.068 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Front End Flare EU 017 | 0.37 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Front End Flare EU 017 | 0.0054 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Front End Flare EU 017 | 116.89 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Back End Flare EU-018 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Back End Flare EU-018 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Back End Flare EU-018 | 0.068 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Back End Flare EU-018 | 0.37 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Back End Flare EU-018 | 0.0054 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Back End Flare EU-018 | 116.89 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Discontinuous Urea Flare EU-DUF | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Discontinuous Urea Flare EU-DUF | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Discontinuous Urea Flare EU-DUF | 0.068 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Discontinuous Urea Flare EU-DUF | 0.37 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Discontinuous Urea Flare EU-DUF | 0.0054 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Discontinuous Urea Flare EU-DUF | 116.89 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Emergency Urea Flare EU-EUF | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Emergency Urea Flare EU-EUF | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Emergency Urea Flare EU-EUF | 0.068 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Emergency Urea Flare EU-EUF | 0.37 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Emergency Urea Flare EU-EUF | 0.0054 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Emergency Urea Flare EU-EUF | 116.89 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | PM2.5 | Process Flare FL-16-1 (EQT034) | 0.01 | lb/hr hourly maximum | Correct flare design and good combustion practices; Compliance with the Louisiana Non-NSPS Flare Requirements (2.17 MMBtu/hr)(Flare shall not operate more than 4 hours above normal firing rate in any 24 consecutive hours and 148 hours per year) |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | PM2.5 | Process Flare FL-16-1 (EQT034) | 0.02 | tpy annual maximum | Correct flare design and good combustion practices; Compliance with the Louisiana Non-NSPS Flare Requirements (2.17 MMBtu/hr)(Flare shall not operate more than 4 hours above normal firing rate in any 24 consecutive hours and 148 hours per year) |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | CO | Process Flare FL-16-1 (EQT034) | 0.87 | lb/hr hourly maximum | Correct flare design and good combustion practices; Compliance with the Louisiana Non-NSPS Flare Requirements (2.17 MMBtu/hr)(Flare shall not operate more than 4 hours above normal firing rate in any 24 consecutive hours and 148 hours per year) |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | CO | Process Flare FL-16-1 (EQT034) | 3.76 | tpy annual maximum | Correct flare design and good combustion practices; Compliance with the Louisiana Non-NSPS Flare Requirements (2.17 MMBtu/hr)(Flare shall not operate more than 4 hours above normal firing rate in any 24 consecutive hours and 148 hours per year) |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | CO2e | Process Flare FL-16-1 (EQT034) | 370 | tpy annual maximum | Correct flare design and good combustion practices; Compliance with the Louisiana Non-NSPS Flare Requirements (2.17 MMBtu/hr)(Flare shall not operate more than 4 hours above normal firing rate in any 24 consecutive hours and 148 hours per year) |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | TPM | Back End Flare (EU-018) | 0.0019 | lb/MMBtu 3 hour average | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | TPM | Back End Flare (EU-018) | 336 | hours/12 consec month | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | TPM | Back End Flare (EU-018) | No Numeric Limit | No Numeric Limit | Pilot and purge gas shall be natural gas; and process flaring minimization practices; operated with a flame present at all times; continuously monitored |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Flare" - Fertilizer Plants only
**Unit 22 - Plants 4 and 5 Small Flare**
**Unit 23 - Plants 4 and 5 Emergency Flare**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | PM10 | Back End Flare (EU-018) | 0.0075 | lb/MMBtu 3 hour average | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | PM10 | Back End Flare (EU-018) | 336 | hours/12 consec month venting | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | PM10 | Back End Flare (EU-018) | No Numeric Limit | No Numeric Limit | Pilot and purge gas shall be natural gas; and process flaring minimization practices; operated with a flame present at all times; continuously monitored |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | PM2.5 | Back End Flare (EU-018) | 0.0075 | lb/MMBtu 3 hour average | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | PM2.5 | Back End Flare (EU-018) | 336 | hours/12 consec month venting | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | PM2.5 | Back End Flare (EU-018) | No Numeric Limit | No Numeric Limit | Pilot and purge gas shall be natural gas; and process flaring minimization practices; operated with a flame present at all times; continuously monitored |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | NOx | Back End Flare (EU-018) | 0.068 | lb/MMBtu during normal operations 3 hour average | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | NOx | Back End Flare (EU-018) | 624.94 | lb/hour venting operations 3 hour average | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | NOx | Back End Flare (EU-018) | No Numeric Limit | No Numeric Limit | Pilot and purge gas shall be natural gas; and process flaring minimization practices; operated with a flame present at all times; continuously monitored |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | CO | Back End Flare (EU-018) | 0.37 | lb/MMBtu during normal operations 3 hour average | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | CO | Back End Flare (EU-018) | 804.76 | lb/hour venting operations 3 hour average | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | CO | Back End Flare (EU-018) | No Numeric Limit | No Numeric Limit | Pilot and purge gas shall be natural gas; and process flaring minimization practices; operated with a flame present at all times; continuously monitored |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | VOC | Back End Flare (EU-018) | 0.0054 | lb/MMBtu during normal operations 3 hour average | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | VOC | Back End Flare (EU-018) | 11.73 | lb/hour venting operations 3 hour average | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | VOC | Back End Flare (EU-018) | No Numeric Limit | No Numeric Limit | Pilot and purge gas shall be natural gas; and process flaring minimization practices; operated with a flame present at all times; continuously monitored |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | CO2 | Back End Flare (EU-018) | 116.89 | lb/MMBtu during normal operations 3 hour average | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | CO2 | Back End Flare (EU-018) | 573 | tons/12 consecutive months | |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft), updated 7/10/17 | CO2 | Back End Flare (EU-018) | No Numeric Limit | No Numeric Limit | Pilot and purge gas shall be natural gas; and process flaring minimization practices; operated with a flame present at all times; continuously monitored |
| Agrium US, Inc | TX-0814 | 1/5/2017(draft) | CO2e | Ammonia Emergency Flare | 157 | tpy | Good Engineering Practices (0.31 MMBtu/hr and 2715 MMBtu/year) |
| Agrium US, Inc | TX-0814 | 1/5/2017(draft) | CO2e | Urea Emergency Flare | 1418 | tpy | Good Engineering Practices (2.76 MMBtu/hr) |
| Agrium US, Inc | TX-0814 | 1/5/2017(draft) | CO2e | Urea Emergency Flare (maintenance) | 5.9 | tpy | Good Engineering Practices (2000 kg/event, 36 hrs/event, 4 events/yr) |
| | | | | | | | |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CH4 | Flares | No Numeric Limit | No Numeric Limit | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CH4 | Ammonia Flare | No Numeric Limit | No Numeric Limit | Work Practice/Good Combustion Practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Flares | No Numeric Limit | No Numeric Limit | Good operating practices & use of natural gas |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Front End Process Flare | 0.37 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Front End Process Flare | 3240.16 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Back end ammonia process vent flare | 0.37 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Back end ammonia process vent flare | 804.76 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | CO | Process Flare | No Numeric Limit | No Numeric Limit | Good combustion practices. Meet 40 CFR 60.18 |
| United Wisconsin Grain Producers UWGP - Fuel Grade Ethanol Plant | WI-0204 | 8/14/2003 | CO | Bypass Flare, Biomethanator | 2.4 | lbs/hr | Operation Limit: No more than 5040 hr/yr |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | NOx | Ammonia Flare | No Numeric Limit | No Numeric Limit | Work Practice/Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Front End Process Flare | 0.068 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Front End Process Flare | 595.47 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | Visible Emissions | Flares | No Numeric Limit | No Numeric Limit | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | Visible Emissions | Ammonia Flare | No Numeric Limit | No Numeric Limit | Work Practice/Good Combustion Practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Flares | No Numeric Limit | No Numeric Limit | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | VOC | Ammonia Flare | No Numeric Limit | No Numeric Limit | Work Practice/Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | VOC | Front End Process Flare | 0.0054 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | VOC | Front End Process Flare | 47.26 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | CO | Flare, Steam Assisted | 12.8 | lbs/hr | Unknown |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | CO | Flare, Steam Assisted | 56.07 | tons/year 365-day sum of daily emissions | Unknown |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | NOx | Flare, Steam Assisted | 15.23 | lbs/hr | Unknown |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | NOx | Flare, Steam Assisted | 66.71 | tons/year 365-day sum of daily emissions | Unknown |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | PM10 | Flare, Steam Assisted | 1.16 | lbs/hr | Unknown |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | PM10 | Flare, Steam Assisted | 5.08 | tons/year 365-day sum of daily emissions | Unknown |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | SOx | Flare, Steam Assisted | 4.2 | lbs/hr | Unknown |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | SOx | Flare, Steam Assisted | 18.4 | tons/year 365-day sum of daily emissions | Unknown |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | Visible Emissions | Flare, Steam Assisted | 0 | % opacity no NE except for 5 min during any 2 hrs | Unknown |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | VOC | Flare, Steam Assisted | 3.68 | tons/year 365-day sum of daily emissions | Unknown |
| Sunoco, Inc. Sun Company, Inc., Toledo Refinery | OH-0308 | 2/23/2009 | VOC | Flare, Steam Assisted | 0.84 | lbs/hr | Unknown |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | VOC | Back end ammonia process vent flare | 0.0054 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | VOC | Back end ammonia process vent flare | 11.73 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| United Wisconsin Grain Producers UWGP - Fuel Grade Ethanol Plant | WI-0204 | 8/14/2003 | VOC | Bypass Flare, Biomethanator | 0.3 | lbs/hr | Operation Limit: No more than 5040 hr/yr |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | CO | Flares, 3500 SCFM LFG (3) | 17.3 | lbs/hr | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | CO | Flares, 3500 SCFM LFG (3) | 98% | Reduction | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | CO | Flares, 2500 SCFM LFG (2) | 12.3 | lbs/hr | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | CO | Flares, 2500 SCFM LFG (2) | 98% | Reduction | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Flare" - Fertilizer Plants only
**Unit 22 - Plants 4 and 5 Small Flare**
**Unit 23 - Plants 4 and 5 Emergency Flare**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | NOx | Flares, 2500 SCFM LFG (2) | 3.6 | lbs/hr | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | NOx | Flares, 3500 SCFM LFG (3) | 5.1 | lbs/hr | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | NOx | Flares, 3500 SCFM LFG (3) | 98% | Reduction | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | NOx | Flares, 2500 SCFM LFG (2) | 98% | Reduction | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | PM10 | Flares, 2500 SCFM LFG (2) | 1.6 | lbs/hr | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | PM10 | Flares, 2500 SCFM LFG (2) | 98% | Reduction | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | PM10 | Flares, 3500 SCFM LFG (3) | 2.2 | lbs/hr | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | PM10 | Flares, 3500 SCFM LFG (3) | 98% | Reduction | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | SO2 | Flares, 2500 SCFM LFG (2) | 1.4 | lbs/hr | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | SO2 | Flares, 3500 SCFM LFG (3) | 1.9 | lbs/hr | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | VOC | Flares, 2500 SCFM LFG (2) | 1 | lbs/hr nonmethane organic carbon | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | VOC | Flares, 2500 SCFM LFG (2) | 98% | Reduction | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | VOC | Flares, 3500 SCFM LFG (3) | 0.6 | lbs/hr | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |
| WM Atlantic Waste Disposal Inc. Atlantic Waste Disposal Landfill | VA-0294 | 2/5/2003 | VOC | Flares, 3500 SCFM LFG (3) | 1.4 | lbs/hr nonmethane organic carbon | Proper maintenance of the flare, including monitoring for the presence of flame, LGF flow rate, 0% opacity, measuring % methane in LFG |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.
Some facilities are not shown because they are not fertilizer production facilities. These units are not directly comparable because they do not flare common process gas.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "MDEA", "methyl","42.009","61.999" - All Results
**MDEA Storage Tank**

No new entries

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| No New Results | | | | | | | |
| | | | | | | | |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Methyl-diethanol Amine (MDEA) Storage Tank | 0.1 | tons/year rolling 12 month total | Nitrogen Gas Blanket |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | VOC | MDEA Storage Tank | 0.1 | tons/year rolling 12 month total | Nitrogen Gas Blanket |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu).

