# Air Quality Effects Analysis (AQEA)
# for
# Agristo North Dakota LLC

# Agristo Grand Forks Processing Facility
# Grand Forks, ND

Associated with Permit No.:

ACP-18316 v1.0

North Dakota Department of Environmental Quality

*Division of Air Quality*

| | |
|---|---|
| **Date of Draft Analysis:**<br>April 13, 2026 | **Dates of Public Comment Period:**<br>April 15, 2026 to May 15, 2026 |
| **Date of Final Analysis:**<br>[Reserved] | **Update Post Comment Period:**<br>[Reserved] |
| **Analysis By:**<br><br>Eric Yablonski<br>Environmental Engineer<br>Division of Air Quality | **Reviewed By:**<br><br>Rhannon Thorton<br>Environmental Scientist<br>Division of Air Quality |

## 1. Project Description

Agristo North Dakota LLC (Agristo) submitted a Permit to Construct (PTC) application to the North Dakota Department of Environmental Quality – Division of Air Quality (Department) on September 18, 2025. The application was for the construction of a new potato processing facility in Grand Forks, North Dakota (Project). The Agristo Grand Forks Processing Facility (facility) will process raw potatoes and distribute them as various commercial products. The Project emission units are found in Table 1-1 of ACP-18316 v1.0.

## 2. Permit Description

The proposed Project was classified as a true minor source under the Prevention of Significant Deterioration (PSD) program and an area HAP (hazardous air pollutants) source. Potential to emit (PTE) calculations showed that the facility is expected to be below PSD and Title V major source thresholds without synthetic restrictions to emissions or operations. Following Project completion, the facility will not be classified as a Title V major source.

After a complete review of the proposed Project (see Section 3) indicating that the facility is expected to comply with applicable federal and state air pollution rules and regulations, the Department recommends issuance of a PTC for the Agristo Grand Forks Processing Facility.

## 3. Facility Emission Profile

For all emission units associated with the Project, Table 1 lists the potential to emit (PTE) for all criteria air pollutants, total HAP, and largest individual HAP.

*Table 1 – Project PTE Summary. All units are in tons per year (tpy).* [A]

| Emission Unit Description | Emission Unit (EU) | Emission Point (EP) | $NO_X$ | CO | $SO_2$ | VOC | PM | $PM_{10}$ | $PM_{2.5}$ | Total HAP | n-Hexane (Largest HAP) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Line 1 french fry fryer | F-1 | 1 | 0.0 | 0.0 | 0.0 | 0.3 | 9.0 | 9.0 | 9.0 | 0.0 | 0.0 |
| Line 1A formed product fryer | F-2 | 1 | 0.0 | 0.0 | 0.0 | 0.1 | 2.9 | 2.9 | 2.9 | 0.0 | 0.0 |
| Direct flame thermal oxidizer (NSPS Dc) | TO | 1 | 9.3 | 15.7 | 0.1 | 0.1 | 1.4 | 1.4 | 1.4 | 0.4 | 0.4 |
| Steam boiler 1 (NSPS Dc) | BLR-1 | 2 | 14.2 | 23.8 | 0.2 | 1.6 | 2.2 | 2.2 | 2.2 | 0.6 | 0.5 |
| Steam boiler 2 (NSPS Dc) | BLR-2 | 3 | 14.2 | 23.8 | 0.2 | 1.6 | 2.2 | 2.2 | 2.2 | 0.6 | 0.5 |
| Emergency fire pump engine (NSPS IIII, MACT ZZZZ) | FWP-1 | 4 | 0.5 | 0.6 | 0.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Emergency generator (NSPS IIII, MACT ZZZZ) | G-1 | 5 | 0.7 | 0.8 | 0.3 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Office water heater | HTR-1 | 6 & 7 | 3.0 | 2.5 | 0.0 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 |
| Production line 1 makeup air unit | MAU-1 | FUG | 12.5 | 10.5 | 0.1 | 0.7 | 0.9 | 0.9 | 0.9 | 0.2 | 0.2 |
| Production lines 1A/1B makeup air unit | MAU-2 | FUG | 12.5 | 10.5 | 0.1 | 0.7 | 0.9 | 0.9 | 0.9 | 0.2 | 0.2 |
| Packaging makeup air unit 1 | MAU-3 | FUG | 5.6 | 4.7 | 0.0 | 0.3 | 0.4 | 0.4 | 0.4 | 0.1 | 0.1 |
| Packaging makeup air unit 2 | MAU-4 | FUG | 5.2 | 4.3 | 0.0 | 0.3 | 0.4 | 0.4 | 0.4 | 0.1 | 0.1 |
| Receiving makeup air unit | MAU-5 | FUG | 2.3 | 1.9 | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 |
| Paved road fugitive emissions | FUG | FUG | 0.0 | 0.0 | 0.0 | 0.0 | 8.3 | 1.7 | 0.4 | 0.0 | 0.0 |
| Insignificant activities | IA | IA | 2.4 | 2.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 |
| **Total (without Fugitives):** | | | **41.9** | **67.3** | **1.0** | **4.2** | **17.9** | **17.9** | **17.9** | **1.5** | **1.5** |
| **Total (with Fugitives):** | | | **82.3** | **101.2** | **1.2** | **6.4** | **29.2** | **22.6** | **21.4** | **2.3** | **2.2** |

