SIMPLE
AIR CONTAMINANT DISCHARGE PERMIT

Department of Environmental Quality
Northwest Region
1550 NW Eastman Parkway, Suite 290
Gresham, Oregon 97030
(503) 667-8414

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

International Paper Company
1601 NE 192nd Avenue
Portland, OR 97230

PLANT SITE LOCATION:

Portland Containerboard Packaging
1601 NE 192nd Avenue
Portland, OR 97230

INFORMATION RELIED UPON:

Application No.: 023554
Date Received: 12/11/2008

LAND USE COMPATIBILITY FINDING:

Approving Authority: City of Gresham
Approval Date: 2/17/1994

PERMIT PREVIOUSLY ISSUED TO:

Weyerhaeuser Company
1601 NE 192nd Avenue
Portland, OR 97230

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Craig Wind 04|15|2009

Ed Druback, Northwest Region Air Quality Manager — Dated

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-0020):

Table 1 Code	Source Description	SIC/ NAICS
Part B, 75	Source that would emit 10 tons/year or more of a criteria pollutant if operated uncontrolled (containerboard mfg.)	2653/ 322211
	Boiler greater than 10 MM Btu/hr input, natural gas fired with diesel back-up	4961/ 221330

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1.0 GENERAL EMISSION STANDARDS AND LIMITS

1.1. Visible Emissions

The permittee must comply with the following visible emission limits, as applicable:

a. Emissions from any air contaminant source must not equal or exceed 20% opacity for a period aggregating more than 3 minutes in any one hour.

b. Emissions from any air contaminant source other than the boiler must not equal or exceed 20% opacity for a period aggregating more than 30 seconds in any one hour.

1.2. Particulate Matter Emissions

The permittee must comply with the following particulate matter emission limits, as applicable:

a. Particulate matter emissions from the boiler must not exceed 0.1 grains per standard cubic foot, corrected to 12% CO_2 or 50% excess air.

b. Particulate matter emissions from any air contaminant source installed, constructed, or modified after June 1, 1970 other than the boiler and fugitive emission sources must not exceed 0.1 grains per standard cubic foot.

1.3. Fugitive Emissions

The permittee must take reasonable precautions to prevent fugitive dust emissions by:

a. Operating all air contaminant-generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times.

b. Storing collected materials from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer.

1.4. Particulate Matter Fallout

The permittee must not cause or permit the emission of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. The Department will verify that the deposition exists and will notify the permittee that the deposition must be controlled.

1.5. Nuisance and Odors

The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by Department personnel.

1.6. Fuels and Fuel Sulfur Content

The permittee must not use any fuel other than natural gas, propane, butane, ASTM grade fuel oils, or on-specification used oil.

a. Fuel oils must not contain more than:

i. 0.3% sulfur by weight for ASTM Grade 1 distillate oil;

ii. 0.5% sulfur by weight for ASTM Grade 2 distillate oil;

iii. 1.75% sulfur by weight for residual oil;

b. The permittee is allowed to use on-specification used oil as fuel which contains no more than 0.5% sulfur by weight. The permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that it can be demonstrated that each shipment of oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1.

2.0 OPERATION AND MAINTENANCE REQUIREMENTS

2.1. Work practices

The permittee must perform a maintenance service on the boiler at least once in every 2-year period. As a minimum, the service must include an inspection of the burners and refractory chamber; cleaning, adjustment, and repair as necessary. For water tube boilers, the service must include flushing the tubes.

3.0 PLANT SITE EMISSION LIMITS

3.1. Plant Site Emission Limits (PSEL)

Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM	24	tons per year
PM_{10}	14	tons per year
SO_2	39	tons per year
NO_X	39	tons per year
CO	99	tons per year
VOC	39	tons per year

Single HAP	9	tons per year
Combined HAPs	24	tons per year

3.2. Annual Period The annual plant site emissions limits apply to any 12-consecutive calendar month period.

4.0 COMPLIANCE DEMONSTRATION

4.1. PSEL Compliance Monitoring Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for each pollutant:

$$E = \Sigma(EF \times P)/2000 \text{ lbs}$$

where,

E = pollutant emissions (tons/yr);
EF = pollutant emission factor (see Condition 11.0);
P = process production (see Condition 5.1)

4.2. Emission Factors The permittee must use the default emission factors provided in condition 11.0 for calculating pollutant emissions, unless alternative emission factors are approved by the Department. The permittee may request or the Department may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by the Department.

