RECIPROCATING INTERNAL COMBUSTION ENGINE (RICE) INVENTORY and NESHAP 40 CFR 63 SUBPART ZZZZ APPLICABLE REQUIREMENTS FOR MAJOR SOURCES OF HAPS
(Mosaic Fertilizer LLC - New Wales Facility, Facility ID: 1050059)

	Reciprocating Internal Combustion Engine (RICE) Information									40 CFR 63 Subpart ZZZZ Applicable Requirements *(list all applicable **subsections**)*					
EU ID	**Engine Description / Location**	**Owned or Rented?**	**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)
087	#2 Deepwell	Owned	Cummins	NTA855P450	Prior to June 12, 2006; Existing RICE	425	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 after which time the non-startup emission limitations apply. [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 if one is not already installed. [40 CFR 63.6625(f)] Proper maintenance. Safetly and appropriately minimize idle & startup time to a period needed for appropriate and safe loading of the engine; not to exceed 30 min after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply. [40 CFR 63.6625(h)] (e) You must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop 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. (f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed. (h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply. (i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.	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] 63.6655 (except 63.6655(c) (a) If you must comply with the emission and operating limitations, you must keep the records described in paragraphs (a)(1) through (a)(5), (b)(1) through (b)(3) and (c) of this section. (1) 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*). (2) Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. (3) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii). (4) Records of all required maintenance performed on the air pollution control and monitoring equipment. (5) 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. (d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you. (e) You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan (f) If you own or operate any of the stationary RICE in paragraphs (f)(1) or (2) of this section, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.	Per 63.6640(b) (e) b.)You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE. e.) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.
	~~DAP#2 East~~	~~Owned~~	~~Ford~~	~~4500EM~~	~~Prior to June 12, 2006; Existing RICE~~	~~105~~	~~diesel~~	~~CI~~	~~Emergency~~						
088	~~C1 #5 Generator~~	~~Owned~~	~~Detroit~~	~~12V71~~	~~Prior to June 12, 2006; Existing RICE~~	~~350~~	~~diesel~~	~~CI~~	~~Emergency~~	~~Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2, or~~ ~~Reduce CO emissions by 70 percent or more.~~	~~N/A~~	~~Conduct Initial performance testing or other initial compliance demonstration per Table 4 and 5 to this Subpart ZZZZ(40CFR63.6612) that apply to you within 180 days after the compliance test that is specified for your stationary RICE in 63.6595 and according to the provisions in 63.7(a)(2).~~ ~~SeeTable 4 and 5 for requirements to limit the concentration of formaldehyde or CO and sampling method/performance tests.~~	~~Follow manufacturer's or better maintenance procedures. [40 CFR 63.6625(e)] Safely and appropriately minimize idle & startup time; not to exceed 30 min after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply. [40 CFR 63.6625(h)]~~ ~~(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) of this section.~~ ~~(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or~~ ~~(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.~~ ~~(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.~~	~~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)].~~ ~~63.6655 (except 63.6655(c), (e), and (f)); see above~~	~~63.6650 and Compliance Report [40 CFR 63 Subpart ZZZZ Table 7]~~
	~~Booster pump~~	~~Owned~~	~~Detroit~~	~~453~~	~~Prior to June 12, 2006; Existing RICE~~	~~110~~	~~diesel~~	~~CI~~	~~Non-Emergency~~	~~Limit CO to 230 ppmvd or less at 15% O_2. [40 CFR 63 Subpart ZZZZ Table 2c]~~	~~N/A~~	~~Conduct Initial performance testing or other initial compliance demonstration per Table 4 and 5 to this Subpart ZZZZ(40CFR63.6612) that apply to you within 180 days after the compliance test that is specified for your stationary RICE in 63.6595 and according to the provisions in 63.7(a)(2).~~ ~~SeeTable 4 and 5 for requirements to limit the concentration of formaldehyde or CO and sampling method/performance tests.~~	~~Follow manufacturer's or better maintenance procedures. [40 CFR 63.6625(e)] Safely and appropriately minimize idle & startup time; not to exceed 30 min after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply. [40 CFR 63.6625(h)]~~ ~~(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (g)(2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska not accessible by the FAHS do not have to meet the requirements of paragraph (g) of this section.~~ ~~(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or~~ ~~(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates, and metals.~~ ~~(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.~~	~~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)].~~ ~~63.6655 (except 63.6655(c), (e), and (f)); see above~~	~~63.6650 and Compliance Report [40 CFR 63 Subpart ZZZZ Table 7]~~
	~~C-1 Liqua Water Blaster~~	~~Owned~~	~~Cummins~~	~~6BT~~	~~Prior to June 12, 2006; Existing RICE~~	~~140~~	~~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)

b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first;

c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]