WASHINGTON DEPARTMENT OF ECOLOGY
MAIL STOP 47600
OLYMPIA, WASHINGTON 98504

IN THE MATTER OF AIR EMISSIONS FROM:

GEORGIA-PACIFIC COMSUMER OPERATIONS LLC	)	NOC ORDER No. 15610)
401 NE ADAMS ST	)	
CAMAS, WA 98607	)	

DESCRIPTION

Georgia-Pacific Consumer Operations LLC in Camas, WA (G-P Camas) is a bleaching Kraft pulp and paper mill located in Camas, Washington. The facility is an existing major source under the Prevention of Significant Deterioration (PSD) program and currently operates under Air Operating Permit (AOP) 0000256 issued by the Washington State Department of Ecology (Ecology) on June 25, 2014.

The mill produces communication paper, tissues, and toweling. Current operations include one digester, one bleach plant, one recovery boiler, one natural gas boiler (No. 5), one hogged fuel/natural gas power boiler (No. 3), a lime kiln, and two paper machines. As part of restructuring, G-P Camas plans to shut down the Kraft pulp mill (digester, bleach plant, recovery boiler, and lime kiln), the No. 5 power boiler, as well as one paper machine (No. 20, which produces communication paper) in May of 2018. All current operations described previously will be permanently shut down, with the exception of one paper machine, No. 11, one power boiler (No. 3), and associated converting operations, which will produce tissue and towel from purchased pulp. To power No. 11 paper machine, G-P Camas plans to operate No. 3 power boiler, which may eventually be replaced by the two package boilers subject to this NOC. The two package boilers and their respective stacks will be assembled on-site and located adjacent to the existing steam plant. Both package boilers will operate on natural gas only. G-P will start using the package boilers following the shutdown of No. 3 power boiler. The initial startup phase of the two package boilers may overlap operation of No. 3 power boiler to ensure operational continuity.

Ecology received a hard copy of the Notice of Construction (NOC) application from G-P Camas on December 8, 2017. The application is for the project covering the installation and operation of the package boilers. G-P Camas provided a revised NOC application with additional information on December 22, 2017. Ecology accepted the application as complete on December 29, 2017. Additional information was submitted by G-P Camas on January 12, 2018 and February 8, 2018.

FINDINGS

Pursuant to New Source Review (NSR) regulations in the Washington Administrative Code (WAC) 173-400-110 and 173-460-040 and based upon the complete NOC application submitted by G-P Camas and the technical analysis performed by Ecology, Ecology now finds the following:

1) The project includes the installation and operation of two package boilers at the G-P Camas mill. Each boiler is rated at 99.9 MMBtu per hour (approximately 78,000 lb of steam per hour). A new stack will be constructed for each boiler.

2) The package boilers are a new source of emissions and are subject to the NSR regulations specified by WAC 173-400-110 if the increase in emissions from the project are at or above threshold levels in WAC 173-400-110(5) for the pollutants emitted. The following pollutants have the potential to increase as a result of this project.
   - Total suspended particulates (TSP)
   - Particulate matter smaller than 10 microns (PM-10)
   - Particulate matter smaller than 2.5 microns (PM-2.5)
   - Nitrous oxides (NO_x)
   - Carbon monoxide (CO)
   - Volatile organic compounds (VOCs)
   - Sulfur dioxide (SO_2)
   - Lead (Pb)

   The estimated increase in emissions associated with this project in tons per year (tpy) and the associated exemption levels are presented in the table below.

   Table 1 – Emission Increases from Two Package Boilers and Applicable NSR Exemption Levels and Significant Emissions Rates (SER)

Pollutants	Potential to Emit (tpy)	NSR Exemption Level (tpy)	SER (tpy)
TSP	1.64	1.25	25
PM-10	4.38	0.75	15
PM-2.5	4.38	0.5	10
NO_x	9.62	2	40
CO	19.26	5	100
VOCs	3.5	2	40
SO_2	0.514	2	40
Pb	0.000428	0.005	0.6

   Emission increases are above NSR Exemption Levels for PM-10, PM-2.5, NO_x, CO, and VOCs. Therefore, new source review requirements apply to this project. No other emission units will have an increase in emissions as a result of this project.

3) Because the project is located in an attainment area, Best Available Control Technology (BACT) must be employed for all the pollutants not previously emitted or whose emissions would increase, per WAC 173-400-113. G-P submitted a BACT analysis with the NOC application. For this project, the following are considered BACT for the two package boilers.

