**RECIPROCATING INTERNAL COMBUSTION ENGINE (RICE) INVENTORY and NESHAP 40 CFR 63 SUBPART ZZZZ APPLICABLE REQUIREMENTS FOR MAJOR SOURCES OF HAPS**
***(Mosaic Fertilizer LLC - Bartow Facility, Facility ID: 1050046)***

| Reciprocating Internal Combustion Engine (RICE) Information | | | | | | | | | | 40 CFR 63 Subpart ZZZZ Applicable Requirements *(list all applicable **subsections**)* | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Engine Description / Location** | **Owned or Rented?** | **Engine Serial Number** | **Engine Manufacturer** | **Model Number** | **Date of Construction / Reconstruction** | **Power (bhp)** | **Fuel** | **CI or SI** | **Indicate if Emergency or Limited Use*** | **Emission Standards** (from 63.6600, 63.6602, 63.6604, & Tables 2b & 2c) | **Operation / Maintenance Standards** (from 63.6600, 63.6602, 63.6604, 63.6640 & Table 2c) | **Performance Testing** (from 63.6612, 63.6615,Table 3 & Table 4) | **Monitoring** (from 63.6625) | **Recordkeeping** (from 63.6655) | **Reporting** (from 63.6650, & Table 7) |
| Generator Power Plant | Owned | 33129642 | Cummins | KTTA50-G2 | February 1995; Existing RICE | 2,220 | diesel | CI | Emergency | N/A | Operate for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine, limited to 100 hours; upto 50 hours non-emergency allowed but counted towards the limitted 100 hours. [40 CFR 63.6640(f)] | N/A | Safely and appropriately minimize idle & startup time; not to exceed 30 min. [40 CFR 63.6625(h)] | Work or Management practices by operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63 Subpart ZZZZ Table 6, item 9] | N/A |
| No. 4 SAP Generator | Owned | 46058215 | Cummins | 6CTAA8.3-21 | Prior to June 12, 2006; Existing RICE | 288 | diesel | CI | Emergency | N/A | Replace oil and oil filter and inspect all hoses and belts every 500 hours, air filter every 1,000 hours, or annually (whichever comes first). Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [40 CFR 63 Subpart ZZZZ Table 2c] Operate for the purpose of maintenance checks and readiness testing no more than 100 hours per year. Operate up to 50 hours per year in non-emergency situations (these hours counted towards the 100 hours per year). [40 CFR 63.6640(f)] | N/A | Install non-resettable hour meter. [40 CFR 63.6625(f)] Proper maintenance. Safetly and appropriately minimize idle & startup time; not to exceed 30 min. [40 CFR 63.6625(h)] | | Per 63.6640(b)(e) |
| R1 Canal Emergency Pump | Owned | 9ZR02217 | Caterpiller | 3126 | Prior to June 12, 2006; Existing RICE | 220 | diesel | CI | Emergency | | | | | | |
| No. 5 SAP Generator | Owned | 4B10773 | Caterpiller | 3304 PC | Prior to June 12, 2006; Existing RICE | 155 | diesel | CI | Emergency | | | | | | |
| No. 6 SAP Generator | Owned | 4B10765 | Caterpiller | 3304 PC | Prior to June 12, 2006; Existing RICE | 155 | diesel | CI | Emergency | | | | | | |
| Safety Building Gen No. 3 | Owned | 46103363 | Cummins | 6BT5.9-G6 | Prior to June 12, 2006; Existing RICE | 155 | diesel | CI | Emergency | | | | | | |
| SAP Fire Pump | Owned | FP952 | Cummins | V378F2 | Prior to June 12, 2006; Existing RICE | 132 | diesel | CI | Emergency | | | | | | |
| Foam Building Gen No. 4 | Owned | 46103839 | Cummins | 4BT3.9-G4 | Prior to June 12, 2006; Existing RICE | 102 | diesel | CI | Emergency | | | | | | |
| II-C MCC Genertor | Owned | CD4039T402970 | John Deer | GENB-S2 | 1999; Existing RICE | 70 | diesel | CI | Emergency | | | | | | |
