

Statement of Basis

Tier I Operating Permit No. T1-2014.0023

Project ID 62328

Clearwater Paper Corp – PPD & CPD

Lewiston, Idaho

Facility ID 069-00001

Final

December 18, 2019

Dan Pitman, PE

Permit Writer

The purpose of this Statement of Basis is to set forth the legal and factual basis for the Tier I operating permit terms and conditions, including references to the applicable statutory or regulatory provisions for the terms and conditions, as required by IDAPA 58.01.01.362

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1. ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
HAP	Hazardous Air Pollutant
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
MACT	Maximum Achievable Control Technology
NESHAP	National Emission Standards for Hazardous Air Pollutants
MRRR	Monitoring, Recordkeeping and Reporting Requirements
NO _x	nitrogen oxides
PC	permit condition
PM	particulate matter
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PTC	permit to construct
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
SO ₂	sulfur dioxide
VOC	volatile organic compound

2. INTRODUCTION AND APPLICABILITY

Clearwater Paper Corp – PPD & CPD (Clearwater) is a manufacturer of paper products, and is located at 803 Mill Road in Lewiston, Idaho. The facility is classified as a major facility, as defined by IDAPA 58.01.01.008.10.c, because it emits or has the potential to emit PM₁₀, PM_{2.5}, SO₂, CO, NO_x and VOC above the major source threshold of 100 tons-per-year. The facility is also classified as a major facility, as defined by Subsection 008.10.a, because it emits or has the potential to emit HAP pollutants above the major source thresholds of 10 tons-per-year for any single HAP and/or 25 tons-per-year for any combination of HAP (methanol @ 240 T/yr).

IDAPA 58.01.01.362 requires that as part of its review of the Tier I application, DEQ shall prepare a technical memorandum (i.e. statement of basis) that sets forth the legal and factual basis for the Tier I operating permit terms and conditions including reference to the applicable statutory provisions or the permit. This document provides the basis for the Tier I operating permit minor permit modification for Clearwater.

3. FACILITY INFORMATION

3.1 Facility Description

The mill produces bleached kraft pulp from sawdust and wood chips.

The mill consists of digesters, pulp preparation activities (washers and bleaching), and chemical recovery processes (e.g. recovery furnaces and lime kilns). The pulp is processed in three different areas. Uncoated and coated paperboard is produced in the paper machine area. Market pulp is dried on the pulp dryer in the finishing area, and slurried pulp stock is pumped to the Clearwater Paper Corporation, Consumer Product Division.

3.2 Facility Permitting History

Tier I Operating Permit History - 5-year permit term 2/19/16 to 2/19/21

The following information is the permitting history of this Tier I facility during the five-year permit term which is from 2/19/16 to 2/19/21. This 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).

Date	Permit Number	Project	Status
February 19, 2016	P-2015.0007	Tier I renewal	S
March 18, 2017	P-2015.0007	Administrative Amendment	S
September 10, 2019	P-2019.0019	Amendments to Chlorine Dioxide Plant	A
September 10, 2019	P-2011.0101	Lime Kilns Source test changes	A

Permit History - Includes every permit issued to this facility

The following information is the comprehensive permitting history of all underlying applicable permits issued to this Tier I facility. This 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).

Date	Permit Number	Project	Status
December 6, 1973	069-00001	#1 Recovery, #4 Kiln, Digester, Stock Washer	A
September 20, 1978	N/A - letter	#4 Power Boiler	A
July 5, 1979	13-1140-0003-00 (9 pg)	SIP Air Pollution Source Permit	A
July 5, 1979	13-1140-00001-001 (19 pg)	SIP Air Pollution Source Permit	A