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Start up", "Start-up","Preheat" - All Results Included
**Unit 13 - Startup Heater**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | PM10 | Startup heater EU-002 | 200 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | PM10 | Startup heater EU-002 | 0.249 | LB/HR | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | PM2.5 | Startup heater EU-002 | 200 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | PM2.5 | Startup heater EU-002 | 0.249 | LB/HR | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | CO2e | Startup heater EU-002 | 200 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | CO2e | Startup heater EU-002 | 3898 | LB/HR | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | VOC | Startup heater EU-002 | 200 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | VOC | Startup heater EU-002 | 0.18 | LB/HR | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | CO | Startup heater EU-002 | 200 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | CO | Startup heater EU-002 | 1.217 | LB/HR | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | NOx | Startup heater EU-002 | 200 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | shall combust natural gas, shall be controlled by good combustion practices |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 44687 | NOx | Startup heater EU-002 | 6.007 | LB/HR | shall combust natural gas, shall be controlled by good combustion practices |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Start up", "Start-up","Preheat" - All Results Included
**Unit 13 - Startup Heater**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| PORT ARTHUR REFINERY | TX-0873 | 43865 | NOx | Heaters' SCR MSS and heater | 0.1 | LB/MMBTU, Hourly | |
| PORT ARTHUR REFINERY | TX-0873 | 43865 | SO2 | Heaters' SCR MSS and heater | 162 | PPMV H2S | |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | PM10 | Vertical and Horizontal Ladl | 0.0075 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | PM2.5 | Vertical and Horizontal Ladl | 0.0075 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | SOx | Vertical and Horizontal Ladl | 0.0006 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | CO2e | Vertical and Horizontal Ladl | 117 | LB/MMBTU | Good operating practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | Visible Emissions (VE) | Vertical and Horizontal Ladl | 5 | % | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | VOC | Vertical and Horizontal Ladl | 0.0054 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | CO | Vertical and Horizontal Ladl | 0.0824 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | NOx | Vertical and Horizontal Ladl | 0.095 | LB/MMBTU | Low NOx burners Combustion of clean fuel Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | FPM | Vertical and Horizontal Ladl | 0.0075 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | PM10 | Tundish Preheaters/Dryout S | 0.0075 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | PM2.5 | Tundish Preheaters/Dryout S | 0.0075 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | CO2e | Tundish Preheaters/Dryout S | 117 | LB/MMBTU | Good operating practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | Visible Emissions (VE) | Tundish Preheaters/Dryout S | 5 | % | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | VOC | Tundish Preheaters/Dryout S | 0.0054 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | CO | Tundish Preheaters/Dryout S | 0.0824 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | NOx | Tundish Preheaters/Dryout S | 0.097 | LB/MMBTU | Low NOx burners Combustion of clean fuel Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | FPM | Tundish Preheaters/Dryout S | 0.0075 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 44592 | SO2 | Tundish Preheaters/Dryout S | 0.0006 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practices |
| NUCOR STEEL KANKAKEE, INC. | *IL-0132 | 44221 | PM10 | Ladle Preheater | 0.0076 | LB/MMBTU | Good combustion practice |
| NUCOR STEEL KANKAKEE, INC. | *IL-0132 | 44221 | VOC | Ladle Preheater | 0.0055 | LB/MMBTU | Good combustion practice |
| NUCOR STEEL KANKAKEE, INC. | *IL-0132 | 44221 | CO | Ladle Preheater | 0.084 | LB/MMBTU | Good combustion practice |
| NUCOR STEEL KANKAKEE, INC. | *IL-0132 | 44221 | NOx | Ladle Preheater | 0.1 | LB/MMBTU | Good combustion practice |
| NUCOR STEEL KANKAKEE, INC. | *IL-0132 | 44221 | FPM | Ladle Preheater | 0.0019 | LB/MMBTU | Good combustion practice |
| NUCOR STEEL KANKAKEE, INC. | *IL-0132 | 44221 | SO2 | Ladle Preheater | 0.0006 | LB/MMBTU | Good combustion practice |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | TPM | Galvanizing Line #2 Preheat | 7.6 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | TPM | Galvanizing Line #2 Preheat | 3.07 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | PM2.5 | Galvanizing Line #2 Preheat | 7.6 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | PM2.5 | Galvanizing Line #2 Preheat | 3.07 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | Ammonia (NH3) | Galvanizing Line #2 Preheat | 10 | PPM, CONTINUOUSLY MONITORED | |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | CO2e | Galvanizing Line #2 Preheat | 48725 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan and implement various design and operational efficiency requirements. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | VOC | Galvanizing Line #2 Preheat | 5.5 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | VOC | Galvanizing Line #2 Preheat | 2.22 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | CO | Galvanizing Line #2 Preheat | 84 | LB/MMSCF, 3-HR AVERAGE | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | CO | Galvanizing Line #2 Preheat | 33.91 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | NOx | Galvanizing Line #2 Preheat | 7.5 | LB/MMSCF, 3-HR AVERAGE | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan. This unit is also equipped with a SCR/SNCR system to control emissions. During a cold start, SCR does not reach operating temperature for approximately 30 minutes. During this time, only low-NOx burners are controlling emissions of NOx. NSG estimates the unit may undergo 1 cold start every two (2) weeks. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | NOx | Galvanizing Line #2 Preheat | 3.03 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan. This unit is also equipped with a SCR/SNCR system to control emissions. During a cold start, SCR does not reach operating temperature for approximately 30 minutes. During this time, only low-NOx burners are controlling emissions of NOx. NSG estimates the unit may undergo 1 cold start every two (2) weeks. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | Lead (Pb) / Lead Compounds | Galvanizing Line #2 Preheat | 0.0005 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | Lead (Pb) / Lead Compounds | Galvanizing Line #2 Preheat | 0.0002 | TON/YR, 12-MONTH ROLLING | |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Start up", "Start-up","Preheat" - All Results Included
**Unit 13 - Startup Heater**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | FPM | Galvanizing Line #2 Preheat | 1.9 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | FPM | Galvanizing Line #2 Preheat | 0.77 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | SO2 | Galvanizing Line #2 Preheat | 0.6 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | SO2 | Galvanizing Line #2 Preheat | 0.24 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | PM10 | Galvanizing Line #2 Zinc Pot | 7.6 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | PM10 | Galvanizing Line #2 Zinc Pot | 0.0019 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | PM2.5 | Galvanizing Line #2 Zinc Pot | 7.6 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | PM2.5 | Galvanizing Line #2 Zinc Pot | 0.0019 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | CO2e | Galvanizing Line #2 Zinc Pot | 30 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan and implement various design and operational efficiency requirements. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | VOC | Galvanizing Line #2 Zinc Pot | 5.5 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | VOC | Galvanizing Line #2 Zinc Pot | 0.0013 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | CO | Galvanizing Line #2 Zinc Pot | 84 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | CO | Galvanizing Line #2 Zinc Pot | 0.021 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | NOx | Galvanizing Line #2 Zinc Pot | 70 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan. This unit is equipped with a low-NOx burner. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | NOx | Galvanizing Line #2 Zinc Pot | 0.017 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan. This unit is equipped with a low-NOx burner. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | Lead (Pb) / Lead Compounds | Galvanizing Line #2 Zinc Pot | 0.0005 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | FPM | Galvanizing Line #2 Zinc Pot | 1.9 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | FPM | Galvanizing Line #2 Zinc Pot | 0.0005 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | SO2 | Galvanizing Line #2 Zinc Pot | 0.6 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 44305 | SO2 | Galvanizing Line #2 Zinc Pot | 0.0001 | TON/YR, 12-MONTH ROLLING | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| PETMIN USA INCORPORATED | OH-0383 | 44029 | CO | Ladle Preheaters (P002, P003 | 0.521 | LB/H | Good combustion practices and the use of natural gas |
| PETMIN USA INCORPORATED | OH-0383 | 44029 | CO | Ladle Preheaters (P002, P003 | 2.26 | T/YR, PER ROLLING 12 MONTH PERIOD | Good combustion practices and the use of natural gas |
| PETMIN USA INCORPORATED | OH-0383 | 44029 | CO | Ladle Preheaters (P002, P003 | 0.0344 | LB/MMBTU | Good combustion practices and the use of natural gas |
| STEEL MANUFACTURING FACILITY | TX-0867 | 43832 | VOC | MELT SHOP LADLE PREHE | 0 | | GOOD COMBUSTION PRACTICES |
| STEEL MANUFACTURING FACILITY | TX-0867 | 43832 | CO | MELT SHOP LADLE PREHE | 0 | | GOOD COMBUSTION PRACTICES |
| STEEL MANUFACTURING FACILITY | TX-0867 | 43832 | NOx | MELT SHOP LADLE PREHE | 0 | | GOOD COMBUSTION PRACTICES |
| STEEL MANUFACTURING FACILITY | TX-0867 | 43832 | SO2 | MELT SHOP LADLE PREHE | 0 | | CLEAN FUEL AND SCRAP |
| SDSW STEEL MILL | TX-0882 | 43847 | TPM | LADLE DRYERS AND PREH | 0.0075 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | PM10 | LADLE DRYERS AND PREH | 0.0075 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | PM2.5 | LADLE DRYERS AND PREH | 0.0075 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | CO2e | LADLE DRYERS AND PREH | 117.1 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | VOC | LADLE DRYERS AND PREH | 0.0054 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | CO | LADLE DRYERS AND PREH | 0.082 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | NOx | LADLE DRYERS AND PREH | 0.1 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | SO2 | LADLE DRYERS AND PREH | 0.0006 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | TPM | Tundish Dryer and Tundish | 0.0075 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | PM10 | Tundish Dryer and Tundish | 0.0075 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | PM2.5 | Tundish Dryer and Tundish | 0.0075 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | CO2e | Tundish Dryer and Tundish | 117.1 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | VOC | Tundish Dryer and Tundish | 0.0054 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | CO | Tundish Dryer and Tundish | 0.082 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | NOx | Tundish Dryer and Tundish | 0.1 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |
| SDSW STEEL MILL | TX-0882 | 43847 | SO2 | Tundish Dryer and Tundish | 0.0006 | LB/MMBTU | GOOD COMBUSTION PRACTICES, CLEAN FUEL |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Start up", "Start-up","Preheat" - All Results Included
**Unit 13 - Startup Heater**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| CHAPARRAL STEEL MILL | TX-0932 | 44575 | SO2 | Melt Shop – Electric Arc Furn | 0 | | Sweet NG, Scrap Best Mgmt Practices |
| | | | | | | | |
| Gerdau Macsteel Inc. - Gerdau Macsteel Monroe | MI-0438 | 10/29/2018, updated 2/19/2019 | PM10 | mmbtu/hr burner) | 0.0076 | lb/MMBtu Hourly | Use of NG fuel and good combustion practices |
| Gerdau Macsteel Inc. - Gerdau Macsteel Monroe | MI-0438 | 10/29/2018, updated 2/19/2019 | PM2.5 | mmbtu/hr burner) | 0.0076 | lb/MMBtu Hourly | Use of NG fuel and good combustion practices |
| Gerdau Macsteel Inc. - Gerdau Macsteel Monroe | MI-0438 | 10/29/2018, updated 2/19/2019 | NOx | Ladle Preheater (30 mmbtu/hr burner) | 0.08 | lb/MMBtu Hourly | LAER - Low NOx burners, use of NG fuel, and good combustion practices. NOx subject to LAER due to non-attainment for ozone, also subject to NOx BACT in NOx attainment area. |
| Gerdau Macsteel Inc. - Gerdau Macsteel Monroe | MI-0438 | 10/29/2018, updated 2/19/2019 | CO | Ladle Preheater (30 mmbtu/hr burner) | 0.084 | lb/MMBtu Hourly | Use of NG fuel and good combustion practices |
| Gerdau Macsteel Inc. - Gerdau Macsteel Monroe | MI-0438 | 10/29/2018, updated 2/19/2019 | SO2 | Ladle Preheater (30 mmbtu/hr burner) | 0.0006 | lb/MMBtu Hourly | Use of NG fuel and good combustion practices |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | PM2.5 | Ammonia Converter Start-up Heater Stack SUH-16-1 (EQT030) | 0.18 | lb/hr hourly maximum | Use of pipeline quality natural gas and good combustion practices |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | PM2.5 | Ammonia Converter Start-up Heater Stack SUH-16-1 (EQT030) | 0.01 | tpy annual maximum | Use of pipeline quality natural gas and good combustion practices |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | CO | Ammonia Converter Start-up Heater Stack SUH-16-1 (EQT030) | 1.96 | lb/hr hourly maximum | Use of pipeline quality natural gas and good combustion practices |
| Topchem Pollock, LLC | LA-0306 | 12/20/2016, updated 8/8/17 | CO | Ammonia Converter Start-up Heater Stack SUH-16-1 (EQT030) | 0.12 | tpy annual maximum | Use of pipeline quality natural gas and good combustion practices |
| Topchem Pollock, LLC | IN-0263 (draft) | 12/20/2016, updated 8/8/17 | CO2e | Ammonia Converter Start-up Heater Stack SUH-16-1 (EQT030) | 169 | tpy annual maximum | Use of pipeline quality natural gas and good combustion practices |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | FPM | Startup Heater EU-002 | 0.13 | lb/hr 3 hour average | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | FPM | Startup Heater EU-002 | 200 | hours/year | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | PM10 | Startup Heater EU-002 | 0.522 | lb/hr 3 hour average | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | PM10 | Startup Heater EU-002 | 200 | hours/year | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | PM2.5 | Startup Heater EU-002 | 0.522 | lb/hr 3 hour average | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | PM2.5 | Startup Heater EU-002 | 200 | hours/year | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | NOx | Startup Heater EU-002 | 12.611 | lb/hr 3 hour average | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | NOx | Startup Heater EU-002 | 200 | hours/year | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | CO | Startup Heater EU-002 | 2.556 | lb/hr 3 hour average | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | CO | Startup Heater EU-002 | 200 | hours/year | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | VOC | Startup Heater EU-002 | 0.378 | lb/hr 3 hour average | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | VOC | Startup Heater EU-002 | 200 | hours/year | Good Combustion Practices & use of natural gas (70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | CO2 | Startup Heater EU-002 | 8184 | lb/hr 3 hour average | Good Combustion Practices & use of inlet air control sensors that limit excess air(70 MMBtu/hr) |
| Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | CO2 | Startup Heater EU-002 | 200 | hours/year | Good Combustion Practices & use of inlet air control sensors that limit excess air(70 MMBtu/hr) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | PM10 | Gasifier Start-up Preheat Burners | No Numeric Limit | No Numeric Limit | Good engineering practices, good combustion technology, and use of clean fuels (23 MMBtu/hr each) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | PM2.5 | Gasifier Start-up Preheat Burners | No Numeric Limit | No Numeric Limit | Good engineering practices, good combustion technology, and use of clean fuels (23 MMBtu/hr each) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | SO2 | Gasifier Start-up Preheat Burners | No Numeric Limit | No Numeric Limit | Good engineering practices, good combustion technology, and use of clean fuels (23 MMBtu/hr each) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | NOx | Gasifier Start-up Preheat Burners | No Numeric Limit | No Numeric Limit | Good engineering practices, good combustion technology, and use of clean fuels (23 MMBtu/hr each) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | CO | Gasifier Start-up Preheat Burners | No Numeric Limit | No Numeric Limit | Good engineering practices, good combustion technology, and use of clean fuels (23 MMBtu/hr each) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | CO2e | Gasifier Start-up Preheat Burners | No Numeric Limit | No Numeric Limit | Good equipment design and good combustion practices (23 MMBtu/hr each) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | PM10 | WSA Preheat Burners | No Numeric Limit | No Numeric Limit | Good engineering design and practices and use of clean fuels (no size listed) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | PM2.5 | WSA Preheat Burners | No Numeric Limit | No Numeric Limit | Good engineering design and practices and use of clean fuels(no size listed) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | SO2 | WSA Preheat Burners | No Numeric Limit | No Numeric Limit | Good engineering design and practices and use of clean fuels (no size listed) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | NOx | WSA Preheat Burners | No Numeric Limit | No Numeric Limit | Good engineering design and practices and use of clean fuels(no size listed) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | CO | WSA Preheat Burners | No Numeric Limit | No Numeric Limit | Good engineering design and practices and use of clean fuels (no size listed) |
| Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | CO2e | WSA Preheat Burners | No Numeric Limit | No Numeric Limit | Good equipment design and good combustion practices (no size listed) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Start up", "Start-up","Preheat" - All Results Included
**Unit 13 - Startup Heater**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | CO | FGFUELHTR (Two fuel pre-heaters identified as EUFUELHTR1 & EUFUELHTR2) | 2.22 | lb/hr hourly; each unit | SIP - Good combustion practices (27 MMBtu/hr each) |
| Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | NOx | FGFUELHTR (Two fuel pre-heaters identified as EUFUELHTR1 & EUFUELHTR2) | 2.65 | lb/hr hourly; each unit | SIP - Good combustion practices (27 MMBtu/hr each) |
| Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | FPM | FGFUELHTR (Two fuel pre-heaters identified as EUFUELHTR1 & EUFUELHTR2) | 0.002 | lb/MMBtu Test Protocol will Specify Avg Time | Good combustion practices (27 MMBtu/hr each) |
| Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | TPM10 | FGFUELHTR (Two fuel pre-heaters identified as EUFUELHTR1 & EUFUELHTR2) | 0.2 | lb/hr hourly; each fuel heater | SIP - Good combustion practices (27 MMBtu/hr each) |
| Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | TPM2.5 | FGFUELHTR (Two fuel pre-heaters identified as EUFUELHTR1 & EUFUELHTR2) | 0.2 | lb/hr hourly; each fuel heater | SIP - Good combustion practices (27 MMBtu/hr each) |
| Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | VOC | FGFUELHTR (Two fuel pre-heaters identified as EUFUELHTR1 & EUFUELHTR2) | 0.15 | lb/hr hourly; each fuel heater | Good combustion practices (27 MMBtu/hr each) |
| Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | SO2 | FGFUELHTR (Two fuel pre-heaters identified as EUFUELHTR1 & EUFUELHTR2) | 2000 | gr/MMscf Based upon Fuel Receipt Records | SIP - Good combustion practices and the use of pipeline quality natural gas (The limit is 2,000 grains of sulfur per MMscf. The natural gas material limit of 2000 grains of sulfur per MMscf is what the emission factor is based upon.) (27 MMBtu/hr each) |
| Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | CO2e | FGFUELHTR (Two fuel pre-heaters identified as EUFUELHTR1 & EUFUELHTR2) | 13848 | tpy combined 12-month rolling time period | Energy efficiency measures and the use of a low carbon fuel (pipeline quality natural gas) (27 MMBtu/hr each) |
| Holland Board of Public Works - East 5th Street | **MI-0424 (draft) (update of MI-0412)** | 12/5/2016, 7/31/17 update | CO | EUFUELHTR (Fuel pre-heater) | 0.41 | lb/hr Test Protocol will Specify Avg Time | SIP - Good combustion practices (3.7 MMBtu/hr each) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | NOx | EUFUELHTR (Fuel pre-heater) | 0.55 | lb/hr Test Protocol will Specify Avg Time | SIP - Good combustion practices (3.7 MMBtu/hr each) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | FPM | EUFUELHTR (Fuel pre-heater) | 0.007 | lb/MMBtu Test Protocol will Specify Avg Time | Good combustion practices (3.7 MMBtu/hr each) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | TPM10 | EUFUELHTR (Fuel pre-heater) | 0.0075 | lb/MMBtu Test Protocol will Specify Avg Time | SIP - Good combustion practices (3.7 MMBtu/hr each) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | TPM2.5 | EUFUELHTR (Fuel pre-heater) | 0.0075 | lb/MMBtu Test Protocol will Specify Avg Time | SIP - Good combustion practices (3.7 MMBtu/hr each) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | VOC | EUFUELHTR (Fuel pre-heater) | 0.03 | lb/hr Test Protocol will Specify Avg Time | Good combustion practices (3.7 MMBtu/hr each) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | SO2 | EUFUELHTR (Fuel pre-heater) | 2000 | gr/MMscf Based upon Fuel Receipt Records | SIP - Good combustion practices and the use of pipeline quality natural gas (The limit is 2,000 grains of sulfur per MMscf. The natural gas material limit of 2000 grains of sulfur per MMscf is what the emission factor is based upon.) (3.7 MMBtu/hr each) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | CO2e | EUFUELHTR (Fuel pre-heater) | 1934 | tpy combined 12-month rolling time period | Good combustion practices (3.7 MMBtu/hr each) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | NOx | Dew Point Heater 13.8 | 0.011 | lb/MMBtu | NSPS (12.8 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | CO | Dew Point Heater 13.8 | 0.08 | lb/MMBtu | NSPS (12.8 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | CO | Dew Point Heater 3.2 | 0.08 | lb/MMBtu | NSPS (3.2 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | NOx | Dew Point Heater 3.2 | 0.035 | lb/MMBtu | NSPS (3.2 MMBtu/hr) |
| Mid-Kansas Electric Company, LLC - Rubart Stati | KS-0030 (draft) | 3/31/16, 7/19/17 update | NOx | Indirect Fuel-Gas Heater | 0.2 | lb/hr excludes SSM | (One (1) indirect fuel-gas heater, rated at 2 mmBtu/hr heat input, which shall only burn natural gas, for the purpose of heating the natural gas fuel prior to combustion in the Caterpillar 4SLB RICE) |
| Mid-Kansas Electric Company, LLC - Rubart Stati | KS-0030 (draft) | 3/31/16, 7/19/17 update | CO | Indirect Fuel-Gas Heater | 0.16 | lb/hr excludes SSM | (One (1) indirect fuel-gas heater, rated at 2 mmBtu/hr heat input, which shall only burn natural gas, for the purpose of heating the natural gas fuel prior to combustion in the Caterpillar 4SLB RICE) |
| Mid-Kansas Electric Company, LLC - Rubart Stati | KS-0030 (draft) | 3/31/16, 7/19/17 update | VOC | Indirect Fuel-Gas Heater | 0.011 | lb/hr excludes SSM | (One (1) indirect fuel-gas heater, rated at 2 mmBtu/hr heat input, which shall only burn natural gas, for the purpose of heating the natural gas fuel prior to combustion in the Caterpillar 4SLB RICE) |
| Mid-Kansas Electric Company, LLC - Rubart Stati | KS-0030 (draft) | 3/31/16, 7/19/17 update | TPM | Indirect Fuel-Gas Heater | 0.015 | lb/hr excludes SSM | (One (1) indirect fuel-gas heater, rated at 2 mmBtu/hr heat input, which shall only burn natural gas, for the purpose of heating the natural gas fuel prior to combustion in the Caterpillar 4SLB RICE) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Start up", "Start-up","Preheat" - All Results Included
**Unit 13 - Startup Heater**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Mid-Kansas Electric Company, LLC - Rubart Stati | KS-0030 (draft) | 3/31/16, 7/19/17 update | TPM10 | Indirect Fuel-Gas Heater | 0.015 | lb/hr excludes SSM | (One (1) indirect fuel-gas heater, rated at 2 mmBtu/hr heat input, which shall only burn natural gas, for the purpose of heating the natural gas fuel prior to combustion in the Caterpillar 4SLB RICE) |
| Mid-Kansas Electric Company, LLC - Rubart Stati | KS-0030 (draft) | 3/31/16, 7/19/17 update | TPM2.5 | Indirect Fuel-Gas Heater | 0.015 | lb/hr excludes SSM | (One (1) indirect fuel-gas heater, rated at 2 mmBtu/hr heat input, which shall only burn natural gas, for the purpose of heating the natural gas fuel prior to combustion in the Caterpillar 4SLB RICE) |
| | | | | | | | |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CH4 | Startup Heater | 0.0023 | lb/MMBtu average of 3 stack tests | good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CH4 | Startup Heater | 0.0023 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Startup Heater | 0.0194 | lb/MMBtu average of 3 stack tests | good operating practices & use of natural gas |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Startup Heater | 0.057 | tons/year rolling 12 month total | good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO | Startup Heater | 0.0194 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO | Startup Heater | 0.1 | tons/year rolling 12 month total | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Ammonia catalyst startup heater | 37.23 | lb/MMcf 3 hour average | good heater design and good combustion practices |
| Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | CO | Heaters | 0.01 | lb/MMBtu | Unknown |
| Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | CO | Heaters, Reboiler | 0.01 | lb/MMBtu | Unknown |
| Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | CO | Heater, CCR Reactor | 0.01 | lb/MMBtu | Unknown |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2 | Startup Heater | 117 | lb/MMBtu average of 3 stack tests | good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO2 | Startup Heater | 117 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO2 | Ammonia catalyst startup heater | 59.61 | ton/MMcf 3 hour average | good heater design and good combustion practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2e | Startup Heater | 345 | tons/year rolling 12 month total | good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO2e | Startup Heater | 638 | tons/year rolling 12 month total | Good Combustion Practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | N2O | Startup Heater | 0.0006 | lb/MMBtu average of 3 stack tests | good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | N2O | Startup Heater | 0.0006 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | NOx | Startup Heater | 0.119 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | NOx | Startup Heater | 0.63 | tons/year rolling 12 month total | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Ammonia catalyst startup heater | 183.7 | lb/MMcf 3 hour average | good heater design and good combustion practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Startup Heater | 0.0024 | lb/MMBtu average of 3 stack tests | good operating practices & use of natural gas |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Startup Heater | 0.007 | tons/year rolling 12 month total | good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Startup Heater | 0.0024 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Startup Heater | 0.01 | tons/year rolling 12 month total | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM | Ammonia catalyst startup heater | 1.9 | lb/MMcf 3 hour average | good heater design and good combustion practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Startup Heater | 0.0024 | lb/MMBtu average of 3 stack tests | good operating practices & use of natural gas |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Startup Heater | 0.007 | tons/year rolling 12 month total | good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Startup Heater | 0.0024 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Startup Heater | 0.01 | tons/year rolling 12 month total | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM10 | Ammonia catalyst startup heater | 7.6 | lb/MMcf 3 hour average | good heater design and good combustion practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM2.5 | Startup Heater | 0.0024 | lb/MMBtu average of 3 stack tests | good operating practices & use of natural gas |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Start up", "Start-up","Preheat" - All Results Included
**Unit 13 - Startup Heater**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM2.5 | Startup Heater | 0.007 | tons/year rolling 12 month total | good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM2.5 | Startup Heater | 0.0024 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM2.5 | Startup Heater | 0.01 | tons/year rolling 12 month total | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM2.5 | Ammonia catalyst startup heater | 7.6 | lb/MMcf 3 hour average | good heater design and good combustion practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | Visible Emissions | Startup Heater | 0 | % | good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | Visible Emissions | Startup Heater | 0 | % Opacity | Good Combustion Practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Startup Heater | 0.0014 | lb/MMBtu average of 3 stack tests | good operating practices & use of natural gas |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Startup Heater | 0.004 | tons/year rolling 12 month total | good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | VOC | Startup Heater | 0.0014 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | VOC | Startup Heater | 0.01 | tons/year rolling 12 month total | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | VOC | Ammonia catalyst startup heater | 5.5 | lb/MMcf 3 hour average | good heater design and good combustion practices |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.
Some facilities are not shown because they are not fertilizer production facilities. These units are not directly comparable because they are not used for startup.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Urea" - All Results Included
**Unit 35 - Urea Granulators A/B**
**Unit 36 - Urea Granulators C/D**

No new entries

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft) | PM | Urea Granulation Unit (EU-008) | 0.163 | lb/ton 3 hour average | Wet Scrubber |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft) | PM | Urea Granulation Unit (EU-008) | 368040 | tons/12 consecutive mos | Wet Scrubber |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft) | PM10 | Urea Granulation Unit (EU-008) | 0.163 | lb/ton 3 hour average | Wet Scrubber |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft) | PM10 | Urea Granulation Unit (EU-008) | 368040 | tons/12 consecutive mos | Wet Scrubber |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft) | PM2.5 | Urea Granulation Unit (EU-008) | 0.163 | lb/ton 3 hour average | Wet Scrubber |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft) | PM2.5 | Urea Granulation Unit (EU-008) | 368040 | tons/12 consecutive mos | Wet Scrubber |
| | | | | | | | |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CH4 | Urea Granulator | 0.0023 | lb/MMBtu average of 3 stack tests | good combustion practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Urea Granulator | 0.0194 | lb/MMBtu average of 3 stack tests | good combustion practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Urea Granulator | 5.5 | tpy rolling 12 month total | good combustion practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2 | Urea Granulator | 117 | lb/MMBtu average of 3 stack tests | good combustion practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2e | Urea Granulator | 33469 | tpy rolling 12 month total | good combustion practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | N2O | Urea Granulator | 0.0006 | lb/MMBtu average of 3 stack tests | good combustion practices |
| Agrium U.S. Incorporated Kennewick Fertilizer Operations | WA-0318 | 7/11/2008 | PM | Granular Urea Ammonium Nitrate Production | 0.096 | gr/dscf 24 hour average | Wet Scrubber, Mist Eliminator, and Product Hardener |
| Agrium U.S. Incorporated Kennewick Fertilizer Operations | WA-0318 | 7/11/2008 | PM | Granular Urea Ammonium Nitrate Production | 99.6 | tons/year 12 month rolling average | Wet Scrubber, Mist Eliminator, and Product Hardener |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Urea Granulator | 0.11 | lb/ton of urea average of 3 stack tests | good combustion practices along with a wet scrubber |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Urea Granulator | 85.7 | tpy rolling 12 month total | good combustion practices along with a wet scrubber |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Urea Granulator | 0.1 | kg/metric ton average of 3 stack tests | Wet Scrubber |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Urea Granulator | 60.4 | tons/year rolling 12 month total | Wet Scrubber |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | PM | Granulator Scrubbers | 0.7 | lbs/hr 24-hour | Good operating practices |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | PM | Granulator Scrubbers | 80% | Reduction | Good operating practices |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM | Urea Granulation Vent | 0.011 | lb/ton | Wet Scrubber |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM | Urea Granulation Vent | 20.5 | lbs/hr | Wet Scrubber |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM | Urea Granulation Vent | 20% | Reduction | Wet Scrubber |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Urea Granulator | 0.11 | lb/ton of urea average of 3 stack tests | good combustion practices along with a wet scrubber |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Urea Granulator | 85.7 | tpy rolling 12 month total | good combustion practices along with a wet scrubber |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Urea Granulator | 0.1 | kg/metric ton average of 3 stack tests | Wet Scrubber |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Urea Granulator | 60.4 | tons/year rolling 12 month total | Wet Scrubber |
| Koch Nitrogen Company Enid Nitrogen Plant | OK-0124 | 5/1/2008 | PM10 | Urea Granulators | 6.6 | lbs/hr per granulator | Wet Scrubber |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | PM10 | Granulator Scrubbers | 0.7 | lbs/hr 24-hour | Good operating practices |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | PM10 | Granulator Scrubbers | 80% | Reduction | Good operating practices |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM10 | Urea Granulation Vent | 0.005 | lb/ton | Wet Scrubber |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM10 | Urea Granulation Vent | 9 | lbs/hr | Wet Scrubber |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM2.5 | Urea Granulator | 0.108 | lb/ton of urea average of 3 stack tests | good combustion practices along with a wet scrubber |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM2.5 | Urea Granulator | 85.7 | tpy rolling 12 month total | good combustion practices along with a wet scrubber |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM2.5 | Urea Granulator | 0.025 | kg/metric ton average of 3 stack tests | Wet Scrubber |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM2.5 | Urea Granulator | 15.1 | tons/year rolling 12 month total | Wet Scrubber |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | Visible Emission | Urea Granulator | 0 | % | good combustion practices and wet scrubber |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | Visible Emission | Urea Granulator | 0 | % opacity | Wet Scrubber |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Urea Granulator | 0.05 | lb/ton of urea average of 3 stack tests | good combustion practices and wet scrubber |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Urea Granulator | 38.9 | tpy rolling 12 month total | good combustion practices and wet scrubber |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers and heaters >100 MMBtu/hr Included. (Process Type 12.31 (>100 MMBtu) and 11.31 (>250 MMBtu))
**Unit 44 - Package Boiler**
**Unit 48 - Package Boiler**
**Unit 49 - Package Boiler**

