

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT

Oregon Department of Environmental Quality
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201-4987
Phone: 503-229-5263

Issued pursuant to ORS 468B.050 and the Federal Clean Water Act

ISSUED TO:

PERMITTEES:

City of St. Helens
PO Box 278
St. Helens, OR 97051

And

Boise Cascade Corporation
1300 Kaster Road
St. Helens, OR 97051

SOURCES COVERED BY THIS PERMIT:

Type of Waste

Outfall Number

Outfall Location

Combined Municipal and Kraft
Mill Aerated Stabilization Basin
Effluent

001

RM 86.9, Columbia River

Effluent from the Municipal
Primary Treatment Facility

002

Internal Monitoring Point

Municipal Primary Treatment
Influent

003

Internal Monitoring Point

Kraft Mill Process Wastewater*,
Storm Water, Sanitary
Wastewater, Water Treatment
Plant Filter Backwash

004

Internal Monitoring Point

Kraft Mill Bleach Plant Combined
A Bleach Line

005

Internal Monitoring Point

Kraft Mill Bleach Plant Combined
B Bleach Line

006

Internal Monitoring Point

Emergency Discharge from ASB

007

RM 0.2, Multnomah
Channel

Overflow of Sanitary Sewer
Collection at Pump Station No. 1

008

RM 86.8, Columbia River

Overflow of Pump Stations No. 2,
No. 3, and Middle Trunk

009

RM 85.8, Columbia River

Mill Intake Screen Return Water

010

RM 1.0, Multnomah
Channel

* In addition to the normal wastewater discharge, this NPDES permit authorizes discharges associated with or resulting from essential maintenance, regularly scheduled maintenance, during startup and shutdown, spills and releases (whether anticipated or unanticipated) from within the permitted facilities, as long as they are amenable to treatment, routed to the plant's wastewater treatment system and effluent limitations are met.

PLANT TYPE AND LOCATION:

Combined Plant:

Municipal Sewage Treatment Plant
451 Plymouth Street
St. Helens, OR 97051

Treatment System Class: IV
Collection System Class: III

and

Bleached Kraft Pulp and Paper Mill
1300 Kaster Road
St. Helens, OR 97051

RECEIVING STREAM INFORMATION:

Outfall 001:

Basin: Lower Columbia
Sub-Basin: North Coast
Receiving Stream: Columbia River
Hydro Code: 10--COLU 86.9 D
LLID: 1240483462464/86.9
County: Columbia

Outfall 007:

Basin: Willamette
Sub-Basin: Lower Willamette
Receiving Stream: Multnomah Channel
Hydro Code: 22P-MULT 0.2 D
County: Columbia

EPA REFERENCE NO: OR-002083-4

This permit is issued in response to Application No. 991134 received June 22, 1998 from the City of St Helens and supplemental application by Boise Cascade Corporation for status as co-permittee.

Neil Mullane
Manager, Water Quality Source Control
Northwest Region

Date

Permitted Activities

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify or operate a wastewater collection, treatment, control and disposal system and discharge to public waters adequately treated wastewaters only from the authorized discharge point or points established in Schedule A and only in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

Schedule A Waste Discharge Limitations	4
Mixing Zones	8
Schedule B Monitoring and Reporting Requirements	9
Reporting Procedures	13
Reporting of Non-Detect Sample Results and Minimum Levels	14
Monitoring Records Prepared in Ink	14
Procedure for Calculating 7-Day Moving Average of Daily Maximum Values	14
Continuous Monitoring Defined	14
24-hour Composite Sampling	14
If 24-hour composite samples cannot be collected as a result of equipment breakdown or malfunction, the permittees may use grab sampling techniques to complete monitoring requirements specified in this permit.	14
Summary of Selected Permit Report Submittals	14
Schedule C Compliance Conditions and Schedules	16
Certification of Implementation of Best Management Practices (BMPs) in 40 CFR 430.	16

City of St. Helens File No. 84069	Boise Cascade Corp. File No.9582	Permit No. 101173 Expiration Date: 12/31/2008 Page 3 of 39
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2.....Temperature Study

Plan.....16

Turbidity Compliance Schedule17

Compliance Schedule to Meet Provisions for Discharge from Outfall 008 and 00918

Responsibility to Meet Compliance Dates18

Schedule D Special Conditions19

Schedule E Pretreatment Activities29

Schedule F General Conditions31

Unless specifically authorized by this permit, by another NPDES or WPCF permit, or by Oregon Administrative Rule, any other direct or indirect discharge to waters of the state is prohibited, including discharge to an underground injection control system.

