

# **ADEQ OPERATING AIR PERMIT**

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation No. 26:

**Permit No. : 0492-AOP-R2**

**IS ISSUED TO:**

**Norton Proppants  
A Division of Saint-Gobain Ceramics and Plastics  
Fort Smith, AR 72904-1699  
Sebastian County  
AFIN: 66-00219**

**THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO  
INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION  
UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE  
FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:**

**August 5, 2002 AND August 4, 2007**

**IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.**

Signed:

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Michael Bonds  
Chief, Air Division

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Date Modified

Norton Proppants – A Division of Saint-Gobain Ceramics & Plastics  
Permit No.: 0492-AOP-R2  
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**Table 1 - List of Acronyms**

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound per hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO <sub>x</sub>	Nitrogen Oxide
PM	Particulate matter
PM <sub>10</sub>	Particulate matter smaller than ten microns
SNAP	Significant New Alternatives Program (SNAP)
SO <sub>2</sub>	Sulfur dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Ton per year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

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**Section I: FACILITY INFORMATION**

PERMITTEE: Norton Proppants – a Division of Saint-Gobain Ceramics and Plastics

AFIN: 66-00219

PERMIT NUMBER: 0492-AOP-R2

FACILITY ADDRESS: 5300 Gerber Road  
Fort Smith, AR 72904-1699

MAILING ADDRESS: 5300 Gerber Road  
Fort Smith, AR 72904-1699

COUNTY: Sebastian

CONTACT POSITION: Richard Lee – Process Engineer  
Tom Duncan – General Manager

TELEPHONE NUMBER: (479)782-2001, Ext. 223

FAX NUMBER: (479)782-9984

REVIEWING ENGINEER: Paul Osmon

UTM North - South (Y): Zone 15, 3920.56 km N

UTM East - West (X): Zone 15, 374.26 km E



## **Section II: INTRODUCTION**

### **Summary of Permit Activity**

Norton Proppants – A Division of Saint-Gobain Ceramics and Plastics owns and operates a facility located at 5300 Gerber Road in Fort Smith which manufactures proppants. Proppants are small, sintered, high density spherical grains in size from approximately 12 U.S. mesh to 70 U.S. mesh. The product is normally used in the fracturing of oil and gas wells.

The Fort Smith facility currently contains 2 plants. Norton has identified that the Forming section in Plant No. 2 is a bottleneck. This permit modification is issued to allow the installation of the Line No. 3 ceramic pellet formation line. The added emission units will be Line #3 Mixing Area Baghouse (SN-56), Line #3 Dryer Area Baghouse (process) (SN-57), Line #3 Dryer (combustion) (SN-57), Line #3 Screen Area Baghouse (SN-58), Line #3 Milled Feed Vessel Baghouse (SN-59), Line #3 Binder Feed Vessel Filter (SN-60) and Line #3 Rework Feed Vessel Filter (SN-61). Proposed increases in emission limits are: particulate matter – 26.7 tons per year, volatile organic compounds – 1.5 tons per year, carbon monoxide – 21.0 tons per year, and oxides of nitrogen – 37.9 tons per year.

### **Process Description**

Proppants are small sintered high density spherical grains ranging in size from approximately 12 U.S. mesh to 70 U.S. mesh. These sintered spheres are used in the oil and gas well industry to increase the well's flow rate. After the drilling of a new well is complete and the casing installed, the rock formation at the bottom of the well must be fractured to maximize the gas or oil flow. A viscous material mixed with the proper size proppants is pumped under very high pressure into the well. When the rock formation fractures, the proppants enter the fissures and prevent them from closing when the pressure is relieved.

The basic raw materials used to manufacture the proppants are heat treated and calcined bauxitic ore and metakaolin ore. The ores are delivered to the facility in covered dump trucks and unloaded at the receiving station at one of the two process buildings (SN-02 and SN-18). The ore is conveyed to an enclosed storage room in process building #1 or to concrete storage silos at process building #2.

At Plant #2, calcined ores are conveyed to one of two mill feed tanks (which vents through SN-22 or SN-23), which in turn feeds the ore to a dry continuous ball mill for size reduction. The ball mill (emissions controlled through SN-21) grinds the ore to fine particles in preparation for the forming operation. Emissions from the feed elevators and ore transport system will be controlled by proposed dust collector DC-221 (SN-53). The milled ore is conveyed into one of two storage tanks which vent through SN-48.

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At Plant No. 3, Milled bauxite is pneumatically transported from the existing silos located at Plant No. 2. The existing pneumatic conveying system will be used to transport milled material into a vessel equipped with two fabric filters designated as Line #3 Mill Feed Vessel Vent Filters (SN-59).

Binder Material is pneumatically transported from the existing bulk binder vessel to a binder vessel equipped with a fabric filter on its vent designated Line #3 Binder Vessel Vent Filter (SN-60).

Rework materials are crushed and pneumatically transported into a vessel equipped with 2 vents through fabric filters designated as Line #3 Rework Feed Vessel Vent Filter (SN-61).

Milled bauxite, rework material, binder and water are individually batch-weighed with one of four weigh hoppers and batch-mixed for further processing. Emissions from the mixing are controlled by the Line #3 batch mixing baghouse (SN-56). Wet pellets are discharged into a hopper, mounted on a variable speed reversible conveyor which feeds to the Line #3 Rotary Dryer rated at 56 MMBtu/hr (SN-57).

Dried pellets are passed through a system of screens for the separation of oversize, undersize and product size pellets. Rejected size pellets are returned to rework material. The screening process is controlled by the Line #3 Drying Area Baghouse (SN-58).

At Plant No. 1, ore is conveyed to either of two ball mills (controlled through SN-03 and SN-11). Baghouses emitting at SN-01 and SN-16 control the emissions from the ore transfer conveyors.

The milled ores are conveyed to the two plants' forming areas where there are two mixing lines at each plant. In Plant #1, emissions from mixing lines are controlled by SN-05. Plant #2 has one mixer per line and emissions from both lines are controlled by SN-28. All mixers are batch type. Milled ore, water, and cornstarch are introduced into the mixer, where high-energy rotors compact and pelletize the mix.

The moist spheres are conveyed from the forming area into one of four natural gas or diesel fuel fired continuously fed dryers (SN-09 and SN-13 in Plant #1, SN-26 and SN-27 in Plant #2) where the moisture content is reduced from approximately 21% by weight to 8% by weight.

