



RECEIVED

OCT 26 2018

ORCAA

October 24, 2018

Mark Goodin  
Olympic Regional Clean Air Agency  
2940 Limited Lane NW  
Olympia, WA 98502

**RE: McKinley Paper AOP Renewal Application Supplemental Information Submittal (Permit No. 11AOP816)**

Dear Mr. Goodin:

In response to ORCAA's information request dated October 4, 2018, McKinley Paper is submitting supplemental information for the Facility's AOP Renewal Application for AOP Permit No. 11AOP816. The facility is located at 1902 Marine Drive in Port Angeles.

The enclosed Form C has been updated and is accompanied with a certification form signed by Mr. Isaac Rosas, the responsible official for McKinley Paper. This submittal includes the following supplemental information:

1. Annual uncontrolled PTE emissions for units subject to a federal limit.
2. For emissions units subject to a federal limit, a CAM determination has been provided.
3. PTE Calculations

McKinley Paper requests a written response from ORCAA regarding the completeness of this permit renewal application.

Sincerely,

A handwritten signature in black ink, appearing to read "Amy Dougherty", is written over a horizontal line.

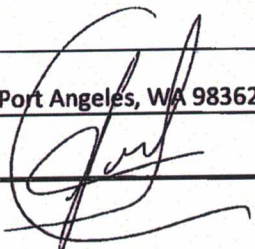
Amy Dougherty  
Purchasing Manager  
McKinley Paper Co, Washington Mill  
amy.dougherty@biopappel.com  
360-565-7019

**Enclosures:**

Certification Form  
Updated AOP Renewal Form C  
PTE calculations

McKinley Paper Company, 1815 Marine Drive, Port Angeles, WA 98362

**AIR OPERATING PERMIT (AOP)  
 RENEWAL APPLICATION  
 Form A: General Information**

Company Name: McKinley Paper Company		<b>For ORCAA use only</b>	
Plant Name: McKinley Paper Company		File No: 153	County No: 9
Physical Address: 1902 Marine View Drive, Port Angeles, WA 98363		Source No:	Application No: 18AOP1300
Mailing Address (if different from above): 1815 Marine Drive, Port Angeles, WA 98363		Date Received: <b>RECEIVED</b> <b>OCT 26 2018</b>  ORCAA	
Current AOP Number: 11AOP816			
Issuance Date: November 12, 2014		Expiration Date: November 12, 2019	
Owner's name and agent:			
Plant site manager/contact: Amy Dougherty			
Title: Purchasing Manager	Phone: 360-565-7019	Email: adougherty@biopappel.com	
<b>RESPONSIBLE OFFICIAL CERTIFICATION</b> I certify that I am the responsible official, as defined in WAC 173-401-200(27) for this facility. I further certify as required by WAC 173-401-520, that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.			
Responsible Official: Isaac Rosas			
Title: General Manager	Phone: 505-972-2146	Email: irosas@biopappel.com	
Address: 1815 Marine Drive, Port Angeles, WA 98362			
Signature: 		Date: 10/19/18	

**OLYMPIC REGION CLEAN AIR AGENCY**

2940 B Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

**AIR OPERATING PERMIT (AOP) RENEWAL APPLICATION  
Form C: Emissions**

Emissions Unit Number (from Form B)	Pollutants (all regulated pollutants including greenhouse gases)	Emissions			CAM Applicability	
		Annual Potential Emissions (for each regulated air pollutants)	Have Potential Emissions Changed Since Submittal of Most Recent AOP Application?	Actual Emissions for Calendar Year 2016_	Annual Potential Emissions without regard to Control Device	CAM needed? If yes, submit a CAM Plan
EU1-Refiner Lines #2 and #3	SO <sub>2</sub> H <sub>2</sub> SO <sub>4</sub>	SO <sub>2</sub> : 102 tpy H <sub>2</sub> SO <sub>4</sub> : 235 lb/yr	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	SO <sub>2</sub> : 26.9 tpy H <sub>2</sub> SO <sub>4</sub> : 62 lb/yr	N/A, does not have "control device" per CAM rules. Unit is not subject to a federal limit.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
EU3-Boiler #9	SO <sub>2</sub> , NO <sub>x</sub> , PM, CO, HCl, Hg	SO <sub>2</sub> : 0.6 tpy NO <sub>x</sub> : 784 tpy PM: 127 tpy CO: 29 tpy HCl: 1513 lb/year Hg: 2.75 lb/year	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	SO <sub>2</sub> : 0.002 tons/yr NO <sub>x</sub> : 1.2 tons/yr PM: 0.5 tons/yr CO: 0.1 tons/yr HCL: not reported in AEI separately; total HAPs 0.6 lb/yr Hg: 69 lb/yr	N/A, does not have a "control device" per CAM rules.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
EU4 – Boiler #10	SO <sub>2</sub> , NO <sub>x</sub> , Filterable PM, HCl, Hg,	SO <sub>2</sub> : 0.6 tpy NO <sub>x</sub> : 352 tpy PM: 75 tpy CO: 50 tpy HCl: 1513 lb/year Hg: 2.75 lb/year	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	SO <sub>2</sub> : 0.002 tons/yr NO <sub>x</sub> : 1.0 tons/yr PM: 0.2 tons/yr HCl: not reported separately in AEI; total HAPs 0.08 lb/year Hg: 9 lb/yr	N/A, does not have a "control device" per CAM rules.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Emissions Unit	Pollutants (all)	Emissions			CAM Applicability	
EU5 - Deinking	VOC	4.6 tpy	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		N/A, does not have "control device" per CAM rules. Unit is not subject to a federal limit.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
EU6 – Paper Machines	VOC	1 tpy	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	VOC: 8.7 tpy	N/A, does not have "control device" per CAM rules. Unit is not subject to a federal limit.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
EU7 – Wastewater Treatment Plant	VOC Methanol	VOC: 1.2 ton/yr Methanol: 128 lbs/yr	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	VOC: 0.9 tons/yr Methanol: 98.8 lbs/yr	N/A, does not have "control device" per CAM rules. Unit is not subject to a federal limit.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
EU8 – Cogeneration Facility Boiler	CO, NO <sub>x</sub> , PM, Filterable PM, SO <sub>2</sub> , VOC, Acrolein, NH <sub>3</sub> , Benzene, Formaldehyde, HCl, Dioxin/Furan, Hg	CO: 644 tons/yr NO <sub>x</sub> : 184 tons/yr PM: 37 tons/yr SO <sub>2</sub> : 76 tons/yr VOC: 28 tons/yr Acrolein: 368 lb/yr NH <sub>3</sub> : 25 ppm <sub>dv</sub> @7% Benzene: 2649 lb/yr Formaldehyde: 184 lb/yr HCl: 8094 lb/yr Dioxin/Furan: .0000059 lb/yr Hg: 2.94 lb/yr	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CO: 64.3 tons/yr NO <sub>x</sub> : 101 tons/yr PM: 8.4 tons/yr Filterable PM: 1 ton/yr SO <sub>2</sub> : 6.7 tons/yr VOC: 1.4 tons/yr Acrolein: 15 lb/year NH <sub>3</sub> : 3.3 tons/yr Benzene: 36 lb/yr Formaldehyde: 80 lb/yr HCl: 428 lb/year Dioxin/Furan: 0.0000001 lb/year Hg: 9 lb/yr	EU8 is subject to the Boiler MACT, which was proposed by the Administrator after November 15, 1990 and, therefore, qualifies for the exemption "i" from §64.2(b)(1)(i). Therefore, with respect to Boiler MACT limits, the CAM rule does not apply to EU8***	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Emissions Unit	Pollutants (all)	Emissions		CAM Applicability	
EU9 – Cooling Towers	PM	PM: 0.24 tpy	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	PM: 0.02 tpy	120 tpy. CAM conditions have already been accepted by ORCAA and incorporated into existing Title V AOP as Monitoring Conditions M9 and M10. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
EU10 – Gasoline Dispensing*	VOC HAP	VOC: 0.12 tpy HAP: 0.02 tpy	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		N/A, not equipped with a control device. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
EU11 – Portable Temporary Generators**			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		N/A, NOI must be filed with ORCAA prior to use onsite. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
EU12 - Landfill*			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		N/A, unit is not subject to a federal limit. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

\*PTE Not Determined, Plantwide Limit

\*\* PTE Not Determined as ORCAA must be notified prior to use onsite.

\*\*\* EU8 is also subject to Subpart Db standards and limits imposed by ORCAA through New Source Review permitting, which are not exempted under CAM. However, these requirements limit pollutants that are also limited by the Boiler MACT. Because the Boiler MACT requires “Continuous Compliance Determination” methods, and because these methods are incorporated into the Title V permit for McKinley, CAM requirements are met through the Boiler MACT.

**AOP Renewal Form C Calculations for EU1/Refiner Lines #2 & #3**

Pollutant	EF	EF Type	Based on Max Annual Production Tons	Units	Annual PTE Emissions (tpy)	Annual PTE without regard to Control Device (tpy)
SO2	1.3081	1	156,403	ADST/yr	102.30	Same as PTE, no control device.
H2SO4	0.0015	1	156,403	ADST/yr	0.12	Same as PTE, no control device.

**NOTES:**

Emission Factors and 2016 Actual Emissions were obtained from the Nippon Paper Industries 2016 Annual Air Emissions Inventory Report.

PTE tons based on 250 tpd at 365 days/year.

PTE = potential to emit

tpy = tons per year

ADST = Air Dried Short Ton

EF = Emission Factor

EF Type 1 = 7/28/2011 site-specific source test

SO2 = sulfur dioxide

H2SO4 = sulfuric acid

**AOP Renewal Form C Calculations for EU3/Boiler #9**

Pollutant	EF	EF Type	Annual Fuel (MMBtu)	Annual Fuel (gallons)	Annual PTE Emissions	Unit	Annual PTE without regard to Control Device (tpy)
SO2	0.000007	1	--	80,530,783	0.6	tpy	Same as PTE.
NOx	0.413	2	1,375,320	--	284	tpy	Same as PTE.
PM	0.184	2	1,375,320	--	127	tpy	Same as PTE.
CO	0.042	2	1,375,320	--	29	tpy	Same as PTE.
HCl	1.10E-03	2	1,375,320	--	1513	lb/year	Same as PTE.
Hg	2.00E-06	2	1,375,320	--	2.75	lb/year	Same as PTE.
VOC	0.3805	2	1,375,320	--	262	tpy	Same as PTE.

**NOTES:**

Emission Factors and 2016 Actual Emissions were obtained from the Nippon Paper Industries 2016 Annual Air Emissions Inventory Report.

-- = not used in this calculation

% = percentage

EF = Emission Factor

EF Type 1 = Material Balance/ORCAA Audit

EF Type 2 = ORCAA Audit

lb/year = pounds per year

tpy = tons per year

VOC = volatile organic compounds

**Calculations based on:**

157	mmbtu/hr rated boiler
8760	hours per year
1375320	Max MMBtu per year
80530783	Max Gallons per year
0.0007	% Oil Sulfur
2	Molecular Weight SO <sub>2</sub> /S (64/32)

### AOP Renewal Form C Calculations for EU4/Boiler #10

Pollutant	EF	EF Type	Annual Fuel (MMBtu)	Annual Fuel (gallons)	Annual PTE Emissions	Unit	Annual PTE without regard to Control Device (tpy)
SO2	0.000007	1	--	80,530,783	0.6	tpy	Same as PTE.
NOx	0.512	2	1,375,320	--	352	tpy	Same as PTE.
PM	0.109	2	1,375,320	--	75	tpy	Same as PTE.
CO	0.073	2	1,375,320	--	50	tpy	Same as PTE.
HCl	1.10E-03	2	1,375,320	--	1513	lb/year	Same as PTE.
Hg	2.00E-06	2	1,375,320	--	2.75	lb/year	Same as PTE.
VOC	0	2	1,375,320	--	0	tpy	Same as PTE.

**NOTES:**

Emission Factors and 2016 Actual Emissions were obtained from the Nippon Paper Industries 2016 Annual Air Emissions Inventory Report.

-- = not used in this calculation

% = percentage

EF = Emission Factor

EF Type 1 = Material Balance/ORCAA Audit

EF Type 2 = ORCAA Audit

**Calculations based on:**

157	mmbtu/hr rated boiler
8760	hours per year
1375320	Max MMBtu per year
236716	Max Gallons per year
0.0007	% Oil Sulfur
64 /32	S to SO2 conversion



### AOP Renewal Form C Calculations for EU5/Deinking Plant

Pollutant	EF	EF Type	Calculation Based on Annual Production Tons	Units	Annual PTE Emissions (tpy)	Annual PTE without regard to Control Device (tpy)
VOC	6.279E-05	1	80,500	ODTP/Yr	4.6	Same as PTE, no control device.

**NOTES:**

Emission Factors and 2016 Actual Emissions were obtained from the Nippon Paper Industries 2016 Annual Air Emissions Inventory Report.

EF Type 1 = Average EF from NCASI TB #739, Table 6-1, VOC as C (carbon basis)

EF = Emission Factor

ODTP/Yr = oven dried tons on pulp per year

PTE = potential to emit

tpy = tons per year

VOC = volatile organic compounds

### AOP Renewal Form C Calculations for EU6/Paper Machines

Pollutant	EF	EF Type	Calculation Based on Annual Production Tons	Annual PTE Emissions (tpy)	Annual PTE without regard to Control Device (tpy)
VOC	5.037E-05	1	172,706	8.70	Same as PTE, no control device.

**NOTES:**

Emission Factors and 2016 Actual Emissions were obtained from the Nippon Paper Industries 2016 Annual Air Emissions Inventory Report.

Total hydrocarbon as C assumed to be same as VOC as C (carbon basis).

EF = Emission Factor

EF Type 1 = EF average from NCASI TB #740, Table 6.1 [JJ].

PTE = potential to emit

tpy = tons per year

VOC = volatile organic compounds

### AOP Form C Calculations for EU7/Wastewater Treatment Plant

Pollutant	EF Type	EF	Calculation Based on Max Annual WWTP Flow (MGD)	Annual PTE Emissions (tpy)	Annual PTE without regard to Control Device (tpy)
VOC	1	0.125	9.5	1.2	Same as PTE, no control device.
MeOH	1	0.0068	9.5	0.1	Same as PTE, no control device.

**NOTES:**

Emission Factors were obtained from the Nippon Paper Industries 2016 Annual Air Emissions Inventory Report.

EF = Emission Factor

EF Type 1 = site-specific test data (2005)

MeOH = methanol

MGD = million gallons per day

PTE = potential to emit

tpy = tons per year

VOC = volatile organic compounds

WWTP = wastewater treatment plant

## AOP Form C Calculations for EU8/Cogen Boiler

Pollutant	Emission Factor (EF)	EF Type	Calculation Based on MMBtu/year	Annual PTE Emissions	Unit
Carbon Monoxide	0.35 lb/MMBtu	1	3679200	644	tpy
Nitrogen Oxides	0.100 lb/MMBtu rolling 12-month average	1	3679200	184	tpy
Particulate Matter	0.020 lb/MMBtu	1	3679200	37	tpy
Sulfur Dioxide	permit limit	1	3679200	76	tpy
VOC	0.015 lb/MMBtu	1	3679200	28	tpy
Acrolein	1.00E-04 lb/MMBtu	1	3679200	368	lb/yr
Ammonia	25 ppdv @ 7% O2	1	3679200	permit limit	tpy
Benzene	7.20E-04 lb/MMBtu	1	3679200	2649	lb/yr
Formaldehyde	5.00E-05 lb/MMBtu	1	3679200	184	lb/yr
Hydrogen Chloride	2.20E-02 lb/MMBtu	1	3679200	4	tpy
Dioxin/Furan	1.6E-12 lb/MMBtu	1	3679200	0.0000059	lb/yr
Mercury	8E-07 lb/MMBtu	1	3679200	2.94	lb/yr

### NOTES

VOC = volatile organic compound

MMBtu = Million British Thermal Units per hour

EF Type 1 = Potential to Emit (PTE) derived from emission limits listed in existing AOP

**AOP Form C Calculations for EU9/Cooling Tower**

Pollutant	Mist Eliminator Drift Loss Rate	Max concentration of total dissolved solids (TDS)	Annual PTE Emissions (tpy)	Annual PTE without regard to Control Device (tpy)
PM	0.002%	1,000 ppm	0.24	120