Schedule A Waste Discharge Limitations

- 1. Outfall 001: Combined Discharge from the Aerated Stabilization Basin of Municipal Wastewater and Bleached Kraft Pulp/Paper Mill Wastewater to the Columbia River**
Boise has primary responsibility for compliance with the following discharge limits at this outfall.

Parameter	Daily Max	Monthly Ave
BOD ₅	19,600 lb/d	12,800 lb/d
TSS	50,057 lb/d	26,862 lb/d
AOX	2206 lb/d	1430 lb/d
2,3,7,8-TCDD ¹	0.57 mg/day (quarterly average)	0.40 mg/day (annual average)
pH	within range 5.0 to 9.0	
Excess Heat Load ^{2, 3, 4}	71.2 MW (7-day average of daily maximums)	
Turbidity (final) (May – Oct) (Nov – April) ⁵	32 NTU	N/A
	55 NTU	N/A
Turbidity (interim) ⁵	206 NTU	N/A

Boise and the City have joint responsibility for compliance with the following discharge limit from this outfall.

Parameter	Daily Max	Monthly Ave
<i>E. coli</i> bacteria ⁶	406/100 mL	126/100 mL

Notes:

1. These 2,3,7,8-TCDD mass discharge limitations (also known as TMDL limits) are based on EPA's total maximum daily load (TMDL) for controlling the discharge of 2,3,7,8-TCDD into the Columbia River Basin promulgated on February 25, 1991. The TMDL waste load allocation for the discharge is 0.27 mg/day. This waste load allocation represents the long-term average limitation that must be met by the permittee and is based on a 70-year exposure period. In addition to complying with the quarterly and annual limitations specified above, the permittees must also demonstrate compliance with the following limitations and exposure periods:

Exposure Period	Effluent Limit
2 years	0.37 mg/day
3 years	0.35 mg/day
4 years	0.34 mg/day
5 years	0.33 mg/day

On an annual basis beginning the second year, the permittee must submit a report with effluent 2,3,7,8-TCDD data for the exposure period in question along with an analysis of whether the discharge is meeting the above effluent limits for 2,3,7,8-TCDD. Reports must be submitted two, three, four and five years after permit issuance.

2. The excess heat load limit specified in Schedule A.1 is an interim limit based on historical data. These limits apply from June 1 – September 30. A final excess heat load limit will be established upon completion of the temperature study in Schedule C.2. It should also be noted that the Department is currently reviewing its

temperature standard. Upon adoption of a new temperature standard, the permittee may request modification of the excess heat load limits in the permit.

3. The excess heat load limits in Schedules A.1, the temperature monitoring requirements in Schedule B, and the compliance conditions in Schedule C.2 of this permit constitute the permittees' Department-approved surface water temperature management plan (TMP) pursuant to OAR 340-041-0026(3)(a)(D). In accordance with OAR 340-041-0026(3)(a)(D)(vi), the permittee is deemed to be in compliance with in-stream temperature water quality standards and shall not be deemed to be causing or contributing to a violation of the water quality standards for temperature if the permittee is in compliance with this approved TMP.