From the dryers, the product is sent to a screening deck to eliminate over and under sized material. Material of optimum size is then sent to the kiln feed tank and the screened off material is sent back to the forming area to be reformed. In Plant #1, the screening area conveyor dust collector (SN-07) controls emissions from the screening area. In Plant #2, emissions from the screening process are controlled by four baghouses (SN-39, SN-45, SN-46, and SN-47). Two of the baghouses (SN-45 and SN-47) are being added on this modification.

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The “green” product is conveyed from the kiln feed tanks to one of the continuous feed kilns, SN-04 and SN-10 in Plant #1 and SN-29 in Plant #2. Emissions from the feeders and conveyors in Plant #2 will be controlled through proposed baghouse DC-440 (SN-54). These kilns are fired with either natural gas or diesel fuel and are heated to 1500 degrees Celsius.

The product flows directly into an air swept rotary cooler following the kilns. In Plant #1, both kilns feed a single product cooler (SN-12) while in Plant #2, the kiln and product cooler are listed as a single source (SN-29). Following the coolers, the product is conveyed to a screening deck where any remaining off-spec material is screened off and discarded. Emissions from the screening operation in Plant #1 will be controlled by proposed baghouse DC-21 (SN-52). Fired and sintered ceramic material cannot be reworked.

During start-up, a kiln will get to full temperature but will not heat evenly though out. Therefore, the product will be under-fired and not fully sintered. The first three hours of production is diverted to a re-fire vessel. This product is blended back into the kiln at a later time.

The kilns and the dryers may be fired with either natural gas or diesel fuel. Due to the high temperature, the kilns must be cooled or heated slowly to prevent the bricks from cracking or the drum from warping. It takes four days to bring a kiln from ambient temperature to operating temperature. Two types of fuels are used to minimize outages due to natural gas curtailments.

An alternate product has been produced at Rotary Kiln No. 2 (SN-10) using feldspathic mineral granules and a resin binder. This is the process where the HAP emissions had been generated. This process is no longer taking place at this facility. Therefore, HAP emissions are no longer generated at this facility.

The sintered and sized product is conveyed to finished product storage tanks. Any emission from the finished product storage tanks in Plant #1 are contained within the building. Emissions from Plant #2 finished product storage are controlled by a baghouse (SN-32/33). The product can be packaged in 50 to 100 pound bags or in super sacks for truck or rail shipping. The majority of the product is shipped in bulk from the loadout area at Plant #1 (SN-08) or at the Plant #2 loadout area (SN-34).

Rarely, finished product from Plant #2 is pneumatically conveyed to the Plant #1 loadout area. Emissions from the process are emitted at SN-38. An enclosed booth is used twice daily for the de-dusting of mobile equipment. Emissions from the booth are controlled through SN-49.



**Regulations**

The following table contains the regulations applicable to this permit.

**Table 2 - Regulations**

Source No.	Regulation Citations
Facility	Regulation 18 – Arkansas Air Pollution Control Code
Facility	Regulation 19 – Regulations of the Arkansas Plan of Implementation for Air Pollution Control
Facility	Regulation 26 – Regulations of the Arkansas Operating Air Permit Program
SN-18, SN-19, SN-20, SN-21, SN-22, SN-23, SN-25, SN-28, SN-31, SN-34, SN-38, SN-39, SN-45, SN-46, SN-47, SN-48, SN-50, SN-51, SN-52, SN-53, SN-54, SN-56, SN-57, SN-58, SN-59, SN-60, and SN-61	40 CFR 60 Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants

The following table is a summary of emissions from the facility. The following table contains cross-references to the pages containing specific conditions and emissions for each source. This table, in itself, is not an enforceable condition of the permit.

**Table 3 – Emission Summary**

EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
		PM	71.7	235.2	

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EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
		PM <sub>10</sub>	71.7	235.2	
Total Allowable Emissions		SO <sub>2</sub>	75.6	90.0	
		VOC	1.5	7.1	
		CO	21.5	105.2	
		NO <sub>x</sub>	43.6	153.1	
Facility	Plantwide Combustion Emission Sources	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>		19.3 19.3 *** 7.1 105.2 191.0	20
Facility	Plantwide Sulfur Dioxide Limit	SO <sub>2</sub>		90.0	20
SN-01	Plant #1 -Ore Conveyor/Crush Tank Filter	PM PM <sub>10</sub>	1.1 1.1	1.7 1.7	25
SN-02	Plant #1 - Ore Dump Station Filter	PM PM <sub>10</sub>	0.6 0.6	0.5 0.5	25
SN-03	Plant #1 Ball Mill Filter	PM PM <sub>10</sub>	0.3 0.3	1.1 1.1	25
SN-04	Plant #1 Kiln Filter	PM PM <sub>10</sub>	1.0 1.0	3.7 3.7	25
SN-05	Plant #1 Mixers No.	PM	0.2	0.7	25

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EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
	1 through No. 6	PM <sub>10</sub>	0.2	0.7	
SN-06	Plant #1 North/South Tank Bin Vents Filter	PM PM <sub>10</sub>	0.1 0.1	0.4 0.4	25
SN-07	Plant #1 Screening Kiln Feed Area Filter	PM PM <sub>10</sub>	1.7 1.7	3.4 3.4	25
SN-08	Plant #1 Finished Product Loadout Filter	PM PM <sub>10</sub>	0.6 0.6	0.9 0.9	25
SN-09	Plant #1 Dryer #1 46 MMBtu/hr	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.7 0.7 2.6 0.3 3.9 7.1		20
SN-09	Plant #1 Dryer No. 1 Filter (process)	PM PM <sub>10</sub>	0.5 0.5	1.9 1.9	25
SN-10	Plant #1 – Kiln No. 2 20 MMBtu/hr	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.3 0.3 1.1 0.2 1.7 3.1		20
SN-10	Plant #1 Rotary Kiln #2 Filter (process)	PM PM <sub>10</sub> SO <sub>2</sub>	2.8 2.8 60.0	10.4 10.4 ***	25

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EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
SN-11	Plant #1 Ball Mill Filter	PM PM <sub>10</sub>	0.6 0.6	2.1 2.1	25
SN-12	Plant #1 Product Cooler Filter	PM PM <sub>10</sub>	3.5 3.5	12.6 12.6	25
SN-13	Plant #1 Dryer No.2 46 MMBtu/hr	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.7 0.7 2.6 0.3 3.9 7.1		20
SN-13	Plant #1 Dryer No. 2 Filter (process)	PM PM <sub>10</sub>	0.5 0.5	1.9 1.9	25
SN-14	Plant #1 CDF Tank Filter	PM PM <sub>10</sub>	0.1 0.1	0.1 0.1	25
SN-15	South Tank Bin Vent	Rerouted to SN-06			
SN-16	Plant #1 Ore Transport Mill Area Filter	PM PM <sub>10</sub>	0.4 0.4	1.4 1.4	25
SN-17	Truck Loadout	Rerouted to SN-08			
SN-18	Plant No. 2 Ore Truck Unloading Filter	PM PM <sub>10</sub>	0.6 0.6	1.0 1.0	25
SN-19	Plant #2 Raw	PM	1.7	3.0	25