September 30, 1980	PSD X80-18	EPA PTC - #4 Power Boiler	A
May 6, 1983	1140-0001	#5 Recovery Boiler	A
July 26, 1983	13-1140-0001-00 (19 pg)	Amendment to 1979 SIP Air Pollution Source Permit	E
August 22, 1984	1140-0001	Air Pollution Source Permit	E
December 3, 1984	PSD -X84-01	#5 Recovery Furnace	A
July 3, 1985	1140-0001-315	Trash Hog	S
August 19, 1985	1140-00001	Air Pollution Source Permit Mod - Trash Hog	E
September 15, 1986	1140-0001	Air Pollution Source Permit Mod - Kilns	S
October 29, 1986	1140-0001	Air Pollution Source Permit Mod - Kilns	S
September 9, 1988	1140-0001	Lime Slaking and Handling	S
May 25, 1989	PSD-X84-01	EPA PTC amend - #5 Recovery	S
July 3, 1990	1140-0001	Chlorine Dioxide	S
August 14, 1990	1140-0001	Oxygen Delignification	S
December 11, 1990	1140-0001	PTC Mod - Oxygen Delignification	S
April 30, 1993	069-00001	NCG Incinerator	S
June 22, 1994	069-00001	Chlorine Dioxide	S
September 6, 1994	069-00001	PTC Mod - Oxygen Delignification	S
September 6, 1994	069-00001	PTC amend - Chlorine Dioxide	S
October 17, 1994	PSD-X84-01	EPA PTC amend - #5 Recovery	A
March 2, 1995	069-00001	PSD permit mod	S
March 16, 1995	069-00001	PSD permit mod - letter	A
March 15, 1995	069-00001	NCG Incinerator	S
May 8, 1995	069-00001	#4 & #5 Saltcake	S
August 7, 1995	069-00001	#4 & #5 Saltcake	S
December 18, 1995	069-00001	Chlorine Dioxide	S
January 31, 1996	069-00001	PTC amend - Chlorine Dioxide	S
September 16, 1996	069-00001	Oxygen Delignification	S
January 29, 1997	069-00001	#4 & #5 Saltcake	C
March 21, 1997	069-00001	PTC amend - NCG Incinerator	S
April 30, 1997	069-00001	PTC amend - NCG	S
August 29, 1997	069-00001	NCG Incinerator	S
September 3, 1998	069-00001	Temporary Boilers	S
November 6, 1998	069-00001	Temporary Boilers	A
April 28, 1999	069-00001	Chlorine Dioxide Plant	S
September 22, 1999	069-00001	Chlorine Dioxide Plant	S
February 14, 2000	069-00001	PTC amend - Chlorine Dioxide	A
August 31, 2001	069-00001	Thermocompressor	A
February 26, 2002	069-00001	#3 & #4 Lime Kilns	S
May 31, 2002	069-00001	#3 & #4 Lime Kilns	S
June 24, 2002	069-00001	#3 & #4 Lime Kilns	S
December 17, 2002	069-00001	Initial Tier I permit	S
February 27, 2003	069-00001	Lime Kilns, incorporates PTC issued 6/24/02	S
November 9, 2006	P-050208	Package Boilers	S
February 21, 2007	T1-050216		S
May 25, 2007	P-060209	PTC amend - NCG Incinerator	S
August 17, 2007	P-2007.0056	Oxygen Delignification	A
August 27, 2007	T1-2007.0057	Tier I	S

April 24, 2008	P-2008.0009	PTC amend - Package Boilers	A
April 13, 2009	P-2009.0020	PTC amend - Lime Handling	A
January 1, 2010	T1-2007.0106	Tier I renewal	S
February 2, 2012	P-2011.0101	Changes to lime kiln permits	A
October 4, 2012	P-2012.0046	Changes to reflect rule changes	A
April 1, 2010	T1-2010.0030	Add CEM requirements	S
February 22, 2012	T1-2010.0030	Admin. Amendment to add kiln PTC	S
July 20, 2012	T1-2010.0030	Admin Amendment to reflect rule change	E
September 3, 2015	P-2015.0007	Pulp Optimization Project	A
February 19, 2016	P-2015.0007	Tier I renewal	S
March 18, 2017	P-2015.0007	Administrative Amendment	S
September 10, 2019	P-2019.0019	Amendments to Chlorine Dioxide Plant	A
September 10, 2019	P-2011.0101	Lime Kilns Source test changes	A

4. APPLICATION SCOPE AND APPLICATION CHRONOLOGY

4.1 Application Scope

This permit is minor modification of the facility's currently effective Tier I operating permit.