4. In the event the permittee experiences an exceptional event in which there is unintentional and temporary noncompliance with excess heat load limits in the NPDES permit because of factors beyond the reasonable control of the permittee (i.e. high background stream temperatures), the permittee may claim an affirmative defense to an action brought for noncompliance with the excess heat load limits. The affirmative defense does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation. In an enforcement proceeding, the permittee seeking to establish the occurrence of an exceptional event has the burden of proof. To claim an affirmative defense, the Permittee must demonstrate through properly signed contemporaneous operating logs, or other relevant evidence that:

- (1) An exceptional event occurred and that the permittee can identify the cause(s) of the event;
- (2) The permitted facility was at the time being properly operated;
- (3) The permittee submitted notice of the exceptional event as required in the General Condition D.5 (24-hour notice); and
- (4) The permittee complied with any remedial measures required under General Condition A.3.

5. The interim turbidity limit is effective upon permit issuance. The final turbidity limit is effective upon completion of the compliance schedule in Schedule C.3 of the permit. Note, however, that the final turbidity limits are based on the existing turbidity standard and existing mixing zone dilution. Both the turbidity standard and the mixing zone dilution are expected to change within this permit cycle. Schedule C.3 of the NPDES permit includes a compliance schedule that requires Boise to implement in-plant controls and relocate the outfall structure, which would result in increased dilution. Additionally, the Department is in the process of reviewing its turbidity standard. Revision to the turbidity standard and outfall 001 relocation will result in changes to the final effluent turbidity limits. The permittees may apply for modification to the NPDES permit to revise the final turbidity limits. Until such time as the Department takes action on the modification request or renews the NPDES permit, the interim limits specified herein would apply.

6. Monthly average must be calculated as 30-day log mean. If the daily maximum is exceeded in any month, the permittee may take at least five consecutive re-samples at four-hour intervals beginning no later than 28 hours after the original sample was taken, or 4 hours after the permittee is notified of the exceedance if notification was made more than 28 hours after the original sample was taken. If the log mean of the five or more re-samples is less than or equal to 126/100 mL, no violation of the daily maximum shall be deemed to have occurred. For a month in which an exceedance of the daily maximum occurred and the permittee performed re-sampling, the re-samples shall replace the exceedance sample in calculating the monthly average, if the log mean of the re-samples is less than or equal to 126/100 mL. If the log mean of the re-samples is greater than 126/100 mL, then the monthly average shall be calculated as a log mean of all samples for the month.

2. Outfall 002 (Internal Monitoring Point): Discharge from the Municipal Primary Treatment Facility to the Aerated Stabilization Basin

This is the discharge from the municipal primary treatment facility's chlorine contact chamber into the combined aerated stabilization basin. The City of St. Helens has the primary responsibility for the discharge from this outfall. There are no limits applicable to this outfall.

3. Outfall 003 (Internal Monitoring Point): Influent to the Municipal Primary Treatment Facility

Except for wastewater from the Boise pulp and paper mill, all domestic and industrial wastewater (including leachate from the Boise landfill) enter the municipal primary treatment facility at this location. The City of St. Helens has primary responsibility for this outfall. There are no limits applicable to this outfall.

4. Outfall 004 (Internal Monitoring Point): Discharge from the Boise Kraft Mill to the Aerated Stabilization Basin

This is the discharge from the Boise primary treatment system into the combined aerated stabilization basin. Outfall 004 piping is maintained by Boise. Waste sources include the combined bleach Kraft mill wastewaters, cooling waters, storm water runoff, precipitated calcium carbonate plant, and all other integrated and ancillary process wastewaters resulting from operation and maintenance activities at the mill. This discharge also includes wastewater from the mill's sanitary sewage treatment facility. Boise has primary responsibility for the discharge from this outfall. There are no limits applicable to this outfall.

5. Outfall 005 (Internal Monitoring Point): Discharge from the Kraft Mill Bleach Plant Combined "A" Bleach Line

This is the hypothetical combined Boise "A" bleach line discharge, defined as representative samples from A bleach line acid (005 acid) and A bleach line caustic (005 caustic) sewers, and includes bleaching process filtrates and wastewaters generated at the mill. Boise has primary responsibility for the discharge from this outfall.