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EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
	Material Silo Filter	PM <sub>10</sub>	1.7	3.0	
SN-20	Plant #2 Silo Loadout Filter	PM PM <sub>10</sub>	2.2 2.2	8.0 8.0	25
SN-21	Plant #2 Fuller Ball Mill Filter	PM PM <sub>10</sub>	1.2 1.2	5.2 5.2	25
SN-22	Plant #2 Ball Mill Feed Vessel Vent Filter	PM PM <sub>10</sub>	0.2 0.2	0.6 0.6	25
SN-23	Plant #2 Supply Feed Tank No.2 Filter	PM PM <sub>10</sub>	0.1 0.1	0.2 0.2	25
SN-24	Source Removed from permit – 2000				
SN-25	Plant #2 Binder Storage Vessel Vent Filter	PM PM <sub>10</sub>	0.2 0.2	0.1 0.1	25
SN-26	Plant #2, Dryer No. 1  24.5 MMBTU/hr	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.4 0.4 1.4 0.2 2.1 3.8		20
SN-26	Plant No.2, Dryer No. 1 Exhaust Vent Filter (process)	PM PM <sub>10</sub>	1.0 1.0	3.9 3.9	25

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EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
SN-27	Plant #2, Dryer No. 2  24.5 MMBTU/hr	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.4 0.4 1.4 0.2 2.1 3.8		20
SN-27	Plant No.2, Dryer No. 2 Exhaust Vent Filter (process)	PM PM <sub>10</sub>	1.0 1.0	3.9 3.9	25
SN-28	Forming Area Dust Collection Baghouse	PM PM <sub>10</sub>	2.8 2.8	11.5 11.5	25
SN-29	Cooler and Kiln Exhaust  60.0 MMBTU/hr	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	1.0 1.0 3.3 0.4 5.1 9.2		20
SN-29	Plant #2 Cooler and Kiln Exhaust Filters	PM PM <sub>10</sub>	10.0 10.0	43.5 43.5	25
SN-31	Plant #2 Fired Screening Filter	PM PM <sub>10</sub>	0.2 0.2	0.4 0.4	25
SN-32 / SN-33	Finished Product Loadout Tanks Filter	PM PM <sub>10</sub>	0.3 0.3	0.6 0.6	25
SN-34	Shipping Area Vent (Truck Loadout)/Deduster	PM PM <sub>10</sub>	0.2 0.2	0.2 0.2	25

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EMISSION SUMMARY					
Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
	Filter				
SN-35	Diesel Fuel Storage Tank	Insignificant Activity			
SN-36	Diesel Fuel Storage Tank	Insignificant Activity			
SN-37	Source removed from the permit – 1998				
SN-38	Plant to Plant Finished Product Conveyor Filter	PM PM <sub>10</sub>	0.1 0.1	0.1 0.1	25
SN-39	350 Baghouse	PM PM <sub>10</sub>	0.8 0.8	3.2 3.2	25
SN-40	Plant #1 Side #1 R/W Blower	PM PM <sub>10</sub>	0.2 0.2	0.5 0.5	25
SN-41	Plant #1 Side #2 R/W Blower	PM PM <sub>10</sub>	0.2 0.2	0.5 0.5	25
SN-42	Plant #1 DCF Blower	PM PM <sub>10</sub>	0.1 0.1	0.1 0.1	25
SN-43	Plant #2 R/W Blower	PM PM <sub>10</sub>	0.3 0.3	1.0 1.0	25
SN-44	Plant #2 R?W Blower	PM PM <sub>10</sub>	0.3 0.3	1.0 1.0	25
SN-45	340 Baghouse	PM PM <sub>10</sub>	0.8 0.8	3.2 3.2	25

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			lb/hr	tpy	
SN-46	360 Baghouse	PM	1.9	8.1	25
		PM <sub>10</sub>	1.9	8.1	
SN-47	370 Baghouse	PM	0.8	3.2	25
		PM <sub>10</sub>	0.8	3.2	
SN-48	Plant #2 301-1, 301-2 Tank Filter	PM	0.2	0.7	25
		PM <sub>10</sub>	0.2	0.7	
SN-49	Cleaning Booth/SN-04 Backup Filter	PM	0.1	0.1	25
		PM <sub>10</sub>	0.1	0.1	
SN-50	Plant No. 2 Mill Conveyer Filter	PM	0.3	1.0	25
		PM <sub>10</sub>	0.3	1.0	
SN-51	Non-point Source Emissions	PM	3.5	20.0	25
		PM <sub>10</sub>	3.5	20.0	
SN-52	Plant #1 Sizing Area – DC 21 Filter	PM	1.3	5.7	25
		PM <sub>10</sub>	1.3	5.7	
SN-53	Plant #2 Ball Mill Area – DC 221 Filter	PM	1.9	8.1	25
		PM <sub>10</sub>	1.9	8.1	
SN-54	Plant #2 400 Area – DC 440 Filter	PM	1.9	8.1	25
		PM <sub>10</sub>	1.9	8.1	
SN-55	Plant #1 Bin Vent Mixer 6 – Baghouse	PM	0.1	0.5	25
		PM <sub>10</sub>	0.1	0.5	
SN-56	Line #3 Mixing Area Baghouse	PM	1.1	3.8	25
		PM <sub>10</sub>	1.1	3.8	
SN-57	Line #3 Dryer Area Baghouse (process)	PM	3.3	11.9	25
		PM <sub>10</sub>	3.3	11.9	



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Source No.	Description	Pollutant	Emission Rates		Cross Reference Page
			lb/hr	tpy	
SN-57	Line #3 Dryer (combustion)  56 MMBtu/hr	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.9 0.9 3.1 0.2 2.2 8.6		20
SN-58	Line #3 Screen Area Baghouse	PM PM <sub>10</sub>	1.4 1.4	4.9 4.9	25
SN-59	Line #3 Milled Feed Vessel Filter	PM PM <sub>10</sub>	0.4 0.4	0.5 0.5	25
SN-60	Line #3 Binder Feed Vessel Filter	PM PM <sub>10</sub>	0.4 0.4	0.1 0.1	25
SN-61	Line #3 Rework Feed Vessel Filter	PM PM <sub>10</sub>	1.0 1.0	1.6 1.6	25

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### **Section III:PERMIT HISTORY**

492-A was issued to Norton Company on May 26, 1978. 492-A permitted Norton to construct and operate a sintered aluminum oxide manufacturing plant at the present location with an annual production capacity of 20,000 tons per year.