4.3. Mass Balance without controls Annual VOC/HAP emissions for each 12 consecutive calendar month period are calculated by the following formula:

$$E_{VOC\text{-}A} = [\Sigma(C_X * D_X * K_X) - W] \times 1\text{ton}/2000 \text{ pounds}$$

Where,

$E_{VOC\text{-}A}$ = Annual VOC emissions in tons
C = Material usage for the period in gallons
D = Material density in pounds per gallon
K = VOC/HAP concentration expressed as a decimal
X = Subscript X represents a specific material
W = Weight of VOC shipped offsite

5.0 RECORDKEEPING REQUIREMENTS

5.1. Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices on a monthly basis:

a. Quantity of natural gas combusted, in million cubic feet;

b. Quantity and type of fuel oils combusted, in thousand gallons;

c. Hours of operation of the corrugators;

d. Quantity of inks used, in pounds;

e. Quantity of scrap paper/containerboard baled, in tons;

f. Weighted average VOC content of inks, in percent;

g. Gallons of VOC/HAP containing materials used, and percent of HAP, by weight;

h. Gallons of VOC/HAP waste material shipped off site;

i. Calculations required in Conditions 4.1 and 4.3;

j. Percentage of containerboard that has been waxed

5.2. Excess Emissions

The permittee must maintain records of excess emissions as defined in OAR 340-214-0300 through 340-214-0340 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity for 3 minutes or more in any 60-minute period. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must cease operation of the equipment or facility no later than 48 hours after the beginning of the excess emissions, unless continued operation is approved by the Department in accordance with OAR 340-214-0330(4).

5.3. Complaint Log

The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.

5.4. Retention of Records Unless otherwise specified, all records must be maintained on site for a period of two (2) years and made available to the Department upon request.

6.0 REPORTING REQUIREMENTS

6.1. Excess Emissions The permittee must notify the Department of excess emissions events if the excess emission is of a nature that could endanger public health.

a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 8.3 by e-mail, telephone, facsimile, or in person.

b. If the excess emissions occur during non-business hours, the permittee must notify the Department by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.

c. The permittee must also submit follow-up reports when required by the Department.

6.2. Annual Report For each year this permit is in effect, the permittee must submit to the Department by **February 15** two (2) copies of the following information for the previous calendar year:

a. Operating parameters:

i. Calculations required in Condition 4.0, these may be in the form of a spreadsheet.

ii. The date of the last boiler tune-up, and any major repairs completed.

iii. Average percentage of containerboard waxed.

b. A summary of annual pollutant emissions determined each month in accordance with Condition 5.1.

c. Records of all planned and unplanned excess emissions events.

d. Summary of complaints relating to air quality received by permittee during the year.

e. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.

f. List major maintenance performed on pollution control equipment.

6.3. Notice of Change of Ownership or Company Name

The permittee must notify the Department in writing using a Departmental "Permit Application Form" within 60 days after the following:

a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or

b. Sale or exchange of the activity or facility.

6.4. Construction or Modification Notices

The permittee must notify the Department in writing using a Departmental "Notice of Construction Form," or "Permit Application Form," and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

a. Constructing, installing, or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;

b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or

c. Constructing or modifying any air pollution control equipment.

6.5. Where to Send Reports and Notices

The reports, with the permit number prominently displayed, must be sent to the Field office for the region where the source is located as identified in Condition 8.3

7.0 ADMINISTRATIVE REQUIREMENTS

7.1. Permit Renewal Application

The completed application package for renewal of this permit is due on 11/01/2013. Two (2) copies of the application must be submitted to the DEQ Permit Coordinator listed in Condition 8.2.

7.2. Permit Modifications

Application for a modification of this permit must be submitted not less than **60** days prior to the source modification. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the Business Office of the Department.

8.0 DEQ CONTACTS / ADDRESSES

8.1. Business Office

The permittee must submit payments for invoices, applications to modify the permit, and any other payments to DEQ's Business Office:

Department of Environmental Quality
Business Office
811 SW Sixth Avenue
Portland, Oregon 97204-1390

8.2. Permit Coordinator

The permittee must submit all Notices and applications that do not include payment to the Northwest Region's Permit Coordinator:

Department of Environmental Quality
Northwest Region
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
Telephone: (503) 229-5582

8.3. Field Office

Unless otherwise notified, the permittee must submit all reports (annual reports, source test plans and reports, etc.) to field office noted below.