Parameter	Daily Max	Monthly Ave
2,3,7,8-TCDD	<10 pg/L	--
2,3,7,8-TCDF	31.9 pg/L	--
Trichlorosyringol	<2.5 µg/L	--
3,4,5-trichlorocatechol	<5.0 µg/L	--
3,4,6-trichlorocatechol	<5.0 µg/L	--
3,4,5-trichloroguaiacol	<2.5 µg/L	--
3,4,6-trichloroguaiacol	<2.5 µg/L	--
4,5,6-trichloroguaiacol	<2.5 µg/L	--
2,4,5-trichlorophenol	<2.5 µg/L	--
2,4,6-trichlorophenol	<2.5 µg/L	--
Tetrachlorocatechol	<5.0 µg/L	--
Tetrachloroguaiacol	<5.0 µg/L	--
2,3,4,6-tetrachlorophenol	<2.5 µg/L	--
Pentachlorophenol	<5.0 µg/L	--
Chloroform ⁸	7.96 lb/d	4.76 lb/d

6. Outfall 006(Internal Monitoring Point): Discharge from the Kraft Mill Bleach Plant Combined "B" Bleach Line

This is the hypothetical combined Boise "B" bleach line discharge, defined as representative samples from B bleach line acid (006 acid) and B bleach line caustic (006 caustic) sewers, and includes bleaching process filtrates and wastewaters generated at the mill. Boise has primary responsibility for the discharge from this outfall.

Parameter	Daily Max	Monthly Ave
2,3,7,8-TCDD	<10 pg/L	--
2,3,7,8-TCDF	31.9 pg/L	--
Trichlorosyringol	<2.5 µg/L	--
3,4,5-trichlorocatechol	<5.0 µg/L	--
3,4,6-trichlorocatechol	<5.0 µg/L	--
3,4,5-trichloroguaiacol	<2.5 µg/L	--
3,4,6-trichloroguaiacol	<2.5 µg/L	--
4,5,6-trichloroguaiacol	<2.5 µg/L	--
2,4,5-trichlorophenol	<2.5 µg/L	--
2,4,6-trichlorophenol	<2.5 µg/L	--
Tetrachlorocatechol	<5.0 µg/L	--
Tetrachloroguaiacol	<5.0 µg/L	--
2,3,4,6-tetrachlorophenol	<2.5 µg/L	--
Pentachlorophenol	<5.0 µg/L	--
Chloroform ⁸	7.96 lb/d	4.76 lb/d

Notes:

7. On September 19, 2002, EPA published in the Federal Register (67 Fed. Reg. 58990) a final rule allowing mills subject to the Cluster rule effluent discharge monitoring requirements to opt for a certification program, instead of conducting the weekly chloroform monitoring required by the rule. If, after two years of weekly monitoring demonstrating compliance with the chloroform limitation contained in Schedule A.5 and A.6, Boise decides to implement this alternative, it must notify the Department 90 days in advance of its intent to implement the compliance certification alternative as outlined in the rule (40 CFR 430.02(f)). Certification requirements are incorporated into this permit by reference.

7. Outfall 007: Emergency Discharge from the Aerated Stabilization Basin

This is the emergency discharge from the aerated stabilization basin to the Multnomah Channel. Waste sources include all of the sources that are normally included in Outfall 001. Use of this outfall is restricted to emergency situations during periods of high Columbia River level when there is insufficient hydraulic head to discharge the entire secondary ASB effluent flow through the normal Outfall 001 diffuser. The effluent limitations that apply at Outfall 001 also apply to Outfall 007. Boise and the City have joint responsibility for the discharge from this outfall.

8. Outfalls 008 and 009: Emergency Overflows from Pump Stations

The City of St. Helens has the primary responsibility for the discharge from these outfalls. Except as otherwise provided by law, no wastes shall be discharged from these outfalls and no activities shall be conducted which violate water quality standards as adopted in OAR 340-041-0205 and OAR 340-041-0445, unless the cause of the discharge is due to storm events as allowed under OAR 340-041-0120 (13) and (14) as follows:

Emergency overflow discharges are prohibited to Waters of the State from May 22 through October 31, except during a storm event greater than the one-in-ten-year, 24-hour duration storm event. In the wet season, emergency overflow discharges are allowed until December 31, 2009. On and after January 1, 2010, overflows are prohibited from November 1 through May 21 except during a storm event greater than a one-in-five-year, 24-hour storm event.

