

Statement of Basis

Final

**Boise Packaging & Newsprint, L.L.C.
Nampa, Idaho
Facility ID No. 027-00026
Permit to Construct No. P-2010.0053**

CZ

**June 2, 2010
Carole Zundel
Permit Writer**

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

| | |
|------------------|--|
| AQCR | Air Quality Control Region |
| CFR | Code of Federal Regulations |
| DEQ | Department of Environmental Quality |
| EPA | U.S. Environmental Protection Agency |
| HAP | hazardous air pollutants |
| 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/hr | million British thermal units per hour |
| NAAQS | National Ambient Air Quality Standard |
| NAICS | North American Industry Classification System |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NO ₂ | nitrogen dioxide |
| NO _x | nitrogen oxides |
| NSPS | New Source Performance Standards |
| 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 |
| Rules | Rules for the Control of Air Pollution in Idaho |
| SO ₂ | sulfur dioxide |
| T/yr | tons per consecutive 12-calendar month period |
| T2 | Tier II operating permit |
| TAP | toxic air pollutants |
| UTM | Universal Transverse Mercator |
| VOC | volatile organic compounds |

FACILITY INFORMATION

Description

The facility utilizes paper, starch, and steam to manufacture corrugated sheet material. Steam is provided by two 13.69 MMBtu/hr natural gas-fired boilers. Starch is received and stored in a silo equipped with a baghouse to control dust emissions during material unloading. The process utilizes a corrugator equipped with single facers, a double-back glue unit, and pre-heaters. Corrugated stock is processed into containers in various processes that involve cutting, slotting, folding, gluing, and printing.

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 Permit status is noted as active and in effect (A) or superseded (S).

| | |
|--------------------|--|
| June 24, 2005 | Tier II Operating Permit No. T2-040005 (A, but will become S upon issuance of this permit) |
| November 14, 2002 | Permit to Construct No. 027-00026 (S) |
| September 10, 2002 | Permit to Construct No. 027-00026 (S) |
| July 17, 2001 | Permit to Construct No. 027-00026 (S) |
| July 21, 2000 | Permit to Construct No. 027-00026 (S) |
| June 2, 2000 | Permit to Construct No. 027-00026 (S) |
| May 5, 1995 | Permit to Construct No. 027-00026 (S) |
| March 16, 1995 | Permit to Construct No. 027-00026 (S) |

Application Scope

This PTC is for a revised PTC at an existing minor facility. The previous permit was a PTC/Tier II operating permit combo which was up for renewal. The facility submitted a renewal application. Because all of the permit conditions were PTC permit conditions, it was decided that the permit could be converted to a PTC. There are no other changes at the facility. The permit has been updated to incorporate new permitting language. Also, typographical-type errors have been corrected.

The boilers are not included in this permit because they were exempted from permitting when installed. This permit is not a facility-wide permit.

Application Chronology

| | |
|---------------|---|
| April 8, 2010 | DEQ received an application |
| May 6, 2010 | DEQ received a request from the applicant to convert this combo permit to a PTC. |
| May 11, 2010 | DEQ received the application fee and processing fee. |
| May 12, 2010 | DEQ made available the draft permit and statement of basis for peer and regional office review. |
| May 14, 2010 | DEQ made available the draft permit and statement of basis for applicant review. |

TECHNICAL ANALYSIS

Emissions Units and Control Devices

Table 1 EMISSIONS UNIT AND CONTROL DEVICE INFORMATION

| Source Description | Control Equipment Description |
|---------------------|-------------------------------|
| Corrugator | None |
| Printing & Gluing | None |
| Starch Storage Silo | Baghouse |
| Scrap Cyclone | Cyclone & Baghouse |

Emissions Inventories

A detailed emissions inventory has been included in Appendix A. A brief summary of PM₁₀ and VOC emissions are given in Table 2.

Table 2 EMISSIONS INVENTORY

| Source Description | VOC | | PM ₁₀ | | Formaldehyde |
|-----------------------|--------|------|------------------|------|--------------|
| | lb/day | T/yr | lb/day | T/yr | T/yr |
| Corrugator | 67.2 | 5.84 | 1.8 | 0.33 | N/A |
| Starch Silo Baghouse | N/A | N/A | 1.85 | 0.34 | N/A |
| Scrap System Baghouse | N/A | N/A | 2.56 | 0.22 | N/A |
| Printing and Gluing | N/A | 19 | N/A | N/A | 0.13 |

Total formaldehyde emissions from printing and gluing were estimated to be 0.13 T/yr.

Ambient Air Quality Impact Analyses

No air dispersion modeling was required with this permit revision because there is no change in emissions.

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.