| Process Code | Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|---|
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | TPM10 | natural gas-fired auxiliary boilers EU 012A and EU 012B | 7.6 | LB/MMCF | shall combust natural gas |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | TPM10 | natural gas-fired auxiliary boilers EU 012A and EU 012B | 1877.39 | MMCF TWELVE CONSECUTIVE MONTH PERIC | shall combust natural gas |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | TPM2.5 | natural gas-fired auxiliary boilers EU 012A and EU 012B | 7.6 | LB/MMCF | shall combust natural gas |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | TPM2.5 | natural gas-fired auxiliary boilers EU 012A and EU 012B | 1877.39 | MMCF TWELVE CONSECUTIVE MONTH PERIC | shall combust natural gas |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | natural gas-fired auxiliary boilers EU 012A and EU 012B | 59.61 | TON/MMCF | The natural gas-fired auxiliary boilers shall combust natural gas; shall be designed to achieve a minimum 80% thermal efficiency (HHV); shall be equipped with the following energy efficient design features: air inlet controls, heat recovery, condensate recovery, and blow down heat recovery. |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | natural gas-fired auxiliary boilers EU 012A and EU 012B | 1877.39 | MMCF TWELVE CONSECUTIVE MONTH PERIC | The natural gas-fired auxiliary boilers shall combust natural gas; shall be designed to achieve a minimum 80% thermal efficiency (HHV); shall be equipped with the following energy efficient design features: air inlet controls, heat recovery, condensate recovery, and blow down heat recovery. |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | natural gas-fired auxiliary boilers EU 012A and EU 012B | 5.5 | LB/MMCF, THREE-HOUR AVERAGE | shall combust natural gas |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | natural gas-fired auxiliary boilers EU 012A and EU 012B | 1877.39 | MMCF TWELVE CONSECUTIVE MONTH PERIC | shall combust natural gas |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | natural gas-fired auxiliary boilers EU 012A and EU 012B | 37.22 | LB/MMCF, THREE-HOUR AVERAGE | shall combust natural gas |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | natural gas-fired auxiliary boilers EU 012A and EU 012B | 1877.39 | MMCF TWELVE CONSECUTIVE MONTH PERIC | shall combust natural gas |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | natural gas-fired auxiliary boilers EU 012A and EU 012B | 20.4 | LB/MMCF | shall combust natural gas |
| 12.31 | MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | natural gas-fired auxiliary boilers EU 012A and EU 012B | 1877.39 | MMCF TWELVE CONSECUTIVE MONTH PERIC | shall combust natural gas |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | TPM10 | FCCU Charge Heater (EQT0163) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | TPM2.5 | FCCU Charge Heater (EQT0163) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | CO2e | FCCU Charge Heater (EQT0163) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | VOC | FCCU Charge Heater (EQT0163) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | H2S | FCCU Charge Heater (EQT0163) | 0 | | Comply with 40 CFR 60 Subpart J Fuel gas H2S <=162 ppmv (3-hour rolling average) Fuel gas H2S <=60 ppmv (365-day rolling average) |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | CO | FCCU Charge Heater (EQT0163) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | NOx | FCCU Charge Heater (EQT0163) | 0.06 | LB/MM BTU ANNUAL AVERAGE | LNB |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | SO2 | FCCU Charge Heater (EQT0163) | 0 | | Comply with 40 CFR 60 Subpart J Fuel gas H2S <=162 ppmv (3-hour rolling average) Fuel gas H2S <=60 ppmv (365-day rolling average) |
| 12.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | TPM10 | Reboilers/Heaters (EQT0164, EQT0181, EQT0376) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 12.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | TPM2.5 | Reboilers/Heaters (EQT0164, EQT0181, EQT0376) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 12.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | CO2e | Reboilers/Heaters (EQT0164, EQT0181, EQT0376) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 12.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | VOC | Reboilers/Heaters (EQT0164, EQT0181, EQT0376) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers and heaters >100 MMBtu/hr Included. (Process Type 12.31 (>100 MMBtu) and 11.31 (>250 MMBtu))
**Unit 44 - Package Boiler**
**Unit 48 - Package Boiler**
**Unit 49 - Package Boiler**

| Process Code | Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|---|
| 12.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | H2S | Reboilers/Heaters (EQT0164, EQT0181, EQT0376) | 0 | | Comply with 40 CFR 60 Subpart J Fuel gas H2S <=162 ppmv (3-hour rolling average) Fuel gas H2S <=60 ppmv (365-day rolling average) |
| 12.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | CO | Reboilers/Heaters (EQT0164, EQT0181, EQT0376) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 12.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | NOx | Reboilers/Heaters (EQT0164, EQT0181, EQT0376) | 0.04 | LB/MM BTU ANNUAL AVERAGE | LNB |
| 12.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | SO2 | Reboilers/Heaters (EQT0164, EQT0181, EQT0376) | 0 | | Comply with 40 CFR 60 Subpart J Fuel gas H2S <=162 ppmv (3-hour rolling average) Fuel gas H2S <=60 ppmv (365-day rolling average) |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | TPM10 | Crude Heaters (EQT0292) | 0.0075 | LB/MM BTU ANNUAL AVERAGE | Proper design and good engineering practices Fueled by refinery fuel gas and natural gas |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | CO2e | Crude Heaters (EQT0292) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | VOC | Crude Heaters (EQT0292) | 0.0015 | LB/MM BTU ANNUAL AVERAGE | Proper design and good engineering practices Fueled by refinery fuel gas and natural gas |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | H2S | Crude Heaters (EQT0292) | 0 | | Total Sulfur in fuel gas <= 40 ppmv and H2S in fuel gas <= 25 ppmv (annual average) based on monthly fuel gas sampling for sulfur plus CEMS weekly H2S average |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | CO | Crude Heaters (EQT0292) | 0.02 | LB/MM BTU ANNUAL AVERAGE | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | NOx | Crude Heaters (EQT0292) | 0.0125 | LB/MM BTU ANNUAL AVERAGE | LNB + SCR |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | SO2 | Crude Heaters (EQT0292) | 0 | | Fueled by natural gas and/or refinery fuel gas Total Sulfur in fuel gas <= 40 ppmv and H2S in fuel gas <= 25 ppmv (annual average) based on monthly fuel gas sampling for sulfur plus CEMS weekly H2S average |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | TPM10 | Charge Heaters (EQT0377, EQT0378) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | TPM2.5 | Charge Heaters (EQT0377, EQT0378) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | CO2e | Charge Heaters (EQT0377, EQT0378) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | VOC | Charge Heaters (EQT0377, EQT0378) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | H2S | Charge Heaters (EQT0377, EQT0378) | 0 | | Total Sulfur in fuel gas <= 40 ppmv and H2S in fuel gas <= 25 ppmv (annual average) based on monthly fuel gas sampling for sulfur plus CEMS weekly H2S average |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | CO | Charge Heaters (EQT0377, EQT0378) | 0 | | Comply with work practice standards of 40 CFR 63 Subpart DDDDD |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | NOx | Charge Heaters (EQT0377, EQT0378) | 0.06 | LB/MM BTU ANNUAL AVERAGE | LNB |
| 11.31 | GARYVILLE REFINERY | LA-0385 | 2/11/2021 | SO2 | Charge Heaters (EQT0377, EQT0378) | 0 | | Total Sulfur in fuel gas <= 40 ppmv and H2S in fuel gas <= 25 ppmv (annual average) based on monthly fuel gas sampling for sulfur plus CEMS weekly H2S average |
| 12.31 | PETMIN USA INCORPORATED | OH-0383 | 7/17/2020 | CO2e | Process gas heater (P001) | 70203 | LB/H | Good combustion practices and the use of natural gas |
| 12.31 | PETMIN USA INCORPORATED | OH-0383 | 7/17/2020 | CO2e | Process gas heater (P001) | 307490 | T/YR PER ROLLING 12 MONTH PERIOD | Good combustion practices and the use of natural gas |
| 12.31 | PETMIN USA INCORPORATED | OH-0383 | 7/17/2020 | CO | Process gas heater (P001) | 11.17 | LB/H | Good combustion practices and the use of natural gas |
| 12.31 | PETMIN USA INCORPORATED | OH-0383 | 7/17/2020 | CO | Process gas heater (P001) | 48.92 | T/YR PER ROLLING 12 MONTH PERIOD | Good combustion practices and the use of natural gas |
| 12.31 | PETMIN USA INCORPORATED | OH-0383 | 7/17/2020 | NOx | Process gas heater (P001) | 18.88 | LB/H | Low NOX burners, use of natural gas and good combustion practices |
| 12.31 | PETMIN USA INCORPORATED | OH-0383 | 7/17/2020 | NOx | Process gas heater (P001) | 82.71 | T/YR PER ROLLING 12 MONTH PERIOD | Low NOX burners, use of natural gas and good combustion practices |
| 12.31 | MONT BELVIEU NGL FRACTIONATION UNIT | TX-0886 | 3/31/2020 | VOC | HOT OIL HEATERS | 0.002 | LB/MMBTU | clean fuel, good combustion practices |
| 12.31 | MONT BELVIEU NGL FRACTIONATION UNIT | TX-0886 | 3/31/2020 | NOx | HOT OIL HEATERS | 0.01 | LB/MMBTU, HOURLY | Low-NOx burners and selective catalytic reduction (SCR |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers and heaters >100 MMBtu/hr Included. (Process Type 12.31 (>100 MMBtu) and 11.31 (>250 MMBtu))
**Unit 44 - Package Boiler**
**Unit 48 - Package Boiler**
**Unit 49 - Package Boiler**

| Process Code | Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|---|
| 12.31 | MONT BELVIEU NGL FRACTIONATION UNIT | TX-0886 | 3/31/2020 | NOx | HOT OIL HEATERS | 0.006 | LB/MMBTU ANNUAL | Low-NOx burners and selective catalytic reduction (SCR |
| 12.31 | MONT BELVIEU NGL FRACTIONATION UNIT | TX-0886 | 3/31/2020 | NOx | HOT OIL HEATERS MSS | 0.05 | LB/MMBTU | LIMITED MSS OPERATIONS |
| 12.31 | TEXAS CITY CHEMICAL PLANT | *TX-0913 | 9/27/2021 | CO2e | BOILERS | 0 | | Good combustion practices, natural gas |
| 12.31 | TEXAS CITY CHEMICAL PLANT | *TX-0913 | 9/27/2021 | CO | BOILERS | 50 | PPMV, 3% O2 | Good combustion practices, natural gas |
| 12.31 | TEXAS CITY CHEMICAL PLANT | *TX-0913 | 9/27/2021 | FPM2.5 | BOILERS | 1.38 | LB/HR/BOILER | Good combustion practices, natural gas |
| | Venture Global Calcasieu Pass, LLC - Calcasieu Pass LNG Project | LA-0331 (draft) | 9/21/2018, updated 2/19/2019 | NOx | Hot Oil Heaters (HOH1 to HOH6) (115 MMBtu/hr) | 0.038 | lb/MMBtu 3-hr average | Ultra Low NOx Burners and Good Combustion Practices (BACT-PSD NSPS) |
| | Venture Global Calcasieu Pass, LLC - Calcasieu Pass LNG Project | LA-0331 (draft) | 9/21/2018, updated 2/19/2019 | CO | Hot Oil Heaters (HOH1 to HOH6) (115 MMBtu/hr) | 0.082 | lb/MMBtu 3-hr average | Exclusive Combustion of Fuel Gas and Good Combustion Practices (BACT-PSD NSPS) |
| | Venture Global Calcasieu Pass, LLC - Calcasieu Pass LNG Project | LA-0331 (draft) | 9/21/2018, updated 2/19/2019 | TPM10 | Hot Oil Heaters (HOH1 to HOH6) (115 MMBtu/hr) | 0.0075 | lb/MMBtu 3-hr average | Exclusive Combustion of Fuel Gas and Good Combustion Practices (BACT-PSD NSPS) |
| | Venture Global Calcasieu Pass, LLC - Calcasieu Pass LNG Project | LA-0331 (draft) | 9/21/2018, updated 2/19/2019 | TPM2.5 | Hot Oil Heaters (HOH1 to HOH6) (115 MMBtu/hr) | 0.0075 | lb/MMBtu 3-hr average | Exclusive Combustion of Fuel Gas and Good Combustion Practices (BACT-PSD NSPS) |
| | Venture Global Calcasieu Pass, LLC - Calcasieu Pass LNG Project | LA-0331 (draft) | 9/21/2018, updated 2/19/2019 | SO2 | Hot Oil Heaters (HOH1 to HOH6) (115 MMBtu/hr) | 0.0006 | lb/MMBtu 3-hr average | Exclusive Use of Low Sulfur Fuel Gas and Proper Engineering Practices (BACT-PSD NSPS) |
| | Venture Global Calcasieu Pass, LLC - Calcasieu Pass LNG Project | LA-0331 (draft) | 9/21/2018, updated 2/19/2019 | VOC | Hot Oil Heaters (HOH1 to HOH6) (115 MMBtu/hr) | 0.0054 | lb/MMBtu 3-hr average | Proper Equipment Design and Operation, Good Combustion Practices, and Exclusive Combustion of Fuel Gas (BACT-PSD NSPS) |
| | Venture Global Calcasieu Pass, LLC - Calcasieu Pass LNG Project | LA-0331 (draft) | 9/21/2018, updated 2/19/2019 | CO2e | Hot Oil Heaters (HOH1 to HOH6) (115 MMBtu/hr) | 354456 | tons/year | Exclusive Use of Low Carbon Fuel Gas, Good Combustion Practices, Good Operation and Mantenance Practices and Insulation (BACT Limit based on Annual Total for 6 Heaters. 40 CFR Subpart Dc) (BACT-PSD NSPS) |
| | | | | | | | | |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | TPM (all PM is assumed to be PM2.5 or less) | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 0.008 | lbs/MMBtu | Good combustion practices, use of natural gas. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | TPM (all PM is assumed to be PM2.5 or less) | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 0.87 | lb/hr | Good combustion practices, use of natural gas. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | TPM (all PM is assumed to be PM2.5 or less) | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 1.99 | tons/year | Good combustion practices at all times boilers are in operation, use of natural gas. Annual emissions are based on 512,140 mmBtu/yr. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | Sulfuric Acid | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 0.0001 | lbs/MMBtu | Use of natural gas. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | Sulfuric Acid | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 0.02 | lb/hr | Use of natural gas. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | Sulfuric Acid | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 0.03 | tons/year | Use of natural gas. Annual emissions are based on 512,140 mmBtu/yr. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | NOx | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 0.011 | lb/MMBtu | Low NOx burners and good combustion practices. Annual emissions are based on 512,140 mmBtu/yr. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | NOx | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 1.23 | lb/hour | Low NOx burners and good combustion practices. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | NOx | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 2.82 | tons/year | Low NOx burners and good combustion practices. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | CO | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 0.037 | lb/MMBtu | Good combustion practices at all times boilers are in operation, must only combust natural gas. Annual emissions are based on 512,140 mmBtu/yr. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | CO | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 4.14 | lb/hour | Good combustion practices. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | CO | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 9.47 | tons/year | Good combustion practices, use of natural gas. Annual emissions are based on 512,140 mmBtu/yr. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | VOC | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 0.008 | lb/MMBtu | Good combustion practices, use of natural gas. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | VOC | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 0.9 | lb/hour | Good combustion practices, use of natural gas. |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers and heaters >100 MMBtu/hr Included. (Process Type 12.31 (>100 MMBtu) and 11.31 (>250 MMBtu))
**Unit 44 - Package Boiler**
**Unit 48 - Package Boiler**
**Unit 49 - Package Boiler**

| Process Code | Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|---|
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | VOC | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 2.05 | tons/year | Good combustion practices, use of natural gas. Annual emissions are based on 512,140 mmBtu/yr. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | CO2e | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 14768 | lb/hour | Use of natural gas. |
| | ESC Brooke County Power I, LLC | WV-0032 (draft) | 9/18/2018 (draft) updated 1/2/2019 | CO2e | Auxiliary Boiler (111.90 MMBtu/hr - Natural Gas/Ethane ) | 33790 | tons/year | Use of natural gas. Annual emissions are based on 512,140 mmBtu/yr. |
| | | | | | | | | |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | NOx | Auxiliary Boiler (902 mmcf/year) | 0.011 | lb/MMBtu corrected to 3% O2 | Low NOx Burners (Annual limit of 5.1 tons/yr on a 12-month rolling total. Compliance based on stack test and annual fuel throughput) (BACT-PSD NSPS SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | NOx | Auxiliary Boiler (902 mmcf/year) | 1.2 | lb/hr | Low NOx Burners (Annual limit of 5.1 tons/yr on a 12-month rolling total. Compliance based on stack test and annual fuel throughput) (BACT-PSD NSPS SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | CO | Auxiliary Boiler (902 mmcf/year) | 0.037 | lb/MMBtu | Good Combustion Practices and Clean Fuel (Compliance based on stack test. Annual limit 17.1 tons/year base on fuel throughput.)(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | CO | Auxiliary Boiler (902 mmcf/year) | 3.9 | lb/hr | Good Combustion Practices and Clean Fuel (Compliance based on stack test. Annual limit 17.1 tons/year base on fuel throughput.)(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | TPM10 | Auxiliary Boiler (902 mmcf/year) | 0.8 | lb/hr | Good Combustion Practices and the Use of Pipeline Quality Natural Gas with a Maximum Sulfur Content of 0.4 gr/100 scf on a 12-month rolling avg.(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | TPM10 | Auxiliary Boiler (902 mmcf/year) | 3.3 | tons/year 12-month rolling total | Good Combustion Practices and the Use of Pipeline Quality Natural Gas with a Maximum Sulfur Content of 0.4 gr/100 scf on a 12-month rolling avg.(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | TPM2.5 | Auxiliary Boiler (902 mmcf/year) | 0.8 | lb/hr | Good Combustion Practices and the Use of Pipeline Quality Natural Gas with a Maximum Sulfur Content of 0.4 gr/100 scf on a 12-month rolling avg.(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | TPM2.5 | Auxiliary Boiler (902 mmcf/year) | 3.3 | tons/year 12-month rolling total | Good Combustion Practices and the Use of Pipeline Quality Natural Gas with a Maximum Sulfur Content of 0.4 gr/100 scf on a 12-month rolling avg.(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | SO2 | Auxiliary Boiler (902 mmcf/year) | 0.0012 | lb/MMBtu | The Use of Pipeline Quality Natural Gas with a Maximum Sulfur Content of 0.4 gr/100 scf on a 12-month rolling avg. (Compliance based on compliance with the fuel sulfur limit)(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | SO2 | Auxiliary Boiler (902 mmcf/year) | 0.6 | tons/year 12-month rolling avg | The Use of Pipeline Quality Natural Gas with a Maximum Sulfur Content of 0.4 gr/100 scf on a 12-month rolling avg. (Compliance based on compliance with the fuel sulfur limit)(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | Sulfuric Acid (mist, vapors, etc) | Auxiliary Boiler (902 mmcf/year) | | | The Use of Pipeline Quality Natural Gas with a Maximum Sulfur Content of 0.4 gr/100 scf on a 12-month rolling avg. (Compliance based on compliance with the fuel sulfur content)(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | VOC | Auxiliary Boiler (902 mmcf/year) | 0.005 | lb/MMBtu | Good Combustion Practices(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | VOC | Auxiliary Boiler (902 mmcf/year) | 2.3 | tons/year 12-month rolling avg | Good Combustion Practices(BACT-PSD SIP) |
| | Novi Energy - C4GT, LLC | VA-0328 (draft) | 4/26/2018, updated 11/16/2018 | CO2e | Auxiliary Boiler (902 mmcf/year) | 53863 | tons/year 12-month rolling total | Use of Natural Gas and High Efficiency Design and Operation(BACT-PSD SIP) |
| | | | | | | | | |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers and heaters >100 MMBtu/hr Included. (Process Type 12.31 (>100 MMBtu) and 11.31 (>250 MMBtu))
**Unit 44 - Package Boiler**
**Unit 48 - Package Boiler**
**Unit 49 - Package Boiler**