If an overflow occurs between May 22 and June 1, and if the permittee demonstrates to the Department's satisfaction that no increase in risk to beneficial uses occurred because of the overflow, no violation shall be triggered if the storm associated with the overflow was greater than the one-in-five-year, 24-hour duration storm event.

9. Outfall 010: Mill Intake Screen Return Water

River water is used to flush the mill intake screen. The mill intake screen return water is discharged to Multnomah Channel. Boise has primary responsibility for the discharge from this outfall. There are no limits applicable to this outfall.

10. Mixing Zones

Except as provided for in OAR 340-45-0080, no wastes shall be discharged and no activities shall be conducted which violate Water Quality Standards as adopted in OAR 340-41-0205 except in the following defined mixing zone:

Outfall 001: The allowable mixing zone is that portion of the Columbia River within a parallelogram shaped area extending 100 feet upstream and 400 feet downstream and 100 feet off each end of the diffuser. The Zone of Immediate Dilution (ZID) is that portion of the Columbia River within 24 feet of any part of the diffuser between and including the end-most discharge ports.

Except as provided for in OAR 340-45-0080, no wastes shall be discharged and no activities shall be conducted which violate Water Quality Standards as adopted in OAR 340-41-0445 except in the following defined mixing zone:

Outfall 007: The allowable mixing zone is that portion of Multnomah Channel within a radius of 100 ft from the end of the discharge pipe. A Zone of Immediate Dilution (ZID) is that portion of the Multnomah Channel within a 10 foot radius from the end of the discharge pipe.

Outfall 010: The allowable mixing zone is that portion of Multnomah Channel within a radius of 10 ft from the end of the discharge pipe.

Schedule B Monitoring and Reporting Requirements

1. Monitoring Requirements

The permittee must monitor the parameters as specified below at the locations indicated. The laboratory used by the permittee to analyze samples must have a quality assurance/quality control (QA/QC) program to verify the accuracy of sample analysis. If QA/QC requirements are not met for any analysis, the results must be included in the report, but not used in the calculations required by this permit. When possible, the permittee must re-sample in a timely manner for parameters failing QA/QC requirements, analyze samples, and report results.

a) **Outfall 001: Combined Discharge from the Aerated Stabilization Basin of Municipal Wastewater and Bleached Kraft Pulp/Paper Mill Wastewater to the Columbia River**

The monitoring location is the discharge pipe from the aerated stabilization basin. The City of St. Helens has primary responsibility for conducting the monitoring at outfall 001.

Parameter	Minimum Frequency	Sample Type
Flow	Daily	Continuous Recorder
BOD ₅	Daily	24-hour composite
TSS	Daily	24-hour composite
pH	Daily	Grab
AOX ¹	Daily	24-hour composite
Temperature	Daily	Continuous Recorder
Turbidity	Daily	24-hour composite
<i>E. coli</i> bacteria ²	2/week	Grab
Color	1/week	Grab
NH ₃ -N	1/month	24-hour composite
Total Dissolved Solids ³	1/month	24-hour composite
2,3,7,8-TCDD	1/quarter	24-hour composite
Whole effluent toxicity ⁴	1/quarter	24-hour composite
Priority Pollutant Scan ⁵	1/quarter	24-hour composite
Outfall condition ⁶	2 nd and 4 th year	Visual Inspection

Notes:

1. Upon written approval by the Department, AOX monitoring will be reduced to once per week after completion of the five year minimum monitoring requirement as allowed by 63 FR 18572 dated April 15, 1998.