The facility has requested to:

- Allow the use of weak wash as a scrubbing media in the non-condensable gas incinerator scrubber;
- Include a pH of less than 9.0 as an indicator of an excursions for compliance assurance monitoring (CAM) purposes when using weak wash ; and
- Include a minimum scrubber operating flow rate of 546 gallons per minute when using weak wash as a scrubbing media.

These operating parameters were previously found to provide a reasonable assurance of compliance with the applicable sulfur dioxide emissions limit and are documented in a DEQ source test review and approval letter dated August 30, 2019. This letter is included as Appendix A to this document.

4.2 Application Chronology

October 17, 2019 DEQ received an application.

October 22, 2019 EPA and affected states provided a copy of the application.

5. EMISSIONS UNITS, PROCESS DESCRIPTION(S), AND EMISSIONS INVENTORY

Emissions units, process descriptions and the emission inventory do not change from previous Tier I permit actions and are not repeated in this statement of basis. For information regarding these topics see the February 19, 2016 statement of basis which supports Tier I permit No. T1-2014.0023, issued February 19, 2016.

6. EMISSIONS LIMITS AND MRRR

None of the emission limits in this permit change.

Permit condition 14.6 was amended as follows to allow the use of weak wash as a scrubbing media; changes are indicated by underline and strikeout:

14.6 SO₂ Packed Bed Scrubber Operation

The packed bed scrubber shall be installed, operated and maintained according to the requirements of CAM included in Section 20 of this permit. The scrubbing media solution shall be soda ash (sodium carbonate); ~~or caustic soda (sodium hydroxide)~~; or weak wash (sodium hydroxide and sodium sulfide).

CAM Tables 20.1 and 20.2 of the permit were also amended. Table 20.1 was amended to allow the use of weak wash as a scrubbing media. Table 20. 2, indicators of excursions, were updated to include scrubbing media flow rate and pH requirements when weak wash is used. The flow rate and pH is directly from DEQ’s source test review and approval letter dated August 30, 2019. The DEQ letter is included in Appendix A of this document. Following are the changes to each Table as indicated by underline and strikeout:

Table 20.1 Summary of Compliance Assurance Monitoring

Non-condensable Gas Incinerator/SO ₂	Scrubber Liquid pH & Scrubber Liquid Flow and scrubbing media is Soda Ash (sodium carbonate), caustic soda (sodium hydroxide), <u>or weak wash (sodium hydroxide and sodium sulfide)</u>	Continuous pH sensor in recirculation line/ sensor accuracy shall be assessed once a month and shall be calibrated annually. pH recorded once per hour. Continuous magnetic flow sensor/shall be calibrated annually. Flow is recorded once per hour.
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Table 20.2 Indicators of Excursion

Non-condensable Gas Incinerator	Scrubber liquid pH < 8.5 (soda ash); or <9.6 (caustic soda) , 3-hr block average; <u>or < 9.0 (weak wash)</u> . Scrubber liquid flow < 326 gallons per minute, 3-hr block average <u>for soda ash and caustic soda. Scrubber liquid flow < 546 gallons per minute, 3-hr block average for weak wash.</u>
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General Provision 25.6 was amended to require semiannual reports within 60 days of the reporting period consistent with Facility-wide Permit Condition 3.12.

7. REGULATORY REVIEW

CAM (40 CFR 64)

The indicators of compliance for the scrubber on the NCG incinerator do not change and continue to be scrubbing media type, scrubbing media flow rate and scrubbing media pH. The numerical values that indicate excursions while using weak wash are directly from DEQ source test review and approval letter dated August 30, 2019. In short, during the test period, Clearwater emitted sulfur dioxide at only a fraction (<0.01 lb/hr) of the allowable limit (4.7 lb/hr) while operating under the scrubber conditions listed in the letter. Therefore, those scrubber operating parameters provide a reasonable assurance of compliance and satisfy CAM requirements.