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201

Permit to Construct Required

The application was submitted for the renewal of a PTC/Tier II operating permit (refer to the Tier II Operating Permit section). There are no changes to the PTC portion of the permit, and PTC's do not require renewal. Therefore, the procedures of IDAPA 58.01.01.200–228 are not applicable to this permitting action.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401

Tier II Operating Permit

The application was submitted for the renewal of a PTC/Tier II operating permit. This permitting action was processed in accordance with the Tier II operating permit renewal procedures of IDAPA 58.01.01.404.04.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625

Visible Emissions

The sources of PM₁₀ emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Conditions 10 and 11.

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

IDAPA 58.01.01.301

Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for PM₁₀, SO₂, NO_x, CO, VOC, and HAP or 10 tons per year for any one HAP or 25 tons per year for all HAPs combined as demonstrated in the Emissions Inventories Section of this analysis. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006.113 and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52.21(b)(1). Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR 60)

The permitting action does not include any units that are subject to NSPS requirements. The facility has two natural-gas fired boilers that were installed separately from any other permitting action and were and still are exempt from obtaining a permit to construct. The boilers are subject to 40 CFR 60 Subpart Dc requirements, but are not subject to a permit to construct. The Subpart Dc requirements are to monitor and record the natural gas usage on a monthly basis for each boiler.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements 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.

In general, some of the facility-wide conditions were updated to the most recent wording, and some were relocated to the general provisions section.

Permit conditions which included phrases referencing other permit conditions by number were revised to eliminate the numerical reference. Tables and permit conditions were renumbered in the PTC format which replaces the Tier II format.

Existing Permit Condition 3.2

Emission Control Description

Emissions from the starch storage silo are controlled by a baghouse. Emissions from the scrap container board cyclone are controlled by a baghouse. Emissions from the corrugator are uncontrolled.

Table 2 STARCH STORAGE SILO DESCRIPTION

| <i>Emissions Unit/ Process</i> | <i>Emissions Control Device</i> | <i>Emissions Point</i> |
|--------------------------------------|---------------------------------|------------------------|
| <i>Starch Storage Silo</i> | <i>Baghouse</i> | <i>Baghouse Stack</i> |
| <i>Scrap Container Board Cyclone</i> | <i>Cyclone and Baghouse</i> | <i>Baghouse Stack</i> |

Revised Permit Condition 3.2

Emission Control Description

Emissions from the starch storage silo are controlled by a baghouse. Emissions from the scrap container board cyclone are controlled by a baghouse. Emissions from the corrugator are uncontrolled.

Table 2 STARCH STORAGE SILO AND SCRAP CONTAINER BOARD CYCLONE DESCRIPTION

| <i>Emissions Unit/ Process</i> | <i>Emissions Control Device</i> | <i>Emissions Point</i> |
|--------------------------------------|---------------------------------|------------------------|
| <i>Starch Storage Silo</i> | <i>Baghouse</i> | <i>Baghouse Stack</i> |
| <i>Scrap Container Board Cyclone</i> | <i>Cyclone and Baghouse</i> | <i>Baghouse Stack</i> |

This permit condition has been revised to add “Scrap Container Board Cyclone” to the description on the table title.

Existing Permit Condition 3.3

Emission Limits

The VOC and PM₁₀ emissions from the corrugator shall not exceed any corresponding emissions rate limits listed in Table 3.2.

Table 3.2 STARCH STORAGE SILO BAGHOUSE EMISSIONS LIMITS

| <i>Source Description</i> | <i>VOC</i> | <i>PM10</i> | |
|------------------------------|-------------|---------------|-------------|
| | <i>T/yr</i> | <i>lb/day</i> | <i>T/yr</i> |
| <i>Corrugator</i> | <i>5.84</i> | <i>1.8</i> | <i>0.33</i> |
| <i>Starch Silo Baghouse</i> | <i>N/A</i> | <i>1.85</i> | <i>0.34</i> |
| <i>Scrap System Baghouse</i> | <i>N/A</i> | <i>2.56</i> | <i>0.22</i> |

Revised Permit Condition 3.3

Emission Limits

The VOC and PM₁₀ emissions from the corrugator, starch silo, and scrap system shall not exceed any corresponding emissions rate limits listed in Table 3.

Table 3 CORRUGATOR AND BAGHOUSE EMISSIONS LIMITS

| <i>Source Description</i> | <i>VOC</i> | <i>PM10</i> | |
|------------------------------|-------------|---------------|-------------|
| | <i>T/yr</i> | <i>lb/day</i> | <i>T/yr</i> |
| <i>Corrugator</i> | <i>5.84</i> | <i>1.8</i> | <i>0.33</i> |
| <i>Starch Silo Baghouse</i> | <i>N/A</i> | <i>1.85</i> | <i>0.34</i> |
| <i>Scrap System Baghouse</i> | <i>N/A</i> | <i>2.56</i> | <i>0.22</i> |

This permit condition has been revised to clarify that the emission limits apply to the corrugator and both baghouses.