| East Gate Generator | Owned | GENB-444 | Cummins | -- | Prior to June 12, 2006; Existing RICE | -- | diesel | CI | Emergency | | | | | | |
| II-C Center Pump | Owned | P805B | Detroit | 60 , 12.7L | September 2000; Existing RICE | 500 | diesel | CI | Non-Emergency | Limit CO to 49 ppmvd or less at 15% $O_2$ or reduce CO emissions by 70% or more [40 CFR 63 Subpart ZZZZ Table 2c] | Must use diesel fuel that meets the requirements in 40 CFR 80.510(b) for nonroad diesel fuel [40 CFR 63.6604] | Conduct Initial Testing per Table 4 to Subpart ZZZZ [40 CFR 63.6612] | Install closed crankcase ventilation system, or open crankcase filtration system. [40 CFR 63.6625(g)] Follow manufacturer's or better maintenance procedures. [40 CFR 63.6625(e)] Safely and appropriately minimize idle & startup time; not to exceed 30 min. [40 CFR 63.6625(h)] | A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that you submitted, according to the requirement in §63.10(b)(2)(xiv). Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii). Records of all required maintenance performed on the air pollution control and monitoring equipment. Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [40 CFR 63.6655(a)] | 63.6650 and Compliance Report [40 CFR 63 Subpart ZZZZ Table 7] |
| Deep Well Left Diesel Engine | Owned | 12A2161LA-671A62 | Detroit | 6V-671 | Prior to June 12, 2006; Existing RICE | 180 | diesel | CI | Non-Emergency | Limit CO to 230 ppmvd or less at 15% $O_2$ [40 CFR 63 Subpart ZZZZ Table 2c] | N/A | | Follow manufacturer's or better maintenance procedures. [40 CFR 63.6625(e)] Safely and appropriately minimize idle & startup time; not to exceed 30 min. [40 CFR 63.6625(h)] | | |
| Deep Well Right Diesel Engine | Owned | 12A2161LC-671LC62 | Detroit | 6V-671 | Prior to June 12, 2006; Existing RICE | 180 | diesel | CI | Non-Emergency | | | | | | |
| South Stack Seepage | Rented | PG10 | Detroit | 06VF221121 | Prior to June 12, 2006; Existing RICE | 250 | diesel | CI | Non-Emergency | | | | | | |
| Pump Collection Area into II-C Pump | Rented | 616-08-8002 | Deutz | D914L06 | Prior to June 12, 2006; Existing RICE | 116 | diesel | CI | Non-Emergency | | | | | | |
| G-2 Pump | Rented | 616-62-8009 | John Deere | -- | Prior to June 12, 2006; Existing RICE | 99.2 | diesel | CI | Non-Emergency | N/A | Replace oil, oil filter, and air filter every 1,000 hours or annually, and inspect hoses and belts every 500 hours of operation or annually (whichever comes first). [40 CFR 63 Subpart ZZZZ Table 2c] | N/A | | Work or Management practices by operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. [40 CFR 63 Subpart ZZZZ Table 6, item 9] | N/A |
| Pump Seepage to R-2 Canal Pump | Rented | -- | -- | F4I914 | Prior to June 12, 2006; Existing RICE | 76 | diesel | CI | Non-Emergency | | | | | | |
| Creek SR Seepage Return Pump | Rented | 616-62-3004 | -- | F41913 | Prior to June 12, 2006; Existing RICE | 75 | diesel | CI | Non-Emergency | | | | | | |
| 30% Clarifier Area Pump | Rented | 626-20-5010 | Perkins | -- | Prior to June 12, 2006; Existing RICE | 51 | diesel | CI | Non-Emergency | | | | | | |

**NOTES**:
CI = Compression Ignition; SI = Spark Ignition
Compliance Date for all existing CI engines at area sources is 05/03/10
Startup or Malfunction Requirements for all existing CI engines: Minimize idle & startup time to <30 min.
* See 40 CFR 63.6675 for definitions of Emergency Stationary RICE, and Limited Use Stationary RICE (operates < 100hours/year)