492-AR-1 was issued to the Norton Company on May 22, 1981. 492-AR-1 permitted the installation and operation of a new sintering kiln (SN-10), a new ball mill (SN-11), mixing and sizing equipment (SN-16), and a product cooler system.

492-AR-2 was issued to the Norton Company on January 22, 1982. 492-AR-2 permitted the installation and operation of a new dryer (SN-13) with associated baghouse.

492-AR-3 was issued to Norton-Alcoa Proppants on July 24, 1985. 492-AR-3 permitted the construction and operation of new expanded facilities (SN-18 through SN-34). The permit also recognized the facility's name change from Norton Company to Norton-Alcoa Proppants.

492-AR-4 was issued to Norton-Alcoa Proppants on September 30, 1998 to reclassify the facility as a synthetic minor with annual PM<sub>10</sub> emissions of 91.3 tons per year. The permit also included two previously unlisted sources, the railcar loadout (SN-08), and the truck loadout (SN-17). The permit also includes the plant to plant pneumatic conveyor (SN-38) as a new source.

492-AR-5 was issued to Norton-Alcoa Proppants on September 30, 1999. The permit was issued to allow the installation of a back up bucket elevator which increased the operating efficiency of the facility, but with no increase in emissions. A new baghouse (SN-39) was added with this permit modification. Several sources were also listed for the first time as being subject to 40 CFR 60 Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants.

492-AR-6 was issued to Norton Alcoa Proppants on February 16, 2000. The permit was issued to allow the manufacture of an alternate product at the facility. Permit limits were: PM - 135.7 tpy, PM<sub>10</sub> - 91.3 tpy, SO<sub>2</sub> - 0.8 tpy, VOC - 25.0 tpy, CO - 18.8 tpy, NO<sub>x</sub> - 75.1 tpy, Formaldehyde - 4.61 tpy, Ethylene Glycol - 7.86 tpy, and Phenol 9.40 tpy.

An administrative amendment was issued to the above permit on March 10, 2000. It was determined during testing for the above permit that SN-24 did not vent to atmosphere and was not an emission source. Its emission limits were removed from the permit. Permit limits were: PM - 134.4 tpy, PM<sub>10</sub> - 90.1 tpy, SO<sub>2</sub> - 0.8 tpy, VOC - 25.0 tpy, CO - 18.8 tpy, NO<sub>x</sub> - 75.1 tpy, Formaldehyde - 4.61 tpy, Ethylene Glycol - 7.86 tpy, and Phenol 9.40 tpy.

492-AR-7 was issued to Norton Alcoa Proppants on July 12, 2000. The permit was issued to allow the manufacture to revise cycle times to increase throughput. Permit limits were: PM - 139.8 tpy, PM<sub>10</sub> - 94.3 tpy, SO<sub>2</sub> - 0.8 tpy, VOC - 25.0 tpy, CO - 18.8 tpy, NO<sub>x</sub> - 75.1 tpy,

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Formaldehyde - 4.61 tpy, Ethylene Glycol - 7.86 tpy, and Phenol 9.40 tpy.

492-AR-8 was issued to Norton Alcoa Proppants on September 15, 2001. The permit was issued to allow seven minor changes to the previous permit. The primary changes were to allow diesel fuel as a fully permitted fuel and to remove the HAPS containing materials from the process. Permit limits were: PM - 144.9 tpy, PM<sub>10</sub> - 95.3 tpy, SO<sub>2</sub> - 90.0 tpy, VOC - 3.6 tpy, CO - 54.2 tpy, and NO<sub>x</sub> - 98.5 tpy.

492-AOP-R0 was issued to Norton Proppants, Inc. on August 5, 2002. The permit allowed several changes to the previous permit including recalculating several of the emission sources. Permit limits were: PM – 178.1 tpy, PM<sub>10</sub> – 178.1 tpy, SO<sub>2</sub> - 90.0 tpy, VOC - 5.6 tpy, CO - 84.2 tpy, and NO<sub>x</sub> – 153.1 tpy.

Permit No. 0492-AOP-R1 was issued to Norton Proppants, a Division of Saint-Gobain Ceramics and Plastics on November 27, 2003. This modification was issued to allow several minor process changes. Permit limits were: PM – 208.5 tpy, PM<sub>10</sub> – 208.5 tpy, SO<sub>2</sub> - 90.0 tpy, VOC - 5.6 tpy, CO - 84.2 tpy, and NO<sub>x</sub> – 153.1 tpy.

**Section IV: SPECIFIC CONDITIONS**

**SN-04, SN-09, SN-10, SN-13, SN-26, SN-27, SN-29 and SN-57  
 Combustion Sources**

**Source Description**

There are three kilns (SN-04, SN-10, and SN-29) and five dryers (SN-09, SN-13, SN-26, SN-27 and SN-57) that are the fired equipment operating in the process at the facility. Each source is permitted for full time operation at maximum capacity on either natural gas or low sulfur diesel fuel. The emission limits are based on using the fuel which causes the highest emissions of that pollutant.

**Specific Conditions**

- The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition is demonstrated by each source being permitted at its maximum capacity and full time operation on the fuel which causes the highest emissions of that pollutant. [§19.501 et seq of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control (Regulation #19) effective February 15, 1999 and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
Facility	Plantwide Combustion Emission Sources	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>		19.3 90.0** 7.1 105.2 191.0
Facility	Plantwide Sulfur Dioxide Emission Limit	SO <sub>2</sub>		90.0
04	Kiln No. 1 7.7 MMBtu/hr natural gas or low sulfur diesel fuel	PM <sub>10</sub> SO <sub>2</sub> VOC CO	0.1 0.1 0.1 0.1	

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SN	Description	Pollutant	lb/hr	tpy
		NO <sub>x</sub>	0.2	
09	Plant No. 1, Dryer No.1 46.0 MMBtu/hr natural gas or low sulfur diesel fuel	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.7 2.6 0.3 3.9 7.1	
10	Rotary Kiln No. 2 No.1 20.0 MMBtu/hr natural gas or low sulfur diesel fuel	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.3 1.1 0.2 1.7 3.1	
13	Plant No. 1, Dryer No. 2 46.0 MMBtu/hr natural gas or low sulfur diesel fuel	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.7 2.6 0.3 3.9 7.1	
26	Plant No. 2, Dryer No. 1 24.5 MMBtu/hr natural gas or low sulfur diesel fuel	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.4 1.4 0.2 2.1 3.8	
27	Plant No. 2, Dryer No. 2 24.5 MMBtu/hr natural gas or low sulfur diesel fuel	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.4 1.4 0.2 2.1 3.8	
29	Plant No. 2 Kiln and Cooler Exhaust 60.0 MMBtu/hr natural gas or low sulfur diesel fuel	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	1.0 3.3 0.4 5.1 9.2	
57	Line #3 Dryer 56 MMBtu/hr Natural gas of low sulfur	PM <sub>10</sub> SO <sub>2</sub> VOC	0.9 3.1 0.2	

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SN	Description	Pollutant	lb/hr	tpy
	diesel fuel	CO NO <sub>x</sub>	2.2 8.6	

\*\* The sulfur dioxide limit for the facility is in the facility PAL see S.C. # 12.

2. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition is demonstrated by each source being permitted at its maximum capacity and full time operation on the fuel which causes the highest emissions of that pollutant. [§18.801 of the Arkansas Air Pollution Control Code (Regulation #18) effective February 15, 1999, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
Facility	Plantwide Combustion Emission Sources	PM		15.4
04	Kiln No. 1 7.7 MMBtu/hr natural gas or low sulfur diesel fuel	PM	0.1	
09	Plant No. 1, Dryer No.1 46.0 MMBtu/hr natural gas or low sulfur diesel fuel	PM	0.7	
10	Rotary Kiln No. 2 No.1 20.0 MMBtu/hr natural gas or low sulfur diesel fuel	PM	0.3	
13	Plant No. 1, Dryer No. 2 46.0 MMBtu/hr natural gas or low sulfur diesel fuel	PM	0.7	
26	Plant No. 2, Dryer No. 1 24.5 MMBtu/hr			

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SN	Description	Pollutant	lb/hr	tpy
	natural gas or low sulfur diesel fuel	PM	0.4	
27	Plant No. 2, Dryer No. 2 24.5 MMBtu/hr natural gas or low sulfur diesel fuel	PM	0.4	
29	Plant No. 2 Kiln and Cooler Exhaust 60.0 MMBtu/hr natural gas or low sulfur diesel fuel	PM	1.0	
57	Line #3 Dryer 56 MMBtu/hr Natural gas or low sulfur diesel fuel	PM	0.9	

3. The combustion sources may only be fired with pipeline quality natural gas or low sulfur diesel fuel. Pipeline quality natural gas is defined as natural gas which contains less than 0.3 grains/100 SCF of H<sub>2</sub>S and that H<sub>2</sub>S constitutes greater than 50% by weight of the sulfur in the gas. Low sulfur diesel fuel must have a sulfur content of less than 0.05 weight percent sulfur. [§19.705 of Regulation #19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR 70.6]
  
4. The permittee shall maintain records of the sulfur content of all shipments of diesel fuel received at the facility. These records shall be maintained on site and made available to Department personnel upon request. [§19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]
  
5. Visible emissions from the Combustion Sources shall not exceed 5% when firing natural gas and 20% when firing low sulfur diesel fuel as measured by EPA Method 9. [§18.501 of Regulation #18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**SN-01 through SN-14, SN-16, SN-18 through SN-23, SN-25 through SN-34,  
 SN-38, SN-39, SN-45 through SN-55, SN-56 through SN-61  
 Particulate Sources**

**Source Description**

Norton Proppants operates a facility with three manufacturing trains which produce proppants used in completions of oil and gas wells. A more complete description of the service for each source is contained in the process description at the beginning of this permit.

**Specific Conditions**

6. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition is demonstrated by the sources lb/hr limits being based on maximum capacity and the tpy limits are based on the throughput limits in Specific Condition No. 10. [§19.501 et seq of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control (Regulation #19) effective February 15, 1999 and 40 CFR Part 52, Subpart E]

SN	Description	Pollutant	lb/hr	tpy
SN-01	Plant #1 Ore Conveyor/Crush Tank Filter	PM <sub>10</sub>	1.1	1.7
SN-02	Plant #1 Ore Dump Station Filter	PM <sub>10</sub>	0.6	0.5
SN-03	Plant #1 Ball Mill No. 1 Filter	PM <sub>10</sub>	0.3	1.1
SN-04	Plant #1 Kiln No. 1 Filter (Process)	PM <sub>10</sub>	1.0	3.7
SN-05	Plant #1 Mixers No. 1 through No. 6 Filter	PM <sub>10</sub>	0.2	0.7
SN-06	Plant #1 North/South Tank Bin Vents Filter	PM <sub>10</sub>	0.1	0.4
SN-07	Plant #1 Screening/Kiln Feed Area Filter	PM <sub>10</sub>	1.7	3.4
SN-08	Plant #1 Finished Product Loadout Filter	PM <sub>10</sub>	0.6	0.9
SN-09	Plant #1, Dryer No. 1 Filter (process)	PM <sub>10</sub>	0.5	1.9
SN-10	Plant #1 Rotary Kiln No. 2 Filter	PM <sub>10</sub>	2.8	10.4



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SN	Description	Pollutant	lb/hr	tpy
	(process)	SO <sub>2</sub>	60.0	*
SN-11	Plant #1 Ball Mill Filter	PM <sub>10</sub>	0.6	2.1
SN-12	Plant #1 Product Cooler Filter	PM <sub>10</sub>	3.5	12.6
SN-13	Plant #1, Dryer No.2 Filter (process)	PM <sub>10</sub>	0.5	1.9
SN-14	Plant #1 DCF Tank Filter	PM <sub>10</sub>	0.1	0.1
SN-15	South Tank Bin Vent	Rerouted to SN-06		
SN-16	Plant #1 Ore Transport Mill Area Filter	PM <sub>10</sub>	0.4	1.4
SN-17	Truck Loadout	Rerouted to SN-08		
SN-18	Plant #2 Ore Truck Unloading Filter	PM <sub>10</sub>	0.6	1.0
SN-19	Plant #2 Raw Material Silo Transport Filter	PM <sub>10</sub>	1.7	3.0
SN-20	Plant #2 Silo Loadout Filter	PM <sub>10</sub>	2.2	8.0
SN-21	Plant #2 Fuller Ball Mill Filter	PM <sub>10</sub>	1.2	5.2
SN-22	Plant #2 Ball Mill Feed Vessel Vent Filter	PM <sub>10</sub>	0.2	0.6
SN-23	Plant #2 Ball Mill Feed Vent No.2 Filter	PM <sub>10</sub>	0.1	0.2
SN-24	Source Removed from permit - 2000			
SN-25	Plant #2 Binder Storage Vessel Vent Filter	PM <sub>10</sub>	0.2	0.1
SN-26	Plant #2, Dryer No. 1 Exhaust Vent Filter (process)	PM <sub>10</sub>	1.0	3.9
SN-27	Plant #2, Dryer No. 2 Exhaust Vent Filter (process)	PM <sub>10</sub>	1.0	3.9
SN-28	Forming Area Dust Collection Baghouse	PM <sub>10</sub>	2.8	11.5
SN-29	Plant #2 Cooler and Kiln Exhaust Filters	PM <sub>10</sub>	10.0	43.5