Revised Permit Condition 4.3

The table number in the title of the table was changed to match the referenced table number in the text portion of the permit condition.

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 A – EMISSIONS INVENTORIES

**Fax
Message**



El Monte, California, USA

Fax: 1-826-442-1701 Phone: 1-826-443-9381

To: Parameters Date: Sept 18, 1987
Attn: Dick Burkhalter From: Andy Wales
263-883-5128/0848 - TEL/FAX
Re: Emissions Data for Page 1 of 1
Clayton EG384-2.5-LNB Steam Generator

For your request, here is the data requested on our Model EG384-2.5-LNB for Boise Cascade's Nampa, Idaho project. Note this unit will be used with a semi-closed receiver (SCR) feedwater system. The values given have been corrected for this operation.

All data given for 100% output rating

| | | |
|--|--------|----------|
| Heat Input Rating | 13.69 | MMBTU/hr |
| Typical O ₂ | 9 | % |
| Typical Excess air | 67 | % |
| Exhaust Gas Rate | 17,848 | lb/hr |
| Typical Exhaust Gas Temp. °F | 420 | |
| Exhaust Stack Diameter | 28 | inches |
| NOx ppmv (corrected to 3% O ₂) | 30 | |
| NOx (lb/day) | 11.8 | |
| CO ppmv (corrected to 3% O ₂) | 50 | |
| CO (lb/day) | 12.0 | |
| SO ₂ (estimated), ppmv (note 1) | 0.39 | |
| SO ₂ (lb/day) | 0.21 | |
| Particulates, lb/day (note 2) | 0.98 | |
| VOC (estimated), lb/day (note 2) | 1.24 | |

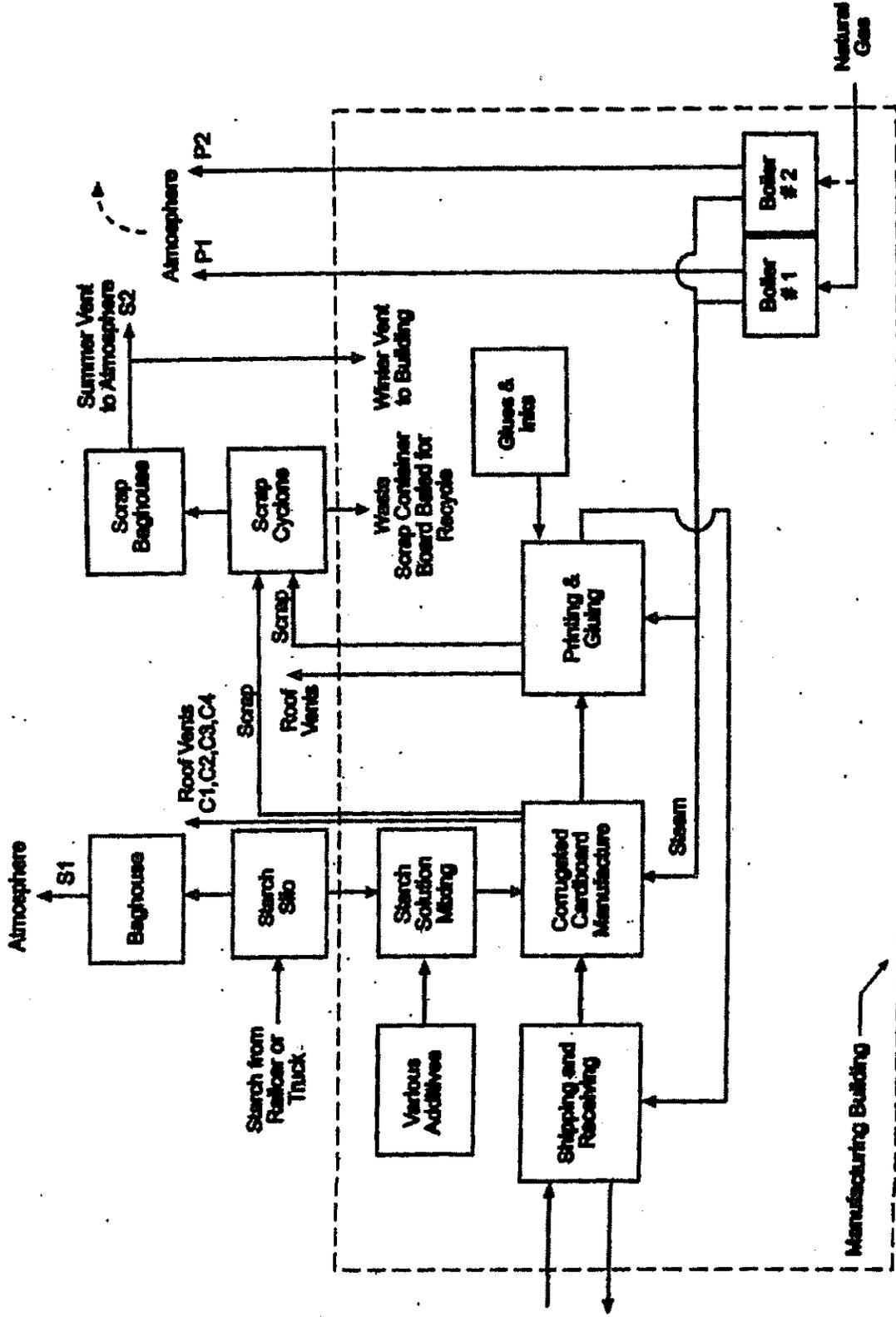
Notes:

- 1 - Values for SO₂ assume 92.5% conversion from Sulfur content in fuel (8 ppmw assumed)
- 2 - Estimated values based on typical industry data.
- 3 - lb/day values based on 24 hour/day operation @ 100% output

I trust this answers your questions. Please feel free to contact me 826-443-9381 or page me at 800-206-0979 if you need further information.

Best Regards, Andy Wales

Copy: Ray Adams / BC Nampa -
Kevin Talbot - BC Boise
C. Maguire / El Monte File



ParsonsBrinckerhoff - Nampa Facility - 11/11/08 (14-07) (v1) (1)

Figure 1
 Process Flow Diagram
 Boise Paper Solutions
 Corrugated Container Facility - Nampa, Idaho

ATTACHMENT A

EMISSION ESTIMATE CALCULATIONS AND REFERENCES

See Table 2 for a summary of emission rates and production limits. Below are example calculations in support of Table 2.

Assumptions:

- Emissions assume 100% load and 8,760 hours/year operation unless otherwise noted.
- See Table 2 for complete statement of emissions and production limits.

Boilers (P1, P2)

Units fired natural gas only.

Clayton Industries, 13.69 mmBtu/hr each.

Reference: Manufacturer's data sheet, attached.

Estimated Emissions (per boiler):

| | | |
|----------|--|---|
| CO: | 12 lb/day x 1 d/24 hr = 0.5 lb/hr. | 12 lb/day x 365 d/yr x 1 ton/2,000 lb = 2.2 ton/yr. |
| NOx: | 11.6 lb/day x 1 d/24 hr = 0.49 lb/hr. | 11.6 lb/day x 365 d/yr x 1 ton/2,000 lb = 2.1 ton/yr. |
| SO2: | 0.21 lb/day x 1 d/24 hr = 0.009 lb/hr. | 0.21 lb/day x 365 d/yr x 1 ton/2,000 lb = 0.039 ton/yr. |
| PM/PM10: | 0.99 lb/day x 1 d/24 hr = 0.042 lb/hr. | 0.99 lb/day x 365 d/yr x 1 ton/2,000 lb = 0.18 ton/yr. |
| VOC: | 1.8 lb/day x 1 d/24 hr = 0.075 lb/hr. | 1.8 lb/day x 365 d/yr x 1 ton/2,000 lb = 0.34 ton/yr. |

HAPs (example for benzene):

Benzene:

$0.0021 \text{ lb}/16^{\circ} \text{ cf} \times 1 \text{ cf}/1,020 \text{ Btu} \times 13.69 \text{ mmBtu}/\text{hr} = 0.000028 \text{ lb}/\text{hr}$

$0.000028 \text{ lb}/\text{hr} \times 8,760 \text{ hr}/\text{yr} \times 1 \text{ ton}/2,000 \text{ lb} = 0.0001 \text{ ton}/\text{yr}$

Corrugator (C1, C2, C3, C4)

PM/PM10:

Reference: *Industrial Hygiene Survey, Burley Container Division, Boise Cascade Corporation, January 25 and 26, 1999.* Timothy Mann, CIH. Emissions from Nampa Facility assumed to be similar to Burley Facility.

Result: $0.25 \text{ mg}/\text{m}^3$.