| Process Code | Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|---|
| | Targa - Channel View Terminal | TX-0835 | 4/13/2018, updated 2/19/2019 | VOC | Crude Process Heaters (100 MMBtu/hr) | 0.0013 | lb/MMBtu | Good Combustion (Note: Process Type says Refinery Flares) (LAER NSPS) |
| | | | | | | | | |
| | Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017, updated 3/8/2018 | CO | EUAUXBOILER (Auxiliary Boiler) (182 MMBtu/hr) | 0.04 | lb/MMBtu | Good Combustion Practices (Catalytic Reduction not economically feasible)(BACT-PSD SIP) |
| | Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017, updated 3/8/2018 | NOx | EUAUXBOILER (Auxiliary Boiler) (182 MMBtu/hr) | 0.04 | lb/MMBtu 30 day rolling avg | LNB that incorporate intern (within the burner) FGR and Good Combustion Practices (70% control efficiency) (SCR not economically feasible)(BACT-PSD SIP) |
| | Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017, updated 3/8/2018 | FPM | EUAUXBOILER (Auxiliary Boiler) (182 MMBtu/hr) | 0.005 | lb/MMBtu | Good Combustion Practices (Add-on controls not economically feasible)(BACT-PSD) |
| | Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017, updated 3/8/2018 | TPM10 | EUAUXBOILER (Auxiliary Boiler) (182 MMBtu/hr) | 0.0075 | lb/MMBtu | Good Combustion Practices (Add-on controls not economically feasible)(BACT-PSD) |
| | Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017, updated 3/8/2018 | TPM2.5 | EUAUXBOILER (Auxiliary Boiler) (182 MMBtu/hr) | 0.0075 | lb/MMBtu | Good Combustion Practices (Add-on controls not economically feasible)(BACT-PSD) |
| | Filer City Station Limited Partnership - Filer City Station | MI-0427 | 11/17/2017, updated 3/8/2018 | CO2e | EUAUXBOILER (Auxiliary Boiler) (182 MMBtu/hr) | 93346 | tons/year 12-month roll time period | Good Combustion Practices (Add-on controls not economically feasible)(BACT-PSD) |
| | | | | | | | | |
| | Praxiar Inc. - Praxiar Clear Lake | TX-0830 | 10/20/2017, updated 2/19/2019 | CO | HyCO Heater (180 MMBtu/hr) | 50 | PPMVD@3% O2 | The Use of gaseous fuel and good combustion practices (BACT-PSD NSPS) |
| | Praxiar Inc. - Praxiar Clear Lake | TX-0830 | 10/20/2017, updated 2/19/2019 | CO2e | HyCO Heater (180 MMBtu/hr) | 1148305 | tons/year | Annual tune ups. Emissions are based on a plantwide grouped limit(BACT-PSD NSPS) |
| | | | | | | | | |
| | Praxair Inc. - Praxair Clear Lake Plant | TX-0827 | 10/19/2017, updated 11/2/2017 | CO | HyCO Heater (180 MMBtu/hr) | 50 | PPMVD@3% O2 | The Use of gaseous fuel and good combustion practices(BACT-PSD NSPS) |
| | Praxair Inc. - Praxair Clear Lake Plant | TX-0827 | 10/19/2017, updated 11/2/2017 | CO2e | HyCO Heater (180 MMBtu/hr) | 1148305 | tons/year | Annual tune ups. Emissions are based on a plantwide grouped limit(BACT-PSD NSPS) |
| | | | | | | | | |
| | Agrium US, Inc | TX-0814 | 1/5/2017 (draft) | CO2e | Package Boiler 1 (240 MMBtu/hr) | 123059 | tpy | Good Engineering Practices |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | TPM | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 1.9 | lb/MMcf 3 hour average | Proper design and good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | TPM | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 1877.39 | MMcf per 12 consecutive months | Proper design and good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | PM10 | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 7.6 | lb/MMcf 3 hour average | Proper design and good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | PM10 | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 1877.39 | MMcf per 12 consecutive months | Proper design and good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | PM2.5 | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 7.6 | lb/MMcf 3 hour average | Proper design and good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | PM2.5 | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 1877.39 | MMcf per 12 consecutive months | Proper design and good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | NOx | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 20.4 | lb/MMcf 3 hour average | Low NOx burners with flue gas recirculation and good combustion practices, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | NOx | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 1877.39 | MMcf per 12 consecutive months | Low NOx burners with flue gas recirculation and good combustion practices, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | CO | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 37.22 | lb/MMcf 3 hour average | Good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers and heaters >100 MMBtu/hr Included. (Process Type 12.31 (>100 MMBtu) and 11.31 (>250 MMBtu))
**Unit 44 - Package Boiler**
**Unit 48 - Package Boiler**
**Unit 49 - Package Boiler**

| Process Code | Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|---|
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | CO | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 1877.39 | MMcf per 12 consecutive months | Good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | VOC | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 5.5 | lb/MMcf 3 hour average | Good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | VOC | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 1877.39 | MMcf per 12 consecutive months | Good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | CO2 | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 59.61 | ton/MMcf 3 hour average | Good combustion practices at all times boilers are in operation, must only combust natural gas (218.6 MMBtu/hr) |
| | Midwest Fertilizer Company LLC | IN-0263 (draft) | 3/23/17 (draft), updated 7/10/17 | CO2 | Natural Gas Auxiliary Boilers (EU-012A, EU-012B, EU-012C) | 1877.39 | MMcf per 12 consecutive months | Good combustion practices at all times boilers are in operation, must only combust natural gas, shall be designed to achieve a minimum 80% thermal efficiency limit, each shall be equipped with the energy efficiency design features (1) air inlet controls, (2) heat recovery, (3) condensate recovery, (4) blow down heat recovery (218.6 MMBtu/hr) |
| | Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | CO | EUAUXBOILER (Auxiliary Boiler) | 0.04 | lb/MMBtu Test protocol will specify avg time | SIP - Good combustion practices (182 MMBtu/hr) |
| | Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | NOx | EUAUXBOILER (Auxiliary Boiler) | 0.04 | lb/MMBtu 30-day rolling avg time period | NSPS, SIP - Low NOx burners/Flue gas recirculation and good combustion practices. (182 MMBtu/hr) |
| | Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | FPM | EUAUXBOILER (Auxiliary Boiler) | 0.005 | lb/MMBtu Test protocol will specify avg time | Good combustion practices (182 MMBtu/hr) |
| | Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | TPM10 | EUAUXBOILER (Auxiliary Boiler) | 1.36 | lb/hr hourly, test protocol | SIP - Good combustion practices (182 MMBtu/hr) |
| | Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | TPM2.5 | EUAUXBOILER (Auxiliary Boiler) | 1.36 | lb/hr hourly, test protocol | Good combustion practices (182 MMBtu/hr) |
| | Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | VOC | EUAUXBOILER (Auxiliary Boiler) | 0.004 | lb/MMBtu Test protocol will specify avg time | Good combustion practices (182 MMBtu/hr) |
| | Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | SO2 | EUAUXBOILER (Auxiliary Boiler) | 0.6 | lb/MMscf Based on Fuel Receipt Records | Good combustion practices and the use of pipeline quality natural gas (182 MMBtu/hr) |
| | Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | SO2 | EUAUXBOILER (Auxiliary Boiler) | 2000 | gr/MMscf Based upon Fuel Receipts | NSPS, SIP - Good combustion practices and the use of pipeline quality natural gas.(2,000 grains of sulfur per MMscf. The natural gas material limit of 2,000 grains of sulfur per MMscf is what the emission factor is based upon) (182 MMBtu/hr) |
| | Indeck Niles, LLC | MI-0423 (draft) | 1/4/2017, 7/25/17 update | CO2e | EUAUXBOILER (Auxiliary Boiler) | 93346 | tpy 12-month rolling time period | Energy efficiency measures and the use of a low carbon fuel (pipeline quality natural gas). (182 MMBtu/hr) |
| | Rextac, LLC - Odessa Petrochemical Plant | TX-0813 (draft) | 11/22/2016, 12/1/16 update | VOC | Boilers | 0.0005 | lb/MMBtu | NSPS Db - Best combustion practices (2 boilers - 223 Mmbtu/hr) |
| | Rextac, LLC - Odessa Petrochemical Plant | TX-0813 (draft) | 11/22/2016, 12/1/16 update | CO2e | Boilers | 63796 | tpy | MACT DDDDD - Minimul thermal design efficiency of 75% |
| | Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | PM10 | Auxiliary Boilers and Superheaters | No Numeric Limit | No Numeric Limit | Good engineering design and proper operation (Supplement fuel: fuel gas Boilers: 225 MM BTU/hr each) |
| | Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | PM2.5 | Auxiliary Boilers and Superheaters | No Numeric Limit | No Numeric Limit | Good engineering design and proper operation (Supplement fuel: fuel gas Boilers: 225 MM BTU/hr each) |
| | Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | SO2 | Auxiliary Boilers and Superheaters | No Numeric Limit | No Numeric Limit | Fuel gases and/or pipeline quality natural gas (Supplement fuel: fuel gas Boilers: 225 MM BTU/hr each) |
| | Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | NOx | Auxiliary Boilers and Superheaters | 0.015 | lbs/MMBtu 30 rolling avg, except SCR, SU or Maint | SCR (Supplement fuel: fuel gas Boilers: 225 MM BTU/hr each) |
| | Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | CO | Auxiliary Boilers and Superheaters | No Numeric Limit | No Numeric Limit | Good engineering design and good combustion practices (Supplement fuel: fuel gas Boilers: 225 MM BTU/hr each) |
| | Lake Charles Methanol, LLC | LA-0305 | 6/30/16, 4/26/17 update | CO2e | Auxiliary Boilers and Superheaters | No Numeric Limit | No Numeric Limit | Good equipment design and good combustion practices (Supplement fuel: fuel gas Boilers: 225 MM BTU/hr each) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers and heaters >100 MMBtu/hr Included. (Process Type 12.31 (>100 MMBtu) and 11.31 (>250 MMBtu))
**Unit 44 - Package Boiler**
**Unit 48 - Package Boiler**
**Unit 49 - Package Boiler**

| Process Code | Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|---|
| | Magnolia LNG Facility | LA-0307 | 3/21/16, 4/28/17 update | CO2e | Auxiliary Boilers | No Numeric Limit | No Numeric Limit | Good combustion/operating/maintenance practices and fueled by natural gas (171 MMBtu/hr) |
| | Magnolia LNG Facility | LA-0307 | 3/21/16, 4/28/17 update | TPM10 | Auxiliary Boilers | No Numeric Limit | No Numeric Limit | Good combustion practices (171 MMBtu/hr) |
| | Magnolia LNG Facility | LA-0307 | 3/21/16, 4/28/17 update | TPM2.5 | Auxiliary Boilers | No Numeric Limit | No Numeric Limit | Good combustion practices (171 MMBtu/hr) |
| | Magnolia LNG Facility | LA-0307 | 3/21/16, 4/28/17 update | NOx | Auxiliary Boilers | No Numeric Limit | No Numeric Limit | Low NOx Burners (171 MMBtu/hr) |
| | Magnolia LNG Facility | LA-0307 | 3/21/16, 4/28/17 update | CO | Auxiliary Boilers | No Numeric Limit | No Numeric Limit | Good combustion practices (171 MMBtu/hr) |
| | Magnolia LNG Facility | LA-0307 | 3/21/16, 4/28/17 update | VOC | Auxiliary Boilers | No Numeric Limit | No Numeric Limit | Good combustion practices (171 MMBtu/hr) |
| | Tennessee Valley Authority | TN-0162 (draft) | 4/19/16, 5/19/16 update | TPM | Two Natural Gas-Fired Auxiliary Boilers | 0.008 | lb/MMBtu | Good combustion design and practices (450 MMBtu/hr each) |
| | Tenaska PA Partners LLC - Tenaska PA Partners/Westmoreland Gen Fac | PA-0306 (draft) | 2/12/16, 7/12/17 update | TPM2.5 | 245 MMBtu natural gas fired Auxiliary boiler | 0.0075 | lb/MMBtu 3 hr avg | NSPS - Good combustion practices. Total fuel usage of the auxiliary boiler shall not exceed 1052 MMsch/yr on a 12-month rolling basis. |
| | Tenaska PA Partners LLC - Tenaska PA Partners/Westmoreland Gen Fac | PA-0306 (draft) | 2/12/16, 7/12/17 update | TPM2.5 | 245 MMBtu natural gas fired Auxiliary boiler | 4 | t;py | NSPS - Good combustion practices. Total fuel usage of the auxiliary boiler shall not exceed 1052 MMsch/yr on a 12-month rolling basis. |
| | Tenaska PA Partners LLC - Tenaska PA Partners/Westmoreland Gen Fac | PA-0306 (draft) | 2/12/16, 7/12/17 update | Sulfuric Acid (mist, vapors, etc) | 245 MMBtu natural gas fired Auxiliary boiler | 0.0049 | t;py | NSPS - Good combustion practices. Total fuel usage of the auxiliary boiler shall not exceed 1052 MMsch/yr on a 12-month rolling basis. |
| | Tenaska PA Partners LLC - Tenaska PA Partners/Westmoreland Gen Fac | PA-0306 (draft) | 2/12/16, 7/12/17 update | VOC | 245 MMBtu natural gas fired Auxiliary boiler | 0.0054 | lb/MMBtu | Good combustion practices. Total fuel usage of the auxiliary boiler shall not exceed 1052 MMsch/yr on a 12-month rolling basis. |
| | Tenaska PA Partners LLC - Tenaska PA Partners/Westmoreland Gen Fac | PA-0306 (draft) | 2/12/16, 7/12/17 update | VOC | 245 MMBtu natural gas fired Auxiliary boiler | 2.89 | t;py | Good combustion practices. Total fuel usage of the auxiliary boiler shall not exceed 1052 MMsch/yr on a 12-month rolling basis. |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | CO | Auxiliary Boiler | 12.6 | lbs/hr | Unknown |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | CO | Auxiliary Boiler | 5.52 | tons/year per rolling 12 months | Unknown |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | NOx | Auxiliary Boiler | 21 | lbs/hr | Unknown |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | NOx | Auxiliary Boiler | 9.2 | tons/year per rolling 12 months | Unknown |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | PM10 | Auxiliary Boiler | 1.14 | lbs/hr | Unknown |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | PM10 | Auxiliary Boiler | 0.5 | tons/year per rolling 12 months | Unknown |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | SO2 | Auxiliary Boiler | 0.09 | lbs/hr | Unknown |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | SO2 | Auxiliary Boiler | 0.04 | tons/year per rolling 12 months | Unknown |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | Visible Emission | Auxiliary Boiler | 10 | % opacity as a 6 minute average | Unknown |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | VOC | Auxiliary Boiler | 0.83 | lbs/hr | Unknown |
| | American Municipal Power Generating Station | OH-0310 | 10/8/2009 | VOC | Auxiliary Boiler | 0.36 | tons/year per rolling 12 months | Unknown |
| | Calpine Construction Finance Co. LP Amella Energy Center | TX-0386 | 3/26/2002 | CO | Auxiliary Boiler | 13.9 | lbs/hr | Unknown |
| | Calpine Construction Finance Co. LP Amella Energy Center | TX-0386 | 3/26/2002 | CO | Auxiliary Boiler | 0.08 | lb/MMBtu | Unknown |
| | Calpine Construction Finance Co. LP Amella Energy Center | TX-0386 | 3/26/2002 | H2SO4 | Auxiliary Boiler | 0.129 | lbs/hr | Unknown |
| | Calpine Turner Energy Center, LLC | OR-0046 | 1/6/2005 | PM10 | Auxiliary Boiler | No numeric limit | No numeric limit | use of natural gas |
| | Calpine Turner Energy Center, LLC | OR-0046 | 1/6/2005 | VOC | Auxiliary Boiler | 0.0044 | lb/MMBtu 3-hr block | Oxidation Catalyst |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CH4 | Boilers | 0.0023 | lb/MMBtu average of 3 stack tests | proper operation and use of natural gas |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CH4 | Auxiliary Boiler | 0.0023 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Boilers | 0.0013 | lb/MMBtu average of 3 stack tests | oxidation catalyst |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Boilers | 2.6 | tpy rolling 12 month total | oxidation catalyst |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO | Auxiliary Boiler | 0.0013 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO | Auxiliary Boiler | 0.57 | tons/year rolling 12 month total | Good Combustion Practices |
| | Ohio Valley Resources, LLC | TBD | 9/26/2013 | CO | Natural gas fired boilers | 37.22 | lb/MMcf 3 hour average | proper burning design, good combustion practices |
| | Rocky Mountain Energy Center, LLC | CO-0052 | 8/11/2002 | CO | Auxiliary Boiler | 0.039 | lb/MMBtu | Good combustion control practices |
| | Rocky Mountain Energy Center, LLC | CO-0052 | 8/11/2002 | CO | Auxiliary Boiler | 70% | Reduction | Good combustion control practices |
| | Southeast Idaho Energy, LLC Power County Advanced Energy ( | ID-0017 | 2/10/2009 | CO | 250 MMBTU/H package boiler | 0.074 | lb/MMBtu | Good combustion practices |
| | Southeast Idaho Energy, LLC Power County Advanced Energy ( | ID-0017 | 2/10/2009 | CO | 250 MMBTU/H package boiler | 18.5 | lb/hr | Good combustion practices |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2 | Boilers | 117 | lb/MMBtu average of 3 stack tests | proper operation and use of natural gas |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO2 | Auxiliary Boiler | 117 | lb/MMBtu rolling 30 day average | Good Combustion Practices |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers and heaters >100 MMBtu/hr Included. (Process Type 12.31 (>100 MMBtu) and 11.31 (>250 MMBtu))
**Unit 44 - Package Boiler**
**Unit 48 - Package Boiler**
**Unit 49 - Package Boiler**

| Process Code | Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|---|
| | Ohio Valley Resources, LLC | TBD | 9/26/2013 | CO2 | Natural gas fired boilers | 59.61 | ton/MMcf 3 hour average | proper burning design, good combustion practices |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2e | Boilers | 234168 | tpy rolling 12 month total | proper operation and use of natural gas |
| | Forsyth Energy Projects, LLC Forsyth Energy Plant | NC-0101 | 9/29/2005 | CO | Auxiliary Boiler | 9.08 | lbs/hr based on 3-hr average | Low-NOx Burners, good combustion control and clean bu |
| | Forsyth Energy Projects, LLC Forsyth Energy Plant | NC-0101 | 9/29/2005 | NOx | Auxiliary Boiler | 15.13 | lbs/hr based on 3-hr average | Low-NOx Burners, good combustion control and clean bu |
| | Forsyth Energy Projects, LLC Forsyth Energy Plant | NC-0101 | 9/29/2005 | PM10 | Auxiliary Boiler | 0.82 | lbs/hr based on 3-hr average | Low-NOx Burners, good combustion control and clean bu |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | NOx | Auxiliary Boiler | 0.0125 | lb/MMBtu rolling 30 day average | LNB and FGR |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | NOx | Auxiliary Boiler | 5.52 | tons/year rolling 12 month total | LNB and FGR |
| | Ohio Valley Resources, LLC | TBD | 9/26/2013 | NOx | Natural gas fired boilers | 20.4 | lb/MMcf 24 hour average | Ultra Low NOx Burners and Flue Gas Recirculation |
| | Rocky Mountain Energy Center, LLC. | CO-0052 | 8/11/2002 | NOx | Auxiliary Boiler | 0.038 | lb/MMBtu | Operation is limited to 1900 hr/yr. Low NOx combustion system. |
| | Rocky Mountain Energy Center, LLC. | CO-0052 | 8/11/2002 | NOx | Auxiliary Boiler | 80% | Reduction | Operation is limited to 1900 hr/yr. Low NOx combustion system. |
| | Southeast Idaho Energy, LLC Power County Advanced Energy ( | ID-0017 | 2/10/2009 | NOx | 250 MMBTU/H package boiler | 0.02 | lb/MMBtu | Low-NOx Burners and FGR |
| | Southeast Idaho Energy, LLC Power County Advanced Energy ( | ID-0017 | 2/10/2009 | NOx | 250 MMBTU/H package boiler | 5 | lb/hr | Low-NOx Burners and FGR |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Boilers | 0.0024 | lb/MMBtu average of 3 stack tests | proper operation and use of natural gas |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Boilers | 4.79 | tpy rolling 12 month total | proper operation and use of natural gas |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Auxiliary Boiler | 0.0024 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Auxiliary Boiler | 1.06 | tons/year rolling 12 month total | Good Combustion Practices |
| | Ohio Valley Resources, LLC | TBD | 9/26/2013 | PM | Natural gas fired boilers | 1.9 | lb/MMcf 3 hour average | proper burning design, good combustion practices |
| | Southeast Idaho Energy, LLC Power County Advanced Energy ( | ID-0017 | 2/10/2009 | PM | 250 MMBTU/H package boiler | 0.0052 | lb/MMBtu | Good Combustion Practices |
| | Southeast Idaho Energy, LLC Power County Advanced Energy ( | ID-0017 | 2/10/2009 | PM | 250 MMBTU/H package boiler | 1.3 | lbs/hr | Good Combustion Practices |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | CO | Auxiliary Boiler | 100 | ppmvd @ 7% O2 | CO catalyst |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | CO | Auxiliary Boiler | 17.4 | lb/hr | CO catalyst |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | NOx | Auxiliary Boiler | 0.2 | lb/MMBtu | SCR |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | NOx | Auxiliary Boiler | 7.2 | lbs/hr | SCR |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | PM | Auxiliary Boiler | 1.6 | lb/hr | unknown |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | PM | Auxiliary Boiler | 0.008 | lb/MMBtu | Unknown |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | PM10 | Auxiliary Boiler | 1.6 | lb/hr | unknown |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | PM10 | Auxiliary Boiler | 0.008 | lb/MMBtu | Unknown |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | SO2 | Auxiliary Boiler | 0.004 | lb/MMBtu | None |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | SO2 | Auxiliary Boiler | 0.8 | lbs/hr | None |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | VOC | Auxiliary Boiler | 50 | ppmvd @7% O2 | CO catalyst |
| | Liberty Generating Station | NJ-0043 | 3/28/2002 | VOC | Auxiliary Boiler | 1.6 | lbs/hr | CO catalyst |
| | Southeast Idaho Energy, LLC Power County Advanced Energy ( | ID-0017 | 2/10/2009 | PM | 250 MMBTU/H package boiler | 20% | Reduction | Good Combustion Practices |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Boilers | 0.0024 | lb/MMBtu average of 3 stack tests | proper operation and use of natural gas |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Boilers | 4.79 | tpy rolling 12 month total | proper operation and use of natural gas |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Auxiliary Boiler | 0.0024 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| | Some facilities are not shown because they are not fertilizer prod | IA-0105 | 10/26/2012 | PM10 | Auxiliary Boiler | 1.06 | tons/year rolling 12 month total | Good Combustion Practices |
| | Ohio Valley Resources, LLC | TBD | 9/26/2013 | PM10 | Natural gas fired boilers | 7.6 | lb/MMcf 3 hour average | proper burning design, good combustion practices |
| | Southeast Idaho Energy, LLC Power County Advanced Energy ( | ID-0017 | 2/10/2009 | PM10 | 250 MMBTU/H package boiler | 0.0052 | lb/MMBtu | Good Combustion Practices |
| | Southeast Idaho Energy, LLC Power County Advanced Energy ( | ID-0017 | 2/10/2009 | PM10 | 250 MMBTU/H package boiler | 1.3 | lbs/hr | Good Combustion Practices |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM2.5 | Boilers | 0.0024 | lb/MMBtu average of 3 stack tests | proper operation and use of natural gas |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM2.5 | Boilers | 4.79 | tpy rolling 12 month total | proper operation and use of natural gas |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM2.5 | Auxiliary Boiler | 0.0024 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM2.5 | Auxiliary Boiler | 1.06 | tons/year rolling 12 month total | Good Combustion Practices |
| | Ohio Valley Resources, LLC | TBD | 9/26/2013 | PM2.5 | Natural gas fired boilers | 7.6 | lb/MMcf 3 hour average | proper burning design, good combustion practices |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | Visible Emission | Boilers | 0 | % | proper operation and use of natural gas |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | Visible Emission | Auxiliary Boiler | 0 | % opacity | Good Combustion Practices |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Boilers | 0.0014 | lb/MMBtu average of 3 stack tests | proper operation and use of natural gas |
| | CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | VOC | Boilers | 2.8 | tpy rolling 12 month total | proper operation and use of natural gas |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | VOC | Auxiliary Boiler | 0.0014 | lb/MMBtu average of 3 stack tests | Good Combustion Practices |
| | Iowa Fertilizer Company | IA-0105 | 10/26/2012 | VOC | Auxiliary Boiler | 0.62 | tons/year rolling 12 month total | Good Combustion Practices |
| | Ohio Valley Resources, LLC | TBD | 9/26/2013 | VOC | Natural gas fired boilers | 5.5 | lb/MMcf 3 hour average | proper burning design, good combustion practices |
| | Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | NOx | WCR Heater | 0.03 | lb/MMBtu | Unknown |
| | Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | PM | Heaters | 0.005 | lb/MMBtu | Unknown |
| | Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | PM | Heater, Reboiler | 0.005 | lb/MMBtu | Unknown |
| | Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | PM | WCR Heater | 0.005 | lb/MMBtu | Unknown |
| | Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | PM | CCR Reactor | 0.005 | lb/MMBtu | Unknown |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers and heaters >100 MMBtu/hr Included. (Process Type 12.31 (>100 MMBtu) and 11.31 (>250 MMBtu))
**Unit 44 - Package Boiler**
**Unit 48 - Package Boiler**
**Unit 49 - Package Boiler**

