



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

SEP 04 2019

Mr. Jeffrey Ording
Facility Leader
Cargill Inc.
2306 Rochester Ave.
Kansas City, MO 64120

RE: New Source Review Permit Amendment - Permit Number: 1140C
Project Number: 2018-10-008; Installation Number: 095-2001

Dear Mr. Ording:

On October 19, 2018, The Air Pollution Control Program received your request to amend Permit 1140A. The request is for the following:

- Change the PM and PM₁₀ limits from grain loading rate (in grains per dry standard cubic foot, gr/dscf) and air flow rate (in dry standard cubic foot per minute, dscfm) to hourly emission rates (in pounds per hour, lb/hr).
- Remove the monthly cooling tower total dissolved solids (TDS) sampling requirement.

Included with this letter is your amendment. The special conditions of this permit supersede Special Conditions 9, 10, and 15 in Permit 1140A.

Permit 1140A included a list of emission units that are required to be controlled by baghouses/fabric filters or cyclones. Special Conditions 9 and 10 of Permit 1140A limits the PM and PM₁₀ emissions from these sources by limiting the PM and PM₁₀ grain loading (in gr/dscf) and their flow rates (in dscfm). The air flow limits are based on testing conducted at the facility in October of 2014. The purpose of the testing was for Cargill to establish the maximum air flow rates for each of the emission points. The flow rate limits are set at 10% higher than the flow rate determined in the 2014 test. Since testing had already been completed for grain loading as well as the flow rate for most of the emission units, Permit 1140A did not include compliance demonstration for these emission units.

When Operating Permit OP2017-017 was issued, it contained testing requirements for some of these emission units to ensure that the PM emission limits were not exceeded. The tests were performed in 2017 and results show that for some of the emission units, the flow rates exceeded the limits in Permit 1140A. The flow rate limits in Permit 1140A and the flow rates obtained during the tests in 2017 are given below in Table 1.

Table 1: Flow Rates Summary

Emission Point	Description	1140A Flow Limit (dscfm)	2017 Test Flow Result (dscfm)¹
109	7008 CY Meal Dryer/Cooler Cyclone	16,033	18,000
110	7008 CY Meal Dryer/Cooler Cyclone	16,903	17,000
111	7009 CY Meal Dryer/Cooler Cyclone	20,529	19,000
113	7007 DC Meal Storage Dust Collector	8,238	6,600
115	7014 DC Meal Truck Loadout Dust Collector	30,138	30,000
121	7010 CY Pellet Mill Cooler Cyclone	9,133	12,000
126	Cascade Dryer/Cooler	16,500	21,000

Note 1: 2017 flow rates rounded to the nearest 1,000, per stack testing report.

Since some of the limits in 1140A are exceeded, your facility requested that the flow rate limits and grain loading limits be converted into mass emission rates in lb/hr. If the mass flow rates were calculated from the flow rate limits and grain loading limits in Permit 1140A, then the netting analysis performed to avoid PSD for PM and PM₁₀ would not be affected since the netting analysis was performed using the mass rates calculated from the same method and values. Also, stack testing results from 2017, as given below in Table 2, showed that even at the higher flow rates, the mass emission rates (lb/hr) from the 2017 tests are below the mass emission rates as calculated from the limits in Permit 1140A. Therefore, your request to change the flow rate and grain loading limits in Permit 1140A to mass emission rates (lb/hr) was granted.

Table 2: Emission Rates

Emission Point	Description	¹1140A Mass Flow (lb/hr)	2017 Test Emission Rate Results (lb/hr)
109	7008 CY Meal Dryer/Cooler Cyclone	4.12	0.16
110	7008 CY Meal Dryer/Cooler Cyclone	2.03	0.16
111	7009 CY Meal Dryer/Cooler Cyclone	2.46	0.15
113	7007 DC Meal Storage Dust Collector	0.35	0.077
115	7014 DC Meal Truck Loadout Dust Collector	0.78	0.35
121	7010 CY Pellet Mill Cooler Cyclone	1.25	0.25
126	Cascade Dryer/Cooler	0.71	0.285

¹This value is calculated by multiplying the grain loading (gr/dscf) and the air flow rate (dscfm) and converting to the proper units.

Your installation submitted the TDS testing results for the cooling tower from July, 2017 to February, 2019, which are provided below in Table 3.

Table 3: TDS Results

Month	TDS Result (ppm)
7/2017	1,735
8/2017	2,380
9/2017	1,485
10/2017	1,406
11/2017	903
12/2017	448
1/2018	314
2/2018	190
3/2018	216
4/2018	262
5/2018	700
6/2018	1,528
7/2018	1,539
8/2018	1,540
9/2018	1,465
10/2018	1,323
11/2018	831
12/2018	196
1/2019	57
2/2019	127

The data shows that during the summer, the TDS is higher than the other months. The reason is that in the summer months, your facility needs to supplement the high purity boiler condensate water with city water that has a higher TDS. However, even during times of elevated TDS values, only one month in the time period has TDS value come close to the limit of 2,500 ppm. For all other months, the TDS values are all less than 70% of the limit. Furthermore, potential emissions are based on a consecutive 12-month period and any potential emissions that would have been calculated for the facility would have been based on the TDS limit of 2,500 ppm. The data shows that even with the elevated TDS values during the summer, the 12-month TDS average would still be much less than 2,500 ppm. Therefore, the potential emissions calculated for the facility as well as the results from the netting analysis would not have been affected. Due to these reasons, the monthly TDS testing required in Permit No. 1140A has been eliminated.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.ao.mo.gov/ahc.