2. Monthly results must be reported as a 30-day log mean. *E. coli* monitoring must be conducted according to any of the following test procedures as specified in Standard Methods for the Examination of Water and Wastewater, 19th Edition (**except mTEC agar which is to be conducted with the 18th Edition**) or according to any test procedure that has been authorized and approved in writing by the Director or his authorized representative. Resamples may be held for up to 30 hours prior to analysis:

Method	Reference	Page	Method Number
mTEC agar	MF Standard Methods, 18th Edition	9-28	9213 D
NA-MUG, MF	Standard Methods, 19th Edition	9-63	9222 G
Chromogenic Substrate, MPN	Standard Methods, 19th Edition	9-65	9223 B
Colilert QT	Idexx Laboratories, Inc.		

3. Monitoring for this parameter is only required for 1 year from the time of permit issuance.

4. Monitoring to be conducted once during each calendar quarter (January – March, April – June, July – September, October – December). Results are to be reported the month following receipt of test results.

5. The permittee must perform chemical analysis of the effluent for the specific toxic pollutants listed in Tables II and III of Appendix D of 40 CFR 122 in accordance with the sampling frequency specified above. Monitoring results must be submitted with Whole Effluent Toxicity test results. Monitoring results must also be submitted with the Pretreatment Program Annual Report as required in Schedule E. The monitoring for metals and cyanide required by the industrial pretreatment program are included in Table III, Appendix D, 40 CFR 122. The effluent samples must be 24-hour composites, except where sampling volatile compounds and cyanide. For these pollutants, at least four discrete samples (not less than 100 mL) collected over the operating day are acceptable. The permittee must take special precautions in compositing the individual grab samples for the volatile organics to ensure sample integrity (i.e. no exposure to outside air). Alternatively, the discrete samples collected for volatiles may be analyzed separately and averaged. For cyanide, each aliquot must be collected and composited into a larger container which has been preserved with sodium hydroxide to insure sample integrity.

6. The City must conduct an inspection of the outfall pipe and diffuser system for Outfall 001 in the second and fourth years of the permit term. Modification of the outfall structure, if applicable, shall serve to satisfy one of the yearly inspections. A written report must be submitted to the Department with the next Discharge Monitoring Report. The report must include, at a minimum, the condition of the outfall pipe and diffusers and any maintenance required for proper operation of the outfall.

b) Outfall 001: Temperature Data

The City of St. Helens has primary responsibility for conducting the monitoring at outfall 001.

Parameter	Minimum Frequency	Sample Type
Temperature (daily maximum)	1/day	Calculate
Temperature (7-day average of daily maximums)	1/week	Calculate
Excess Heat Load (Daily Maximum) ⁷	1/day	Calculate
Excess Heat Load (7-day Average of Daily Maximums) ⁷	1/week	Calculate

Notes:

7. The daily maximum excess heat load must be calculated using the daily maximum temperature and the total discharge flow for the day. The 7-day average of daily maximum heat load is a moving average of the daily maximum heat loads. Excess heat loads must be calculated using the formula. If the calculation results in a heat load value less than zero, the results must be recorded as zero. Individual values of zero must be used in calculating the average values.

$$H^* = \rho C_p Q (\Delta T) \left(1000 \frac{L}{m^3} \right) \left(\frac{1 \frac{W}{J}}{1 \frac{s}{s}} \right) \left(\frac{1 \frac{MW}{W}}{10^6 \frac{W}{W}} \right)$$

Where:

H = Excess heat load (Megawatts (MW))

ρ = Density of water, (1.0 kg/L)

C_p = Specific heat of water, (4182 Joules/kg-°C)

Q = Discharge flow, (meters³/sec)

ΔT = Daily maximum effluent temperature (°C) minus criterion (20°C) for calculation of daily maximum excess heat load.

c) Outfall 003 (Internal Monitoring Point): Influent to the Municipal Primary Treatment Facility

The monitoring location for outfall 003 is the primary influent flume. The City of St. Helens has primary responsibility for conducting the monitoring at outfall 003.