| Process Code | Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|---|

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.
Some facilities are not shown because they are not fertilizer production facilities. These units are not directly comparable because they are not natural gas fired.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Flare" - Fertilizer Plants only
**Unit 11 - Ammonia Tank Flare**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | ammonia storage flare EU-016 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | ammonia storage flare EU-016 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | ammonia storage flare EU-016 | 0.068 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | ammonia storage flare EU-016 | 0.37 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | ammonia storage flare EU-016 | 0.0054 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | ammonia storage flare EU-016 | 563 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | ammonia storage flare EU-016 | 168 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Front End Flare EU 017 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels used shall be natural gas, Flares shall be designed for and operated with no visible emissions, except for periods not to exceed 5 minutes during any two consecutive hours, Flares shall be operated with a flame present at all times, Flares shall be continuously monitored to assure the presence of a pilot flame with a thermocouple, infrared monitor, or other approved device |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels used shall be natural gas, Flares shall be designed for and operated with no visible emissions, except for periods not to exceed 5 minutes during any two consecutive hours, Flares shall be operated with a flame present at all times, Flares shall be continuously monitored to assure the presence of a pilot flame with a thermocouple, infrared monitor, or other approved device |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Front End Flare EU 017 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels used shall be natural gas, Flares shall be designed for and operated with no visible emissions, except for periods not to exceed 5 minutes during any two consecutive hours, Flares shall be operated with a flame present at all times, Flares shall be continuously monitored to assure the presence of a pilot flame with a thermocouple, infrared monitor, or other approved device |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels used shall be natural gas, Flares shall be designed for and operated with no visible emissions, except for periods not to exceed 5 minutes during any two consecutive hours, Flares shall be operated with a flame present at all times, Flares shall be continuously monitored to assure the presence of a pilot flame with a thermocouple, infrared monitor, or other approved device |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Front End Flare EU 017 | 0.068 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Front End Flare EU 017 | 0.37 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Front End Flare EU 017 | 0.0054 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Front End Flare EU 017 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Front End Flare EU 017 | 116.89 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Back End Flare EU-018 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Back End Flare EU-018 | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Back End Flare EU-018 | 0.068 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Back End Flare EU-018 | 0.37 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Back End Flare EU-018 | 0.0054 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Back End Flare EU-018 | 336 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Back End Flare EU-018 | 116.89 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Discontinuous Urea Flare EU-DUF | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Discontinuous Urea Flare EU-DUF | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Discontinuous Urea Flare EU-DUF | 0.068 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Discontinuous Urea Flare EU-DUF | 0.37 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Discontinuous Urea Flare EU-DUF | 0.0054 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Discontinuous Urea Flare EU-DUF | 240 | HR/YR, TWELVE CONSECUTIVE MONTH PERIOD | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Discontinuous Urea Flare EU-DUF | 116.89 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM10 | Emergency Urea Flare EU-EUF | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | PM2.5 | Emergency Urea Flare EU-EUF | 0.0075 | LB/MMBTU | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | NOx | Emergency Urea Flare EU-EUF | 0.068 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO | Emergency Urea Flare EU-EUF | 0.37 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | VOC | Emergency Urea Flare EU-EUF | 0.0054 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| MIDWEST FERTILIZER COMPANY LLC | *IN-0324 | 5/6/2022 | CO2e | Emergency Urea Flare EU-EUF | 116.89 | LB/MMBTU, DURING NORMAL OPERATION | The pilot and purge gas fuels shall be natural gas |
| | | | | | | | |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CH4 | Flares | No Numeric Limit | No Numeric Limit | Good operating practices & use of natural gas |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO | Flares | No Numeric Limit | No Numeric Limit | Good operating practices & use of natural gas |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Flare" - Fertilizer Plants only
**Unit 11 - Ammonia Tank Flare**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Front End Process Flare | 0.37 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Front End Process Flare | 3240.16 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Back end ammonia process vent flare | 0.37 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Back end ammonia process vent flare | 804.76 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | CO | Process Flare | No Numeric Limit | No Numeric Limit | Good combustion practices. Meet 40 CFR 60.18 |
| United Wisconsin Grain Producers UWGP - Fuel Grade Ethanol Plant | WI-0204 | 8/14/2003 | CO | Bypass Flare, Biomethanator | 2.4 | lbs/hr | Operation Limit: No more than 5040 hr/yr |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Ammonia Storage Flare | 0.37 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | CO | Ammonia Storage Flare | No Numeric Limit | No Numeric Limit | Good combustion practices. Meet 40 CFR 60.18 |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO2 | Ammonia Flare | No Numeric Limit | No Numeric Limit | Work Practice/Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO2 | Front End Process Flare | 511.8 | ton/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO2 | Front End Process Flare | 116.89 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO2 | Back end ammonia process vent flare | 116.89 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO2 | Ammonia Storage Flare | 52.02 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2e | Flares | No Numeric Limit | No Numeric Limit | Good operating practices & use of natural gas |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | CO2e | Flares | No Numeric Limit | No Numeric Limit | Good operating practices & use of natural gas |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | N2O | Flares | No Numeric Limit | No Numeric Limit | Good operating practices & use of natural gas |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | N2O | Ammonia Flare | No Numeric Limit | No Numeric Limit | Work Practice/Good Combustion Practices |
| Degussa Engineered Carbons Inc. Borger Carbon Black Plant | TX-0436 | 10/3/2002 | NOx | Dryers, Boilers, Flare | 0.1 | lb/MMBtu | Good combustion practices and design |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | NOx | Ammonia Flare | No Numeric Limit | No Numeric Limit | Work Practice/Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Front End Process Flare | 0.068 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Front End Process Flare | 595.47 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Back end ammonia process vent flare | 0.068 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Back end ammonia process vent flare | 624.94 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | NOx | Process Flare | No Numeric Limit | No Numeric Limit | Good combustion practices. Meet 40 CFR 60.19 |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Ammonia Storage Flare | 0.068 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Ammonia Storage Flare | 125 | lb/hr 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | NOx | Ammonia Storage Flare | No Numeric Limit | No Numeric Limit | Good combustion practices. Meet 40 CFR 60.19 |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Flares | No Numeric Limit | No Numeric Limit | Good operating practices & use of natural gas |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM | Ammonia Storage Flare | 0.0019 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM | Ammonia Storage Flare | No Numeric Limit | No Numeric Limit | Smokeless flare. Air or steam-assist only if unassisted flare produces smoke. Good combustion practices. Meet 40 CFR 60.21 |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM10 | Ammonia Storage Flare | 0.0075 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Southeast Idaho Energy, LLC Power County Advanced Energy Center | ID-0017 | 2/10/2009 | PM10 | Ammonia Storage Flare | No Numeric Limit | No Numeric Limit | Smokeless flare. Air or steam-assist only if unassisted flare produces smoke. Good combustion practices. Meet 40 CFR 60.21 |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM2.5 | Ammonia Storage Flare | 0.0075 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | Visible Emissions | Ammonia Flare | 0 | % | Work Practice/Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | VOC | Ammonia Storage Flare | 0.0054 | lb/MMBtu 3 hour average | Proper flare design and good combustion practices; and process flaring minimization practices |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "Urea" - All Results Included
**Unit 47 - Urea Loading**
**Unit 47a - Urea Transfer**
**Unit 47b - Urea Transfer**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| PALLAS NITROGEN LLC | OH-0368 | 04/19/2017 | Filterable PM | Granulated Urea Transfer Points with bin vents (P901) | 0.005 | GR/DSCF | Bin Vent Filter |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft) | PM | Truck and Rail Loading Operation (EU-021A) | 0.15 | lb/hr 3 hour average | Baghouse (4800 metric ton/day) |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft) | PM10 | Truck and Rail Loading Operation (EU-021A) | 0.15 | lb/hr 3 hour average | Baghouse (4800 metric ton/day) |
| Midwest Fertilizer Company LLC | IN-0263 | 3/23/17 (draft) | PM2.5 | Truck and Rail Loading Operation (EU-021A) | 0.15 | lb/hr 3 hour average | Baghouse (4800 metric ton/day) |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Urea Loading | 0.003 | lb/ton average of 3 stack tests | Bin Vent Filter |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM | Urea Loading | 5.48 | tpy rolling 12 month total | Bin Vent Filter |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Granulated Urea Transfer | 0.005 | gr/dscf average of 3 stack tests | Bin Vent Filter |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Urea Loading | 0.0011 | lb/ton average of 3 stack tests | Bin Vent Filter |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM10 | Urea Loading | 2.01 | tpy rolling 12 month total | Bin Vent Filter |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Granulated Urea Transfer | 0.005 | gr/dscf average of 3 stack tests | Bin Vent Filter |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM2.5 | Urea Loading | 0.0011 | lb/ton average of 3 stack tests | Bin Vent Filter |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | PM2.5 | Urea Loading | 1.97 | tpy rolling 12 month total | Bin Vent Filter |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM2.5 | Granulated Urea Transfer | 0.0013 | gr/dscf average of 3 stack tests | Bin Vent Filter |
| CF Industries Nitrogen, LLC | IA-0106 | 7/12/2013 | Visible Emissions | Urea Loading | 0 | % | Bin Vent Filter |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | Visible Emissions | Granulated Urea Transfer | 0 | % opacity | Bin Vent Filter |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "16.210 - combined cycle & cogen <25 MW" - All Results
**Unit 55-Solar Turbines**
**Unit 56-Solar Turbines**
**Unit 57-Solar Turbines**
**Unit 58-Solar Turbines**
**Unit 59-Solar Turbines**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| NORFOLK NAVAL SHIPYARD | VA-0333 | 12/9/2020 | CO2e | Two (2) turbines - HRSG | 117.1 | lb/MMBtu | use of low carbon fuel and efficient power generation. |
| NORFOLK NAVAL SHIPYARD | VA-0333 | 12/9/2020 | TPM10 | Two (2) turbines - HRSG | 0.011 | lb/MMBtu | |
| NORFOLK NAVAL SHIPYARD | VA-0333 | 12/9/2020 | TPM2.5 | Two (2) turbines - HRSG | 0.011 | lb/MMBtu | |
| SABINE PASS LNG TERMINAL | LA-0375 | 9/17/2020 | CO | Generator Turbines | 25 | ppm @ 15%O2 AT ALL LOAD | Good combustion practices and use od clean natural gas |
| SABINE PASS LNG TERMINAL | LA-0375 | 9/17/2020 | NOx | Generator Turbines | 150 | ppm @ 15%O2 AND < 75% LOAD | Dry Low NOx and good combustion practices |
| Equistar Chemicals, LP - Westlake Facility | LA-0295 | 7/12/2016 | NOx | Solar Titan 130 Gas Turbine with Unfired HRSG (3-08, EQT 323) | 14.25 | lb/hr hourly maximum | Dry low NOx combustor (SoLoNOx) and good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques (159.46 MM BTU/HR) (Output power at generator: 14.117 MW) Turbine is subject to 40 CFR 60 Subpart KKKK. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. |
| Equistar Chemicals, LP - Westlake Facility | LA-0295 | 7/12/2016 | NOx | Solar Titan 130 Gas Turbine with Unfired HRSG (3-08, EQT 323) | 15 | ppmv @ 15% O2 Annual Average | Dry low NOx combustor (SoLoNOx) and good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques (159.46 MM BTU/HR) (Output power at generator: 14.117 MW) Turbine is subject to 40 CFR 60 Subpart KKKK. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. |
| Equistar Chemicals, LP - Westlake Facility | LA-0295 | 7/12/2016 | VOC | Solar Titan 130 Gas Turbine with Unfired HRSG (3-08, EQT 323) | 1.64 | lb/hr hourly maximum | Good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques consistent with the manufacturer's recommendations to maximize fuel efficiency and minize emissions. (159.46 MM BTU/HR) (Output power at generator: 14.117 MW) Turbine is subject to 40 CFR 60 Subpart KKKK. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. PSD permit requires an annual stack test for VOC. If VOC < 75% of the permit limit, the frequency of the testing may be reduced to once every 2 years. If result of any subsequent test exceeds 75% of the permit limit, resume annual testing. |
| Equistar Chemicals, LP - Westlake Facility | LA-0295 | 7/12/2016 | VOC | Solar Titan 130 Gas Turbine with Unfired HRSG (3-08, EQT 323) | 2.5 | ppmv @ 15% O2 Annual Average | Good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques consistent with the manufacturer's recommendations to maximize fuel efficiency and minize emissions. (159.46 MM BTU/HR) (Output power at generator: 14.117 MW) Turbine is subject to 40 CFR 60 Subpart KKKK. Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. PSD permit requires an annual stack test for VOC. If VOC < 75% of the permit limit, the frequency of the testing may be reduced to once every 2 years. If result of any subsequent test exceeds 75% of the permit limit, resume annual testing. |
| Matem Limited Partnership - Medical Area Total Energy Plant | MA-0041 | 7/1/16, 4/28/17 update | NOx | Combustion Turbine with Duct Burner | 2 | ppmv @ 15% O2 1-hour block avg/excluding SS - ng firing | NSPS and SIP - Dry Low NOx Combustor & Selective Catalytic Reduction (a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing(also permitted to burn fuel oil)) with Heat Recovery Steam Generator including a Duct Burner) (38.8MMBtu/hr NG firing only). NOx limits are determined as BACT under 310 CMR 7.02(8). NOx(firing NG): ≤0.0074 lb/MMBtu, ≤1.21 lb/hr(no duct firing), ≤1.51 lb/hr(with duct firing); during start-ups (≤3 hrs): ≤36.2 lb per event, during shutdowns (≤1 hr): ≤11.2 lb per event. |
| Matem Limited Partnership - Medical Area Total Energy Plant | MA-0041 | 7/1/16, 4/28/17 update | CO | Combustion Turbine with Duct Burner | 2 | ppmv @ 15% O2 1-hour block avg/excluding SS - ng firing | SIP - Oxidation Catalyst (a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing(also permitted to burn fuel oil)) with Heat Recovery Steam Generator including a Duct Burner) (38.8MMBtu/hr NG firing only). CO limits are determined as BACT under 310 CMR 7.02(8). CO(firing NG): ≤0.0045 lb/MMBtu, ≤0.74 lb/hr(no duct firing), ≤0.92 lb/hr(with duct firing); during start-ups (≤3 hrs): ≤153.7 lb per event, during shutdowns (≤1 hr): ≤41.6 lb per event. |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "16.210 - combined cycle & cogen <25 MW" - All Results
**Unit 55-Solar Turbines**
**Unit 56-Solar Turbines**
**Unit 57-Solar Turbines**
**Unit 58-Solar Turbines**
**Unit 59-Solar Turbines**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Matem Limited Partnership - Medical Area Total Energy Plant | MA-0041 | 7/1/16, 4/28/17 update | VOC | Combustion Turbine with Duct Burner | 1.7 | ppmv @ 15% O2 1-hour block avg/excluding SS - ng firing | SIP - Oxidation Catalyst (a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing(also permitted to burn fuel oil)) with Heat Recovery Steam Generator including a Duct Burner) (38.8MMBtu/hr NG firing only). VOC limits are determined as BACT under 310 CMR 7.02(8). VOC as CH4(firing NG): ≤0.0022 lb/MMBtu, ≤0.36 lb/hr(no duct firing), ≤0.45 lb/hr(with duct firing); during start-ups (≤3 hrs): ≤11.4 lb per event, during shutdowns (≤1 hr): ≤3.3 lb per event VOC as CH4. |
| Matem Limited Partnership - Medical Area Total Energy Plant | MA-0041 | 7/1/16, 4/28/17 update | SO2 | Combustion Turbine with Duct Burner | 0.6 | ppmv @ 15% O2 1-hour block avg/excluding SS - ng firing | NSPS and SIP - clean fuels - using natural gas as primary fuel (a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing(also permitted to burn fuel oil as backup)) with Heat Recovery Steam Generator including a Duct Burner) (38.8MMBtu/hr NG firing only). SO2 limits are determined as BACT under 310 CMR 7.02(8). SO2(firing NG): ≤0.0029 lb/MMBtu, ≤0.48 lb/hr(no duct firing), ≤0.58 lb/hr(with duct firing); during start-ups (≤3 hrs): ≤1.8 lb per event, during shutdowns (≤1 hr): ≤0.6 lb per event. |
| Matem Limited Partnership - Medical Area Total Energy Plant | MA-0041 | 7/1/16, 4/28/17 update | Sulfuric Acid (mist, | Combustion Turbine with Duct Burner | 0.4 | ppmv @ 15% O2 1-hour block avg/excluding SS - ng firing | SIP - clean fuels - using natural gas as primary fuel (a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing(also permitted to burn fuel oil as backup)) with Heat Recovery Steam Generator including a Duct Burner) (38.8MMBtu/hr NG firing only). H2SO4 limits are determined as BACT under 310 CMR 7.02(8). H2SO4(firing NG): ≤0.0029lb/MMBtu, ≤0.47 lb/hr(no duct firing), ≤0.58 lb/hr(with duct firing); during start-ups (≤3 hrs): ≤1.8 lb per event, during shutdowns (≤1 hr): ≤0.6 lb per event. |
| Matem Limited Partnership - Medical Area Total Energy Plant | MA-0041 | 7/1/16, 4/28/17 update | Ammonia (NH3) | Combustion Turbine with Duct Burner | 2 | ppmv @ 15% O2 1-hour block avg/excluding SS - ng firing | SIP - no controls listed (a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing(also permitted to burn fuel oil as backup)) with Heat Recovery Steam Generator including a Duct Burner) (38.8MMBtu/hr NG firing only). NH3 limits are determined as BACT under 310 CMR 7.02(8). NH3(firing NG): ≤0.44 lb/hr(no duct firing), ≤0.55 lb/hr(with duct firing); NH3(turbine firing ULSD): ≤0.0029 lb/MMBtu, ≤0.46 lb/hr(no duct firing), ≤0.57 lb/hr(with duct firing). |
| Matem Limited Partnership - Medical Area Total Energy Plant | MA-0041 | 7/1/16, 4/28/17 update | Ammonia (NH3) | Combustion Turbine with Duct Burner | 0.0027 | lb/MMBtu 1-hour block avg/excluding SS - ng firing | SIP - no controls listed (a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing(also permitted to burn fuel oil as backup)) with Heat Recovery Steam Generator including a Duct Burner) (38.8MMBtu/hr NG firing only). NH3 limits are determined as BACT under 310 CMR 7.02(8). NH3(firing NG): ≤0.44 lb/hr(no duct firing), ≤0.55 lb/hr(with duct firing); NH3(turbine firing ULSD): ≤0.0029 lb/MMBtu, ≤0.46 lb/hr(no duct firing), ≤0.57 lb/hr(with duct firing). |
| Matem Limited Partnership - Medical Area Total Energy Plant | MA-0041 | 7/1/16, 4/28/17 update | TPM10 | Combustion Turbine with Duct Burner | 0.02 | lb/MMBtu 1-hour block avg/excluding SS - ng firing | SIP - no controls listed (a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing(also permitted to burn fuel oil as backup)) with Heat Recovery Steam Generator including a Duct Burner) (38.8MMBtu/hr NG firing only). PM10(firing NG): ≤3.29 lb/hr(no duct firing), ≤4.07 lb/hr(with duct firing); during start-ups (≤3 hrs): ≤12.2 lb per event, during shutdowns (≤1 hr): ≤4.1 lb per event. |
| Matem Limited Partnership - Medical Area Total Energy Plant | MA-0041 | 7/1/16, 4/28/17 update | TPM2.5 | Combustion Turbine with Duct Burner | 0.02 | lb/MMBtu 1-hour block avg/excluding SS - ng firing | SIP - no controls listed (a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing(also permitted to burn fuel oil as backup)) with Heat Recovery Steam Generator including a Duct Burner) (38.8MMBtu/hr NG firing only). PM2.5(firing NG): ≤3.29 lb/hr(no duct firing), ≤4.07 lb/hr(with duct firing); during start-ups (≤3 hrs): ≤12.2 lb per event, during shutdowns (≤1 hr): ≤4.1 lb per event. |
| Matem Limited Partnership - Medical Area Total Energy Plant | MA-0041 | 7/1/16, 4/28/17 update | CO2e | Combustion Turbine with Duct Burner | 119 | lb/MMBtu 1-hour block avg/excluding SS - ng firing | SIP - no controls listed (a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing(also permitted to burn fuel oil as backup)) with Heat Recovery Steam Generator including a Duct Burner) (38.8MMBtu/hr NG firing only). CO2e(firing NG): ≤19,584 lb/hr(no duct firing), ≤24,200 lb/hr(with duct firing). |
| | | | | | | | |
| Wesleyan University | CT-0155 | 8/27/2008 | CO | 2.4 MW natural gas fired cogeneration facility | 0.48 | G/B-HP-H short term emission limit | oxidation catalyst |
| Wesleyan University | CT-0155 | 8/27/2008 | CO | 2.4 MW natural gas fired cogeneration facility | 15.51 | tpy annual emission limit | oxidation catalyst |
| Geisinger Medical Center | PA-0289 | 6/18/2010 | CO | Combined heat and power combustion turbine | 25 | ppm @ 15% O2 in solonox mode | Unknown |
| Geisinger Medical Center | PA-0289 | 6/18/2010 | CO | Combined heat and power combustion turbine | 100 | ppm @ 15% O2 in non solonox mode | Unknown |
| Geisinger Medical Center | PA-0289 | 6/18/2010 | Formaldehyde | Combined heat and power combustion turbine | 0.0029 | lb/MMBtu | Unknown |
| Wesleyan University | CT-0155 | 8/27/2008 | NOx | 2.4 MW natural gas fired cogeneration facility | 0.18 | G/B-HP-H short term emission limit | Steuler Eco2pro SCR |
| Wesleyan University | CT-0155 | 8/27/2008 | NOx | 2.4 MW natural gas fired cogeneration facility | 5.82 | tpy annual emission limit | Steuler Eco2pro SCR |
| Cutrale Citrus Juices USA Auburndale citrus facility | FL-0313 | 6/12/2008 | NOx | Cogen System Turbine NO.1 W/existing duct Burner #1 | 25 | PPMVD hr average/corrected to 25%O2 | dry low NOx burners |
| Cutrale Citrus Juices USA Leesburg citrus facility | FL-0314 | 6/2/2008 | NOx | Cogen System Turbine & existing steam generator | 25 | PPMVD hr average/corrected to 25%O2 | dry low NOx burners |
| Geisinger Medical Center | PA-0289 | 6/18/2010 | NOx | Combined heat and power combustion turbine | 15 | ppm @ 15% O2 in solonox mode | SoLoNOx combustor |
| Geisinger Medical Center | PA-0289 | 6/18/2010 | NOx | Combined heat and power combustion turbine | 42 | ppm @ 15% O2 in non solonox mode | SoLoNOx combustor |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "16.210 - combined cycle & cogen <25 MW" - All Results
**Unit 55-Solar Turbines**
**Unit 56-Solar Turbines**
**Unit 57-Solar Turbines**
**Unit 58-Solar Turbines**
**Unit 59-Solar Turbines**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Cornell university Cornell combined heat & power project | NY-0101 | 3/12/2008 | PM | Combustion Turbines 1, 2, 3 | 6.5 | lb/hr above 1 hour average | sulfur in gas assigned max 1.2 gr/100scf; work practices to minimize NHZ slip |
| Cornell university Cornell combined heat & power project | NY-0101 | 3/12/2008 | PM | Combustion Turbines 1, 2, 3 | 0.022 | lb/MMBtu above 1 hour average w/duct firing | sulfur in gas assigned max 1.2 gr/100scf; work practices to minimize NHZ slip |
| Cornell university Cornell combined heat & power project | NY-0101 | 3/12/2008 | PM10 | Combustion Turbines 1, 2, 3 | 6.7 | lb/hr above/below 1 hour average | sulfur in gas assigned max 1.2 gr/100scf; work practices to minimize NHZ slip |
| Cornell university Cornell combined heat & power project | NY-0101 | 3/12/2008 | PM10 | Combustion Turbines 1, 2, 3 | 0.023 | lb/MMBtu above/below 1 hour average w/duct firing | sulfur in gas assigned max 1.2 gr/100scf; work practices to minimize NHZ slip |
| Cornell university Cornell combined heat & power project | NY-0101 | 3/12/2008 | PM2.5 | Combustion Turbines 1, 2, 3 | 6.7 | lb/hr above/below 1 hour average | sulfur in gas assigned max 1.2 gr/100scf; work practices to minimize NHZ slip |
| Cornell university Cornell combined heat & power project | NY-0101 | 3/12/2008 | PM2.5 | Combustion Turbines 1, 2, 3 | 0.023 | lb/MMBtu above/below 1 hour average w/duct firing | sulfur in gas assigned max 1.2 gr/100scf; work practices to minimize NHZ slip |