Table 1 abbreviations are as follows: filterable and condensable particulate matter (PM), PM with an aerodynamic diameter less than or equal to 10 microns ($PM_{10}$), PM with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$), sulfur dioxide ($SO_2$), oxides of nitrogen ($NO_X$), carbon monoxide (CO), volatile organic compounds (VOC), and hazardous air pollutants (HAP) as defined in Section 112(b) of the Clean Air Act.

Table 2 details the PSD and Title V applicability, showing that the Project is not a major source.

*Table 2 – PSD and Title V Major Source Applicability. All units are in tpy.*

| | **$NO_X$** | **CO** | **$SO_2$** | **VOC** | **PM** | **$PM_{10}$** | **$PM_{2.5}$** | **Total HAP** | **n-Hexane (Largest HAP)** |
|---|---|---|---|---|---|---|---|---|---|
| Project/Facility PTE [A] | 41.9 | 67.3 | 1.0 | 4.2 | 17.9 | 17.9 | 17.9 | 1.5 | 1.5 |
| PSD Major Source Thresholds [B] | 250 | 250 | 250 | 250 | 250 | 250 | 250 | N/A | N/A |
| PSD Major Source? | **No** | **No** | **No** | **No** | **No** | **No** | **No** | N/A | N/A |
| Title V Threshold | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 25 | 10 |
| Title V Major Source? | **No** | **No** | **No** | **No** | **No** | **No** | **No** | **No** | **No** |

[A] Fugitive emissions were not included for the purposes of determining PSD major source applicability because the facility is not a listed source category per 40 CFR 52.21(b)(1)(iii).

[B] The PSD Major source threshold is 250 TPY because the source is not a listed source category per 40 CFR 52.21(b)(1)(i)(A) and (B).

## 4. Rules Analysis

This section details the potential applicability and expected compliance status of each rule under the North Dakota Administrative Code (NDAC) 33.1-15—Air Pollution Control Rules.

A. NDAC 33.1-15-01 – General Provisions:

This chapter covers the following topics: entry onto premises - authority, variances, circumvention, severability, land use plans and zoning regulations (only to provide air quality information), measurement of air contaminants, shutdown and malfunction of an installation - requirements for notification, time schedule for compliance, prohibition of air pollution, confidentiality of records, enforcement, and compliance certifications.

*Applicability and Expected Compliance*

Based on the review of the information provided, the facility will comply with all applicable sections of this rule.