C1:

$10,100 \text{ acfm} \times 1 \text{ m}^3/35.3 \text{ cf} \times 0.25 \text{ mg}/\text{m}^3 \times 1 \text{ g}/1,000 \text{ mg} \times 1 \text{ min}/60 \text{ s} \times 3,600 \text{ s}/\text{hr} \times 1 \text{ lb}/454 \text{ g} = 0.0095 \text{ lb}/\text{hr}$
 $0.0095 \text{ lb}/\text{hr} \times 8,760 \text{ hr}/\text{yr} \times 1 \text{ ton}/2,000 \text{ lb} = 0.042 \text{ ton}/\text{yr}$

C2:

$23,300 \text{ acfm} \times 1 \text{ m}^3/35.3 \text{ cf} \times 0.25 \text{ mg}/\text{m}^3 \times 1 \text{ g}/1,000 \text{ mg} \times 1 \text{ min}/60 \text{ s} \times 3,600 \text{ s}/\text{hr} \times 1 \text{ lb}/454 \text{ g} = 0.022 \text{ lb}/\text{hr}$
 $0.022 \text{ lb}/\text{hr} \times 8,760 \text{ hr}/\text{yr} \times 1 \text{ ton}/2,000 \text{ lb} = 0.096 \text{ ton}/\text{yr}$

C3:

$23,300 \text{ acfm} \times 1 \text{ m}^3/35.3 \text{ cf} \times 0.25 \text{ mg}/\text{m}^3 \times 1 \text{ g}/1,000 \text{ mg} \times 1 \text{ min}/60 \text{ s} \times 3,600 \text{ s}/\text{hr} \times 1 \text{ lb}/454 \text{ g} = 0.022 \text{ lb}/\text{hr}$
 $0.022 \text{ lb}/\text{hr} \times 8,760 \text{ hr}/\text{yr} \times 1 \text{ ton}/2,000 \text{ lb} = 0.096 \text{ ton}/\text{yr}$

C4:

$23,300 \text{ acfm} \times 1 \text{ m}^3/35.3 \text{ cf} \times 0.25 \text{ mg/m}^3 \times 1 \text{ g}/1,000 \text{ mg} \times 1 \text{ min}/60 \text{ s} \times 3,600 \text{ s/hr} \times 1 \text{ lb}/454 \text{ g} = 0.022 \text{ lb/hr}$
 $0.022 \text{ lb/hr} \times 8,760 \text{ hr/yr} \times 1 \text{ ton}/2,000 \text{ lb} = 0.096 \text{ ton/yr}$

VOC:

Reference: *Particulate and Volatile Organic Compound Emissions Factors for Container Plant Corrugator*, Prepared for Boise Cascade Corrugated Container Operations, Landau Associates, Inc., October 1995.

$7.3\text{E-}06 \text{ lb VOC/sf} \times 385,000 \text{ sf/hr} = 2.8 \text{ lb/hr}$

$7.3\text{E-}06 \text{ lb VOC/sf} \times 1,600,000,000 \text{ sf/yr} \times 1 \text{ ton}/2,000 \text{ lb} = 5.84 \text{ ton/yr}$

Printing and Gluing

Reference: Boise Nampa Facility vendor data. Maximum VOC contents and total HAP contents are listed below. Emission rates for specific HAPs will vary depending upon the specific products used.

Glue:

VOC: $1,500,000 \text{ lb glue/yr} \times 0.50\% \text{ VOC} \times 1 \text{ ton}/2,000 \text{ lb} = 3.8 \text{ ton/yr}$

HAPs (total): $1,500,000 \text{ lb glue/yr} \times 0.20\% \text{ total HAPs} \times 1 \text{ ton}/2,000 \text{ lb} = 1.5 \text{ ton/yr}$

Specific HAPs (example: vinyl acetate): $1,500,000 \text{ lb glue/yr} \times 0.00049\% \times 1 \text{ ton}/2,000 \text{ lb} = 0.31 \text{ ton/yr}$

Ink:

VOC: $380,000 \text{ lb ink/yr} \times 8.0\% \text{ VOC} \times 1 \text{ ton}/2,000 \text{ lb} = 15.2 \text{ ton/yr}$

HAPs (total): $380,000 \text{ lb ink/yr} \times 0.3\% \times 1 \text{ ton}/2,000 \text{ lb} = 0.57 \text{ ton/yr}$

Specific HAP (e.g., glycol ethers): $380,000 \text{ lb ink/yr} \times 0.3\% \text{ Total HAPs} \times 26\% \text{ glycol ethers} \times 1 \text{ ton}/2,000 \text{ lb} = 0.15 \text{ ton/yr}$

Starch Silo (S1)

Reference: IDEQ Permit No. 027-00026 for Starch Silo and Baghouse, March 16, 1995. Note that the permit limited emissions to 0.051 lb/hr based on an assumed particulate loading of 0.01 gr/dscf. Use of 0.015 gr/dscf is retained for consistence with the ambient air impact analysis.

