



ENVIRONMENTAL PROTECTION DIVISION

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NARRATIVE

TO: Hamid Yavari
FROM: Tracey Hiltunen
DATE: July 12, 2023

Facility Name: **Darling Ingredients Inc. – East Dublin**
AIRS No.: 175-00042
Location: East Dublin, GA (Laurens County)
Application #: 28914
Date of Application: June 15, 2023

Background Information

Darling Ingredients Inc. – East Dublin is a rendering plant located on 508 Highway 80 East, in East Dublin, GA. The rendering plant includes five process lines (three process lines capable of processing red meat or poultry, a feather line, and a blood processing line), a boiler plant, and a water treatment system. The facility processes inedible animal byproducts generated by the beef, swine, and poultry industries as well as spent restaurant cooking oils and trap grease. These raw materials are used to manufacture products such as meat and bone meal, poultry meal, blood meal, as well as tallow, yellow grease, and brown grease. The facility is currently a synthetic minor source with respect to Title V regulations. It operates under Air Quality Permit No. 2077-175-0042-S-05-0 issued on October 24, 2019, and Amendment No. 2077-175-0042-S-05-1 issued on December 22, 2022.

Purpose of Application

On June 16, 2023, the facility submitted SIP Application No. 28914 proposing to replace two venturi scrubbers CD-04A and CD-06 and two packed tower scrubbers CD-07B and CD-05 with one venturi scrubber CD-08A and two packed tower scrubbers CD-08B and CD-08C. The new venturi scrubber CD-08A has a larger capacity of 15,000 standard cubic feet per minute (scfm) compared to the existing 5,000 scfm capacity of venturi scrubbers CD-04A and CD-06.

Currently, all high intensity emissions are routed directly from the venturi scrubbers through a packed tower to the RTO prior to discharge to the atmosphere. If the RTO is down for maintenance, repair, etc., the high intensity emissions are discharged directly from the packed tower scrubber. With this permit modification, all high intensity emissions are routed through a centralized venturi scrubber CD-08A discharging to two packed tower scrubber CD-08B and CD-08C that will operate in series then to the RTO prior to discharge to the atmosphere. After this change, the facility can operate in one of these two scenarios:

1. “Normal” operation with flow from the venturi scrubber CD-08A to the first packed tower scrubber CD-08B, then to the second packed tower scrubber CD-08C, then to the RTO CD-04B, and then to the atmosphere.

2. “RTO Down” operation with flow from the venturi scrubber CD-08A to the first packed tower scrubber CD-8B, then to the second packed tower scrubber CD-08C, and then to the atmosphere.

Updated Equipment List

Emission Units			Associated Control Devices	
Source Code	Description	Installation Date	Source Code	Description
0001	Cleaver Brooks Boiler (33.48 MMBtu)	1994	--	--
0002	Cleaver Brooks Boiler (33.48 MMBtu)	1997	--	--
0005	Hurst Boiler (50.219 MMBtu) Low NOx Boiler	2010	--	--
0006	Victory Energy Boiler (50.219 MMBtu) Low NOx Boiler	2016	--	--
0007	Victory Energy Boiler (62.773 MMBtu) Low NOx Boiler	2019	--	--
RP01	Meat & Poultry Rendering Process Line 1		CD-08A* CD-08B* CD-08C* CD-04B CD-01C	Venturi Scrubber Packed Tower Scrubber Packed Tower Scrubber RTO Counter-Current Room Scrubber
RP02	Meat & Poultry Rendering Process Line 2		CD-08A* CD-08B* CD-08C* CD-04B CD-01C	Venturi Scrubber Packed Tower Scrubber Packed Tower Scrubber RTO Counter-Current Room Scrubber
RP05	Meat & Poultry Rendering Process Line 5		CD-08A* CD-08B* CD-08C* CD-04B CD-03	Venturi Scrubber Packed Tower Scrubber Packed Tower Scrubber RTO Cross Flow Scrubber
FP03	Feather Process Line 3		CD-03 CD-08B* CD-08C* CD-04B	Cross Flow Scrubber Packed Tower Scrubber Packed Tower Scrubber RTO
BP06	Blood Process Line 6	2019	CD-07A CD-08B* CD-08C* CD-04B CD-03	Venturi Scrubber Packed Tower Scrubber Packed Tower Scrubber RTO Cross Flow Scrubber
GEN1	Emergency Generator – Natural gas fired	2017	--	--
FL01	1,041 scfm Biogas Flare	2022	--	--

*proposed within current application

Emissions Summary

Current Facility-Wide Emissions (in tons per year)

Pollutant	Potential Emissions	Actual Emissions
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PM	19.56	3.97
PM ₁₀	21.61	3.97
PM _{2.5}	16.29	3.83
NO _x	99.5	13.9
SO ₂	99.5	50.5
CO	81.48	5.70
VOC	99.5	54.7
Max. Individual HAP	negligible	negligible
Total HAP	1.94	0.05
Total GHG (if applicable)	n/a	n/a

The facility is not claiming any changes in emissions for this modification. It is believed that this modification will decrease SO₂ emissions, however that has not been quantified at this time. Current facility emissions are taken from Application No. 28568 as submitted in September 2022.

Regulatory Applicability

The replacement of the scrubbers as proposed in the application will not change the applicability of the pertinent state and federal rules/standards. The new scrubbers are expected to comply with all the applicable rules/standards applicable to the existing scrubbers.

Permit Conditions

Permit conditions that have been modified or added in this permit amendment are discussed below.

Condition 4.1, which requires operation of the scrubbers and RTO when the associated process is in operation, has been updated to remove scrubbers CD-04, CD-06, CD-07B and CD-05 and add new scrubbers CD-08A, CD-08B, and CD-08C.

Condition 5.1, which contains monitoring requirements for the scrubbers and fuel use in the boilers, has been updated to remove scrubbers CD-07B and CD-05 and add new scrubbers CD-08B and CD-08C.

Conditions 7.13 and 7.14, which include recordkeeping and reporting requirements for the scrubbers, have been updated to remove scrubbers CD-04, CD-06, CD-07B and CD-05 and add new scrubbers CD-08A, CD-08B, and CD-08C.

New Conditions 7.28 and 7.29 require the written notifications of the startup of the new venturi scrubber and two packed tower scrubbers and the removal of the two existing venturi scrubbers and two packed tower scrubbers.

Toxic Impact Assessment

A toxic impact assessment is not required for this modification.

Summary & Recommendations

I recommend issuing Air Quality Permit No. 2077-175-0042-S-05-2 to Darling Ingredients Inc. - East Dublin to replace two venturi scrubbers CD-04A and CD-06 and two packed tower scrubbers CD-07B and CD-05 with one venturi scrubber CD-08A and two packed tower scrubbers CD-08B and CD-08C. This facility is a synthetic minor source and remains assigned to the SSCP for compliance and inspection purposes. A public advisory was issued and expired July 21, 2023. A public notice is not needed for this application since there are no changes to the process and no changes in emissions.