B. NDAC 33.1-15-02 – Ambient Air Quality Standards:

This chapter requires that the facility complies with the North Dakota and Federal Ambient Air Quality Standards (AAQS) and the "Criteria Pollutant Modeling Requirements for a Permit to Construct" guidelines.[1]

*Applicability and Expected Compliance*

The Project PTE triggered the modeling thresholds listed in Department guidance;[1] therefore, preconstruction modeling for the Project was required. The results of the preconstruction modeling demonstrate that the Project PTE is not expected to cause or significantly contribute to nonattainment of the AAQS. See the Department's Air Quality Impacts Analysis (AQIA) associated with this permitting action, "ACP-18316 v1.0_AQIA," for details on air dispersion modeling.

C. NDAC 33.1-15-03 – Restriction of Emission of Visible Air Contaminants:

This chapter requires all non-flare emission sources at new facilities to comply with an opacity limit of 20% except for one six-minute period per hour when 40% opacity is permissible. For all flare emission sources, the limits are 20% and 60% respectively. Fugitive emissions must not exceed 40% for more than one six-minute period per hour. The chapter establishes exceptions to opacity requirements and that compliance shall be determined using EPA Reference Method 9 or 22.

*Applicability and Expected Compliance*

[1] See October 6, 2014, Criteria Pollutant Modeling Requirements for a Permit to Construct. Available at: https://www.deq.nd.gov/publications/AQ/policy/Modeling/Criteria_Modeling_Memo.pdf

Based on Department experience with similar emission units, the facility is expected to comply with the 20%/40% opacity limit without additional controls.

D. NDAC 33.1-15-04 – Open Burning:

No person may cause, conduct, or permit open burning of refuse, trade waste, or other combustible material—as part of a salvage operation or otherwise—except as provided under NDAC 33.1-15-04-02 or 33.1-15-10-02.

*Applicability and Expected Compliance*

No open burning operations are permitted unless approved in advance by the Department.

E. NDAC 33.1-15-05 – Emissions of Particulate Matter Restricted:

This chapter establishes particulate matter emission limits, restrictions, and measurement methods for industrial processes, fuel burning equipment used for indirect heating (where emissions do not interact with process materials), waste incinerators, and crematoriums.

*Applicability and Expected Compliance*

The potato fryers (EUs F-1 & F-2) are expected to emit PM but are expected to be adequately controlled by the thermal oxidizer (EU TO). Initial testing will be conducted to confirm this.

The PM emissions from the diesel-fired engines (EUs FWP-1 & G-1) are subject to NSPS IIII, which requires more restrictive limits than this chapter; compliance with NSPS IIII is used to demonstrate compliance with this chapter.

F. NDAC 33.1-15-06 – Emissions of Sulfur Compounds Restricted:

This chapter applies to any installation in which $SO_2$ emissions are substantially due to the sulfur content of burned fuel used primarily to produce heat. This chapter establishes requirements for measurement methods, continuous emission monitoring, reporting, and recordkeeping. This chapter is not applicable to installations which are subject to an $SO_2$ emission limit under NDAC 33.1-15-12 (NSPS, see Section 4.L) or which burn pipeline quality natural gas.

*Applicability and Expected Compliance*

Natural gas-fired equipment associated with the Project (EUs TO, BLR-1, BLR-2, HTR-1, & MAU-1 through MAU-5) shall burn pipeline quality natural gas containing no more than 2 grains of sulfur per 100 standard cubic feet. Diesel-fired equipment (EUs FWP-1 & G-1) shall be fired on ultra-low sulfur diesel (ULSD) containing no more than 15 ppm sulfur. As a result, the facility is exempt from the requirements of this chapter.

G. NDAC 33.1-15-07 – Control of Organic Compounds Emissions:

This chapter establishes requirements for the construction of organic compound facilities related to closed-vent systems, control devices, and seals. This chapter requires organic

compound vapors to be controlled by a continuously burning pilot flare or other equally effective control device. This chapter also requires hydrogen sulfide ($H_2S$) to be controlled effectively.

*Applicability and Expected Compliance*

The requirements of this chapter are not applicable since the facility is not expected to have significant organic compound emissions.