Peak Hour: $0.015 \text{ gr/acf} \times 600 \text{ acfm} \times 60 \text{ min/hr} \times 1 \text{ lb}/7,000 \text{ gr} = 0.077 \text{ lb/hr}$

Annual: $0.077 \text{ lb/hr} \times 8,760 \text{ hrs/yr (max)} = 675 \text{ lb/yr} = 0.34 \text{ ton/yr}$

Scrap Cyclone (S2)

Reference: *Particulate Factors for Container Plant Cyclone Collection System, Boise Cascade Corrugated Container Operation*, Landau Associates, July 1995. Report result was emission factor of 0.915 lb/1,000 lb scrap collected, or 1.83 lb/ton scrap. Vendor letter documents baghouse has the following characteristics:

100% control for PM > 2 microns, 98.4% control for PM > 1 micron, and 95% control for PM > 0.1 microns. Assume 98% control overall.

PM/PM10:

$160 \text{ lbs paper}/1,000 \text{ sf} \times 9.5\% \text{ scrap} \times 1.83 \text{ lb PM/ton scrap} \times 385,000 \text{ sf/hr} \times 1 \text{ ton}/2,000 \text{ lb} \times (1 - 0.98) = 0.107 \text{ lb/hr}$

$160 \text{ lbs paper}/1,000 \text{ sf} \times 9.5\% \text{ scrap} \times 1.83 \text{ lb PM/ton scrap} \times 1.6 \text{ billion sf/yr} \times 1 \text{ ton}/2,000 \text{ lb} \times (1 - 0.98) = 0.22 \text{ ton/yr}$

Table 2. Emission Sources and Emissions

| Emission Unit | Pollutant | Emission Factor Source | 1-Hour Potential to Emit (lb/hr) | 24-Hour Potential to Emit (lb/day) | Annual Potential to Emit (tons/yr) | 2002 Production ^a | |
|--|--|---|--|--|---|---|---------------|
| Starch Silo (per PTC 027-00024, May 5, 1993) | PM10 | Estimated: assume 0.015 g/dscf at vendor supplied air flow rate of 600 acfm | 1 hour | 24 hour | 6,780 hour | Approx. 500 hrs | |
| | | | 0.077 | 1.85 | 0.34 | - | |
| Natural-Gas-Fired Boiler No. 1 (Clayton EGS4-2.5-LNB, installed 1998 per IDEQ exemption letter 11/10/97) | | | 13.69 MMBtu/hr / 1020 Btu/cf gas = 13,421.6 cf gas/hr max. | 13,421.6 cf gas/hr x 24 = 322,100 cf gas/day | 13,421.6 cf gas/hr x 8760 hr/yr = 117,600,000 cf/yr | 30,000,000 cf | |
| | CO | Vendor Guarantee | 0.5 | 12.0 | 2.2 | - | |
| | NO ₂ | Vendor Guarantee | 0.486 | 11.84 | 2.1 | - | |
| | SO ₂ | Vendor Guarantee | 0.009 | 0.22 | 0.039 | - | |
| | PM10 | Vendor Guarantee | 0.042 | 1.00 | 0.18 | - | |
| | VOC | Vendor Guarantee | 0.075 | 1.80 | 0.34 | - | |
| | Lead | Engineering Estimate | 0 | 0 | 0 | - | |
| | Benzene | 2.1E-03 lb/10 ⁶ cf, AP-42, Sec 1.4,7/98 | 0.00003 | - | 0.0001 | - | |
| | Dichlorobenzene | 1.2E-03 lb/10 ⁶ cf, AP-42, Sec 1.4,7/98 | 0.00002 | - | 0.00007 | - | |
| | Formaldehyde | 7.5E-02 lb/10 ⁶ cf, AP-42, Sec 1.4,7/98 | 0.001 | - | 0.004 | - | |
| | Hexane | 1.6 lb/10 ⁶ cf, AP-42, Sec 1.4,7/98 | 0.024 | - | 0.11 | - | |
| | Toluene | 3.4E-03 lb/10 ⁶ cf, AP-42, Sec 1.4,7/98 | 0.00005 | - | 0.0002 | - | |
| | Natural-Gas Fired Boiler No. 2 (Clayton EGS4-2.5-LNB, installed 1998 per IDEQ exemption letter 11/10/97) | | | 13.69 MMBtu/hr / 1020 Btu/cf gas = 13,421.6 cf gas/hr max. | 13,421.6 cf gas/hr x 24 = 322,100 cf gas/day | 13,421.6 cf gas/hr x 8760 hr/yr = 117,600,000 cf/yr | 30,000,000 cf |
| | | CO | Vendor Guarantee | 0.5 | 12.0 | 2.2 | - |
| NO ₂ | | Vendor Guarantee | 0.486 | 11.84 | 2.1 | - | |
| SO ₂ | | Vendor Guarantee | 0.009 | 0.22 | 0.039 | - | |