Table 2 – Best Available Control Technology (BACT) Determination

Pollutant	BACT	Associated Limits
TSP/PM-10/PM-2.5 Pb	Good design and combustion practices, combust natural gas only	0.19 pounds per hour (lb/hr) TSP, 0.5 lb/hr for PM-10 and PM-2.5
NO_x	Selective catalytic reduction (SCR)	9 parts per million dry volume (ppmdv) @ 3% Oxygen (O_2)
CO	Oxidation catalyst	30 ppmdv @ 3% O_2
VOC	Good design and combustion practices, combust natural gas only	0.004 pounds per million British Thermal Units (lb/MMBtu)
SO_2	Good design and combustion practices, combust natural gas only	Natural gas combustion

4) As of the date of this Order, G-P Camas is classified as a major stationary source under the PSD permitting program and is subject to PSD permitting consideration under WAC 173-400-720 and 40 CFR 52.21. A PSD review is applicable to projects that meet the definition of "major modification." One of the criteria for determining a major modification is, if the net emissions increase resulting from the modification is greater than the PSD Significant Emission Rate (SER) threshold for any regulated pollutant. In the NOC application, G-P provided estimates of the pollutants emitted from the two boilers in comparison to the SER. Table 1 contains the summary of the data.

5) WAC 173-400-112 requires that the proposed new source must not cause any ambient air quality standard to be exceeded. The application provided by G-P Camas has demonstrated that the installation and operation of the proposed package boilers will not cause an exceedance of any ambient air quality standards.

6) New sources of toxic air pollutants (TAPs) must meet the requirements of Chapter 173-460 WAC, unless they are exempt by WAC 173-110(5). Per WAC 173-460-060, sources must employ Toxic Air Pollutants Best Available Control Technology (t-BACT) for all TAPs with emission increases greater than de minimis rates in WAC 173-460-150. For this project, emissions are above de minimis rates for the following TAPs: 3-methylchloranthene, 7,12-dimethylbenz(a)anthracene, benzene, formaldehyde, hexane, naphthalene, arsenic, beryllium, cadmium, chromium VI, cobalt, manganese, mercury, nickel, vanadium, and ammonia. G-P submitted a t-BACT analysis for these TAPs with the NOC application. For this project, the following are considered t-BACT.

Table 3 – Toxic Air Pollutants BACT (t-BACT) Determination

Pollutants	t-BACT	Associated Limits
Particulate TAPs	Good design and combustion practices, combust natural gas only	0.5 lb/hr for PM-10 and PM-2.5
Organic TAPs	Good design and combustion practices, combust natural gas only	0.004 lb/MMBtu for VOCs
Ammonia (NH_3)	Good operating practices	10 ppmdv @ 3% O_2

Other TAP emissions associated with this project are NO_2, SO_2, CO, and Pb. BACT review for these pollutants are contained in Table 2.

7) New sources of TAPs must comply with the ambient air impact requirements in WAC 173-460-070, as stipulated by WAC 173-460-020. Sources can demonstrate compliance with WAC 173-460-070 using small quantity emission rates (SQER) or dispersion modeling as specified in WAC 173-460-080. G-P submitted an acceptable source impact analysis for all TAPs using dispersion modeling. Modeling results showed that TAPs concentration are below the acceptable source impact levels (ASILs).

8) The NOC Application included a State Environmental Policy Checklist (SEPA), which considered environmental impacts of the project as required by the Revised Code of Washington (RCW) Chapter 43.21C. Ecology reviewed the checklist and made a Determination of Non-significance (DNS) on January 3, 2018. The public notice comment period for DNS was from January 4 through 18, 2018.

9) The proposed project meets applicable federal and state rules and regulations including: General Regulations for Air Pollution Sources, Chapter 173-400 WAC, Chapter 173-460 WAC, and National Emission Standards for Hazardous Air Pollutants (NESHAPs) 40 CFR Parts 60 and 63.

10) The application identified that the boilers are subject to recordkeeping and reporting requirements in 40 CFR Part 60, Subpart Dc and Part 63, Subpart DDDDD.

11) The permitting authority is defined in WAC 173-400-030(66) as Ecology or the local air pollution control authority, whichever has the jurisdiction over the G-P Camas mill.

THEREFORE, it is ordered that the project, as described in said NOC permit application and other information submitted to the Ecology in reference thereto, is approved subject to the conditions listed below.

CONDITIONS

1. **Emission limits:** The facility must comply with the following limits and monitoring. The conditions below apply to Package Boilers No. 1 and No. 2, respectively.