Department of Environmental Quality
NWR-ESO/AQ
1550 NW Eastman Pkwy, Suite 290
Gresham, OR 97030
Telephone: (503) 667-8414

8.4. Web Site

Information about air quality permits and the Department's regulations may be obtained from the DEQ web page at www.deq.state.or.us

9.0 FEES

9.1.	**Annual Compliance Fee**	The Annual Fee specified in OAR 340-216-0020, Table 2, Part 2 for a Simple ACDP is due on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by Department regulations, will be mailed prior to the above date. **Late fees in accordance with Part 4 of the table will be assessed as appropriate.**
9.2.	**Change of Ownership or Company Name Fee**	The non-technical permit modification fee specified in OAR 340-216-0020, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company.
9.3.	**Special Activity Fees**	The special activity fees specified in OAR 340-216-0020, Table 2, Part 3 (b through i) are due with an application to modify the permit.
9.4.	**Where to Submit Fees**	Fees must be submitted to: Department of Environmental Quality Business Office 811 SW Sixth Avenue Portland, Oregon 97204-1390

10.0 GENERAL CONDITIONS AND DISCLAIMERS

10.1.	**Permitted Activities**	This permit allows the permittee to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, or is revoked.
10.2.	**Other Regulations**	In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by the Department.
10.3.	**Conflicting Conditions**	In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.
10.4.	**Masking of Emissions**	The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.

10.5. Department Access The permittee must allow the Department's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.

10.6. Permit Availability The permittee must have a copy of the permit available at the facility at all times.

10.7. Open Burning The permittee may not conduct any open burning except as allowed by OAR 340 Division 264.

10.8. Asbestos The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limit to, demolition, renovation, repair, construction, and maintenance.

10.9. Property Rights The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

10.10. Permit Expiration

a. A source may not be operated after the expiration date of the permit, unless any of the following occur prior to the expiration date of the permit:
   i. A timely and complete application for renewal or for an Oregon Title V operating Permit has been submitted, or
   ii. Another type of permit (ACDP or Oregon Title V Operating Permit) has been issued authorizing operation of the source.

b. For a source operating under an ACDP or Oregon Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated according to the procedures used to establish the requirement initially.

10.11. Permit Termination, Revocation, or Modification The Department may modify or revoke this permit pursuant to OAR 340-216-0082 and 340-216-0084.

11.0 EMISSION FACTORS

Emissions device or activity	Pollutant	Emission Factor (EF)	EF units	EF reference
Natural gas combustion	PM_{10}	7.6	lb/MMCF	AP-42
	SO_2	0.6	lb/MMCF	AP-42
	NO_X	100.0	lb/MMCF	AP-42
	CO	84.0	lb/MMCF	AP-42
	VOC	5.5	lb/MMCF	AP-42
Diesel fuel combustion	PM_{10}	2.0	lb/1,000 Gal.	AP-42
	SO_2	71.0	lb/1,000 Gal.	AP-42
	NO_X	20.0	lb/1,000 Gal.	AP-42
	CO	5.0	lb/1,000 Gal.	AP-42
	VOC	0.34	lb/1,000 Gal.	AP-42
Corrugator	PM_{10}	0.006	lb/MSF	Engineer Estimate
	VOC	0.0082	lb/MSF	Engineer Estimate
Finishing Inks	VOC	0.05	lb/lb ink	Mass Balance
Scrap Cyclones	PM	0.83	lb/ton scrap	Source Test

12.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit
ASTM	American Society for Testing and Materials
AQMA	Air Quality Maintenance Area
calendar year	The 12-month period beginning January 1st and ending December 31st
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic foot
EPA	US Environmental Protection Agency
FCAA	Federal Clean Air Act
gal	gallon(s)
gr/dscf	grains per dry standard cubic foot
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040
I&M	inspection and maintenance
lb	pound(s)
MMBtu	million British thermal units
NA	not applicable
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_X	nitrogen oxides
NSPS	New Source Performance Standard
NSR	New Source Review
O_2	oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	operation and maintenance
Pb	lead
PCD	pollution control device
PM	particulate matter
PM_{10}	particulate matter less than 10 microns in size
ppm	part per million
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limit
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
scf	standard cubic foot
SER	Significant Emission Rate
SIC	Standard Industrial Code
SIP	State Implementation Plan
SO_2	sulfur dioxide
Special Control Area	as defined in OAR 340-204-0070
VE	visible emissions
VOC	volatile organic compound
year	A period consisting of any 12-consecutive calendar months

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Simple AIR CONTAMINANT DISCHARGE PERMIT REVIEW REPORT

Department of Environmental Quality
Northwest Region
International Paper Company
1601 NE 192nd Avenue
Portland, OR 97230
(503) 661-6161

Source Information:

SIC	2653/4961
NAICS	322211/221330

Source Categories (Table 1 Part, code)	Part B, #75
Public Notice Category	II

Compliance and Emissions Monitoring Requirements:

FCE	
Compliance schedule	
Unassigned emissions	
Emission credits	
Special Conditions	

Source test [date(s)]	
COMS	
CEMS	
Ambient monitoring	

Reporting Requirements

Annual report (due date)	February 15
Quarterly report (due dates)	

Monthly report (due dates)	
Excess emissions report	
Other (specify)	

Air Programs

Synthetic Minor (SM)	
SM -80	
NSPS (list subparts)	Subpart Dc
NESHAP (list subparts)	Subpart KK
Part 68 Risk Management	

CFC	
NSR	
PSD	
RACT	
TACT	X

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PERMITTING

PERMITTING ACTION

1. The permit is a renewal for an existing Air Contaminant Discharge Permit (ACDP) which was issued on 5/20/2004 and was originally scheduled to expire on 3/1/2009.

OTHER PERMITS

2. Other permits issued or required by the Department of Environmental Quality for this source include a general storm water permit, 1200 COLS.

ATTAINMENT STATUS

3. The source is located in a maintenance area for CO and Ozone. Ozone precursors NO_X and VOC are regulated pollutants. This source is an insignificant source of CO, NO_X, and VOC. The area is in attainment for all other pollutants.

SOURCE DESCRIPTION

OVERVIEW

4. The permittee manufactures shipping boxes. Three sheets of paper are used to make "containerboard". The outside sheets are heated by steam vents to make them pliable, and then joined to an inner corrugated sheet using a starch-based glue to make a paper "sandwich". The formed sheet passes over heated plates to gel the starch, trimmed, then sent to the finishing area to be formed into boxes. The sheet is cut to specified size, printed, slotted and folded, bottom flap sealed, then packaged for shipment. Approximately 23% of the containerboard is printed; about 5% of the sheets are laminated before finishing, using cold set adhesive; and about 3% of the containerboard is waxed.

   Scrap paper is pneumatically collected, fed through one of two cyclones, and transferred to a baler. The baled scrap is sent to a paper mill for recycling. PM from a bulk starch silo is negligible and is not considered in the permit.

   Steam for the process is provided by a 600 HP natural gas fired boiler, with diesel back-up. The facility also has four natural gas fired heaters which are not considered in the permit. The facility was built in 1980.

5. A two-color rotary die cutter was added to the facility in March 2001.

PROCESS AND CONTROL DEVICES

6. Existing air contaminant sources at the facility consist of the following:

   a. One corrugator, installed 1980;
   b. Two in-line cyclones on the scrap collection system, installed 1980 and 1989;
   c. Printing/finishing station, installed 1980;
   d. One Cleaver Brooks boiler, 25 MM Btu/hr, with diesel back-up, installed in 1980.

COMPLIANCE

7. The facility was inspected on 2/10/2004 and found to be in compliance with permit conditions.

8. During the prior permit period there were no complaints recorded for this facility

9. No enforcement actions have been taken against this source since the last permit renewal.

EMISSIONS

10. Proposed PSEL information:

Pollutant	Baseline Emission Rate (tons/yr)	Netting Basis		Plant Site Emission Limits (PSEL)		
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase (tons/yr)
PM	0	0	0	24	24	0
PM_{10}	0	0	0	14	14	0
SO_2	0	0	0	39	39	0
NO_x	0	0	0	39	39	0
CO	0	0	0	99	99	0
VOC	0	0	0	39	39	0
Single HAP	0	0	0	9	9	0
Combined HAPS	0	0	0	24	24	0

   a. The proposed PSELs for all pollutants are equal to the Generic PSEL in accordance with OAR 340-216-0064(4)(b) and the netting basis is zero in accordance with OAR 340-222-0040(2).
   b. Anticipated emissions are the same as the previous PSEL and are based on the manufacture of 1.6 billion feet of containerboard per year and the use of 342,000

pounds of ink with an average VOC content of 5%, by weight, and an average 3% product that has been waxed (included in the corrugated emission factor).

c. Although the facility does not have PTE for HAP, the permittee has specifically requested a limit on single and combined HAP be included in the permit.

d. The PSEL is a federally enforceable limit on the potential to emit.

SIGNIFICANT EMISSION RATE ANALYSIS

11. For each pollutant, the proposed Plant Site Emission Limit is less than the Netting Basis plus the significant emission rate, thus no further air quality analysis is required.