Table 2. Emission Sources and Emissions

| Emission Unit | Pollutant | Emission Factor Source | 1-Hour Potential to Emit (lb/hr) | 24-Hour Potential to Emit (lb/day) | Annual Potential to Emit (ton/yr) | 2002 Production* |
|--|-----------------|--|---|---|---|-------------------------------------|
| | PM10 | Vendor Guarantees | 0.042 | 1.00 | 0.16 | - |
| | VOC | Vendor Guarantees | 0.075 | 1.80 | 0.34 | - |
| | Lead | Engineering Estimate | - | - | 0.000030 | - |
| | Benzene | 2.1E-03 lb/10 ⁶ cf, AP-42, Sec 1.4,7/88 | 0.00003 | - | 0.0001 | - |
| | Dichlorobenzene | 1.2E-03 lb/10 ⁶ cf, AP-42, Sec 1.4,7/88 | 0.00002 | - | 0.00007 | - |
| | Formaldehyde | 7.5E-02 lb/10 ⁶ cf, AP-42, Sec 1.4,7/88 | 0.001 | - | 0.004 | - |
| | Hexane | 1.8 lb/10 ⁶ cf, AP-42, Sec 1.4,7/88 | 0.024 | - | 0.11 | - |
| | Toluene | 3.4E-03 lb/10 ⁶ cf, AP-42, Sec 1.4,7/88 | 0.00005 | - | 0.0002 | - |
| Corrugator (installed 1988 per IDEQ exemption letter March 18, 1988) | | | | | | |
| Production | | | 395,000 sf/yr | 9,200,000 sf/day | 1.6 Billion sf/yr | 707,200,000 sf |
| | PM10 | Industrial Hygiene Testing | 0.075 | 1.8 | 0.33 | - |
| | VOC | 7.3E-06 lb VOC/sf | 2.81 | 67.2 | 5.84 | - |
| | HAPs/TAPs | Engineering Estimate; no data available | 0 | 0 | 0 | - |
| Printing and Gluing (installed various dates, per IDEQ exemption letter March 8, 2000, PTC 27-00026 dated July 17, 2001, and PTC 027-00026 dated September 10, 2002) | | | | | | |
| Production | | | No hourly maximum ink usage determined. 315 lbs glue/hr | No daily maximum ink usage determined. 7,542 lbs glue/day | 390,000 lbs ink/yr 1,500,000 lbs glue/yr | 153,500 lbs ink 580,000 lbs glue |
| Glue | PM | Engineering Estimate | 0 | 0 | 0 | - |
| | VOC | Calculated mass balance per MSDS, HB Fuller V3869 Glue [®] , 0.33% by weight. Assume future glue will be maximum 0.50% VOC by weight. | 1.6 | 38 | 3.8 | - |
| | Total HAPs | 0.20% by weight ^c (assumed future maximum) | 0.63 | - | 1.5 | - |
| | Vinyl Acetate | 0.0418% by weight | 0.13 | - | 0.31 | - |
| | Formaldehyde | 0.0168% by weight | 0.053 | - | 0.13 | - |
| | Methyl Alcohol | 0.0168% by weight | 0.053 | - | 0.13 | - |

Table 2. Emission Sources and Emissions

| Emission Unit | Pollutant | Emission Factor Source | 1-Hour Potential to Emit (lb/hr) | 24-Hour Potential to Emit (lb/day) | Annual Potential to Emit (tons/yr) | 2002 Production ^a |
|--|--|--|----------------------------------|------------------------------------|------------------------------------|------------------------------|
| Printing and Gluing (Continued) | | | | | | |
| | Acetaldehyde | 0.0637% by weight | 0.26 | - | 0.63 | - |
| Ink | PM | Engineering Estimate | 0 | 0 | 0 | - |
| | VOC | Average VOC content of ink and ink products, Year 2002 = 6.1% by weight (mainly ethanol). Assume future inks at 8 percent VOC by weight. | ND | ND | 15.2 | 3.9 |
| | HAPs (varies with product and color, over 100 different products used) | HAP content = 0.21% by weight. Assume future inks at 0.3% HAPs by weight. HAP breakdown is 20% glycol ethers, 36% methyl alcohol, 6% MIBK, 25% "trade secret," and 5% other. | ND | ND | 0.57 | - |
| Scrap Cyclone and Baghouse (installed 2000 per PTC 27-00026, June 2, 2000) | | | | | | |
| | | | 2.9 tpm on average | 70 tons scrap/day | 12,160 tons scrap/yr | 5,860 ton scrap |
| | PM | Source Test on cyclone without baghouse = 1.89 pounds PM10 per ton scrap. Assume baghouse has 98 percent post-cyclone control efficiency per vendor letter. | 0.11 | 2.56 | 0.22 | - |
| | VOC | Engineering Estimate | 0 | 0 | 0 | - |