H. NDAC 33.1-15-08 – Control of Air Pollution from Vehicles and Other Internal Combustion Engines:

This chapter restricts the operation of internal combustion engines which emit, from any source, unreasonable and excessive smoke, obnoxious or noxious gas, fumes or vapor. This chapter also prohibits the removal or disabling of motor vehicle pollution control devices.

*Applicability and Expected Compliance*

The engines (EUs FWP-1 & G-1) are subject to opacity requirements under NDAC 33.1-15-03-02 and are subject to the requirements of NSPS IIII. As a result of expected compliance with these provisions, the engines are not expected to emit any unreasonable and excessive smoke, obnoxious or noxious gases, fumes, or vapor. Should vehicles or other internal combustion engines be used at the facility, compliance with all applicable requirements of this chapter is expected.

I. NDAC 33.1-15-09 – [repealed]

J. NDAC 33.1-15-10 – Control of Pesticides:

This chapter provides restrictions on pesticide use, disposal, and the proper handling of empty pesticide containers.

*Applicability and Expected Compliance*

The facility is subject to this chapter and is expected to comply with all applicable requirements should pesticides be used.

K. NDAC 33.1-15-11 – Prevention of Air Pollution Emergency Episodes:

This chapter requires facilities to develop abatement strategy plans for use during an air pollution episode—as determined by the Department—to prevent emergencies and adverse effects to human health.

*Applicability and Expected Compliance*

When an air pollution episode is declared by the Department, the facility shall comply with the requirements in this chapter.

L. NDAC 33.1-15-12 – Standards of Performance for New Stationary Sources (40 CFR 60):

This chapter adopts most of the New Source Performance Standards (NSPS) and appendices under 40 CFR 60 as of July 1, 2019, to which the facility is subject:

1) NSPS A – General Provisions

This subpart is applicable to any facility in which an NSPS applies and contains general requirements for control devices and work practices, notification, performance tests, monitoring, reporting and recordkeeping.

*Applicability and Expected Compliance*

The facility will comply with all requirements of this subpart. In addition, any physical or operational changes to the facility after it is built will be evaluated with respect to this subpart and others.

2) NSPS Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

The subpart applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989, and that has a maximum design heat input capacity between 2.9 and 29 megawatts (MW) (10-100 million British thermal units per hour [MMBtu/h]). This subpart establishes standards and requirements, compliance, performance test methods, emission monitoring, reporting, and recordkeeping.

*Applicability and Expected Compliance*

The facility steam boilers (EUs BLR-1 & BLR-2) are subject to this subpart. The steam boilers will comply by exclusively firing pipeline quality natural gas (defined in Section 4.F) and maintaining fuel records. Other fuel burning equipment at the facility is not subject to this subpart since the equipment does not meet the definition of a steam generating unit.

The direct fired thermal oxidizer (EU TO) is subject to this subpart. The TO is an adiabatic thermal incineration chamber with a natural gas burner and waste heat boiler for the production of saturated steam. According to 40 CFR 60.41c, a "steam generating unit is a device that combusts any fuel and produces steam or heats water or heats any heat transfer medium." The TO has a waste heat recovery boiler that generates steam; therefore, this combined system acts as a steam generating unit. Since the TO utilizes only natural gas as a fuel source, NSPS Dc applicable regulations are limited to reporting and recordkeeping (40 CFR 60.48c).

3) NSPS IIII – Standards of Performance for Stationary Compressor Ignition Internal Combustion Engines

This subpart applies to stationary compression ignition internal combustion engines that commence construction after July 11, 2005. Engines are categorized based on usage and size. This subpart establishes emission standards and requirements for fuel, compliance, testing, monitoring, reporting, and recordkeeping.

*Applicability and Expected Compliance*

The emergency fire pump engine (EU FWP-1) and emergency generator (EU G-1) have maximum ratings of 422 and 540 horsepower respectively and are subject to this subpart. The facility will comply by operating NSPS IIII certified engines. Under 40 CFR 60.4207, the engines will burn ULSD to meet fuel requirements. An hour meter will be installed on each engine to track hours of operation. The facility will operate and maintain the engines per manufacturer specifications and comply with the applicable notification, reporting, and recordkeeping requirements under 40 CFR 60.4214.