Parameter	Minimum Frequency	Type of Sample
Flow (measured at effluent from primary treatment facility)	Daily	Continuous Recorder
BOD ₅	2/week	24-hour composite
TSS	2/week	24-hour composite
pH	Daily	Grab
NH ₃ -N	1/month	24-hour composite
Metals (Ag, As, Cd, Cr, Cu, Hg, Mo, Ni, Pb, Se, Zn) & Cyanide, measured as total ⁸	Quarterly	24-hour composite

Notes:

8. Monitoring results for these pollutants must be submitted with the Pretreatment Program Annual Report as required in Schedule E. For cyanide, at least four (4) discrete grab samples must be collected over the operating day. Each aliquot shall not be less than 100 ml and must be collected and composited into a larger container which has been preserved with sodium hydroxide for cyanide samples to insure sample integrity.

d) Production Data

Boise must provide the following production data.

Parameter	Units	Minimum Frequency
Unbleached Pulp Production	ADMT	Monthly
Bleached Kraft Market Pulp	ADMT	Monthly
Bleached Kraft Fine Papers	ADMT	Monthly
Bleached Kraft Tissue	ADMT	Monthly

e) Outfalls 005 (Internal Monitoring Point): Discharge from the Kraft Mill Bleach Plant Combined "A" Bleach Line

The monitoring "location" is the "A" Bleach discharge lines, specifically the flow proportioned combination of 005 Acid and 005 Caustic samples. Boise has primary responsibility for conducting the monitoring at this outfall.

Parameter	Minimum Frequency	Type of Sample
Flow ⁹	1/week	24-hour composite
2,3,7,8-TCDD ¹⁰	1/month	24-hour composite
2,3,7,8-TCDF ¹⁰	1/month	24-hour composite
Trichlorosyringol ¹⁰	1/month	24-hour composite
3,4,5-trichlorocatechol ¹⁰	1/month	24-hour composite
3,4,6-trichlorocatechol ¹⁰	1/month	24-hour composite
3,4,5-trichloroguaiacol ¹⁰	1/month	24-hour composite
3,4,6-trichloroguaiacol ¹⁰	1/month	24-hour composite
4,5,6-trichloroguaiacol ¹⁰	1/month	24-hour composite
2,4,5-trichlorophenol ¹⁰	1/month	24-hour composite
2,4,6-trichlorophenol ¹⁰	1/month	24-hour composite
Tetrachlorocatechol ¹⁰	1/month	24-hour composite
Tetrachloroguaiacol ¹⁰	1/month	24-hour composite
2,3,4,6-tetrachlorophenol ¹⁰	1/month	24-hour composite
Pentachlorophenol ¹⁰	1/month	24-hour composite
Chloroform ^{11, 12}	1/week	24-hour composite

- f) **Outfall Number 006 (Internal Monitoring Point): Discharge from the Kraft Mill Bleach Plant Combined B Bleach Line.** The monitoring “location” is the “B” Bleach discharge lines, specifically the flow proportioned combination of 006 Acid and 006 Caustic samples. Boise has primary responsibility for conducting the monitoring at this outfall.

Parameter	Minimum Frequency	Type of Sample
Flow ⁹	1/week	24-hour composite
2,3,7,8-TCDD ¹⁰	1/month	24-hour composite
2,3,7,8-TCDF ¹⁰	1/month	24-hour composite
Trichlorosyringol ¹⁰	1/month	24-hour composite
3,4,5-trichlorocatechol ¹⁰	1/month	24-hour composite
3,4,6-trichlorocatechol ¹⁰	1/month	24-hour composite
3,4,5-trichloroguaiacol ¹⁰	1/month	24-hour composite
3,4,6-trichloroguaiacol ¹⁰	1/month	24-hour composite
4,5,6-trichloroguaiacol ¹⁰	1/month	24-hour composite
2,4,5-trichlorophenol ¹⁰	1/month	24-hour composite
2,4,6-trichlorophenol ¹⁰	1/month	24-hour composite
Tetrachlorocatechol ¹⁰	1/month	24-hour composite
Tetrachloroguaiacol ¹⁰	1/month	24-hour composite
2,3,4,6-tetrachlorophenol ¹⁰	1/month	24-hour composite
Pentachlorophenol ¹⁰	1/month	24-hour composite
Chloroform ^{11, 12}	1/week	24-hour composite

Notes:

9. Flow is calculated using a water balance model; report daily average and monthly average flow.

10. Samples from individual acid and caustic sewers may be composited in proportion to flow so that a single analysis representative of the bleach line is obtained.