MAJOR SOURCE APPLICABILITY

CRITERIA POLLUTANTS

12. A major source is a facility that has the potential to emit 100 tons/yr or more per year of any criteria pollutant. This facility is not a major source of criteria pollutant emissions. Calculation of anticipated emissions was based on the facility's maximum potential production, thus represents potential to emit.

HAZARDOUS AIR POLLUTANTS

13. A major source is a facility that has the potential to emit 10 tons/yr or more of any single HAP or 25 tons/yr or more of combined HAPs. This source is not a major source of hazardous air pollutants. Glycol ethers from the use of inks and formaldehyde from starch additives total less than two tons/yr.

ADDITIONAL REQUIREMENTS

NSPS APPLICABILITY

14. 40 CFR Part 60, Subpart Dc, is not applicable to the facility because the boiler was installed prior to promulgation of the rule.

NESHAPS/MACT APPLICABILITY

15. 40 CFR Part 63, Subpart KK applies to major sources in the printing and publishing industry. This facility is a minor source, and is therefore not subject to the MACT standards.

RACT APPLICABILITY

16. The facility is located in the Portland AQMA, but it is not one of the listed source categories in OAR 340-232-0010, thus the RACT rules do not apply

TACT APPLICABILITY

17. The source is meeting the State's TACT/Highest and Best Rules by pneumatically collecting containerboard scraps to decrease PM emissions. Highest and Best practices are achieved by routine maintenance and tuning on the boiler.

SOURCE TESTING

PRIOR TESTING RESULTS

18. The results of the most recent source tests are listed below:

Emission Device	Test Date	Production Rate	Pollutant	Measured Value
Corrugator	10/25/1994	204,000 ft^2/hr	VOC	0.0082 lb VOC/1000 ft^2
Scrap cyclones	10/25/1994	1,341 lb/bale	PM	0.83 lb PM/ton of scrap

a. The value given for the corrugators is a weighted average, including 3% waxed product.
b. The value given for the cyclones is an average. Cyclone 2 feeds into cyclone 1.

PUBLIC NOTICE

19. Pursuant to OAR 340-216-0064(5)(a), issuance of Simple Air Contaminant Discharge Permits require public notice in accordance with OAR 340-209-0030(3)(b), which requires that the Department provide notice of the proposed permit action and a minimum of 30 days for interested persons to submit written comments. **The public notice was made available for public comment from March 13, 2009 until 5pm, on April 14, 2009. No comments were received.**

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International Paper Co. – Gresham Plant
ACDP No. 26-3051
Application No. 023554

FUEL COMBUSTION:

Natural Gas:	220 MMCF/yr	0.03 MMCF/hr	8760 hr/yr
Oil type: No. 2	258 1000 Gal/yr	174 Gal/hr	1480 hr/yr

Natural Gas Emissions				
Pollutants	Emission Factor	Units	Reference	Longterm ton/yr
PM/PM_{10}	7.6	lb/MMCF	AP-42	0.8
SO_2	0.6	lb/MMCF	AP-42	0.1
NO_X	100	lb/MMCF	AP-42	11.0
CO	84	lb/MMCF	AP-42	9.2
VOC	5.5	lb/MMCF	AP-42	0.6

Oil Emissions				
Pollutants	Emission Factor	Units	Reference	Longterm, ton/yr
PM/PM_{10}	2	lb/1000 Gal	AP-42	0.3
SO_2	71	lb/1000 Gal	AP-42	9.2
NO_X	20	lb/1000 Gal	AP-42	2.6
CO	5	lb/1000 Gal	AP-42	0.6
VOC	0.34	lb/1000 Gal	AP-42	0.0

PROCESSES:

Corrugator:	6240 hr/yr	
Paper processed:	1.60E+09 SF/yr	300000 SF/hr
Finishing throughputs	342000 lb ink/yr	5800 ton scrap

Corrugator/ Pollutant	Emission Factor	Units	Reference	Longterm ton/yr
VOC	0.0082	lb/MSF	Emission Test	6.56
PM_{10}	0.006	lb/MSF	Engineer Estimate	4.80

Emission Totals	
Pollutant	Tons/yr
PM	8.3
PM_{10}	5.9
SO_2	9.2
NO_X	13.6
CO	9.9
VOC	15.8

Finishing Inks/ Pollutants	Emission Factor	Units	Reference	Longterm, ton/yr
VOC - avg. of 5.0% by weight	0.0500	lb/lb ink	Mass Balance	8.6

Scrap Cyclones/	Emission Factor	Units	Reference	Longterm, ton/yr
PM	0.83	lb/ton scrap	Emission test (1994)	2.4