

Technical Support Document
Notice of Construction Approval Order No. 26AQ-E009
Lamb Weston, Inc. – Pasco Plant
AQPID No. A0210021
Pasco, WA

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1. Project Summary

Lamb Weston, Inc. – Pasco Plant (the source) is a potato processor classified as a synthetic minor 80 (SM80) for Volatile Organic Compounds with multiple existing and new emissions unit(s). This review is for updates to their wastewater treatment system including a new 8.23 MMBtu/hour boiler, flare, anaerobic treatment tanks, and additional control system for odorous compounds.

An initial Notice of Construction (NOC) application dated July 23, 2025, was submitted by Lamb Weston, Inc. – Pasco Plant for the Installation of Advanced Wastewater Treatment Facilities project. The Washington State Department of Ecology (Ecology) reviewed the initial application and found it incomplete per Washington Administrative Code (WAC) 173-400-111 on August 6, 2025. Amended NOC applications were received by Ecology on September 30, 2025, through June 1, 2026, and found to be complete on June 26, 2026.

2. Application Processing

a. Public Notice

Due to anticipated public interest, Ecology scheduled a 30-day comment period August 24, 2026, through September 28, 2026. Legal notices were posted in English and Spanish in the Tri-City Herald. Public notices were posted in English and Spanish on Ecology's website. Any comments received during the comment period will be included in Attachment B.

Resources used to determine outreach:

Department Of Health Disparities map: [Information by Location | Washington Tracking Network \(WTN\)](#)

Washington GIS map: [Limited English Proficiency Application \(arcgis.com\)](#)

b. State Environmental Policy Act (SEPA)

Franklin County issued a determination of non-significance (DNS) for this project on June 18, 2025.

3. Applicable Regulations

a. State Regulations

i. Minor New Source Review Applicability

Per WAC 173-400-110, an NOC application and an order of approval must be issued by the permitting authority prior to the establishment of a new source or modification.

As stated in the NOC application and consistent with Ecology's review, the boiler, flare and reactors are being constructed for this project and therefore are subject to minor new source review (NSR).

A. Exempt Equipment

There are emergency generators that will be installed with this project with aggregate brake horsepower (bhp) that is less than the exemption threshold of 500 bhp.

B. Potential to Emit (Potential Emissions)

The potential emissions (based on uncontrolled units running 8760 hours per year) from the project are greater than the exemption levels listed under WAC 173-400-110(5) as shown below in Tables 1 and 2 (in bold).

Table 1. Potential emissions for pollutants listed under WAC 173-400-110(5), versus the Minor NSR Exemption Levels

Pollutant	New Units (tons/year)	Minor NSR Exemption (tons/year)
Carbon Monoxide (CO)	11.3	5.0
Lead (Pb)	4.1E-05	0.005
Nitrogen Oxides (NO _x)	4.31	2.0
PM ₁₀	0.62	0.75
PM _{2.5}	0.62	0.5
Total Suspended Particulates (TSP)	0.62	1.25
Sulfur Dioxide (SO ₂)	74.3	2.0
Volatile Organic Compounds, total (VOC)	7.17	2.0
Ozone Depleting Substances, total	0.0	1.0
Greenhouse Gases (GHG)	10,114	N/A

Table 2. Potential Toxic Air Pollutant (TAP) emissions increase and de minimis emission values

Pollutant	Potential Emissions Increase from Project (lb/averaging period)	De Minimis Emission Values (lb/averaging period)	Averaging Period
1,4-Dichlorobenzene	2.0E-01	7.4E-01	Year
3-Methylcholanthrene	2.9E-04	7.8E-04	Year
7,12-Dimethylbenz[a]anthracene	2.6E-03	6.9E-05	Year
Acetaldehyde	4.67	3.0	Year
Acrolein	3.11E-03	1.3E-03	24-hr
Arsenic	3.3E-02	2.5E-03	Year
Benz[a]anthracene	2.9E-04	4.5E-02	Year
Benzene	16	1.0	Year
Benzo[a]pyrene	2.0E-04	8.2E-03	Year
Benzo[b]fluoranthene	2.9E-04	4.5E-02	Year
Benzo[k]fluoranthene	2.9E-04	4.5E-02	Year
Beryllium	2.0E-03	3.4E-03	Year
Cadmium	1.8E-01	1.9E-03	Year
Carbon monoxide	2.58	1.1	1-hr
Chromium (III)	6.0E-04	3.7E-04	24-hr
Chromium (VI)	9.2E-03	3.3E-05	Year
Chrysene	2.9E-04	4.5E-01	Year
Cobalt	3.8E-05	3.7E-04	24-hr
Copper	1.6E-05	9.3E-03	1-hr
Ethylbenzene	138	3.2	Year
Formaldehyde	116	1.4	Year
Hexane	8.1E-01	2.6	24-hr
Hydrogen Sulfide	3.7	7.4E-03	24-hr
Indeno[1,2,3-cd]pyrene	2.9E-04	4.5E-02	Year
Lead	4.1E-05	10	Year
Manganese	1.7E-04	1.1E-03	24-hr
Mercury	1.2E-04	1.1E-04	24-hr
Naphthalene	1.1	2.4E-01	Year
Nickel	3.4E-01	3.1E-02	Year
Nitrogen dioxide	4.9E-01	4.6E-01	1-hr
Propylene	7.3E-01	11	24-hr
Selenium	1.1E-05	7.4E-02	24-hr
Sulfur dioxide	17	4.6E-01	1-hr
Toluene	2.0E-02	19	24-hr

Pollutant	Potential Emissions Increase from Project (lb/averaging period)	De Minimis Emission Values (lb/averaging period)	Averaging Period
Vanadium	1.0E-03	3.7E-04	24-hr
Xylenes (mixture)	7.5E-03	8.2E-01	24-hr

ii. Prevention of Significant Deterioration (PSD)

PSD does not apply, based on uncontrolled PTE.

iii. Other Applicable Requirements

In accordance with WAC 173-400-113, the proposed new emission units must comply with all applicable emission standards adopted under Chapter 70A.15 RCW. The following applicable emission standards are associated with the proposed project:

- A. WAC 173-400-040 General standards for maximum emissions. All emission units must meet 20 percent opacity or less for three minutes in one hour.
- B. WAC 173-400-050 Emission standards for combustion and incineration units. Limits emissions of particulate matter from combustion and general process units to 0.23 gram per dry cubic meter at standard conditions (0.10 grains per dry standard cubic foot) of exhaust gas.
- C. WAC 173-400-060 Emission standards for general process units. Limits emissions of particulate matter from combustion and general process units to 0.23 gram per dry cubic meter at standard conditions (0.10 grains per dry standard cubic foot) of exhaust gas.
- D. WAC 173-400-075 See below for Emission standards for sources emitting hazardous air pollutants.
- E. WAC 173-400-115 See below for Standards of performance for new sources.

b. Federal Regulations

In accordance with WAC 173-400-113, the proposed new emission units must comply with all applicable new source performance standards (NSPS) included in 40 C.F.R. Part 60, national emission standards for hazardous air pollutants (NESHAPs) included in 40 C.F.R. Part 61, and NESHAPs for source categories included in 40 C.F.R. Part 63. The following applicable emission standards are associated with the proposed project:

i. Standards of Performance for New Stationary Sources

40 C.F.R. 60 Subpart A – General Provisions

40 C.F.R. 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial Institutional Steam-Generating Units does not apply to the 8.23 MMBTU/hour boiler.

40 C.F.R. 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines does apply to the diesel emergency generators.

ii. National Emission Standards for Hazardous Air Pollutants

40 C.F.R. 63 Subpart A – General Provisions

40 C.F.R. 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

4. Emissions

a. Emission Factors and Calculations

Boiler NO_x and CO emissions are based on manufacturers' emissions guarantees and proposed BACT limits, similar to existing sites. PM, VOC are based on AP-42 Section 1.4 Natural Gas Combustion emission factors. SO₂ is based on worst case of burning all the produced biogas, sulfur content based on 5,300 ppmv H₂S in the biogas and H₂S control of 94 percent and 300 ppmv. The remaining capacity of the boiler is assumed to combust natural gas. The calculated maximum potential SO₂ emissions rate is based on 99 percent conversion of H₂S to SO₂.

Biogas Flare emissions are based on 5,300 ppmv H₂S from the biogas controlled to 300 ppmv and assuming 99 percent H₂S is converted to SO₂ during combustion. NO_x and CO are based on manufacturers' emission guarantees. PM, VOC, and lead are based on AP-42 Section 1.4.

Toxic Air Pollutants for the Boiler and Flare are from the most conservative and fuel appropriate of the following sources: AP-42 Chapter 1.4 Natural Gas Combustion; Ventura County Air Pollution Control District; California Air Toxics Emission Factors (CATEF).

b. Best Available Control Technology (BACT) | Best Available Control Technology for Toxics (tBACT)

Boiler – Low NO_x burners, 30 ppmv NO_x and 50 ppmv CO at three percent oxygen. Ultra-low NO_x burners were technically not feasible due to the biogas element of this project. BACT and tBACT for VOC, PM, and toxic air pollutants are good combustion practices.

Anaerobic Reactors and Biogas Flare – Biogas will be used as fuel for the boiler. A flare will be used to combust biogas when the boiler is not operating or is unavailable to burn

biogas. The flare will convert 99 percent of hydrogen sulfide to SO₂. A hydrogen sulfide control before the flare and boiler will control emissions to 300 ppmv hydrogen sulfide.

c. Additional Voluntary Emission Controls

The Permittee and applicant proposed voluntary installation of foul air oxidation system with particulate pre-filter, photo-oxidation, and activated carbon to control malodors from solids management processes.

d. Allowable Emissions

The allowable emissions from the project, considering all emission controls and operational limits specified by the approval order, are shown in the tables below.

Table 4. Allowable emissions for pollutants listed under WAC 173-400-110(5)

Pollutant	New Units (tons/year)
Carbon Monoxide (CO)	11.31
Lead (Pb)	4.1E-05
Nitrogen Oxides (NO _x)	4.31
PM ₁₀	0.62
PM _{2.5}	0.62
Total Suspended Particulates (TSP)	0.62
Sulfur Dioxide (SO ₂)	4.46
Volatile Organic Compounds, total (VOC)	7.17
Greenhouse Gases (GHG)	10,114

Table 5. Allowable TAP emissions

Pollutant	New Units (pounds/year)	Averaging Period
7,12-Dimethylbenz[a]anthracene	2.6E-03	Year
Acetaldehyde	4.67	Year
Acrolein	1.14	24-hr
Arsenic	3.3E-02	Year
Benzene	16	Year
Cadmium	1.8E-01	Year
Carbon monoxide	22,620	1-hr
Chromium (III)	2.2E-01	24-hr
Chromium (VI)	9.2E-03	Year
Ethylbenzene	138	Year
Formaldehyde	116	Year
Hydrogen Sulfide	80.3	24-hr
Mercury	4.4E-02	24-hr
Naphthalene	1.1	Year
Nickel	3.4E-01	Year
Nitrogen dioxide	4,292	1-hr
Sulfur dioxide	8,920	1-hr
Vanadium	3.7E-01	24-hr

The table below presents the potential and allowable emissions for Lamb Weston, Inc. - Pasco Plant with the emissions from the project included. The Permittee is a synthetic minor 80 for volatile organic compounds.

Table 6. Potential and Allowable Emissions for Total Source

Pollutant	Total Source Allowable Emissions (tons/year)
Carbon Monoxide (CO)	76.01
Nitrogen Oxides (NO _x)	82.50
PM ₁₀	51.02
PM _{2.5}	51.02
Total Suspended Particulates (TSP)	51.02
Sulfur Dioxide (SO ₂)	25.58
Volatile Organic Compounds, total (VOC)	92.32
Greenhouse Gases (GHG)	98,531

5. Ambient Air Quality Standards

As specified in WAC 173-400-113, the proposed new or modified source(s) must not cause or contribute to a violation of any ambient air quality standard. This includes the ambient air quality standards for both criteria and toxic air pollutants.

a. Pollutants Listed Under WAC 173-400-110 (Except TAPs)

For nitrogen dioxide, carbon monoxide, sulfur dioxide, and particulate matter (PM_{2.5}), modeling was performed to satisfy the requirements of Chapter 173-400-113(3) WAC. The modeling demonstrates that the emissions increase as a result of the project will not exceed the ambient air quality standards. The modeling results are included in the table below.

Table 7. Criteria Pollutant Modeling Results

Criteria Pollutant	Averaging Period	Maximum Modeled Concentration (µg/m ³)	Impacts with background (µg/m ³)	Ambient Air Quality Standard (µg/m ³)
Sulfur Dioxide	1-hr	17.3	29.9	196
Sulfur Dioxide	3-hr	13.3	30.3	1,309
Nitrogen Dioxide	1-hr	6.38	65.6	188
Nitrogen Dioxide	Annual	0.36	12.5	100
Particulate Matter 2.5	24-hr	0.32	20.5	35
Particulate Matter 2.5	Annual	0.06	6.63	9.0
Carbon Monoxide	1-hr	18	1,552	10,000
Carbon Monoxide	8-hr	14.7	1,045	40,000

b. Toxic Air Pollutants (TAPs)

In accordance with WAC 173-460-040, new TAP sources must meet the requirements of Chapter 173-460 WAC, unless they are exempt by WAC 173-400-110(5).

As shown in Table 2, minor NSR is required for the boiler, flare and reactors. As such, the new emission units must comply with WAC 173-460-070 (ambient impact requirement). The source may demonstrate compliance with the ambient impact requirement by either showing that the emissions increase is less than the small quantity emissions rates (SQER) or through dispersion modeling. The table below includes the estimated emissions increases associated with the project and the applicable SQER.

Table 8. TAP Analysis

TAP	Estimated Increase (pounds/averaging period)	SQER (pounds per averaging period)	Modeling Required?
7,12-Dimethylbenz[a]anthracene	2.6E-03	1.4E-03	Yes
Acetaldehyde	4.67	60	No
Acrolein	3.11E-03	2.6E-02	No
Arsenic	3.3E-02	4.9E-02	No
Benzene	16	21	No
Cadmium	1.8E-01	3.9E-02	Yes
Carbon monoxide	2.58	43	No
Chromium (III)	6.0E-04	7.4E-03	No
Chromium (VI)	9.2E-03	6.5E-04	Yes
Ethylbenzene	138	65	Yes
Formaldehyde	116	27	Yes
Hydrogen Sulfide	2.2E-01	1.5E-01	Yes
Mercury	1.2E-04	2.2E-03	No
Naphthalene	1.1	4.8	No
Nickel	3.4E-01	6.2E-01	No
Nitrogen dioxide	4.9E-01	8.7E-01	No
Sulfur dioxide	1.7	1.2	Yes
Vanadium	1.0E-03	7.4E-03	No

For 7,12-Dimethylbenz[a]anthracene, Cadmium, Chromium (VI), Ethylbenzene, Formaldehyde, Hydrogen Sulfide, and Sulfur Dioxide modeling was performed to satisfy the requirements of Washington's state toxics rule in Chapter 173-460 WAC. The modeling demonstrates that the emissions increases, as a result of the project will not exceed the acceptable source impact level (ASIL) screening thresholds. The modeling results are included in the table below.

Table 9. TAP Modeling Results

TAP	Averaging Period	Maximum Modeled Concentration (µg/m³)	ASIL (µg/m³)	Percent of ASIL
7,12-Dimethylbenz[a]anthracene	Year	1.48E-07	8.5E-06	2%
Cadmium	Year	1.02E-05	2.4E-04	4%
Chromium (VI)	Year	5.19E-07	4.0E-06	13%
Ethylbenzene	Year	4.72E-03	4.0E-01	1%

TAP	Averaging Period	Maximum Modeled Concentration (µg/m³)	ASIL (µg/m³)	Percent of ASIL
Formaldehyde	Year	1.02E-01	1.7E-01	60%
Hydrogen Sulfide	24-hr	2.44E-02	2.00	1%
Sulfur Dioxide	1-hr	18.8	660	3%

Appendix A – Federal Rule Applicability

1. 40 C.F.R. Part 60, Subpart Dc

NSPS Subpart Dc applies to newly constructed, modified, or reconstructed steam generating units that commenced construction after June 9, 1989, and that have a maximum design heat input capacity of greater than or equal to 10 MMBtu per hour and 100 MMBtu per hour. Because the heat input capacity for the boiler is 8.23 MMBtu per hour, the boiler will not be subject to this standard.

2. 40 C.F.R. Part 60, Subpart IIII

The ICE NSPS (40 C.F.R. Part 60, Subpart IIII) applies to each engine. The applicable portions the rule appear to be:

Citation	Subject	Notes
60.4202(a)(2)	Manufacturer emission standards	Specifies that 2007 model year and later emergency stationary CI ICE with a maximum engine power ≥ 37 kW and $\leq 2,237$ KW be certified to the emission standards specified in 40 C.F.R. 1039, Appendix I.
60.4205(b)	Owner/Operator emission standards	Directs owners and operators of 2007 model year and later emergency stationary CI ICE to comply with the emission standards for new nonroad CI engines in §60.4202.
60.4209(a)	Owner/Operator monitoring requirements	Requires installation of a non-resettable hour meter prior to startup of each engine, since the engines do not meet the standards applicable to non-emergency engines.
Table 8 to Subpart IIII of Part 60	Applicability of General Provisions to Subpart IIII	The table lists what portions of 40 C.F.R. 60 Subpart I are applicable, including notification and recordkeeping requirements.

Note: While the engine is equipped with catalyzed diesel particulate filters, 40 C.F.R. 60.4209(b) is not applicable to the engines because the filters are not required for compliance with the emission standards in 40 C.F.R. 60.4204.

3. 40 C.F.R. Part 63, Subpart ZZZZ

The RICE NESHAP applies to each engine. Condition 1 of the Order requires general compliance with this regulation. However, each engine is also subject to the ICE NSPS (see above). At 40 C.F.R. 63.6590(c), the NESHAP specifies that compliance must be met by meeting the requirements of the NSPS; therefore, no further requirements apply to the engines.

Appendix B – Response to Comments

This section will be updated following the public comment period.