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SN	Description	Pollutant	lb/hr	tpy
SN-31	Plant #2 Sizing Area Vent/Fired Screening Filter	PM <sub>10</sub>	0.2	0.4
SN-32/ SN-33	Plant #2 Finished Product Loadout Tanks Filter	PM <sub>10</sub>	0.3	0.6
SN-34	Plant #2 Shipping Area Vent (Truck Loadout)/Deduster Filter	PM <sub>10</sub>	0.2	0.2
SN-35	Diesel Fuel Storage Tank	Insignificant Activity		
SN-36	Diesel Fuel Storage Tank	Insignificant Activity		
SN-37	Source removed from permit - 1998			
SN-38	Plant to Plant Finished Product Conveyor Filter	PM <sub>10</sub>	0.1	0.1
SN-39	350 Baghouse	PM <sub>10</sub>	0.8	3.2
SN-40	Plant #1 Side #1 R/W Blower	PM <sub>10</sub>	0.2	0.5
SN-41	Plant #1 Side #2 R/W Blower	PM <sub>10</sub>	0.2	0.5
SN-42	Plant #1 DCF Blower	PM <sub>10</sub>	0.1	0.1
SN-43	Plant #2 R/W Blower	PM <sub>10</sub>	0.3	1.0
SN-44	Plant #2 R/W Blower	PM <sub>10</sub>	0.3	1.0
SN-45	340 Baghouse	PM <sub>10</sub>	0.8	3.2
SN-46	360 Baghouse	PM <sub>10</sub>	1.9	8.1
SN-47	370 Baghouse	PM <sub>10</sub>	0.8	3.2
SN-48	Plant #2 301-1, 301-2 Tank Filter	PM <sub>10</sub>	0.2	0.7
SN-49	Cleaning Booth/SN-04 Backup Filter	PM <sub>10</sub>	0.1	0.1
SN-50	Plant No. 2 Mill Conveyer Filter	PM <sub>10</sub>	0.3	1.0
SN-51	Non-point Source Emissions	PM <sub>10</sub>	3.5	20.0
SN-52	Plant #1 Sizing Area – DC 21 Filter	PM <sub>10</sub>	1.3	5.7

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SN	Description	Pollutant	lb/hr	tpy
SN-53	Plant #2 Ball Mill Area – DC 221 Filter	PM <sub>10</sub>	1.9	8.1
SN-54	Plant #2 400 Area – DC 440 Filter	PM <sub>10</sub>	1.9	8.1
SN-55	Plant #1 Bin Vent Mixer 6 – Baghouse	PM <sub>10</sub>	0.1	0.5
SN-56	Line #3 Mixing Area Baghouse	PM <sub>10</sub>	1.1	3.8
SN-57	Line #3 Dryer Area Baghouse (process)	PM <sub>10</sub>	3.3	11.9
SN-58	Line #3 Screen Area Baghouse	PM <sub>10</sub>	1.4	4.9
SN-59	Line #3 Milled Feed Vessel Filter	PM <sub>10</sub>	0.4	0.5
SN-60	Line #3 Binder Feed Vessel Filter	PM <sub>10</sub>	0.4	0.1
SN-61	Line #3 Rework Feed Vessel Filter	PM <sub>10</sub>	1.0	1.6

\* See Specific Condition No. 12 for Plantwide sulfur dioxide yearly limit.

7. The permittee shall not exceed the emission rates set forth in the following table. Compliance with this condition is demonstrated by the sources lb/hr limits being based on maximum capacity and the tpy limits are based on the throughput limits in Specific Condition No. 10. [§18.801 of the Arkansas Air Pollution Control Code (Regulation #18) effective February 15, 1999, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

SN	Description	Pollutant	lb/hr	tpy
SN-01	Plant #1 Ore Conveyor/Crush Tank Filter	PM	1.1	1.7
SN-02	Plant #1 Ore Dump Station Filter	PM	0.6	0.5
SN-03	Plant #1 Ball Mill No. 1 Filter	PM	0.3	1.1
SN-04	Plant #1 Kiln No. 1 Filter (Process)	PM	1.0	3.7
SN-05	Plant #1 Mixers No. 1 through No. 6 Filter	PM	0.2	0.7
SN-06	Plant #1 North/South Tank Bin Vents Filter	PM	0.1	0.4
SN-07	Plant #1 Screening/Kiln Feed Area Filter	PM	1.7	3.4
SN-08	Plant #1 Finished Product Loadout Filter	PM	0.6	0.9
SN-09	Plant #1, Dryer No. 1 Filter (process)	PM	0.5	1.9
SN-10	Plant #1 Rotary Kiln No. 2 Filter (process)	PM	2.8	10.4
SN-11	Plant #1 Ball Mill No. Filter	PM	0.6	2.1
SN-12	Plant #1 Product Cooler Filter	PM	3.5	12.6
SN-13	Plant #1, Dryer No.2 Filter (process)	PM	0.5	1.9
SN-14	Plant #1 DCF Tank Filter	PM	0.1	0.1
SN-15	South Tank Bin Vent	Rerouted to SN-06		
SN-16	Plant #1 Ore Transport Mill Area Filter	PM	0.4	1.4
SN-17	Truck Loadout PM10	Rerouted to SN-08		
SN-18	Plant #2 Ore Truck Unloading Filter	PM	0.6	1.0
SN-19	Plant #2 Raw Material Silo Transport Filter	PM	1.7	3.0