   A. Package Boiler No. 1

Condition	Pollutant	Limit (not to exceed)	Monitoring and Reporting*
1.A.1	Filterable PM	0.19 lb/hr, one-hour average	Source test shall be conducted using EPA Reference Method (RM) 5. Testing frequency is once every three years. The TSP emission factor must be calculated using the most recent source test.
1.A.2	PM_{10}	0.5 lb/hr, one-hour average	Source test shall be conducted using EPA RM 5 or RM 201/201A and 202 or equivalent method(s), as approved by the permitting authority. Testing frequency is once every three years.
1.A.3	$PM_{2.5}$	0.5 lb/hr, one-hour average	Source test shall be conducted using EPA RM 5 or RM 201/201A and 202 or equivalent method(s), as approved by the permitting authority. Testing frequency is once every three years.
1.A.4	NO_x	9 ppmdv @ 3% O_2, one-hour average	Source test must be conducted using EPA RM 7, 7B, 7E or equivalent method, as approved by the permitting authority. Source test shall be in accordance with 40 CFR 60. Testing frequency is once per year. When test result exceeds the limit, the frequency will be increased to monthly. Annual testing frequency will resume

Condition	Pollutant	Limit (not to exceed)	Monitoring and Reporting*
			when the results meet permit limit for two months in a row.
1.A.5	CO	30 ppmvd @ 3% O_2, one-hour average	Source test shall be conducted using EPA RM 10 or 10B. Testing frequency is once every three years. When test result exceeds the limit, the frequency will be increased to annual. Testing frequency of once every three years will resume when the results meet permit limit for two years in a row.
1.A.6	VOCs	0.004 lb/MMBtu @ 3% O_2, one-hour average	Source test must be conducted using EPA RM 25A or equivalent method, as approved by the permitting authority. Results must be reported on a as propane basis. To measure non-methane VOCs, EPA RM 18 or equivalent procedures approved by the permitting authority may be used. Testing frequency is once every three years.
1.A.7	NH_3	10 ppmdv @ 3% O_2, average of three 30-minute measurement	Test method is the BAAQMD ST-1B or equivalent method, as approved by the permitting authority. Testing frequency is annual.

*Monitoring and reporting is applicable when the boiler is in operation. Source tests shall be conducted at representative conditions. Source test reports must be submitted to the permitting authority in accordance with condition #5.

B. Package Boiler No. 2

Condition	Pollutant	Limit (not to exceed)	Monitoring and Reporting*
1.B.1	TSP	0.19 lb/hr, one-hour average	See condition 1.A.1

Condition	Pollutant	Limit (not to exceed)	Monitoring and Reporting*
1.B.2	PM_{10}	0.5 lb/hr, one-hour average	See condition 1.A.2
1.B.3	$PM_{2.5}$	0.5 lb/hr, one-hour average	See condition 1.A.3
1.B.4	NO_x	9 ppmdv @ 3% O_2, one-hour average	See condition 1.A.4
1.B.5	CO	30 ppmvd @ 3% O_2, one-hour average	See condition 1.A.5
1.B.6	VOCs	0.004 lb/MMBtu @ 3% O_2, one-hour average	See condition 1.A.6
1.B.7	NH_3	10 ppmdv @ 3% O_2, average of three 30-minute measurement	See condition 1.A.7

*Monitoring and reporting is applicable when the boiler is in operation. Source tests shall be conducted at representative conditions. Source test reports must be submitted to the permitting authority in accordance with condition #5.

2. **Initial Compliance Test and Source Testing:** G-P Camas must submit a test plan to the permitting authority for the initial compliance testing for PM, PM_{10}, $PM_{2.5}$, NOx, CO, VOCs, and NH_3 at Boilers No. 1 and No. 2. The test plan must be submitted thirty (30) calendar days prior to the initial compliance testing.

   The initial compliance testing must be conducted at Boiler No. 1 and No. 2 within 15 (fifteen) days of the boiler's initial startup date. For the purpose of this NOC, the initial startup is defined as the boiler first supplying useful thermal energy for the operation of the paper machine.

   Source testing due in subsequent years must be conducted no later than the end of the calendar month in which the initial source testing was conducted. Source testing must follow the methods prescribed in Condition 1. The test results must be submitted to the permitting authority within 60 days after completion of the initial compliance testing.

3. **Operations and Maintenance (O&M):** The package boilers must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions at all times. Prior to the boiler startup, G-P Camas must develop an O&M manual for Package Boilers No. 1 and No. 2 and associated pollution control devices. The O&M manual must include provisions for:
   a. Good air pollution control practices and combustion practices to minimize emissions.

b. Performance monitoring for CO at both boilers using combustion analyzer or equivalent method. Performance testing is required at least annually, except during the calendar year where source testing is conducted.

c. Corrective actions to be taken when operating parameters and/or performance monitoring indicate potential for excess emissions.