Mr. Ording
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If you have any questions regarding this amendment, please do not hesitate to contact Chia-Wei Young, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

A handwritten signature in cursive script that reads "Kendall B. Hale".

Kendall B. Hale
Permits Section Chief

KBH:cya

Enclosures

c: Kansas City Regional Office
PAMS File: 2018-10-008

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (3)(E). "Conditions required by permitting authority."

Cargill Inc.
Jackson County, S28/33, T50N, R33W

1. **Superseding Condition**
The conditions of this permit supersede Special Conditions 9, 10, and 15 in the previously issued Construction Permit 1140A issued by the Air Pollution Control Program.
2. **Particulate Matter (PM) and Particulate Matter Less Than Ten Microns in Diameter (PM₁₀) Emission Limits**
 - A. Cargill, Inc. shall not emit PM₁₀ and PM at a rate exceeding the values listed in Table 1.

Table 1: PM and PM₁₀ Emissions Limits

Emission Point Number	Emission Point Description	Emission Unit Number	Emission Unit Description	Control Device ID	PM ₁₀ Limit (lb/hr)	PM (lb/hr)
EP03	Elevator Dust Collector	EU0030	Elevator Conveyor Transfer of Soybean to/from Concrete Soybean Storage Silo	2001DC	0.7385	0.7385
		EU0040	Elevator Conveyor Transfer of Soybean to/from Steel Soybean Storage Tanks			
		EU0500(a)	Whole Bean Leg 1			
		EU0500(b)	Whole Bean Scale			
EP100	Pre-Cleaning Dust Collector	EU0500(c)	Whole Bean Cleaner	7001DC	0.1306	0.1306
		EU0500(d)	Whole Bean Leg 2			
		EU0500(e)	Whole Bean Bin			
		EU0500(f)	Whole Bean Aspirator			
		EU0500(g)	VSC Feed Leg			
		EU0500(h)	Jet Dryer Feed Leg			
EP101	VSC Cyclone #1	EU0510	Vertical Seed Conditioner	7001CY	1.5289	1.5289
EP102	VSC Cyclone #2			7002CY	1.3015	1.3015
EP105	Flaker Aspiration Cyclone	EU0590	Flaker Rollers	7005CY	1.1681	1.1681

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

EP106	Flaker Aspiration Cyclone	EU0600	Flaker Rollers	7006CY	1.2407	1.2407
EP107	Hull Grinding Bag Filter	EU0610	Hull Grinder	7005DC	0.3585	0.3585
		EU0720	Hull Receiver			
		EU580	Secondary Dehulling			
EP108	Meal Dryer/Cooler Scrubber	EU0620	Meal Dryer/Cooler #1	7001 Scrubber	0.7154	0.7154
		EU0630	Meal Dryer/Cooler #2			
EP109	Meal Dryer/Cooler Cyclone	EU0640	Meal Dryer/Cooler #3	7007CY	4.1228	4.1228
EP110	Meal Dryer/Cooler Cyclone	EU0650	Meal Dryer/Cooler #4	7008CY	2.0284	2.0284
EP111	Meal Dryer/Cooler Cyclone	EU0660	Meal Dryer/Cooler #5	7009CY	2.4635	2.4635
EP112	Meal Grinding Dust Collector	EU0670	Meal Grinding	7006DC	0.6693	0.6693
EP113	Meal Storage Dust Collector	EU0680	Meal Storage	7007DC	0.3531	0.3531
EP114	Meal Rail Loadout Dust Collector	EU0690	Meal and Hulls Rail Loadout	7008DC	0.0494	0.0494
EP115	Meal Truck Loadout Dust Collector	EU0790	Meal and Hulls Truck Loadout	7014DC	0.7750	0.7750
EP116	Prep Hull Storage Tank Bin Vent Filter	EU0760	Prep Hull Storage Tank	7015DC	0.0926	0.0926
EP117	Hull Storage Tank Bin Vent Filter	EU0700	Hull Storage Tank	7009DC	0.0926	0.0926
EP118	Meal Flow Additive Tank Bin Vent Filter	EU0710	Meal Flow Additive Tank	7010DC	0.0463	0.0463
EP119	Truck Receiving Dust Collector	EU0740	Truck Receiving	7011DC	1.2576	1.2576
EP120	Rail Receiving Dust Collector	EU0750	Rail Receiving	7012DC	0.6724	0.6724
EP121	Pellet Mill Cooler Cyclone	EU0770	Pellet Mill Cooler	7010CY	1.2525	1.2525
EP122	Pellet Storage Tank Bin Vent Filter	Pellet Storage Tank	Pellet Storage Tank	7013DC	0.0926	0.0926
EP123	Pods Grinder Filter	EU0800	Pods Grinder	7016DC	0.1541	0.1541
EP126	Air Regulator Box	EU0540	Cascade Dryer #1	7004DC	0.7071	0.7071
		EU0550	Cascade Dryer #2			