Minor Modification (IDAPA 58.01.01.383)

The CAM indicator changes made to the permit qualify as a minor modification in accordance with IDAPA 58.01.01.383.b because changes to the CAM indicators of compliance are not required to be processed as significant permit modifications.

8. PUBLIC COMMENT

The Minor Permit Modification rules at IDAPA 58.01.01.383 do not require a public comment period.

9. EPA AND AFFECTED STATES REVIEW

As required by IDAPA 58.01.01.383.03, EPA and affected states were provided a copy of the minor permit modification application within 5 working days of receipt, or on October 22, 2019. Neither the EPA nor affected states provided any comment.

EPA will be provided a copy of the final permit.

Appendix A – August 30, 2019 DEQ Source Test Approval Letter



STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, ID 83706 • (208) 373-0502

Brad Little, Governor
John Tippetts, Director

August 30, 2019

Clayton Steele, Environmental Manager
Clearwater Paper Corporation
Idaho Pulp and Paperboard Division
803 Mill Road
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Subject: Clearwater Paper Corporation-Idaho Pulp and Paperboard; Facility ID No. 069-00001
Approval of NCG incinerator SO₂ test, and request for approval to use weak wash as a scrubbing media in the NCG incinerator

Dear Mr. Steele:

On July 10, 2019, DEQ received an EPA Method 6C sulfur dioxide (SO₂) emissions test report, prepared by Montrose Air Quality Services, LLC, for the NCG (non-condensable gas) Incinerator operated by Clearwater Paper Corporation (Clearwater). The performance test was conducted on June 6, 2019. On August 16, 2019 DEQ received an updated report that included correct process data associated with the test run times. The purpose of the test was to perform an engineering test to demonstrate whether weak wash may be used as a scrubbing media and demonstrate compliance with sulfur dioxide emission rate limits of Tier I Operating Permit No. T1-2014.0023, Project #61848 issued March 8, 2017.

On July 10, 2019, the Department of Environmental Quality (DEQ) received a request from Clearwater Paper Corporation to allow for the ongoing use of weak wash in the NCG incinerator scrubber. The current Tier I operating permit requires that the scrubbing media be sodium carbonate or sodium hydroxide (Permit Condition 14.6). In order to obtain approval for ongoing use of weak wash as a scrubbing media, which you have informed DEQ is primarily water, sodium hydroxide and sodium sulfide, Clearwater will need to submit an application for a significant permit modification (IDAPA 58.01.01.382). The application will need to address compliance assurance monitoring (CAM) requirements in order to use weak wash.

Protocol and Test Observation

DEQ received a test protocol on April 16, 2019. DEQ issued a protocol approval letter on May 30, 2019. DEQ did not have an observer present during testing.

Results

Based on a review of the submitted test report, DEQ has determined that the SO₂ performance test on the NCG Incinerator demonstrated compliance with the emissions limits in Tier I Operating Permit No. T1-2014.0023 during the test period. A summary of the test results is provided in Table 1.

Table 1: NCG Incinerator SO₂ emission test results

Measured Emission Rate, lb/hr	Emission Limit, lb/hr	Incinerator Operating Temp °F	Weak Liquor Flow to Evaporators, gpm	Pulp Production, ADTUBP ^a
<0.01	4.7	1,465	3,060	1,598

^a Air Dried Tons Un-Bleached Pulp per day from the combined sawdust and chip pulp lines.

Scrubber operating data is included in Table 2.

Table 2: Scrubber Data

Scrubbing Media Flow Rate gpm	Scrubber Liquid pH
546	9.0

According to the test program objectives, the test was performed solely for engineering purposes. In accordance with DEQ's January 5, 2018 NCG incinerator source test review letter the next SO₂ performance test is required to be conducted no later than June 8, 2022.

If you have any questions regarding this letter, please contact Dan Pitman at (208) 373-0500 or daniel.pitman@deq.idaho.gov, or contact me at (208) 373-0295 or zach.klotovich@deq.idaho.gov.

Sincerely,



Zach Klotovich, PE
Environmental Engineer
Technical Services Division

dp

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