

NARRATIVE

TO: Hamid Yavari
FROM: S. Ganapathy
DATE: July 5, 2023

Facility Name: **Georgia Kaolin Terminals, Inc.**
AIRS No.: 05100199
Location: Savannah, GA (Chatham County)
Application #: 28904
Date of Application: June 7, 2023

Background Information

Georgia Kaolin Terminals, Inc. is an existing permitted facility located at 509 Foundation Drive in Savannah (Chatham County). The facility is a dry bulk material warehousing and handling facility that is currently permitted to receive materials by vessel, truck or rail, can store the material as needed and then loads the materials into vessels, trucks or railcars for further distribution or export. The facility is permitted for silo storage, handling equipment, bagging and warehousing operations.

On June 7, 2023 the Georgia Kaolin Terminals, Inc. submitted an expedited permit application for removal of the material transfer operations DF-54, DF-55, DF-56, and DF-65, upgrading of DF-52 and modification of DF-66, and the proposed installation of a new conveyor system, loadout silos, and a storage dome. A Public Advisory was issued for this permit amendment application.

Updated Equipment List

Attachment A
Georgia Kaolin Terminals, Inc.
509 Foundation Drive
Savannah, Georgia 31408
Facility/Equipment Description^[1]

Emission Units	Process Description^[1]	APCD	APCD type
Existing Sources			
DF-51	Belt Conveyor BC-52/Bucket Elevator BE-51	Yes	Dust Collector
DF-52*	Bucket Elevator BE-51/Belt Conveyor BC-51	Yes	Dust Collector
DF-53	Bucket Elevator BE-51	Yes	Dust Collector
DF-57	Transfer Belt Shiploader 2 Conveyor Shiploader 2 Spout	Yes	Dust Collector

Emission Units	Process Description[1]	APCD	APCD type
DF-58	Shiploader 1 Spout Shiploader 2 Spout	Yes	Dust Collector
DF-59	Transfer Belt Shiploader 2 Conveyor Shiploader 2 Spout	Yes	Dust Collector
DF-60	Bagging Bucket Elevator Bag Filling 120 ton Surge Bin	Yes	Dust Collector
DF-61	Existing Truck Spout	Yes	Cartridge Filter
DF-62	Truck Loadout 1 at Ship Receiving	Yes	Cartridge Filter
DF-63	Truck Loadout 2 at Ship Receiving	Yes	Cartridge Filter
DF-64	Ship Unloading transfer from Siwertell Belt Conveyor BC-61	Yes	Dust Collector
DF-66**	Belt Conveyor BC-62/Belt Conveyor BC-53 Transfer	Yes	Dust Collector
DF-67	Top of Rail Loadout Silo	Yes	Dust Collector
DF-68	Top of Truck Loadout Silo	Yes	Dust Collector
DF-69	Rail Loading Spout	Yes	Dust Collector
DF-70	Truck Loading Spout	Yes	Dust Collector
New Sources			
DF-71	Transfer from BC-61 to BE-53 to BC-63	Yes	Dust Collector
DF-72	Transfer from BC-61 to BC-63 to BC-64	Yes	Dust Collector
DF-73	Head of BC-64	Yes	Dust Collector
DF-74	Boot of BE-54	Yes	Dust Collector
DF-75	Head of BE-54	Yes	Dust Collector
DF-76	Partway Down FC-63	Yes	Dust Collector
DF-77	Dome 51 Apex	Yes	Dust Collector
DF-78	FK-50 Hopper Vent	Yes	Dust Collector
DF-79	Silo 79 Roof	Yes	Dust Collector
DF-80	Silo 79 Loading Spout	Yes	Dust Collector
DF-81	Silo 80 Roof	Yes	Dust Collector
DF-82	Silo 80 Loading Spout	Yes	Dust Collector

[1] This "Facility Equipment Description" contains information regarding specific process units and emissions points and was created as a general reference for certain Conditions in this Permit (or Permit Amendment). It is not intended to be a comprehensive list of all process units or air pollution sources at this facility and may not include every minor or fugitive emission source. Future minor modifications or additions at this facility may be exempted from permitting by the Georgia Rules for Air Quality Control and may occur without causing this Attachment to be updated.

* DF52 replaced and upgraded to 10,500 ACFM unit. **DF-66 will use fan of DF-65 that will be removed/replaced at 5,300 ACFM.