| Geisinger Medical Center | PA-0289 | 6/18/2010 | VOC | Combined heat and power combustion turbine | 0.6 | lb/hr in solonox mode | unknown |
| Geisinger Medical Center | PA-0289 | 6/18/2010 | VOC | Combined heat and power combustion turbine | 11.9 | lb/hr sub-zero in non-solonox mode | unknown |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | CO2e | Pickle Line Boiler | 117 | LB/MMBTU | Good operating practices Minimum Boiler Efficiency |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | CO | Pickle Line Boiler | 0.0824 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | NOx | Pickle Line Boiler | 0.035 | LB/MMBTU | Low NOx burners Combustion of clean fuel Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | FPM | Pickle Line Boiler | 0.0019 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | FPM10 | Pickle Line Boiler | 0.0019 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | FPM2.5 | Pickle Line Boiler | 0.0019 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | SO2 | Pickle Line Boiler | 0.0006 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | visible emissions | Pickle Line Boiler | 0.05 | percent opacity | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | VOC | Pickle Line Boiler | 0.0054 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | CO2e | Galvanizing Line Boilers #1 and #2 | 117 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | CO | Galvanizing Line Boilers #1 and #2 | 0.0824 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | NOx | Galvanizing Line Boilers #1 and #2 | 0.035 | LB/MMBTU | Low NOx burners Combustion of clean fuel Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | FPM | Galvanizing Line Boilers #1 and #2 | 0.0007 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | FPM10 | Galvanizing Line Boilers #1 and #2 | 0.0007 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | FPM2.5 | Galvanizing Line Boilers #1 and #2 | 0.0007 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | SO2 | Galvanizing Line Boilers #1 and #2 | 0.0006 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | visible emissions | Galvanizing Line Boilers #1 and #2 | 0.05 | percent opacity | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | VOC | Galvanizing Line Boilers #1 and #2 | 0.0054 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | CO2e | Pickle Galvanizing Line Boiler | 117 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | CO | Pickle Galvanizing Line Boiler | 0.0824 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | NOx | Pickle Galvanizing Line Boiler | 0.035 | LB/MMBTU | Low NOx burners Combustion of clean fuel Good Combustion Practices |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | FPM | Pickle Galvanizing Line Boiler | 0.0012 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | FPM10 | Pickle Galvanizing Line Boiler | 0.0012 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | FPM2.5 | Pickle Galvanizing Line Boiler | 0.0012 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | SO2 | Pickle Galvanizing Line Boiler | 0.0006 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | visible emissions | Pickle Galvanizing Line Boiler | 0.05 | percent opacity | Combustion of Natural gas and Good Combustion Practice |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | VOC | Pickle Galvanizing Line Boiler | 0.0054 | LB/MMBTU | Combustion of Natural gas and Good Combustion Practice |
| JUPITER BROWNSVILLE, LLC CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | CO2e | Heaters and Boiler with Firing Rates Less than 100 MMBtu/hr | No Numeric Limit | | Use of natural pipeline gas or refinery fuel gas. Good combustion practices, including maintaining proper air-to-fuel ratio and necessary residence time, temperature, and turbulence. |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| JUPITER BROWNSVILLE, LLC CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | CO | Heaters and Boiler with Firing Rates Less than 100 MMBtu/hr | 50 | PPMVD | Use of natural pipeline gas or refinery fuel gas. Good combustion practices, including maintaining proper air-to-fuel ratio and necessary residence time, temperature, and turbulence. |
| JUPITER BROWNSVILLE, LLC CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | NOx | Heaters and Boiler with Firing Rates Less than 100 MMBtu/hr | 0.015 | lb/MMBtu | LOW NOX BURNERS |
| JUPITER BROWNSVILLE, LLC CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | FPM | Heaters and Boiler with Firing Rates Less than 100 MMBtu/hr | 0.0089 | lb/MMBtu | Use of natural pipeline gas or refinery fuel gas. Opacity not to exceed 5 percent over six minutes. |
| JUPITER BROWNSVILLE, LLC CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | FPM10 | Heaters and Boiler with Firing Rates Less than 100 MMBtu/hr | 0.0089 | lb/MMBtu | Use of natural pipeline gas or refinery fuel gas. Opacity not to exceed 5 percent over six minutes. |
| JUPITER BROWNSVILLE, LLC CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | FPM2.5 | Heaters and Boiler with Firing Rates Less than 100 MMBtu/hr | 0.0089 | lb/MMBtu | Use of natural pipeline gas or refinery fuel gas. Opacity not to exceed 5 percent over six minutes. |
| JUPITER BROWNSVILLE, LLC CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | SO2 | Heaters and Boiler with Firing Rates Less than 100 MMBtu/hr | No Numeric Limit | | Use of natural pipeline gas or refinery fuel gas with sulfur content not to exceed 0.20 grains per 100 dscf. |
| JUPITER BROWNSVILLE, LLC CENTURION BROWNSVILLE | TX-0930 | 10/19/2021 | VOC | Heaters and Boiler with Firing Rates Less than 100 MMBtu/hr | 0.0054 | lb/MMBtu | Use of natural pipeline gas or refinery fuel gas. Good combustion practices, including maintaining proper air-to-fuel ratio and necessary residence time, temperature, and turbulence. |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | CO2e | SN-202, 203, 204 Pickle Line Boilers | 121 | lb/MMBtu | Good Combustion Practice |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | CO | SN-202, 203, 204 Pickle Line Boilers | 0.084 | lb/MMBtu | Good Combustion Practice |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | Lead (Pb) / Lead Co | SN-202, 203, 204 Pickle Line Boilers | No Numeric Limit | | |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | NOx | SN-202, 203, 204 Pickle Line Boilers | 0.035 | lb/MMBtu | Low NOx burners |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | FPM | SN-202, 203, 204 Pickle Line Boilers | 0.0019 | lb/MMBtu | Good Combustion Practice |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | TPM10 | SN-202, 203, 204 Pickle Line Boilers | 0.0076 | GR/DSCF | Good Combustion Practice |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | TPM2.5 | SN-202, 203, 204 Pickle Line Boilers | 0.0076 | GR/DSCF | Good Combustion Practice |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | SO2 | SN-202, 203, 204 Pickle Line Boilers | 0.0006 | lb/MMBtu | Low Sulfur fuels |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | visible emissions | SN-202, 203, 204 Pickle Line Boilers | 5 | percent | Good Combustion Practice |
| NUCOR STEEL ARKANSAS | AR-0172 | 9/1/2021 | VOC | SN-202, 203, 204 Pickle Line Boilers | 0.0055 | lb/MMBtu | Good Combustion Practice |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | CO | 60 MMBtu/hour Auxiliary Boiler | 0.08 | LB/MMBTU | Good combustion practices and low-NOx burners |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | NOx | 60 MMBtu/hour Auxiliary Boiler | 0.05 | LB/MMBTU | Low-NOx burners |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | FPM | 60 MMBtu/hour Auxiliary Boiler | 1.4 | GR. S/100 SCF NG | Clean Fuels |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | FPM | 60 MMBtu/hour Auxiliary Boiler | 20 | % opacity | Clean Fuels |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | FPM10 | 60 MMBtu/hour Auxiliary Boiler | 1.4 | GR. S/100 SCF NG | Clean Fuels |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | FPM10 | 60 MMBtu/hour Auxiliary Boiler | 20 | % opacity | Clean Fuels |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | FPM2.5 | 60 MMBtu/hour Auxiliary Boiler | 1.4 | GR. S/100 SCF NG | Clean Fuels |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | FPM2.5 | 60 MMBtu/hour Auxiliary Boiler | 20 | % opacity | Clean Fuels |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | SO2 | 60 MMBtu/hour Auxiliary Boiler | 1.4 | GR. S/100 SCF NG | Limited sulfur content in fuel |
| SHADY HILLS COMBINED CYCLE FACILITY | FL-0371 | 6/7/2021 | Sulfuric Acid (mist, v | 60 MMBtu/hour Auxiliary Boiler | 1.4 | GR. S/100 SCF NG | Limited sulfur content in fuel |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 04/19/2021 | CO2e | Vacuum Degasser Boiler (EP 20-13) | 26125 | ton/yr | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan and implement various design and operational efficiency requirements. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 04/19/2021 | CO | Vacuum Degasser Boiler (EP 20-13) | 61 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 04/19/2021 | Lead (Pb) / Lead Co | Vacuum Degasser Boiler (EP 20-13) | 0.0005 | LB/MMSCF | |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 04/19/2021 | NOx | Vacuum Degasser Boiler (EP 20-13) | 35 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan. Also equipped with low-NOx burners. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 04/19/2021 | FPM | Vacuum Degasser Boiler (EP 20-13) | 1.9 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan. Also equipped with low-NOx burners. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 04/19/2021 | TPM10 | Vacuum Degasser Boiler (EP 20-13) | 7.6 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan. Also equipped with low-NOx burners. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 04/19/2021 | TPM2.5 | Vacuum Degasser Boiler (EP 20-13) | 7.6 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan. Also equipped with low-NOx burners. |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 04/19/2021 | SO2 | Vacuum Degasser Boiler (EP 20-13) | 0.6 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan. Also equipped with low-NOx burners. |
| NUCOR STEEL GALLATIN, LLC | KY-0115 | 04/19/2021 | VOC | Vacuum Degasser Boiler (EP 20-13) | 5.5 | LB/MMSCF | The permittee must develop a Good Combustion and Operating Practices (GCOP) Plan. Also equipped with low-NOx burners. |
| SHELL ROCK SOY PROCESSING | IA-0117 | 03/17/2021 | TPM | Natural Gas Boiler A and B | 0.026 | lb/Hr, each | Low NOx Burner and Flue Gas Recirculation |
| LBWL--ERICKSON STATION | MI-0447 | 01/07/2021 | CO2e | EUAUXBOILER--nat gas fired auxiliary boiler | 25644 | ton/yr | Low carbon fuel (pipeline quality natural gas), good combustion practices, and energy efficiency measures. |
| LBWL--ERICKSON STATION | MI-0447 | 01/07/2021 | CO | EUAUXBOILER--nat gas fired auxiliary boiler | 50 | PPM | Good combustion practices. |
| LBWL--ERICKSON STATION | MI-0447 | 01/07/2021 | NOx | EUAUXBOILER--nat gas fired auxiliary boiler | 30 | PPM | Low NOx burners (LNB) or flue gas recirculation (FGR) along with good combustion practices. |
| LBWL--ERICKSON STATION | MI-0447 | 01/07/2021 | TPM10 | EUAUXBOILER--nat gas fired auxiliary boiler | 0.74 | lb/Hr | Good combustion practices. |
| LBWL--ERICKSON STATION | MI-0447 | 01/07/2021 | TPM2.5 | EUAUXBOILER--nat gas fired auxiliary boiler | 0.4 | lb/Hr | Good combustion practices. |
| LBWL--ERICKSON STATION | MI-0447 | 01/07/2021 | VOC | EUAUXBOILER--nat gas fired auxiliary boiler | 0.3 | lb/Hr | Good combustion practices. |
| US NAVY NORFOLK NAVAL SHIPYARD | VA-0333 | 12/09/2020 | CO2e | Three (3) boilers | 117.1 | LB/MMBTU | |
| US NAVY NORFOLK NAVAL SHIPYARD | VA-0333 | 12/09/2020 | TPM10 | Three (3) boilers | 0.0078 | LB/MMBTU | |
| US NAVY NORFOLK NAVAL SHIPYARD | VA-0333 | 12/09/2020 | TPM2.5 | Three (3) boilers | 0.0078 | LB/MMBTU | |
| LION OIL COMPANY | AR-0167 | 12/01/2020 | NOx | SN-803 - #4 Pre-Flash Column Reboiler | 1.9 | lb/hr | Ultra-low NOx burners and good combustion practice |
| LION OIL COMPANY | AR-0167 | 12/01/2020 | NOx | SN-805 - #4 Pre-Flash Reboiler | 3.5 | lb/hr | Ultra-low NOx burners and good combustion practice |
| LION OIL COMPANY | AR-0167 | 12/01/2020 | NOx | SN-810 - #9 Hydrotreater Furnace/Reboiler | 12.7 | lb/hr | |
| PLANT BARRY, ALABAMA POWER COMPANY | AL-0328 | 11/09/2020 | CO2e | 90.5 MMBtu/hr Aux Boiler | 46416 | ton/yr | |
| PLANT BARRY, ALABAMA POWER COMPANY | AL-0328 | 11/09/2020 | CO | 90.5 MMBtu/hr Aux Boiler | 0.037 | LB/MMBTU | |
| PLANT BARRY, ALABAMA POWER COMPANY | AL-0328 | 11/09/2020 | NOx | 90.5 MMBtu/hr Aux Boiler | 0.011 | LB/MMBTU | |
| PLANT BARRY, ALABAMA POWER COMPANY | AL-0328 | 11/09/2020 | FPM10 | 90.5 MMBtu/hr Aux Boiler | 0.0075 | LB/MMBTU | |
| PLANT BARRY, ALABAMA POWER COMPANY | AL-0328 | 11/09/2020 | FPM2.5 | 90.5 MMBtu/hr Aux Boiler | 0.0075 | LB/MMBTU | |
| PLANT BARRY, ALABAMA POWER COMPANY | AL-0328 | 11/09/2020 | SO2 | 90.5 MMBtu/hr Aux Boiler | 0.002 | LB/MMBTU | |
| PLANT BARRY, ALABAMA POWER COMPANY | AL-0328 | 11/09/2020 | VOC | 90.5 MMBtu/hr Aux Boiler | 0.004 | LB/MMBTU | |
| FG LA COMPLEX | LA-0364 | 01/06/2020 | CO2e | PR Waste Heat Boiler | 455475 | ton/yr | Use of natural gas or fuel gas as fuel, energy-efficient design options, and operational/maintenance practices. |
| FG LA COMPLEX | LA-0364 | 01/06/2020 | CO | PR Waste Heat Boiler | 26.21 | lb/hr | Good combustion practices and oxidation catalyst. |
| FG LA COMPLEX | LA-0364 | 01/06/2020 | NOx | PR Waste Heat Boiler | 14.41 | lb/hr | SCR and LNB |
| FG LA COMPLEX | LA-0364 | 01/06/2020 | TPM10 | PR Waste Heat Boiler | 0.61 | lb/hr | Use of pipeline quality natural gas or fuel gas and good combustion practices. |
| FG LA COMPLEX | LA-0364 | 01/06/2020 | TPM2.5 | PR Waste Heat Boiler | 0.61 | lb/hr | Use of pipeline quality natural gas or fuel gas and good combustion practices. |
| FG LA COMPLEX | LA-0364 | 01/06/2020 | SO2 | PR Waste Heat Boiler | 8.03 | lb/hr | Use of pipeline quality natural gas or fuel gas. |
| FG LA COMPLEX | LA-0364 | 01/06/2020 | VOC | PR Waste Heat Boiler | 13.37 | lb/hr | Good combustion practices and oxidation catalyst |
| Nucor Steel Kankakee, Inc. | IL-0126 | 11/1/2018, updated 2/19/2019 | CO2e | Gas-Fired Space Heaters (25 MMBtu/hr) | 10197 | ton/year | Good combustion practices (Compliance with limit in accordance with provisions of 40 CFR Part 98) |
| Nucor Steel Kankakee, Inc. | IL-0126 | 11/1/2018, updated 2/19/2019 | TPM10 | Gas-Fired Space Heaters (25 MMBtu/hr) | 0.0075 | lb/MMBtu Individual Units | (Test methods EPA/OAR Mthd 201 and OTM 28) (BACT-PSD ) |
| Nucor Steel Kankakee, Inc. | IL-0126 | 11/1/2018, updated 2/19/2019 | TPM2.5 | Gas-Fired Space Heaters (25 MMBtu/hr) | 0.0075 | lb/MMBtu Individual Units | (BACT-PSD ) |
| | | | | | | | |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Green Bay Packaging, Inc. - Shipping Container Division | WI-0266 | 9/6/2018, updated 2/19/2019 | VOC | Natural gas-fired boiler (Boiler B01) (35 MMBtu/hr) | 0.0055 | lb/MMBtu | Good combustion practices, use only natural gas, equip boiler with Low NOx burners and flue gas recirculation |
| Green Bay Packaging, Inc. - Shipping Container Division | WI-0266 | 9/6/2018, updated 2/19/2019 | CO2e | Natural gas-fired boiler (Boiler B01) (35 MMBtu/hr) | 160 | lb CO2e/1000 lb steam | Good combustion practices, use only natural gas, equip boiler with Low NOx burners and flue gas recirculation |
| | | | | | | | |
| Green Bay Packaging, Inc. - Shipping Container Division | WI-0266 | 9/6/2018, updated 2/19/2019 | VOC | Space heaters (process P53) (40 MMBtu/hr) | 0.0055 | lb/MMBtu | Good combustion practices, use only natural gas, equip with Low NOx burners |
| Green Bay Packaging, Inc. - Shipping Container Division | WI-0266 | 9/6/2018, updated 2/19/2019 | CO2e | Space heaters (process P53) (40 MMBtu/hr) | no numerical limit | | Good combustion practices, use only natural gas, equip with Low NOx burners minimum design annual fuel utilization efficiency of 90% |
| | | | | | | | |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | NOx | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 0.011 | lb/MMBtu 3-hr avg | Ultra-low NOx burners and flue gas recirculation, air preheater, automated combusion managment system with O2 trim system and automated water blowdown, and good combustion practices (LAER) |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | NOx | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 1.1 | lb/hr | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | NOx | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 2.2 | ton/year | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | CO | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 0.037 | lb/MMBtu 3-hr avg | Good Combustion Practices(BACT-PSD ) |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | CO | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 3.6 | lb/hr | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | CO | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 7.2 | ton/year | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | TPM (PM, PM10 and PM2.5) | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 0.0075 | no units listed | Good Combustion Practices(BACT-PSD ) |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | TPM (PM, PM10 and PM2.5) | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 0.72 | lb/hr | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | TPM (PM, PM10 and PM2.5) | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 1.44 | ton/year | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | Sulfuric Acid (mist, vapors, etc) | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 0.1 | lb/hr | Good Combustion Practices(BACT-PSD ) |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | Sulfuric Acid (mist, vapors, etc) | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 0.2 | ton/year | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | CO2e | Auxiliary Boiler (96 MMBtu/hr) (used on an intemittent basis (up to 4000 hrs/yr) | 22500 | ton/year 12-month rolling avg | Good Combustion Practices(BACT-PSD ) |
| | | | | | | | |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | NOx | Fuel Heater (12.80 MMBtu/hr) | 0.011 | lb/MMBtu | LAER NSPS - Low NOx burners |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | NOx | Fuel Heater (12.80 MMBtu/hr) | 0.45 | lb/hr | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | NOx | Fuel Heater (12.80 MMBtu/hr) | 2.0 | ton/year | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | CO | Fuel Heater (12.80 MMBtu/hr) | 0.08 | lb/hr | Good Combustion Practices(BACT-PSD ) |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | CO | Fuel Heater (12.80 MMBtu/hr) | 1.02 | lb/hr | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | CO | Fuel Heater (12.80 MMBtu/hr) | 4.5 | ton/year | Permit Limit |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | TPM (PM, PM10 and PM2.5) | Fuel Heater (12.80 MMBtu/hr) | 0.0075 | lb/MMBtu | Good Combustion Practices(BACT-PSD ) |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | Sulfuric Acid (mist, vapors, etc) | Fuel Heater (12.80 MMBtu/hr) | 0.014 | lb/hr | Good Combustion Practices(BACT-PSD ) |
| CPV Three Rivers, LLC - Energy Center | IL-0129 | 7/30/2018, updated 2/19/2019 | CO2e | Fuel Heater (12.80 MMBtu/hr) | 6600 | ton/year 12-month rolling avg | Good Combustion Practices(BACT-PSD ) |
| | | | | | | | |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | CO | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.007 | lb/mmbtu hourly | Good Combustion Practices, Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | CO | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.7 | lb/hr hourly | Good Combustion Practices, Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | NOx | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.036 | lb/mmbtu hourly | Low NOx Burners/Flue Gas Recirculation (SCR not cost effective) (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | NOx | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 3.6 | lb/hr hourly | Low NOx Burners/Flue Gas Recirculation (SCR not cost effective) (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | FPM | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.007 | lb/mmbtu hourly | Good Combustion Practices, Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | FPM | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.7 | lb/hr hourly | Good Combustion Practices, Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | TPM10 | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.007 | lb/mmbtu hourly | Good Combustion Practices, Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | TPM10 | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.7 | lb/hr hourly | Good Combustion Practices, Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | TPM2.5 | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.075 | lb/mmbtu hourly | Good Combustion Practices (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | TPM2.5 | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 7.49 | lb/hr hourly | Good Combustion Practices (BACT-PSD SIP) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | VOC | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.008 | lb/mmbtu hourly | Good Combustion Controls (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | VOC | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.8 | lb/hr hourly | Good Combustion Controls (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | Sulfuric Acid (mist, vapors, etc) | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 0.34 | gr s/100 scf Fuel supplier records | Good Combustion Practices, Low Sulfur Fuel (BACT-PSD NSPS SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | CO2e | EUAUXBOILER: Auxiliary Boiler (99.9 MMBtu/hr) | 25623 | ton/year 12-month rolling time period | Energy Efficiency Measures, Use of Natural Gas (BACT-PSD) |
| | | | | | | | |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | CO | EUFUELHTR1: Natural gas fired fuel heater (20.80 MMBtu/hr) | 0.77 | lb/hr hourly | Good Combustion Controls (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | NOx | EUFUELHTR1: Natural gas fired fuel heater (20.80 MMBtu/hr) | 0.75 | lb/hr hourly | Low NOx Burners (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | FPM | EUFUELHTR1: Natural gas fired fuel heater (20.80 MMBtu/hr) | 0.15 | lb/hr hourly | Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | TPM10 | EUFUELHTR1: Natural gas fired fuel heater (20.80 MMBtu/hr) | 0.15 | lb/hr hourly | Low Sulfur Fuel (Oxidation catalyst is not economically feasible) (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | TPM2.5 | EUFUELHTR1: Natural gas fired fuel heater (20.80 MMBtu/hr) | 0.15 | lb/hr hourly | Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | VOC | EUFUELHTR1: Natural gas fired fuel heater (20.80 MMBtu/hr) | 0.17 | lb/hr hourly | Good Combustion Controls (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | Sulfuric Acid (mist, vapors, etc) | EUFUELHTR1: Natural gas fired fuel heater (20.80 MMBtu/hr) | 0.34 | gr s/100 scf Fuel supplier records | Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | CO2e | EUFUELHTR1: Natural gas fired fuel heater (20.80 MMBtu/hr) | 6310 | ton/year 12-month rolling time period (combined EUFUELHTR1 and EUFUELHTR2) | Natural Gas Fuel (BACT-PSD) |
| | | | | | | | |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | CO | EUFUELHTR2: Natural gas fired fuel heater (3.80 MMBtu/hr) | 0.14 | lb/hr hourly | Good Combustion Controls (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | NOx | EUFUELHTR2: Natural gas fired fuel heater (3.80 MMBtu/hr) | 0.14 | lb/hr hourly | Low NOx Burners (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | FPM | EUFUELHTR2: Natural gas fired fuel heater (3.80 MMBtu/hr) | 0.03 | lb/hr hourly | Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | TPM10 | EUFUELHTR2: Natural gas fired fuel heater (3.80 MMBtu/hr) | 0.03 | lb/hr hourly | Low Sulfur Fuel (oxidation catalyst not economically feasible) (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | TPM2.5 | EUFUELHTR2: Natural gas fired fuel heater (3.80 MMBtu/hr) | 0.03 | lb/hr hourly | BACT PSD SIP Low Sulfur Fuel (BACT-PSD SIP) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | VOC | EUFUELHTR2: Natural gas fired fuel heater (3.80 MMBtu/hr) | 0.03 | lb/hr hourly | Good Combustion Controls (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | Sulfuric Acid (mist, vapors, etc) | EUFUELHTR2: Natural gas fired fuel heater (3.80 MMBtu/hr) | 0.34 | gr s/100 scf Fuel supplier records | Low Sulfur Fuel (BACT-PSD SIP) |
| DTE Electric Company - Belle River Combined Cycle Power Plant | MI-0435 | 7/16/2018, updated 2/19/2019 | CO2e | EUFUELHTR2: Natural gas fired fuel heater (3.80 MMBtu/hr) | 6310 | ton/year 12-month rolling time period (combined EUFUELHTR1 and EUFUELHTR2) | Natural Gas Fuel (BACT-PSD) |
| | | | | | | | |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | CO | EUAUXBOILER (North Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.08 | lb/MMBtu hourly | Good Combustion Practices (oxidation catalyst not economically feasible) (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | NOx | EUAUXBOILER (North Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.04 | lb/MMBtu 30-day rolling avg time period | Low NOx Burners/flue gas recirculation and good combustion practices (SCR not economically feasible) (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | FPM | EUAUXBOILER (North Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.005 | lb/MMBtu hourly | Good Combustion Practices (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | TPM10 | EUAUXBOILER (North Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.46 | lb/hr hourly | Good Combustion Practices (no control equipment economically feasible) (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | TPM2.5 | EUAUXBOILER (North Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.46 | lb/hr hourly | Good Combustion Practices (no control equipment economically feasible) (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | VOC | EUAUXBOILER (North Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.004 | lb/MMBtu hourly | Good Combustion Practices (oxidation catalysts not economically feasible) (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | SO2 | EUAUXBOILER (North Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 1.8 | lb/MMscf monthly | Good Combustion Practices and use of pipeline quality natural gas (BACT-PSD NSPS SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | SO2 | EUAUXBOILER (North Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.6 | gr s/100 scf Fuel supplier records | Good Combustion Practices and use of pipeline quality natural gas (emission factor based on natural gas material limit of 2,000 grains of sulfur per MMSCF) (BACT-PSD NSPS SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | CO2e | EUAUXBOILER (North Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 31540 | ton/year 12-month rolling time period | Energy efficiency measures and the use of a low carbon fuel (pipeline quality natural gas) (BACT-PSD) |