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SN	Description	Pollutant	lb/hr	tpy
SN-20	Plant #2 Silo Loadout Filter	PM	2.2	8.0
SN-21	Plant #2 Fuller Ball Mill Filter	PM	1.2	5.2
SN-22	Plant #2 Ball Mill Feed Vessel Vent Filter	PM	0.2	0.6
SN-23	Plant #2 Ball Mill Feed Vent No.2 Filter	PM	0.1	0.2
SN-24	Source Removed from permit - 2000			
SN-25	Plant #2 Binder Storage Vessel Vent Filter	PM	0.2	0.1
SN-26	Plant #2, Dryer No. 1 Exhaust Vent Filter (process)	PM	1.0	3.9
SN-27	Plant #2, Dryer No. 2 Exhaust Vent Filter (process)	PM	1.0	3.9
SN-28	Forming Area Dust Collection Baghouse	PM	2.8	11.5
SN-29	Plant #2 Cooler and Kiln Exhaust Filters	PM	10.0	43.5
SN-31	Plant #2 Sizing Area Vent/Fired Screening Filter	PM	0.2	0.4
SN-32/ SN-33	Plant #2 Finished Product Loadout Tanks Filter	PM	0.3	0.6
SN-34	Plant #2 Shipping Area Vent (Truck Loadout)/Deduster Filter	PM	0.2	0.2
SN-35	Diesel Fuel Storage Tank	Insignificant Activity		
SN-36	Diesel Fuel Storage Tank	Insignificant Activity		
SN-37	Source removed from permit - 1998			
SN-38	Plant to Plant Finished Product Conveyor Filter	PM	0.1	0.1
SN-39	350 Baghouse	PM	0.8	3.2
SN-40	Plant #1 Side #1 R/W Blower	PM	0.2	0.5
SN-41	Plant #1 Side #2 R/W Blower	PM	0.2	0.5
SN-42	Plant No. 1 DCF Blower	PM	0.1	0.1
SN-43	Plant #2 R/W Blower	PM	0.3	1.0

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SN	Description	Pollutant	lb/hr	tpy
SN-44	Plant #2 R/W Blower	PM	0.3	1.0
SN-45	340 Baghouse	PM	0.8	3.2
SN-46	360 Baghouse	PM	1.9	8.1
SN-47	370 Baghouse	PM	0.8	3.2
SN-48	Plant #2 301-1, 301-2 Tank Filter	PM	0.2	0.7
SN-49	Cleaning Booth/SN-04 Backup Filter	PM	0.1	0.1
SN-50	Plant #2 Mill Conveyer Filter	PM	0.3	1.0
SN-51	Non-point Source Emissions	PM	3.5	20.0
SN-52	Plant #1 Sizing Area – DC 21 Filter	PM	1.3	5.7
SN-53	Plant #2 Ball Mill Area – DC 221 Filter	PM	1.9	8.1
SN-54	Plant #2 400 Area – DC 440 Filter	PM	1.9	8.1
SN-55	Plant #1 Bin Vent Mixer 6 – Baghouse	PM	0.1	0.5
SN-56	Line #3 Mixing Area Baghouse	PM	1.1	3.8
SN-57	Line #3 Dryer Area Baghouse (process)	PM	3.3	11.9
SN-58	Line #3 Screen Area Baghouse	PM	1.4	4.9
SN-59	Line #3 Milled Feed Vessel Filter	PM	0.4	0.5
SN-60	Line #3 Binder Feed Vessel Filter	PM	0.4	0.1
SN-61	Line #3 Rework Feed Vessel Filter	PM	1.0	1.6

8. Visible emissions from the Particulate Sources shall not exceed 5% as measured by EPA Method 9. [§18.501 of Regulation #18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
  
9. If visible emissions are detected at the Particulate Sources, then the permittee shall immediately conduct a 6 minute opacity reading in accordance with EPA Reference Method #9. The results of these observations or readings shall be recorded in a log which shall be maintained on site and made available to Department personnel upon request. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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10. The permittee shall not produce more than 256,000 tons of ceramic beads (standard proppant product) at the facility per consecutive 12 month period. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6] The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 10. Records shall be updated by the fifteenth day of the month following the month for which the records pertain. These records shall be kept on site, and shall be made available to Department personnel upon request. A copy of the results of these records shall be submitted with the semi-annual report required in General Provision No. 7. [§19.705 of Regulation 19 and 40 CFR Part 52, Subpart E]

**Alternate Product (SN-10)**

11. The silica media used in production at SN-10 shall not exceed 1.5% sulfur content. The permittee shall maintain MSDS sheets or other satisfactory laboratory records to monitor and record the sulfur content of the material used. If laboratory analysis is used, intervals between testing shall not exceed one week for the first year's operation with the alternate product during the time periods the processed silica media is being run. [§19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR 70.6]

**Sulfur Dioxide PAL Requirements:**

12. To demonstrate compliance with the Plantwide Sulfur Dioxide Limit in Specific Condition #1, the permittee shall complete the following material balance for sulfur dioxide emissions for each month the facility operates [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]:

$$\text{TPY SO}_2 = (0.142)(A)(B) + (2)(C)(D) + 0.7^*$$

Where:

A = Weigh percent sulfur in the diesel fuel consumed.

B = Gallons of diesel fuel burned.

C = Percent sulfur in the processed silica media used at SN-10.

D = Tons of processed silica material used.

\* = Sulfur dioxide emissions from natural gas combustion.

The facility shall keep satisfactory usage and content records to complete the above equation on site. The facility shall also complete a summation of the resultant of the above equation for the previous 12 months operation each month. A rolling 12 month total in excess of 90 tons shall be a violation of this permit. The records of sulfur dioxide emissions from the above material balance shall be kept on site and made available to Department personnel upon request. A copy of the results of this calculation shall be submitted with the semi-annual report required in General Provision No. 7.

13. SN-18, SN-19, SN-20, SN-21, SN-22, SN-23, SN-25, SN-28, SN-31, SN-34, SN-38\*, SN-39, SN-45, SN-46, SN-47, SN-48, SN-49, SN-50, SN-52, SN-53, SN-54, and SN-55 are subject to NSPS 40 CFR 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. No additional limits are necessary at this time to

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assure compliance other than those previously listed. The sources have been tested to meet the following standards [§19.304 of Regulation 19 and 40 CFR 60, Subpart OOO]:

Test Method	Standard
EPA Method 5 or 17	Not in excess of 0.05 g/dscm particulate matter
EPA Method 9	Not in excess of 15% opacity

SN-18, SN-19, and SN-20 are non-stack emissions; therefore, testing for particulate was not required.

- \* A special request for alternate testing for SN-38 was sent to EPA Region VI, April 3, 2000. Letter dated May 11, 2000 from John R. Hepola waived requirement for particulate matter testing for the source.