M. NDAC 33.1-15-13 – Emission Standards for Hazardous Air Pollutants (40 CFR 61):

This chapter adopts most of the National Emission Standards for Hazardous Air Pollutants (NESHAP) and appendices under 40 CFR 61 as of July 2, 2010.

*Applicability and Expected Compliance*

The facility does not appear to have any applicable requirements under this chapter.

N. NDAC 33.1-15-14 – Designated Air Contaminant Sources, Permit to Construct, Minor Source Permit to Operate, Title V Permit to Operate:

This chapter designates air contaminant sources that are required to obtain a PTC and a Permit to Operate (PTO) and the requirements for permits of various types, including public comment.

*Applicability and Expected Compliance*

The facility submitted an application and has met all requirements necessary to obtain a PTC. Once the facility completes construction, a facility inspection will be performed by the Department. Pending a satisfactory facility inspection, the facility will be issued a permit to operate by the Department.

O. NDAC 33.1-15-15 – Prevention of Significant Deterioration of Air Quality (40 CFR 52.21):

This chapter adopts the federal provisions of the PSD program (40 CFR 52.21) as of January 1, 2019. A facility is subject to PSD review if it is classified as a "major stationary source" or undergoes a "major modification" as defined by 40 CFR 52.21(b)(1-2). Major stationary sources are either: (1) facilities which fall under one of the specified source

categories and the PTE exceeds 100 tpy of any NSR pollutant or, (2) facilities that do not fall under a specified category and the PTE exceeds 250 tpy of any NSR pollutant.

*Applicability and Expected Compliance*

The facility does not fall under one of the specified "major stationary source" categories under 40 CFR 52.21(b)(1)(i)(A), making it subject to a PSD threshold of 250 tpy. Since the Project is not considered a major modification and the PTE is below 250 tpy for all NSR pollutants as shown in Table 2 (excluding fugitive emissions), the facility is not subject to PSD review.

P. NDAC 33.1-15-16 – Restriction of Odorous Air Contaminants:

This chapter restricts the discharge of objectionable odorous air contaminants which measure seven odor concentration units or greater outside the property boundary. This chapter addresses emissions of $H_2S$. This chapter also establishes the method of measurement using certified inspectors, scentometers, and other approved instruments.

*Applicability and Expected Compliance*

Based on Department experience with sources having similar emission units, processes, and low $H_2S$ concentrations, the facility is expected to comply with this chapter without additional controls. Any odor-related complaints received by the Department will be investigated and resolved in accordance with this chapter.

Q. NDAC 33.1-15-17 – Restriction of Fugitive Emissions:

This chapter restricts PM and gaseous fugitive emissions that would violate Chapters 2 (AAQS), 3 (visible emissions), 15 (PSD), 16 (odor), or 19 (visibility), providing suggested abatement measures.

*Applicability and Expected Compliance*

The facility is required to take reasonable precautions to limit fugitive emissions in violation of the above referenced NDAC chapters.

R. NDAC 33.1-15-18 – Stack Heights:

This chapter restricts the use of stack heights above good engineering practices (GEP) and dispersion techniques to affect pollutant concentrations in the ambient air as defined by 40 CFR 51.100(hh-kk). Stack heights in exceedance of GEP are permissible if they undergo a demonstration study which is made available for review by the Department and the public.

*Applicability and Expected Compliance*

Modeling was conducted in accordance with Department modeling guidance[1] to verify that minimum stack height requirements would provide adequate dispersion (see Table 5-1 of ACP-18316 v1.0 for minimum stack height requirements).

S. NDAC 33.1-15-19 – Visibility Protection:

This chapter requires new major stationary sources or major modifications[2] to demonstrate the emissions will not cause or contribute to adverse impact on visibility in federal Class I areas. This chapter establishes requirements for visibility impact analysis, visibility models, notification, review by federal land managers, public participation, and visibility monitoring.

*Applicability and Expected Compliance*

The facility is not a major source; therefore, the requirements of this chapter do not apply.

T. NDAC 33.1-15-20 – Control of Emissions from Oil and Gas Well Production Facilities:

This chapter regulates emissions from oil and gas well production facilities, requiring operators to register new wells and report gas composition changes. It establishes PSD applicability for major sources and mandates compliance with air quality standards for pollutants like sulfur dioxide and hydrogen sulfide.

*Applicability and Expected Compliance*

The facility is not an oil or gas well facility and is therefore not subject to the requirements of this chapter.

U. NDAC 33.1-15-21 – Acid Rain Program:

This chapter adopts the acid rain provisions under 40 CFR 72, 75, & 76 and appendices as of January 1, 2012.

*Applicability and Expected Compliance*

The facility is not subject to the acid rain provision since it is not an electric utility.

V. NDAC 33.1-15-22 – Emissions Standards for Hazardous Air Pollutants for Source Categories [40 CFR 63 a.k.a. MACT (Maximum Achievable Control Technology)]:

This chapter adopts most of the MACT standards and appendices under 40 CFR 63 as of July 1, 2019.

1) MACT A – General Provisions

This subpart is applicable to any facility to which a MACT standard applies and contains general requirements for control devices and work practices, notification, performance tests, monitoring, reporting and recordkeeping.

[2] Chapter 19 applies to a "new major stationary source" or "major modification" as defined in NDAC 33.1-15-15-01.

*Applicability and Expected Compliance*

The facility's potential HAP emissions (see Table 1) are less than 10 tpy of any single HAP and less than 25 tpy for combined HAP, so the facility is an area (minor) source of HAP.[3] The facility will comply with all requirements of this subpart.

2) MACT ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

This subpart applies to stationary reciprocating internal combustion engines (RICE) at major and area sources of HAP, establishing HAP emission and operating limits and requirements for compliance, testing, reporting, and recordkeeping.

*Applicability and Expected Compliance*

The requirements of this subpart are met by complying with the requirements of NSPS IIII. The Department has not adopted the area source provisions of this subpart per NDAC 33.1-15-22-03. All documentation shall be sent to US EPA Region 8.

3) MACT JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

This subpart applies to industrial, commercial, and institutional boilers located at area sources of HAP, establishing HAP emission limits, work practice standards, and requirements for compliance.

*Applicability and Expected Compliance*

The facility steam boilers (EUs BLR-1 & BLR-2) are natural gas fired boilers; therefore, they are exempt from this subpart under 40 CFR 63.11195(e).

The process heater (EU HTR-1) and waste heat boiler (EU TO) are excluded from the definition of "boiler" in the rule and are therefore not subject to this subpart.

W. NDAC 33.1-15-23 – Fees:

This chapter establishes a filing fee of $325 for PTC applications, plus any additional fees based on actual processing costs assessed upon issuance of the draft PTC. This chapter also requires an annual PTO fee for Title V major and minor sources and well registrations.

*Applicability and Expected Compliance*

The applicant has paid the $325 filing fee, and there are no additional fees associated with this permit process.

[3] 40 CFR 63.2 "Major Source"

X. NDAC 33.1-15-24 – Standards for Lead-Based Paint Activities:

This chapter establishes standards and requirements for the accreditation, notification, and fees of procedures, training programs, certification, and licensing for individuals and firms engaged in lead-based paint activities.

*Applicability and Expected Compliance*

The facility will not perform any lead-based paint activities and is therefore not subject to this chapter.

Y. NDAC 33.1-15-25 – Regional Haze Requirements (40 CFR 51.308):

This chapter establishes requirements for stationary sources (which were in existence between 1962 and 1977) which have the potential to "contribute to visibility impairment" in Class I Federal areas, as defined by 40 CFR 51.301, to implement best available retrofit technology. In addition, existing stationary sources or groups of sources are required to implement emission reduction measures to make reasonable progress toward North Dakota's reasonable progress goals established in accordance with 40 CFR 51.308 at the discretion of the Department.

*Applicability and Expected Compliance*

The facility is a new minor stationary source and is therefore not subject to this chapter.