**NOTES:**

% = percent

TDS = total dissolved solids

PM = particulate matter

tpy = tons per year

ppm = parts per million

**Table 2.1 from ORCAA's Final Determination for NOC# 12NOC899 (March 13, 2013)**

Pollutant	ER <sup>1</sup> (lb/day)	ER (lb/yr)	ER (ton/yr)	SQER <sup>2</sup>	Modeling Required?
PM	1.32	482	0.24	N/A	No
Chlorine	0.95	347	0.17	0.026 lb/day	Yes
Bromodichloromethane	0.01	3.16	0.0017	5.18 lb/yr	No
Manganese	0.000066	0.024	0.000012	0.00526 lb/day	No
Chloroform	0.02	6.93	0.0035	8.35 lb/yr	No

<sup>1</sup> ER = Emission Rate  
<sup>2</sup> Small quantity emission rate (SQER) for each pollutant is defined in Chapter 173-460-150 of the Washington Administrative Code

**Equation for calculating PM emissions obtained from p.7 ORCAA's Final Determination for NOC# 12NOC899 (March 13, 2013)**

The following equation shows how the rates for PM and manganese emissions were calculated:

$$\text{Solids} = 5500 \text{ gpm} \times 8.34 \frac{\text{lb water}}{\text{gal}} \times 60 \frac{\text{min}}{\text{hr}} \times \frac{0.002\%}{100} \times \frac{\text{Conc. ppmw}}{10^6} \times \frac{\text{ton}}{2000 \text{ lb}} \times \frac{8760 \text{ hr}}{\text{yr}} = \text{ton/yr}$$

**AOP Form C Calculations for EU10/Gasoline Dispensing AST**

From the NOC application 12NOC885 Nippon's approximate gasoline yearly throughput was 1,000 gallons. ORCAA reviewed Nippon's proposal conservatively and assumed a worst case scenario based on a maximum gasoline throughput of 10,000 gallons.

**Table 3.2 Summary of PTE emissions from EU1, EU2 and EU3 for all toxic pollutants**

Pollutant	CAS #	PTE Emissions			
		(lbs/yr)		(lbs/hr)	
		EU1	EU2	EU1	EU2
<b>Organic TAPs</b>					
Benzene	71-43-2	4.96E-01	3.21E-01	5.64E-05	3.66E-05
Cyclohexane	110-82-7	2.90E-01	1.88E-01	3.32E-05	2.14E-05
Ethylbenzene	100-41-4	1.28E+00	8.26E-01	1.46E-04	9.43E-05
i-Propylbenzene	98-82-8	7.81E-02	5.05E-02	8.92E-06	5.76E-06
m-Xylene	106-38-3	3.29E+00	2.13E+00	3.76E-04	2.43E-04
Naphthalene	91-20-3	9.83E-02	8.28E-01	1.12E-05	9.46E-05
n-Heptane	110-54-3	2.72E+00	1.78E+00	3.11E-04	2.01E-04
o-Xylene	95-47-6	1.79E+00	1.15E+00	2.04E-04	1.32E-04
p-Xylene	106-42-3	1.43E+00	9.24E-01	1.63E-04	1.05E-04
Toluene	108-88-1	6.92E+00	4.47E+00	7.90E-04	5.10E-04

**Table 3.3 Summary of EU1 and EU2 PTE emissions**

Pollutant	PTE Emissions	
	(tons/yr)	
Total CO <sub>2</sub> , NO <sub>x</sub> , PM, SO <sub>x</sub>	0	
Total VOCs	0.12	
Total HAP	0.02	
Total CO <sub>2e</sub>	0	

Final Determination  
12NOC885

Page 3

Nippon  
Prepared on April 26, 2012

**NOTES:**

EU10 does not have a control device per CAM rules.

Source: Final Determination for NOC12NOC885 issued by ORCAA to Nippon Industries April 26, 2012.

AST = above ground storage tank

CAS = chemical abstract system

lbs/hr = pounds per hour

lbs/yr = pounds per year

NOC = Notice of Construction

ORCAA = Olympic Regional Clean Air Agency

PTE = potential to emit

TAPs = Toxic Air Pollutants

tons / yr = tons per year

### **AOP Form C Calculations for EU11/Temporary Portable Generators**

The Facility is required to file a Notice of Intent (NOI) with ORCAA prior to use of a temporary portable generators onsite per the existing AOP.

### **AOP Renewal Form C Calculations for EU12/Landfill**

The landfill is a source of fugitive dust and emissions as described in NOC# 03NOC318 (ORCAA, 2003).