14. SN-56, SN-57(process), SN-58, SN-59, SN-60 and SN-61 added in the current expansion are subject to NSPS 40 CFR 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. Within 60 days of the facility achieving the maximum production rate when the proposed changes in this permit are activated but no later than 180 days after their initial start up, these sources shall be tested to meet the following standards [§19.304 of Regulation 19 and 40 CFR 60, Subpart OOO]:

Test Method	Standard
EPA Method 5 or 17	Not in excess of 0.05 g/dscm particulate matter
EPA Method 9	Not in excess of 15% opacity

**COMPLIANCE ASSURANCE MONITORING PLAN CONDITIONS:**

15. Daily visible emissions observations will be taken by trained plant operators at the exhaust of SN-56, SN-57, SN-58, and SN-61. If visible emissions are detected at these sources, then the permittee shall immediately conduct a 6 minute opacity reading in accordance with EPA Reference Method #9. The results of these observations and readings shall be recorded in a log which shall be maintained on site and made available to Department personnel upon request. [§19.304 of Regulation 19 and 40 CFR 64.3]
16. A weekly inspection will be completed on the baghouses listed as SN-56, SN-57, SN-



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58, and SN-61. A checklist will be maintained for each inspection. The results of these observations and readings shall be recorded in a log which shall be maintained on site and made available to Department personnel upon request. [§19.304 of Regulation 19 and 40 CFR 64.3]

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### **Section V: COMPLIANCE PLAN AND SCHEDULE**

Norton Proppants – a Division of Saint-Gobain Ceramics and Plastics will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.



### **Section VI: PLANT WIDE CONDITIONS**

1. The permittee will notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation No. 19 §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation No.19 §19.410(B) and 40 CFR Part 52, Subpart E]
3. The permittee must test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) New Equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start-up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee will submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation No.19 §19.702 and/or Regulation No. 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
4. The permittee must provide: [Regulation No.19 §19.702 and/or Regulation No.18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
  - a. Sampling ports adequate for applicable test methods;
  - b. Safe sampling platforms;
  - c. Safe access to sampling platforms; and
  - d. Utilities for sampling and testing equipment.
5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee will maintain the equipment in good condition at all times. [Regulation No.19 §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation No. 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

### **Title VI Provisions**

7. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 CFR Part 82, Subpart E]

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- a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  - c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
8. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 CFR Part 82, Subpart F]
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
  - c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. (“MVAC-like appliance” as defined at §82.152.)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
9. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.
10. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

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The term “motor vehicle” as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term “MVAC” as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant.

11. The permittee can switch from any ozone-depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G, "Significant New Alternatives Policy Program."

**Section VII: INSIGNIFICANT ACTIVITIES**

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement is a significant activity even if this activity meets the criteria of §304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated February, 2004.

**Table 4 - Insignificant Activities**

Description	Category
Gas Fired Pilot Plant Kiln	Group A1
Gas Fired Pilot Plant Test Dryer	Group A1
Two Laboratory Vent Hoods	Group A5
Three emergency use electrical generators	Group B16
One Diesel Fuel Storage Tank	Group A3
Two 15,000 gallon Diesel Storage Tanks	Group A13

Pursuant to §26.304 of Regulation 26, the Department determined the emission units, operations, or activities contained in Regulation 19, Appendix A, Group B, to be insignificant activities. Activities included in this list are allowable under this permit and need not be specifically identified.

### Section VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation No. 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 CFR 70.6(b)(2)]
2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and §26.701(B) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), effective August 10, 2000]
3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation No. 26 §26.406]
4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation No. 26 §26.701(A)(2)]
5. The permittee must maintain the following records of monitoring information as required by this permit. [40 CFR 70.6(a)(3)(ii)(A) and Regulation No. 26 §26.701(C)(2)]
  - a. The date, place as defined in this permit, and time of sampling or measurements;
  - b. The date(s) analyses performed;
  - c. The company or entity performing the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of such analyses; and
  - f. The operating conditions existing at the time of sampling or measurement.

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6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation No. 26 §26.701(C)(2)(b)]
7. The permittee must submit reports of all required monitoring every six (6) months. If permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due within thirty (30) days of the end of the reporting period. Although the reports are due every six months, each report shall contain a full year of data. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26 §26.2 must certify all required reports. The permittee will send the reports to the address below: [40 C.F.R. 70.6(a)(3)(iii)(A) and §26.701(C)(3)(a) of Regulation #26]

Arkansas Department of Environmental Quality  
Air Division  
ATTN: Compliance Inspector Supervisor  
Post Office Box 8913  
Little Rock, AR 72219

8. The permittee will report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit. The permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report may be made by telephone and shall include: [40 CFR 70.6(a)(3)(iii)(B), Regulation #26 §26.701(C)(3)(b), and Regulation #19 §19.601 and §19.602]
  - a. The facility name and location,
  - b. The process unit or emission source deviating from the permit limit,
  - c. The permit limit, including the identification of pollutants, from which deviation occurs,
  - d. The date and time the deviation started,
  - e. The duration of the deviation,
  - f. The average emissions during the deviation,
  - g. The probable cause of such deviations,
  - h. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
  - i. The name of the person submitting the report.



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The permittee will make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report. [40 CFR 70.6(a)(3)(iii)(B), Regulation No. 26 §26.701(C)(3)(b), Regulation No. 19 §19.601 and §19.602]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), §26.701(E) of Regulation No. 26, and A.C.A. §8-4-203, as referenced by §8-4-304 and §8-4-311]
10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation No. 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation No. 26 §26.701(F)(1)]
11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and Regulation No. 26 §26.701(F)(2)]
12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation No. 26 §26.701(F)(3)]
13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation No. 26 §26.701(F)(4)]
14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation No. 26 §26.701(F)(5)]
15. The permittee must pay all permit fees in accordance with the procedures established in Regulation No. 9. [40 CFR 70.6(a)(7) and Regulation No. 26 §26.701(G)]

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16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation No. 26 §26.701(H)]
17. If the permit allows different operating scenarios, the permittee will, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation No. 26 §26.701(I)(1)]
18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation No. 26 §26.702(A) and (B)]
19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation No. 26 §26.2. [40 CFR 70.6(c)(1) and Regulation No. 26 §26.703(A)]
20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation No. 26 §26.703(B)]
  - a. Enter upon the permittee's premises where the permitted source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.
21. The permittee will submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually within 30 days following the last day of the anniversary month of the initial Title V permit. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation No. 26 §26.703(E)(3)]
  - a. The identification of each term or condition of the permit that is the basis of the certification;

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- b. The compliance status;
- c. Whether compliance was continuous or intermittent;
- d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
- e. Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [Regulation No. 26 §26.704(C)]

- a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
- b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act or,
- d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. This permit authorizes only those pollutant-emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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**APPENDIX A**  
**40 CFR 60, SUBPART OOO**