The O&M manual must be submitted to the permitting authority fifteen (15) days prior to the boilers initial startup. G-P Camas must review the O&M manual on at least an annual basis. Significant updates to the O&M manual must be submitted to the permitting authority within thirty (30) days following revisions.

4. **Certification for Fuel Combustion:** The package boilers shall combust natural gas only. G-P Camas shall submit annual certifications to the permitting authority for the type of fuel combusted at each of the package boilers for the previous calendar year. The certification must be submitted annually no later than January 30 for the previous calendar year.

5. **Reporting of Source Tests:** Source test reports must be submitted to the permitting authority within 60 days of the completion of the source testing. The reports must contain operating conditions during the source test, which include but are not limited to:
   - Natural gas firing rate
   - Flue gas flow rate
   - Flue gas temperature
   - Steam rate
   - Ammonia addition rate (for NOx and NH_3 stack test only)

6. **Recording Keeping:** The Permittee shall retain records of all required monitoring data and supporting information for a minimum period of 5 years from the date of monitoring sample, measurement, report, or application.

7. **Notification:** The following notifications concerning the project shall by submitted to the permitting authority:
   a. Within 15 days of commencing construction, a letter informing the permitting authority of the date on which construction commenced and a description of the construction activity
   b. Within 15 days of initial startup, a letter informing the permitting authority of the date of the initial startup.
   c. Within 30 days of completing the project or permanently stopping work on the project, a letter informing the permitting authority of the date on which the project was completed or work on the project was permanently stopped.

8. The owner or operator may request, at any time, a change in the conditions of this Order. The request should include the information necessary to demonstrate compliance with regulations set by the permitting authority. The regulations are in WAC 173-400-111(8) for Ecology and SWCAA 400-109(2) for Southwest Clean Air Agency.

9. In accordance with WAC 173-400-111(8), the owner or operator may request, at any time, a change in the conditions of this Order.

The request should include the information necessary to demonstrate compliance with the requirements of WAC 173-400-111(8)(a)(i) through (a)(v).

10. Access to the source by the permitting authority shall be permitted upon request and presentation of proper credentials for the purpose of compliance assurance inspections. Failure to allow access is grounds for revocation of this determination of approval.

11. Construction and operations of this project shall be consistent with the project description in the NOC application dated December 22, 2017, and additional information submitted on January 12, 2018 and February 8, 2018. Stack locations shall be consistent with the scenarios modeled by G-P Camas and reviewed by Ecology.

12. Any activity or operation, which is undertaken by G-P Camas or others, in a manner which is inconsistent with Condition 10 above and this order, shall be subject to the permitting authority's enforcement under applicable regulations. Nothing in this order shall be construed so as to relieve G-P Camas of its obligations under any state, local, or federal laws or regulations, including any applicable NPSP or MACT requirements.

13. This approval shall become void if construction is not commenced within eighteen (18) months after receipt of this approval, or if construction of the project is discontinued for a period of eighteen (18) months.

Failure to comply with this Order may result in the issuance of civil penalties or other actions, whether administrative or judicial, to enforce the terms of this Order.

Authorization may be modified, suspended, or revoked in whole or part for cause including, but not limited to, the following:

1. Violation of any terms or conditions of this authorization.

2. Obtaining the authorization by misrepresentation or failure to disclose fully all relevant facts.

The provisions of this authorization are severable and, if any provision of this authorization, or application of any provision of this authorization to any circumstance, is held invalid, the application of such provision to their circumstances and the remained of this authorization shall not be affected thereby.

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do both of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.

- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 **Pollution Control Hearings Board** 1111 Israel Road SW STE 301 Tumwater, WA 98501	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 **Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

MORE INFORMATION

- **Pollution Control Hearings Board**
  www.eho.wa.gov/Boards_PCHB.aspx
- **Chapter 43.21B RCW, Environmental Hearings Office – Pollution Control Hearings Board**
  http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21B
- **Chapter 371-08 WAC – Practice and Procedure**
  http://apps.leg.wa.gov/WAC/default.aspx?cite=371-08
- **Chapter 34.05 RCW – Administrative Procedure Act**
  http://apps.leg.wa.gov/RCW/default.aspx?cite=34.05
- **Chapter 70.94 RCW, Washington Clean Air Act**
  http://apps.leg.wa.gov/RCW/default.aspx?cite=70.94
- **Air Quality Rules**
  https://ecology.wa.gov/Air-Climate/Air-quality/Business-industry-requirements/Permits-for-burning-industrial

SIGNATURES

Reviewed by:

Ha Tran, P.E.
Environmental Engineer
Waste 2 Resources Program

4/23/18
Date

Signature Authority:

James DeMay, P.E.
Industrial Section Manager
Waste 2 Resources Program

4/23/18
Date