DF-79 and DF-81 cannot run concurrently. Therefore, emissions from DF-79 are excluded from total PM emissions.

Emissions Summary**Facility-Wide Emissions**
(in tons per year)

Pollutant	Potential Emissions			Actual Emissions		
	Before Mod.	After Mod.	Emissions Change	Before Mod.	After Mod.	Emissions Change
PM/PM ₁₀ /PM _{2.5}	63.6	79.4	15.8	<63.6	<79.4	<15.8

Regulatory Applicability**Georgia Rule (e) - 391-3-1-.02 (2)(e) - Particulate Emissions from Manufacturing Processes**

All current and proposed equipment at GKT is considered new equipment with respect to Rule (e), as it was constructed or will be constructed after July 2, 1968. As all plant processes are rated at more than 30 tons per hour, their Rule (e) emission limits are determined by the following equation:

$$E = 55P^{0.11} - 40,$$

where E is the allowable PM emission rate in lb/hour and P is the process weight in tons per hour.

The facility's existing and proposed operations comply through the use of good process design and the proper maintenance and operation of dust collection equipment. Note that Rule (e) only applies when a more specific PM limit does not apply. Therefore, when a piece of equipment is handling kaolin, Rule (p) applies in place of Rule (e). Both rules are expected to be subsumed by the voluntarily requested 0.020 gr/dscf PM emission limitation for controlled emission sources.

Georgia Rule (n) - 391-3-1-.02 (2)(n) - Fugitive Dust

The facility has potential fugitive dust emissions from its material handling processes. Rule (n) requires that reasonable precautions be taken to prevent such dust from becoming airborne. These are best determined on a case-by-case basis but often include the use of wet suppression, enclosing dust-generating processes or materials, dust collection using filtration equipment, and removal of dust from paved roads. Rule (e) also restricts fugitive dust opacity to less than 20%. The facility will take reasonable precautions as necessary to prevent fugitive dust from becoming airborne.

40 CFR Part 52.21 - Prevention of Significant Deterioration (PSD) of Air Quality

As the Savannah area is in attainment of all National Ambient Air Quality Standards (NAAQS), this regulation is potentially applicable to each NAAQS pollutant as well as all other pollutants regulated under the Clean Air Act. The facility is currently a minor source of all regulated pollutants under §52.21. GKT will remain a minor NSR source after the proposed modification. The proposed project is not a major NSR modification of any regulated pollutant in and of itself. Therefore, the project does not trigger PSD major source status and does not require PSD review.

40 CFR Parts 60, 61, 63 - Federal Performance and Emission Standards

None of the proposed new or existing equipment is subject to a Federal emission standard under Part 60, 61, or 63. The crushing or grinding equipment necessary to trigger NSPS Subpart OOO of Part 60 applicability for nonmetallic minerals processing is not present at this facility.

40 CFR 60 Part 70 - Title V Permitting –

The GKT facility will remain classified as a Title V synthetic minor source after the proposed project. Particulate matter emissions are controlled by dust collectors to ensure that potential emissions of PM₁₀/PM_{2.5} remain below the applicable major source thresholds. The facility will continue to comply with the 0.020 gr/dscf PM emission limit to be applied to all current and proposed dry bulk handling processes controlled by dust collectors, to demonstrate compliance with Title V synthetic minor limitations.

Permit Conditions

The permit amendment did not require any conditions to be modified.

Toxic Impact Assessment

The permit amendment did not require a toxic impact assessment as there is no increase in any air toxics emissions from the facility and no new air toxics will be emitted from the facility. The facility does not emit any TAPs listed in Appendix A of the *Georgia Guideline for Ambient Impact Assessment of TAP*. Therefore, no compliance demonstration is necessary.

Summary & Recommendations

I recommend issuing Air Quality Permit Amendment No. 4491-051-0199-S-02-2 to Georgia Kaolin Terminals, Inc. for the removal of the material transfer operations DF-54, DF-55, DF-56, and DF-65, Upgrading of DF-52 and modification of DF-66, and the proposed installation of a new conveyor system, loadout silos, and a storage dome. No other changes have been made at the facility. This permit amendment was public noticed. This facility is a synthetic minor source and remains assigned to the Coastal District – Brunswick Office for inspection and enforcement issues.