



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Cargill Inc., Bloomington, Illinois

FROM: David Sutlin, Environmental Engineer
AECAB (MN/OH)

THRU: Brian Dickens, Section Supervisor
AECAB (MN/OH)

TO: File

BASIC INFORMATION

Facility Name: Cargill Inc.

Facility Location: 115 South Euclid Avenue, Bloomington, Illinois 61701

Date of Inspection: March 7, 2023

EPA Inspector(s):

1. David Sutlin, Environmental Engineer
2. Brittany Cobb, Environmental Engineer

Other Attendees:

1. Scott Bruemmer, EHS Coordinator, Cargill
2. Nathan Wallace, Trinity Consultants (by phone)
3. Austin Madsen, Process Engineer, Cargill
4. Rafael Ruas, Regional EHS Lead, Cargill

Contact Email Address: Scott_Bruemmer@cargill.com

Purpose of Inspection: Identify potentially unreported point-source emissions of VOC using optical gas imaging

Facility Type: Vegetable oil processing

Facility Name: Cargill Inc.
Facility Location: 115 South Euclid Avenue, Bloomington, Illinois 61701
Date of Inspection: March 7, 2023

Regulations Central to Inspection: Illinois State Implementation Plan; currently, meal grinding, meal storage, meal loadout, white flake storage and white flake loadout do not have VOC limits in the permit.

Arrival Time: 8:45 AM

Departure Time: 1:45 PM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☐ Provided Small Business Resource Information Sheet
- ☒ Small Business Resource Information Sheet not provided. Reason: Not a Small Business
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Scott Bruemmer, Austin Madsen, and Nathan Wallace unless otherwise noted.

Process Description:

Soybeans are unloaded, graded, and run through a dryer. Next, the beans are cracked, conditioned with steam, and formed into flakes. 20 percent of the flakes are then expanded using steam injection. Next the flakes are washed in hexane solvent in order to extract the oil. At this point, flakes intended for animal feed are desolventized using steam in the desolventizer-toaster (DT). During this process, the flakes absorb some moisture from the steam, and are next run through the dryer-cooler until they are reduced to nine to ten percent moisture content. Next the flakes are ground into meal using three hammer mills and stored in large, vented bins. Flakes intended to be converted to a high protein additive product are desolventized quickly through the flash desolventizing system (FDS) using higher temperatures and vacuum pressure. They are then stored in large bins, without being ground into meal. The oil extracted from the beans is distilled in stages, also utilizing vacuum pressure. Hexane from the desolventizing process and distillation process is condensed for reuse, with any residual fumes controlled by a mineral oil absorber.

Staff Interview:

The facility operates 24 hours per day, five days per week. The most recent emissions calculations included facility-wide VOC emissions of approximately 400 tons per year. The extraction process, as permitted, includes the dryer-cooler, but does not include meal grinding. The facility is not subject to any source-wide VOC limit. In terms of the final products, the

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soybean oil is tested in every rail car for hexane, and is under 5 ppm. The meal product is under 100 ppm, and white flakes product is 100-200 ppm.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:

Using an infrared, optical gas imaging camera, EPA recorded a video of possible VOC emissions escaping the top of the white flakes day tank, and a second video of possible VOC emissions at the exhaust of the white flakes, truck loadout dust control system. EPA also observed and recorded digital video of dust exiting one of the truck loadout enclosures.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

Requested documents:

- Daily pressure drop readings for all baghouses
- Copy of the latest version of the facility's CAM Plan(s)
- Copy of the latest compliance demonstration plan, pursuant to 40 CFR Subpart GGGG
- Last 4 semi-annual air compliance deviation reports
- Records of all Method 22 readings since January 1, 2022
- 2021 and 2022 emission calculation Excel spreadsheets

DIGITAL SIGNATURES

Report Author: **DAVID SUTLIN**  Digitally signed by DAVID SUTLIN
Date: 2023.05.03 20:41:18 -05'00'

Section Supervisor: **Brian Dickens**  Digitally signed by Brian Dickens
Date: 2023.05.04 06:31:06 -05'00'

Facility Name: Cargill Inc.
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APPENDICES AND ATTACHMENTS

- Appendix A: Digital Image and Video Logs

Facility Name: Cargill Inc.
Facility Location: 115 South Euclid Avenue, Bloomington, Illinois 61701
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APPENDIX A: DIGITAL IMAGE LOG

1. Inspector Names: David Sutlin and Brittany Cobb	2. Archival Record Location: Region 5 Electronic Record Center
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Image Number	File Name	Date and Time	Description of Image
1	MOV_3041.mp4	2023:03:07 12:58	FLIR video: white flake day tank
2	P3070143.JPG	2023:03:07 13:10:38	Truck loadout
3	P3070144.JPG	2023:03:07 13:12:13	Truck loadout
4	P3070145.JPG	2023:03:07 13:12:39	Truck loadout
5	P3070146.JPG	2023:03:07 13:15:22	Truck loadout
6	P3070147.JPG	2023:03:07 13:15:29	Truck loadout
7	P3070141.MOV	2023:03:07	Dust from truck loadout
8	P3070142.MOV	2023:03:07	Dust from truck loadout
9	P3070148.MOV	2023:03:07	Dust from truck loadout
10	MOV_3042.mp4	2023:03:07 13:53	FLIR video: white flake truck loadout exhaust
11	P3070149.JPG	2023:03:07 14:00:58	Meal dryer stack