Table 2. Emission Sources and Emissions

| Emission Unit | Pollutant | Emission Factor Source | 1-Hour Potential to Emit (lb/hr) | 24-Hour Potential to Emit (lb/day) | Annual Potential to Emit (ton/yr) | 2002 Production ^a |
|----------------------------|-----------------------------|------------------------|----------------------------------|------------------------------------|-----------------------------------|------------------------------|
| Facility-Wide Total | | | | | | |
| | CO | - | 1.0 | 24 | 4.4 | - |
| | NO ₂ | - | 0.99 | 23.3 | 4.2 | - |
| | SO ₂ | - | 0.018 | 0.44 | 0.08 | - |
| | PM10 | - | 0.35 | 8.8 | 1.16 | - |
| | VOC | - | ND | ND | 25.5 | - |
| | Lead | - | ND | ND | 0.00006 | - |
| | HAPs/TAPs (as listed above) | - | ND | ND | 2.0 | - |

a. Facility production rate in 2002 can be characterized as approximately "typical" or "average" in the middle range of potential facility production rates.
 b. Natural gas measured hourly while only. Gas usage listed assumes equal consumption by each boiler, neglecting deduction for gas consumed by space heaters.
 c. Other similar gases may be substituted in the future. Permit application requests limit on emissions, without naming a specific product.
 ND = Not Determined

APPENDIX B – FACILITY DRAFT COMMENTS

The following comments were received from the facility on June 2, 2010:

Facility Comment: Page numbers do not appear for Pages 1-12.

DEQ Response: Page numbers have been added.

Facility Comment: See Page 3, Table 1

- Clean up from Tier II.
- Corrugators needs to be revised to corrugator. Plant has 1 corrugator.

DEQ Response: This has been corrected.

Facility Comment: See Page 5, Section 11.b) --

Lines 4 and 5

“in its annual compliance certification and” needs deleted recognizing this is not a requirement for the plant.

DEQ Response: This has been corrected.

Facility Comment: See Page 7, Section 17.

- 1st sentence needs revised with “s” deleted from corrugators.
- See Table – *Error! No text of specified style in document.*

Needs corrected.

DEQ Response: Has been fixed.

Facility Comment: See Page 7, Section 19.

Period needs added at the end of sentence.

DEQ Response: Done.

Facility Comment: See Page 12 (Construction and Operation Notification)

Is the plant subject to any of these notifications requirements, recognizing there has not been any new construction or modification of a source as part of this permit renewal/PTC process?

DEQ Response: Because none of the equipment is new construction or modification, the notification requirements in Permit Condition 41 do not apply to this permit action.

COMMENTS ON STATEMENT OF BASIS:

Facility Comment: See Page 4 (Application Chronology)

May 14, 2010 date needs added for making the draft documents available to the plant for review.

DEQ Response: Done.

Facility Comment: See Page 5 (Table 1) – Corrugators needs revised to corrugator.

DEQ Response: Done.

Facility Comment: See Page 6 (NSPS Applicability)

This statement needs revised. The plant is subject to NSPS requirements. It has 2 natural gas-fired boilers that are federal NSPS Subpart Dc boilers subject to the gas consumption tracking recordkeeping requirement (40 CFR Section 60.48c(g)). These boilers are registered with IDEQ as a Title V, Tier I non-major source.

DEQ Response: This has been addressed in that section.

Facility Comment: See Page 7 (for 1st and 3rd tables) -- *Table Error! No text of specified style in document...*

DEQ Response: Fixed.

Facility Comment: See Page 7, last Emissions Limits section ---

- 1st and 2nd sentences – corrugators needs changed to corrugator
- 1st sentence – *Table 3 Table Error!.....*

DEQ Response: Fixed.

APPENDIX C – PROCESSING FEE

PTC Fee Calculation

Instructions:

Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: Boise Packaging & Newsprint,
 L.L.C.
 Address: 1808 East Chisholm Drive
 City: Nampa
 State: Idaho
 Zip Code: 83687
 Facility Contact: Steve Henke
 Title: Environmental Manager
 AIRS No.: 027-00026

- N Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
- Y Did this permit require engineering analysis? Y/N
- N Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

| Emissions Inventory | | | |
|----------------------------|----------------------------------|-----------------------------------|--------------------------------|
| Pollutant | Annual Emissions Increase (T/yr) | Annual Emissions Reduction (T/yr) | Annual Emissions Change (T/yr) |
| NO _x | 0.0 | 0 | 0.0 |
| SO ₂ | 0.0 | 0 | 0.0 |
| CO | 0.0 | 0 | 0.0 |
| PM10 | 0.0 | 0 | 0.0 |
| VOC | 0.0 | 0 | 0.0 |
| TAPS/HAPS | 0.0 | 0 | 0.0 |
| Total: | 0.0 | 0 | 0.0 |
| Fee Due | \$ 1,000.00 | | |

Comments: