

Statement of Basis

**Permit to Construct No. P-2015.0012
Project ID 61488**

**Oldcastle Precast, Inc.
Nampa, Idaho**

Facility ID 027-00085

Final

May 28, 2015
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The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

| | |
|------------------|--|
| Btu | British thermal unit |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| DEQ | Department of Environmental Quality |
| EPA | U.S. Environmental Protection Agency |
| HAP | Hazardous Air Pollutant |
| IDAPA | a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act |
| lb/hr | pounds per hour |
| MACT | Maximum Achievable Control Technology |
| MMBtu | million British thermal units |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NO ₂ | nitrogen dioxide |
| NO _x | nitrogen oxides |
| NSPS | New Source Performance Standards |
| Oldcastle | Oldcastle Precast Inc. Nampa Plant |
| PC | permit condition |
| PM | particulate matter |
| PM ₁₀ | particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers |
| PSD | Prevention of Significant Deterioration |
| PTC | permit to construct |
| PTE | potential to emit |
| Rules | Rules for the Control of Air Pollution in Idaho |
| SIC | Standard Industrial Classification |
| SIP | State Implementation Plan |
| SM | Synthetic Minor |
| SO ₂ | sulfur dioxide |
| SO _x | sulfur oxides |
| Tier II | Tier II operating permit |
| PTC/Tier II | permit to construct and Tier II operating permit |
| T/yr | tons per year |
| VOC | volatile organic compound |

FACILITY INFORMATION

Description

Oldcastle Precast Inc. (Oldcastle) in Nampa is a concrete precast facility. Oldcastle manufactures concrete pipe and vaults. Aggregate (sand and gravel), cement, and fly ash are delivered to the facility by truck. Aggregate is dumped into a bin, conveyed to the top of the mixer building, and dropped into a storage silo. The conveyors are inside the building. Cement and fly ash are pneumatically transferred from trucks to storage silos. Each silo vents to its respective baghouse. The aggregate, cement, and fly ash are dropped into a weigh hopper, then to a mixer. The concrete is mixed and then poured into pour buckets, which are emptied into molds. The molds are moved to the curing station, then outside for storage. The entire precast product manufacturing process is conducted inside a building. A 6.28 MMBtu/hr natural gas-fired boiler provides heat for product curing and for space heating.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

| | |
|-------------------|--|
| May 29, 2003 | T2-020011, initial Tier II operating permit (Tier II) and permit to construct (PTC) for the facility constructed without a permit, permit status (S) |
| November 24, 2003 | T2-030045, PTC revision for installing a baghouse for fly ash silo and for correcting typographical errors, permit status (S) |
| August 29, 2008 | T2-2008.0051, Tier II renewal, permit status (A, but will become S upon issuance of this permit) |

Application Scope

This is a revised PTC for renewing the PTC/Tier II and for converting it to a PTC. The application stated that the facility has no substantial equipment and operational changes and has agreed to continue abiding by the conditions and restrictions in the PTC/Tier II issued on August 29, 2008.

Application Chronology

| | |
|---------------|---|
| March 6, 2015 | DEQ received an application. |
| March 9, 2015 | DEQ received an application fee. |
| April 6, 2015 | DEQ determined that the application was complete. |
| May 7, 2015 | DEQ made available the draft permit and statement of basis for peer and regional office review. |
| May 12, 2015 | DEQ made available the draft permit and statement of basis for applicant review. |
| May 15, 2015 | The applicant stated there were no comments on the draft permit. |
| May 27, 2015 | DEQ received the permit processing fee. |
| May 28, 2015 | DEQ issued the final permit and statement of basis. |

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

No changes are made to the emissions units and control equipment. The following information is taken from the SOB for the PTC/Tier II issued on August 29, 2008. (2011AAG3558)

Table 1 EMISSION UNIT AND CONTROL DEVICE INFORMATION

| Emissions Unit Description | Control Device Description | Emissions Discharge Point ID No. and/or Description |
|---|----------------------------|---|
| Cleaver Brooks Model BC 700.150, 6.28 MMBtu/hr natural gas-fired boiler | None | Boiler exhaust stack |
| Cement silo loading | Baghouse | Baghouse exhaust stack |
| Fly ash silo loading | Baghouse | Baghouse exhaust stack |

Emissions Inventories

No changes are made to the emissions units and control equipment. The following information is taken from the SOB for the PTC/Tier II issued on August 29, 2008.

Table 2 CONTROLLED EMISSIONS ESTIMATES OF CRITERIA POLLUTANTS

| Emissions Unit | Emission Limits ^a - Hourly (lb/hr), and Annual ^b (T/yr) | | | | | | | | | |
|--|---|--------------|-----------------|-------------|-----------------|-------------|-------------|-------------|-------------|-------------|
| | PM ₁₀ ^c | | SO ₂ | | NO _x | | CO | | VOC | |
| | lb/hr | T/yr | lb/hr | T/yr | lb/hr | T/yr | lb/hr | T/yr | lb/hr | T/yr |
| 6.28 MMBtu/hr natural gas-fired boiler | 0.05 | 0.2 | 0.004 | 0.02 | 0.62 | 2.7 | 0.52 | 2.27 | 0.03 | 0.15 |
| Cement Storage silo baghouse ^d | 0.12 | 0.023 | | | | | | | | |
| Fly ash storage silo baghouse ^e | 0.34 | 0.36 | | | | | | | | |
| Total, Point Sources | 0.51 | 0.583 | 0.004 | 0.02 | 0.62 | 0.27 | 0.52 | 2.27 | 0.03 | 0.15 |

^a Allowable pound per hour limit as stated within the permit

^b The annual limit of each pollutant as stated within the permit.

^c Particulate matter with an aerodynamic diameter of 10 microns or less

^{d,e} The pound per hour limit was determined from the rate each silo could be filled, while the ton per year emission rate was determined from the amount of cement and flyash required to produce the permit limit of concrete per year.

Ambient Air Quality Impact Analyses

There is no increase in emissions associated with this permit renewal; therefore, modeling is not required.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Canyon County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

Oldcastle is defined as a minor facility because without permit limits on the potential to emit, Oldcastle would not exceed any major source thresholds for any regulated air pollutants. The facility classification is "B".

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for renewing the PTC/Tier II and for converting it to a PTC. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625..... Visible Emissions

The sources of PM emissions at this facility are subject to the State of Idaho visible emissions standard of 20%

opacity. This requirement is assured by Permit Conditions 3.5 and 4.6 to 4.11.

Standards for New Sources (IDAPA 58.01.01.677)

IDAPA 58.01.01.677.....Standards for Minor and Existing Sources

The fuel burning equipment located at this facility, with a maximum rated input of less than ten (10) million BTU per hour, is subject to a particulate matter limitation of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume when combusting gaseous fuels. Fuel-Burning Equipment is defined as any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer. This requirement is assured by Permit Condition 3.5.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301Requirement to Obtain Tier I Operating Permit

This is a minor source. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006, and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

40 CFR 52.21Prevention of Significant Deterioration of Air Quality

This is a minor source. Therefore, in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action.

NSPS Applicability (40 CFR 60)

This facility is not subject to 40 CFR 60, Subpart Dc because the maximum design heat input rate of the boiler is 6.28 MMBtu/hr that is less than 10 MMBtu/hr as specified in the subpart.

NESHAP Applicability (40 CFR 61)

The facility is not subject to NESHAP in 40 CFR 61.

MACT Applicability (40 CFR 63)

The facility is not subject to any MACT standards in 40 CFR Part 63.

Permit Conditions Review

This section describes only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action. The new text is in bold. The deleted text is in strikethrough.

Permit Conditions 1.1 to 1.3

Permit Condition 1.1 states the purpose of this permitting action. Permit Condition 1.2 states that those permit conditions that have been modified or revised by this permitting action are identified by the permit issue date citation located directly under the permit condition and on the right-hand margin. Permit Condition 1.3 states that this PTC replaces PTC/Tier II No. T2-2008.0051, issued on August 29, 2008.

Permit Condition 2.8 and New Permit Condition 2.9

Permit Condition 2.8 is replaced with the standard language from the current Tier II operating permit template. PC 2.8 and new PC 2.9 read as follows:

- 2.8 The permittee shall conduct a quarterly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. Sources that are monitored using a continuous opacity monitoring system (COMS) are not required to comply with this permit condition. The inspection shall consist of a see/no see evaluation for each potential**

source of visible emissions. If any visible emissions are present from any point of emission, the permittee shall either:

a) take appropriate corrective action as expeditiously as practicable to eliminate the visible emissions. Within 24 hours of the initial see/no see evaluation and after the corrective action, the permittee shall conduct a see/no see evaluation of the emissions point in question. If the visible emissions are not eliminated, the permittee shall comply with b).

or

b) perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20%, as measured using Method 9, for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective actions and report the period or periods as an excess emission in the annual compliance certification and in accordance with IDAPA 58.01.01.130–136.

2.9 The permittee shall maintain records of the results of each visible emissions inspection and each opacity test, when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions were present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

~~The permittee shall conduct a quarterly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130–136. The permittee shall maintain records of the results of each visible emissions inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.~~

Permit Condition 2.10

A minor change is made as a result of Rules change. The revised PC 2.10 reads as follows:

"2.10 The permittee shall comply with the requirements of IDAPA 58.01.01.600-~~624~~ 616, Rules for Control of Open Burning."

Old Permit Condition 2.12

Old Permit Condition 2.12 is removed because it duplicates Permit Condition 3.3 and because the facility does not have fuel burning equipment that burns liquid, coal, or wood.

~~2.12 The permittee shall not discharge to the atmosphere from any fuel burning equipment PM in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas, 0.050 gr/dscf of effluent gas corrected to 3% oxygen by volume for liquid, 0.050 gr/dscf of effluent gas corrected to 8% oxygen by volume for coal, and 0.080 gr/dscf of effluent gas corrected to 8% oxygen by volume for wood products.~~

Permit Condition 3.4

The opacity limit in PC 3.4 is removed because it duplicates PC 2.7.

To follow the current PTC template, the boiler emissions limits of old Permit Section 5 Summary of Emissions Rate Limits have been included here. Footnote "e" is new and is taken from the current PTC template.

“3.4 Emission Limits

The emissions from the Cleaver Brooks boiler stack shall not exceed any corresponding emissions rate limits listed in Table 3.1.

Table 3.1 EMISSION LIMITS^a – HOURLY (LB/HR), AND ANNUAL^b (T/yr)

| Source Description | PM ₁₀ | | NO _x | | CO | | VOC | | SO ₂ | |
|--|--------------------|-------------------|-----------------|------|-------|------|-------|------|-----------------|------|
| | lb/hr ^c | T/yr ^c | lb/hr | T/yr | lb/hr | T/yr | lb/hr | T/yr | lb/hr | T/yr |
| 6.28 MMBtu/hr natural gas fired boiler ^{d, e} | 0.05 | 0.2 | 0.62 | 2.7 | 0.52 | 2.27 | 0.03 | 0.15 | 0.004 | 0.02 |

^aAs determined by a pollutant-specific EPA reference method, a DEQ-approved alternative, or as determined by DEQ's emissions estimation methods used in this permit analysis.

^b As determined by multiplying the actual or allowable (if actual is not available) pound per hour emission rate by the allowable hours per year that the process(es) may operate(s), or by actual annual production rates.

^c Includes condensibles

^d Natural gas boiler emissions determined using emission factors in AP-42.

^e In absence of any other credible evidence, compliance is ensured by complying with permit operating, monitoring, and record keeping requirements.

Permit Condition 3.6

Minor changes are made to PC 3.6; it reads as follows:

“3.6 Fuel Monitoring

The permittee shall monitor and record the amount of natural gas burned in the Cleaver Brooks boiler once a month to demonstrate compliance with Permit Conditions 3.3, 3.4, and 3.5. Records of the fuel usage shall be kept on site for the most recent five-year period and shall be made available to DEQ representatives upon request **in accordance with General Provision 5.10 monitoring and recordkeeping requirements.**”

New Permit Condition 4.11

DEQ has developed a standard language for baghouse operating and monitoring. After having compared the existing permit conditions regarding baghouse with the standard language, the following visible emissions inspection requirement is added as new PC 4.11.

“4.11 The permittee shall conduct visible emissions inspection in accordance with Permit Condition 2.8 but at a frequency of each time cement and/or fly ash are loaded into their silos.”

Old Permit Section 5

The boiler emissions limits are moved to Permit Condition 3.4. The emissions from the silo baghouses are under Permit Conditions 4.3. To follow the current PTC template, Old Permit Section 5 is removed.

5. SUMMARY OF EMISSION RATE LIMITS

Table 5.1 EMISSION LIMITS^a – HOURLY (LB/HR), AND ANNUAL^b (T/yr)

| Source Description | PM ₁₀ | | NO _x | | CO | | VOC | | SO ₂ | |
|---|--------------------|--------------------|-----------------|------|-------|------|-------|------|-----------------|------|
| | lb/hr ^c | T/yr ^c | lb/hr | T/yr | lb/hr | T/yr | lb/hr | T/yr | lb/hr | T/yr |
| 6.28 MMBtu/hr natural gas fired boiler ^d | 0.05 | 0.2 | 0.62 | 2.7 | 0.52 | 2.27 | 0.03 | 0.15 | 0.004 | 0.02 |
| Cement storage silo baghouse | 0.12 ^e | 0.023 ^f | | | | | | | | |
| Fly ash storage silo baghouse | 0.34 ^e | 0.36 ^f | | | | | | | | |

^aAs determined by a pollutant-specific EPA reference method, a DEQ-approved alternative, or as determined by DEQ's emissions estimation methods used in this permit analysis.

^b As determined by multiplying the actual or allowable (if actual is not available) pound per hour emission rate by the allowable hours per year that the process(es) may operate(s), or by actual annual production rates.

^c Includes condensibles

^d Natural gas boiler emissions determined using emission factors in AP-42.

^e Based on the unloading rate of the cement and fly ash to the silos.

^f Based on the amount of cement and fly ash to produce the yearly limit of concrete.

General Provisions

General Provisions of the existing Tier II/PTC is replaced with the General Provisions taken from the current PTC template.

PUBLIC REVIEW

Public Comment Opportunity

Because this permitting action does not authorize an increase in emissions, an opportunity for public comment period was not required or provided in accordance with IDAPA 58.01.01.209.04.

APPENDIX – PROCESSING FEE

In accordance with IDAPA 58.01.01.225, the processing fee is \$250 because no engineering analysis is required for this permitting action.