| | | | | | | | |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | CO | EUAUXBOILER (South Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.08 | lb/MMBtu hourly | Good Combustion Practices (oxidation catalyst not economically feasible) (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | NOx | EUAUXBOILER (South Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.04 | lb/MMBtu 30-day rolling avg time period | Low NOx Burners/flue gas recirculation and good combustion practices (SCR not economically feasible) (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | FPM | EUAUXBOILER (South Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.005 | lb/MMBtu hourly | Good Combustion Practices (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | TPM10 | EUAUXBOILER (South Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.46 | lb/hr hourly | Good Combustion Practices (no control equipment economically feasible) (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | TPM2.5 | EUAUXBOILER (South Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.46 | lb/hr hourly | Good Combustion Practices (no control equipment economically feasible) (BACT-PSD SIP) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | VOC | EUAUXBOILER (South Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.004 | lb/MMBtu hourly | Good Combustion Practices (oxidation catalysts not economically feasible) (BACT-PSD SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | SO2 | EUAUXBOILER (South Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 1.8 | lb/MMscf monthly | Good Combustion Practices and use of pipeline quality natural gas (BACT-PSD NSPS SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | SO2 | EUAUXBOILER (South Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 0.6 | gr s/100 scf Fuel supplier records | Good Combustion Practices and use of pipeline quality natural gas (emission factor based on natural gas material limit of 2,000 grains of sulfur per MMSCF) (BACT-PSD NSPS SIP) |
| Marshall Energy Center LLC - MEC North, LLC and MEC South, LLC | MI-0433 | 6/29/2018, updated 2/19/2019 | CO2e | EUAUXBOILER (South Plant): Auxiliary Boiler (61.5 MMBtu/hr) | 31540 | ton/year 12-month rolling time period | Energy efficiency measures and the use of a low carbon fuel (pipeline quality natural gas) (BACT-PSD) |
| | | | | | | | |
| Dominion Energy Transmission, Inc. - Mockingbird Hill Compressor Station | WV-0031 | 6/14/2018, updated 9/24/2018 | TPM2.5 | WH-1 - Boiler (8.72 MMBtu/hr) | 0.28 | ton/year 12-month rolling | Limited to Natural Gas (Monitoring is limit to either fuel usage or tracking hours of operation) (BACT-PSD SIP) |
| Dominion Energy Transmission, Inc. - Mockingbird Hill Compressor Station | WV-0031 | 6/14/2018, updated 9/24/2018 | TPM10 | WH-1 - Boiler (8.72 MMBtu/hr) | 0.28 | ton/year 12-month rolling | Limited to Natural Gas (Monitoring is limit to either fuel usage or tracking hours of operation) (BACT-PSD SIP) |
| Dominion Energy Transmission, Inc. - Mockingbird Hill Compressor Station | WV-0031 | 6/14/2018, updated 9/24/2018 | TPM | WH-1 - Boiler (8.72 MMBtu/hr) | 0.28 | ton/year 12-month rolling | Limited to Natural Gas (Monitoring is limit to either fuel usage or tracking hours of operation) (BACT-PSD SIP) |
| Dominion Energy Transmission, Inc. - Mockingbird Hill Compressor Station | WV-0031 | 6/14/2018, updated 9/24/2018 | CO2e | WH-1 - Boiler (8.72 MMBtu/hr) | 4468 | ton/year 12-month rolling | Restricted to pipeline quality natural gas and tune-up the boiler once every five years (BACT-PSD) |
| | | | | | | | |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | CO | Auxiliary Boiler (77.8 MMBtu/hr) | 2.88 | lb/hr | Good Combustion Practices (BACT-PSD) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | CO | Auxiliary Boiler (77.8 MMBtu/hr) | 6.58 | tons/year | Good Combustion Practices (BACT-PSD) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | CO | Auxiliary Boiler (77.8 MMBtu/hr) | 0.037 | lb/MMBtu | Good Combustion Practices (BACT-PSD) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | NOx | Auxiliary Boiler (77.8 MMBtu/hr) | 0.86 | lb/hr | Low NOx Burners/flue gas recirculation and good combustion practices (BACT-PSD) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | NOx | Auxiliary Boiler (77.8 MMBtu/hr) | 1.96 | tons/year | Low NOx Burners/flue gas recirculation and good combustion practices (BACT-PSD) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | NOx | Auxiliary Boiler (77.8 MMBtu/hr) | 0.0011 | lb/MMBtu | Low NOx Burners/flue gas recirculation and good combustion practices (BACT-PSD) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | TPM | Auxiliary Boiler (77.8 MMBtu/hr) | 0.6 | lb/hr | Low NOx Burners/flue gas recirculation and good combustion practices (BACT-PSD SIP) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | TPM | Auxiliary Boiler (77.8 MMBtu/hr) | 1.38 | tons/year | Low NOx Burners/flue gas recirculation and good combustion practices (BACT-PSD SIP) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | TPM | Auxiliary Boiler (77.8 MMBtu/hr) | 0.008 | lb/MMBtu | Low NOx Burners/flue gas recirculation and good combustion practices (BACT-PSD SIP) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | VOC | Auxiliary Boiler (77.8 MMBtu/hr) | 0.62 | lb/hr | Use of Natural Gas, Good Combustion Practices (BACT-PSD SIP) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | VOC | Auxiliary Boiler (77.8 MMBtu/hr) | 1.42 | tons/year | Use of Natural Gas, Good Combustion Practices (BACT-PSD SIP) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | VOC | Auxiliary Boiler (77.8 MMBtu/hr) | 0.008 | lb/MMBtu | Use of Natural Gas, Good Combustion Practices (BACT-PSD SIP) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | Sulfuric Acid (mist, vapors, etc) | Auxiliary Boiler (77.8 MMBtu/hr) | 0.0132 | lb/hr | Use of Natural Gas (BACT-PSD SIP) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | Sulfuric Acid (mist, vapors, etc) | Auxiliary Boiler (77.8 MMBtu/hr) | 0.03 | tons/year | Use of Natural Gas (BACT-PSD SIP) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | Sulfuric Acid (mist, vapors, etc) | Auxiliary Boiler (77.8 MMBtu/hr) | 0.0002 | lb/MMBtu | Use of Natural Gas (BACT-PSD SIP) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | CO2e | Auxiliary Boiler (77.8 MMBtu/hr) | 9107 | lb/hr emission limit | Use of Natural Gas (BACT-PSD) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | CO2e | Auxiliary Boiler (77.8 MMBtu/hr) | 20837 | tons/year emission limit | Use of Natural Gas (BACT-PSD) |
| ESC Harrison County Power, LLC - Harrison County Power Plant | WV-0029 | 3/27/2018, updated 6/25/2018 | CO2e | Auxiliary Boiler (77.8 MMBtu/hr) | 9107 | lb/hr standard emission | Use of Natural Gas (BACT-PSD) |
| | | | | | | | |
| Florida Power and Light Company - Dania Beach Energy Center | FL-0363 (draft) | 12/4/2017, updated 4/11/2018 | CO | 99.8 MMBtu/hr Auxiliary Boiler | 0.08 | lb/MMBtu | Clean Fuel (Compliance by initial and annual stack test (EPA/OER mthd 10), or manufacturer guarantee. CO also serves as proxy for VOC.) (BACT-PSD) |
| Florida Power and Light Company - Dania Beach Energy Center | FL-0363 (draft) | 12/4/2017, updated 4/11/2018 | SO2 | 99.8 MMBtu/hr Auxiliary Boiler | no numeric limit | | Clean Fuel (May only fire natural gas with sulfur content less than 2 grains per 100 scf. This limits SO2, SAM, PM, PM10, and PM2.5) (BACT-PSD NSPS) |
| Florida Power and Light Company - Dania Beach Energy Center | FL-0363 (draft) | 12/4/2017, updated 4/11/2018 | Sulfuric Acid (mist, vapors, etc) | 99.8 MMBtu/hr Auxiliary Boiler | no numeric limit | | Clean Fuel (May only fire natural gas with sulfur content less than 2 grains per 100 scf. This limits SO2, SAM, PM, PM10, and PM2.5) (BACT-PSD NSPS) |
| Florida Power and Light Company - Dania Beach Energy Center | FL-0363 (draft) | 12/4/2017, updated 4/11/2018 | FPM | 99.8 MMBtu/hr Auxiliary Boiler | no numeric limit | | Clean Fuel (May only fire natural gas with sulfur content less than 2 grains per 100 scf. This limits SO2, SAM, PM, PM10, and PM2.5) (BACT-PSD NSPS) |
| Florida Power and Light Company - Dania Beach Energy Center | FL-0363 (draft) | 12/4/2017, updated 4/11/2018 | TPM10 | 99.8 MMBtu/hr Auxiliary Boiler | no numeric limit | | Clean Fuel (May only fire natural gas with sulfur content less than 2 grains per 100 scf. This limits SO2, SAM, PM, PM10, and PM2.5) (BACT-PSD) |
| Florida Power and Light Company - Dania Beach Energy Center | FL-0363 (draft) | 12/4/2017, updated 4/11/2018 | TPM2.5 | 99.8 MMBtu/hr Auxiliary Boiler | no numeric limit | | Clean Fuel (May only fire natural gas with sulfur content less than 2 grains per 100 scf. This limits SO2, SAM, PM, PM10, and PM2.5) (BACT-PSD) |
| | | | | | | | |
| Holland Board of Public Works - East 5th Street | **MI-0424 (draft) (update of MI-0412)** | 12/5/2016, 7/31/17 update | CO | EUAUXBOILER (Auxiliary Boiler) | 0.077 | lb/MMBtu Test protocol will specify avg time | SIP - Good combustion practices (83.5 MMBtu/hr) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | NOx | EUAUXBOILER (Auxiliary Boiler) | 0.05 | lb/MMBtu Test protocol will specify avg time | SIP - Low NOx burners/Internal flue gas recirculation and good combustion practices (83.5 MMBtu/hr) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | FPM | EUAUXBOILER (Auxiliary Boiler) | 0.0018 | lb/MMBtu Test protocol will specify avg time | Good combustion practices (83.5 MMBtu/hr) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | TPM10 | EUAUXBOILER (Auxiliary Boiler) | 0.007 | lb/MMBtu Test protocol will specify avg time | SIP - Good combustion practices (83.5 MMBtu/hr) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | TPM2.5 | EUAUXBOILER (Auxiliary Boiler) | 0.007 | lb/MMBtu Test protocol will specify avg time | SIP - Good combustion practices (83.5 MMBtu/hr) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | VOC | EUAUXBOILER (Auxiliary Boiler) | 0.008 | lb/MMBtu Test protocol will specify avg time | Good combustion practices (83.5 MMBtu/hr) |
| Holland Board of Public Works - East 5th Street | MI-0424 (draft) | 12/5/2016, 7/31/17 update | CO2e | EUAUXBOILER (Auxiliary Boiler) | 43283 | tpy 12-month rolling time period | Good combustion practices (83.5 MMBtu/hr) |
| Rextac, LLC - Odessa Petrochemical Plant | TX-0813 (draft) | 11/22/2016, 12/1/16 update | VOC | Small Boiler | 0.0005 | MMBtu/hr | NSPS Dc - Best combustion practices (39.9 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | NOx | Auxilary boiler | 0.11 | Llb/MMBtu Avg of 3 1-hr test runs | NSPS - Ultra low NOx burners, FGR, good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | NOx | Auxilary boiler | 2.03 | tpy 12-month rolling basis | NSPS - Ultra low NOx burners, FGR, good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | CO | Auxilary boiler | 0.037 | lb/MMBtu Avg of 3 1-hr test runs | NSPS - ULSD and good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | CO | Auxilary boiler | 6.84 | tpy 12-month rolling basis | NSPS - ULSD and good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | TPM | Auxilary boiler | 0.007 | lb/MMBtu | NSPS - ULSD and good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | TPM | Auxilary boiler | 1.29 | tpy 12-month rolling basis | NSPS - ULSD and good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | TPM10 | Auxilary boiler | 0.007 | lb/MMBtu | NSPS - ULSD and good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | TPM10 | Auxilary boiler | 1.29 | tpy 12-month rolling basis | NSPS - ULSD and good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | TPM2.5 | Auxilary boiler | 0.007 | lb/MMBtu | NSPS - ULSD and good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | TPM2.5 | Auxilary boiler | 1.29 | tpy 12-month rolling basis | NSPS - ULSD and good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | VOC | Auxilary boiler | 0.004 | lb/MMBtu Avg of 3 1-hr test runs | NSPS - ULSD and good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
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**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| CPV Fairview, LLC - CPV Fairview Energy Center | PA-0310 | 9/2/16, 7/31/17 update | VOC | Auxilary boiler | 0.74 | tpy 12-month rolling basis | NSPS - ULSD and good combustion practices (Operation of the auxiliary boiler shall not exceed 4000 hrs in any continuous 12-month period) (92.4 MMBtu/hr) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | NOx | Auxilary boiler | 0.975 | lb/hr avg of three 1-hour initial stack test | NSPS - Low Nox burners and FGR and use of natural gas as a clean burning fuel (97.5 MMBtu/hr)(4000.00 H/YR) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | NOx | Auxilary boiler | 0.01 | lb/MMBtu avg of three 1-hour initial stack test | NSPS - Low Nox burners and FGR and use of natural gas as a clean burning fuel (97.5 MMBtu/hr)(4000.00 H/YR) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | CO | Auxilary boiler | 3.6 | lb/hr avg of three 1-hour initial stack test | Use of natural gas as a clean burning fuel and good combustion practices (97.5 MMBtu/hr)(4000.00 H/YR) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | VOC | Auxilary boiler | 0.488 | lb/hr avg of three 1-hour initial stack tests initially | Use of natural gas as a clean burning fuel and good combustion practices (97.5 MMBtu/hr)(4000.00 H/YR) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | FPM | Auxilary boiler | 0.181 | lb/hr avg of three 1-hour initial stack tests initially | Use of natural gas as a clean burning fuel and good combustion practices (97.5 MMBtu/hr)(4000.00 H/YR) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | TPM10 | Auxilary boiler | 0.488 | lb/hr avg of three 1-hour initial stack tests initially | Use of natural gas as a clean burning fuel and good combustion practices (97.5 MMBtu/hr)(4000.00 H/YR) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | TPM2.5 | Auxilary boiler | 0.488 | lb/hr avg of three 1-hour initial stack tests initially | Use of natural gas as a clean burning fuel and good combustion practices (97.5 MMBtu/hr)(4000.00 H/YR) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | SO2 | Auxilary boiler | 0.128 | lb/hr | Use of natural gas as a clean burning fuel low sulfur fuel (SUBJECT TO NJDEP STATE-OF-THE-ART REQUIREMENTS) (97.5 MMBtu/hr)(4000.00 H/YR) |
| Stonegate Power, LLC - Middlesex Energy Center, LLC | NJ-0085 | 7/19/16, 11/3/16 update | Sulfuric Acid (Mist, Vapors, etc) | Auxilary boiler | 0.01 | lb/hr | Use of natural gas as a clean burning fuel low sulfur fuel (97.5 MMBtu/hr)(4000.00 H/YR) |
| DTE Gas Company - Milford Compressor Station | MI-0420 | 6/3/16, 4/27/17 update | NOx | FGAUXBOILERS | 14 | ppmv at 15% O2; Test Protocol (each boiler) | SIP - Ultra Low NOx Burners and good combustion practices (2 boilers at 6 MMBtu/hr each) |
| DTE Gas Company - Milford Compressor Station | MI-0420 | 6/3/16, 4/27/17 update | CO | FGAUXBOILERS | 0.08 | lb/MMBtu each; Test Protocol | SIP - Good combustion practices and clean burn fuel (pipeline quality natural gas) (2 boilers at 6 MMBtu/hr each) |
| DTE Gas Company - Milford Compressor Station | MI-0420 | 6/3/16, 4/27/17 update | TPM10 | FGAUXBOILERS | 0.0075 | lb/MMBtu each; Test Protocol | SIP - Good combustion practices and low sulfur fuel (pipeline quality natural gas) (2 boilers at 6 MMBtu/hr each) |
| DTE Gas Company - Milford Compressor Station | MI-0420 | 6/3/16, 4/27/17 update | TPM2.5 | FGAUXBOILERS | 0.0075 | lb/MMBtu each; Test Protocol | SIP - Good combustion practices and low sulfur fuel (pipeline quality natural gas) (2 boilers at 6 MMBtu/hr each) |
| DTE Gas Company - Milford Compressor Station | MI-0420 | 6/3/16, 4/27/17 update | CO2e | FGAUXBOILERS | 6155 | tpy 12-month rolling time period | Use of pipeline quality natural gas and energy efficiency measures (2 boilers at 6 MMBtu/hr each) |
| PSEG Fossil LLC Sewaren Generating Station | NJ-0084 | 3/10/16, 7/25/16 update | NOx | Auxiliary Boiler firing natural gas | 0.8 | lb/hr avg of three 1-hour stack tests | NSPS - Low NOx burners and FGR (80 MMBtu/hr) |
| PSEG Fossil LLC Sewaren Generating Station | NJ-0084 | 3/10/16, 7/25/16 update | NOx | Auxiliary Boiler firing natural gas | 0.01 | lb/MMBtu avg of three 1-hour stack tests | NSPS - Low NOx burners and FGR (80 MMBtu/hr) |
| PSEG Fossil LLC Sewaren Generating Station | NJ-0084 | 3/10/16, 7/25/16 update | CO | Auxiliary Boiler firing natural gas | 2.88 | lb/hr avg of three 1-hour stack tests | Use of good combustion practices and use of natural gas a clean burning fuel (80 MMBtuhr) |
| PSEG Fossil LLC Sewaren Generating Station | NJ-0084 | 3/10/16, 7/25/16 update | VOC | Auxiliary Boiler firing natural gas | 0.32 | lb/hr avg of three 1-hour stack tests | Use of good combustion practices and use of natural gas a clean burning fuel (80 MMBtuhr) |
| PSEG Fossil LLC Sewaren Generating Station | NJ-0084 | 3/10/16, 7/25/16 update | FPM | Auxiliary Boiler firing natural gas | 0.26 | lb/hr avg of three 1-hour stack tests | Use of natural gas a clean burning fuel (80 MMBtuhr) |
| PSEG Fossil LLC Sewaren Generating Station | NJ-0084 | 3/10/16, 7/25/16 update | TPM10 | Auxiliary Boiler firing natural gas | 0.4 | lb/hr avg of three 1-hour stack tests | Use of natural gas a clean burning fuel (80 MMBtuhr) |
| PSEG Fossil LLC Sewaren Generating Station | NJ-0084 | 3/10/16, 7/25/16 update | TPM2.5 | Auxiliary Boiler firing natural gas | 0.4 | lb/hr avg of three 1-hour stack tests | Use of natural gas a clean burning fuel (80 MMBtuhr) |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| PSEG Fossil LLC Sewaren Generating Station | NJ-0084 | 3/10/16, 7/25/16 update | SO2 | Auxiliary Boiler firing natural gas | 0.12 | lb/hr | Use of natural gas a low sulfur fuel (80 MMBtu/hr) |
| PSEG Fossil LLC Sewaren Generating Station | NJ-0084 | 3/10/16, 7/25/16 update | Sulfuric Acid (Mist, Vapors, etc) | Auxiliary Boiler firing natural gas | 0.02 | lb/hr | Use of natural gas a low sulfur fuel (80 MMBtu/hr) |
| Florida Power & Light - Okeechobee Clean Energy Center | FL-0356 | 3/9/16, 7/6/16 update | CO | Auxiliary Boiler, 99.8 MMBtu/hr | 0.08 | lb/MMBtu | Proper combustion prevents CO - only ng, limited to 2000 hours per year |
| Florida Power & Light - Okeechobee Clean Energy Center | FL-0356 | 3/9/16, 7/6/16 update | NOx | Auxiliary Boiler, 99.8 MMBtu/hr | 0.05 | lb/MMBtu | Low NOx burners - only ng, limited to 2000 hours per year |
| Florida Power & Light - Okeechobee Clean Energy Center | FL-0356 | 3/9/16, 7/6/16 update | TPM | Auxiliary Boiler, 99.8 MMBtu/hr | 10 | % Opacity | Use of natural gas with sulfur content less than 2 grains / 100 scf - only ng, limited to 2000 hours per year |
| Florida Power & Light - Okeechobee Clean Energy Center | FL-0356 | 3/9/16, 7/6/16 update | SO2 | Auxiliary Boiler, 99.8 MMBtu/hr | 2 | gr s/100 scf gas | Use of low-sulfur gas - only ng, limited to 2000 hours per year |
| Florida Power & Light - Okeechobee Clean Energy Center | FL-0356 | 3/9/16, 7/6/16 update | CO2e | Auxiliary Boiler, 99.8 MMBtu/hr | No numeric limit | No numeric limit | Use of natural gas only - only ng, limited to 2000 hours per year |
| Florida Power & Light - Okeechobee Clean Energy Center | FL-0356 | 3/9/16, 7/6/16 update | NOx | Two Natural Gas Heaters | 0.1 | lb/MMBtu | Must have NOx emission design value less than 0.1 lb/MMBtu (fueled only with ng, may operate one at a time, 10 MMBtu/hr) |
| Florida Power & Light - Okeechobee Clean Energy Center | FL-0356 | 3/9/16, 7/6/16 update | SO2 | Two Natural Gas Heaters | 2 | gr s/100 scf gas | Use of low-sulfur fuel (fueled only with ng, may operate one at a time, 10 MMBtu/hr) |
| Commercial Metals Company - CMC Steel Oklahoma | OK-0173 | 1/19/2016, 7/7/16 update | CO2e | Heaters (Gas-Fired) | 120 | lb/MMBtu | Natural Gas Fuel (Numerous gas-fired heaters will be installed. The application requested that the sizes all be kept confidential.) |
| Commercial Metals Company - CMC Steel Oklahoma | OK-0173 | 1/19/2016, 7/7/16 update | CO | Heaters (Gas-Fired) | 0.084 | lb/MMBtu | Natural Gas Fuel (Numerous gas-fired heaters will be installed. The application requested that the sizes all be kept confidential.) |
| Commercial Metals Company - CMC Steel Oklahoma | OK-0173 | 1/19/2016, 7/7/16 update | NOx | Heaters (Gas-Fired) | 0.1 | lb/MMBtu | Natural Gas Fuel (Numerous gas-fired heaters will be installed. The application requested that the sizes all be kept confidential.) |
| Commercial Metals Company - CMC Steel Oklahoma | OK-0173 | 1/19/2016, 7/7/16 update | TPM10 | Heaters (Gas-Fired) | 0.0076 | lb/MMBtu | Natural Gas Fuel (Numerous gas-fired heaters will be installed. The application requested that the sizes all be kept confidential.) |
| Commercial Metals Company - CMC Steel Oklahoma | OK-0173 | 1/19/2016, 7/7/16 update | TPM2.5 | Heaters (Gas-Fired) | 0.0076 | lb/MMBtu | Natural Gas Fuel (Numerous gas-fired heaters will be installed. The application requested that the sizes all be kept confidential.) |
| Commercial Metals Company - CMC Steel Oklahoma | OK-0173 | 1/19/2016, 7/7/16 update | VOC | Heaters (Gas-Fired) | 0.0055 | lb/MMBtu | Natural Gas Fuel (Numerous gas-fired heaters will be installed. The application requested that the sizes all be kept confidential.) |
| Equistar Chemicals, LP - Westlake Facility | LA-0295 | 7/12/16, 9/19/16 update | NOx | Firetube Boiler Nos. 1 and 2 (4-08, EQT 324 & 5-08, EQT 325) | 2.75 | lb/hr maximum | Flue gas recirculation and good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques (63 MMBtu/hr - Natural Gas and Vent Gas). Aggregate NOx emissions from the boilers are capped at 10.05 TPY (GRP 11). Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. The PSD permit also references the 30 ppmvd @ 3% O2 limit as a "three 1-hour testing average." |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr, not included in startup
**Unit 50- Waste Heat Boiler**
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**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
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| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Equistar Chemicals, LP - Westlake Facility | LA-0295 | 7/12/16, 9/19/16 update | NOx | Firetube Boiler Nos. 1 and 2 (4-08, EQT 324 & 5-08, EQT 325) | 30 | ppmvd @ 3% O2 annual average | Flue gas recirculation and good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques (63 MMBtu/hr - Natural Gas and Vent Gas). Aggregate NOx emissions from the boilers are capped at 10.05 TPY (GRP 11). Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. The PSD permit also references the 30 ppmvd @ 3% O2 limit as a "three 1-hour testing average." |
| Equistar Chemicals, LP - Westlake Facility | LA-0295 | 7/12/16, 9/19/16 update | VOC | Firetube Boiler Nos. 1 and 2 (4-08, EQT 324 & 5-08, EQT 325) | 0.21 | lb/hr maximum | Oxidation catalyst and good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques. (63 MMBtu/hr - Natural Gas and Vent Gas). Aggregate VOC emissions from the boilers are capped at 0.90 TPY (GRP 11). Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. The PSD permit also references the 2.8 ppmvd @ 3% O2 limit as a "three 1-hour testing average." |
| Equistar Chemicals, LP - Westlake Facility | LA-0295 | 7/12/16, 9/19/16 update | VOC | Firetube Boiler Nos. 1 and 2 (4-08, EQT 324 & 5-08, EQT 325) | 2.8 | ppmvd @ 3% O2 annual average | Oxidation catalyst and good combustion practices, including good equipment design, use of gaseous fuels for good mixing, and proper combustion techniques. (63 MMBtu/hr - Natural Gas and Vent Gas). Aggregate VOC emissions from the boilers are capped at 0.90 TPY (GRP 11). Good combustion practices shall include monitoring of the flue gas oxygen content, combustion air flow, fuel consumption, and flue gas temperature. These parameters shall be maintained within the manufacturer's recommended operating guidelines or within a range that is otherwise indicative of proper operation of the emissions unit. The PSD permit also references the 2.8 ppmvd @ 3% O2 limit as a "three 1-hour testing average." |
| Flint Hills Resources Houson Chemical LLC - PL Propylene Houston Olefins Plant | TX-0803 (draft) | 7/12/16. 8/31/16 update | | | | | Includes 5 turbines, 1 regen air heater, and one duct burner exhausting through one stack to provide regenerative hot air to catalyst beds |
| Subaru of Indiana Automotive, Inc. | IN-0239 | 2/18/16, 9/14/16 update | VOC | Boiler | 0.005 | lb/MMBtu | 38 MMBtu/hr - Miscellaneous process heaters and boilers from (this is where the description ends…) |
| | | | | | | | |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | CO | Boilers #1 and #2 | 6.6 | lbs/hr 1 hour/8 hour | Good operating practices |
| Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | CO | Boiler, NO. 9 | 0.09 | lb/MMBtu | Unknown |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | Formaldehyde | Boilers #1 and #2 | 0.1 | lb/hr | unknown |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | NOx | Boilers #1 and #2 | 4 | lb/hr 3-H/168-H rolling d | Low NOx burners and good combustion practices |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | NOx | Boilers #1 and #2 | 0.2 | lb/MMBtu state limit | Low NOx burners and good combustion practices |
| Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | NOx | Boiler, NO. 9 | 0.084 | lb/MMBtu | Unknown |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | PM | Boilers #1 and #2 | 0.6 | lb/hr | Unknown |

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary
Search: "boiler","heater" - All Results for boilers <100 MMBtu/hr,  not included in startup
**Unit 50- Waste Heat Boiler**
**Unit 51- Waste Heat Boiler**
**Unit 52- Waste Heat Boiler**
**Unit 53- Waste Heat Boiler**
**Unit 54- Waste Heat Boiler**
Red = updated in 2022

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | PM10 | Boilers #1 and #2 | 0.5 | lb/hr 24-hour | Unknown |
| Williams Refining & Marketing, L.L.C. | TN-0153 | 4/3/2002 | PM10 | Boiler, NO. 9 | 0.0075 | lb/MMBtu | Unknown |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | SO2 | Boilers #1 and #2 | 0.2 | lb/hr | Unknown |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | SO2 | Boilers #1 and #2 | 0.2 | lb/MMBtu state limit | unknown |
| Pryor Plant Chemical Company | OK-0135 | 2/23/2009 | VOC | Boilers #1 and #2 | 0.5 | lb/hr | unknown |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu).  Other units may be shown; however, there is not enough information to convert to common units or averaging times.

# Appendix B
# KNO Restart - RBLC Summary

KNO Restart
RBLC Search Summary: Less than 500 HP Fire Pumps, 17.210 Fuel Oil

**Unit 65 - Diesel Well Pump**
**Unit 66 - Gasoline Fire Pump**
**Did not update in 2017**

| Facility Name | RBLC ID | Permit Issue Date | Pollutant | Process Name | Emission Limit | Emission Limit Units | BACT Determination |
|---|---|---|---|---|---|---|---|
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | Carbon Dioxide Equival | Emergency Water Pumps | 164 | LB/MMBTU | Good Operating Practices |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | Particulate matter, filtera | Emergency Water Pumps | 1 | G/BHP-HR | Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | Particulate matter, total ( | Emergency Water Pumps | 1 | G/BHP-HR | Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | Particulate matter, total ( | Emergency Water Pumps | 1 | G/BHP-HR | Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | Visible Emissions (VE) | Emergency Water Pumps | 20 | % | Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | Sulfur Dioxide (SO2) | Emergency Water Pumps | 15 | PPM SULFUR IN FUEL | Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | Volatile Organic Compo | Emergency Water Pumps | 1.12 | G/BHP-HR | Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | Carbon Monoxide | Emergency Water Pumps | 3.03 | G/BHP-HR | Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII |
| BIG RIVER STEEL LLC | AR-0173 | 1/31/2022 | Nitrogen Oxides (NOx) | Emergency Water Pumps | 14.06 | G/BHP-HR | Good Operating Practices, limited hours of operation, Compliance with NSPS Subpart IIII |
| LASALLE BIOENERGY LLC | LA-0386 | 5/5/2021 | Particulate matter, total ( | Generators and Firewater Pumps Engines | 0 | | Comply with 40 CFR 60 Subpart IIII |
| LASALLE BIOENERGY LLC | LA-0386 | 5/5/2021 | Particulate matter, total ( | Generators and Firewater Pumps Engines | 0 | | Comply with 40 CFR 60 Subpart IIII |
| LASALLE BIOENERGY LLC | LA-0386 | 5/5/2021 | Volatile Organic Compo | Generators and Firewater Pumps Engines | 0 | | Comply with 40 CFR 60 Subpart IIII |
| LASALLE BIOENERGY LLC | LA-0386 | 5/5/2021 | Carbon Monoxide | Generators and Firewater Pumps Engines | 0 | | Comply with 40 CFR 60 Subpart IIII |
| LASALLE BIOENERGY LLC | LA-0386 | 5/5/2021 | Carbon Dioxide Equival | Generators and Firewater Pumps Engines | 0 | | Comply with 40 CFR 60 Subpart IIII |
| LASALLE BIOENERGY LLC | LA-0386 | 5/5/2021 | Nitrogen Oxides (NOx) | Generators and Firewater Pumps Engines | 0 | | Comply with 40 CFR 60 Subpart IIII |
| | | | | | | | |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CH4 | Fire Pump | 0.0001 | g/kw-hr average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO | Fire Pump | 3.5 | g/kw-hr average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO | Fire Pump | 0.45 | tons/year rolling 12 month total | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO2 | Fire Pump | 1.55 | g/kw-hr average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | CO2e | Fire Pump | 91 | tpy rolling 12 month total | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | NOx | Fire Pump | 3.75 | g/kw-hr average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | NOx | Fire Pump | 0.49 | tons/year rolling 12 month total | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Fire Pump | 0.2 | g/kw-hr average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM | Fire Pump | 0.03 | tons/year rolling 12 month total | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Fire Pump | 0.2 | g/kw-hr average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM10 | Fire Pump | 0.03 | tons/year rolling 12 month total | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM2.5 | Fire Pump | 0.2 | g/kw-hr average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | PM2.5 | Fire Pump | 0.03 | tons/year rolling 12 month total | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | Visible Emissions | Fire Pump | 5 | % 6 minute average | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | VOC | Fire Pump | 0.25 | g/kw-hr average of 3 stack tests | Good Combustion Practices |
| Iowa Fertilizer Company | IA-0105 | 10/26/2012 | VOC | Fire Pump | 0.03 | tons/year rolling 12 month total | Good Combustion Practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO | Diesel-Fired Emergency Firewater Pump | 2.6 | g/hp-hr 3 hour average | good combustion practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | CO2 | Diesel-Fired Emergency Firewater Pump | 527.4 | g/hp-hr 3 hour average | good combustion practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | NOx | Diesel-Fired Emergency Firewater Pump | 2.86 | g/hp-hr 3 hour average | good combustion practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM | Diesel-Fired Emergency Firewater Pump | 0.15 | g/hp-hr 3 hour average | good combustion practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM10 | Diesel-Fired Emergency Firewater Pump | 0.15 | g/hp-hr 3 hour average | good combustion practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | PM2.5 | Diesel-Fired Emergency Firewater Pump | 0.15 | g/hp-hr 3 hour average | good combustion practices |
| Ohio Valley Resources, LLC | TBD | 9/25/2013 | VOC | Diesel-Fired Emergency Firewater Pump | 0.141 | g/hp-hr 3 hour average | good combustion practices |

Notes:
Highlighted fields represent the lowest limit in common units (e.g., lb/MMBtu). Other units may be shown; however, there is not enough information to convert to common units or averaging times.