11. The 24-hour composite sampling for chloroform must consist of a minimum of four individual samples collected during a 24-hour period and quantitatively composited in the laboratory. The permittee must include, a detailed description of the method used to composite the samples with the first report, and with subsequent reports where there is a change of the compositing method. If an automated continuous or grab compositing device is used, the report must include a description of the system and the name of the manufacturer.

12. The 24-hour composite samples for chloroform from individual acid and caustic sewers are to be analyzed individually. Results from these analyses may be mathematically combined in proportion to flow and reported as a single value representative of the bleach line.

g) Outfall 007: Emergency Discharge from the Aerated Stabilization Basin

The monitoring location is the overflow structure discharge weir. The City of St. Helens has primary responsibility for conducting the monitoring at outfall 007.

Parameter	Minimum Frequency	Type of Sample
Flow	Daily When Discharging	Estimate
BOD, TSS, and AOX ¹³	Daily When Discharging	Calculate

Notes:

13. Due to the proximity of the discharge points for Outfall 007 and Outfall 001, monitoring at Outfall 001 is deemed equivalent to monitoring at Outfall 007 when Outfall 007 is being used. When discharging from outfall 007, the BOD, TSS, and AOX analytical results from outfall 001 must be used with the flow at outfall 007 to calculate effluent mass load. The mass load at outfall 007 must be combined to the mass load calculated at outfall 001 to determine compliance with the mass load limits specified at outfall 001.

h) Outfalls 008 and 009: Emergency Overflows from Pump Stations

For outfall 008, the monitoring location is at the overflow pipe inlet at manhole IA25. For outfall 009, the monitoring location is at the Pump Station No. 3 wet well overflow pipe, manhole IF 23 on the inlet line to Pump Station No. 2, and the overflow pipe on the middle trunk at manhole M1. The City of St. Helens has primary responsibility for conducting the monitoring at outfalls 008 and 009.

Parameter	Minimum Frequency	Type of Sample
Flow	Daily (during each occurrence)	Estimate duration and volume

i) Columbia River Monitoring

Temperature and turbidity monitoring will be conducted as part of the temperature and turbidity studies specified in Schedule C.2 and C.3. The purpose of the monitoring program will be to establish background temperature and turbidity levels. In addition to conducting in-stream monitoring, the permittees may also use existing temperature and turbidity data, if appropriate, to characterize background temperature and turbidity levels.

2. Reporting Procedures

Monitoring results must be reported on approved forms. The reporting period is the calendar month. Reports must be submitted to the Department's Northwest Region Office by the 45th day after the end of the monitoring period. If analytical results are not received on time (i.e., at least 5 days before the report is due), then the results must be submitted with the following month's report.

Boise and the City of St. Helens must each report monitoring results for their respective areas of responsibility as identified in this permit. An authorized representative for each permittee must sign the forms for which it is responsible and the combined report must be submitted by the City of St. Helens to the Department's Northwest Region Office.

3. Reporting of Non-Detect Sample Results and Minimum Levels

For all pollutants, if a value is less than the permit limit and less than the "minimum quantitative level (MQL)", the permittee must report Non-Detect "ND (detection level in mg/L)" for the parameter. For example, if the MQL for a pollutant is 10 µg/L and the value of the analytical result is below the MQL, the permittee must report ND (≤ 0.010 mg/L) in the Discharge Monitoring Report.

For those pollutants for which a Minimum Level (ML) has been established in 40 CFR 430, if a value is less than the ML, the permittee must report "less than [insert ML]" for the parameter. The ML represents the minimum level as defined by regulation for the particular pollutant. For example, if the ML for a pollutant is 10 pg/L and the value of the analytical result is below the ML, the permittee must report "less than 10 pg/L" for the Discharge Monitoring Report. For 2,3,7,8-TCDD, ML represents the minimum level as defined in 40 CFR 430.01(i) for this pollutant.

4. Monitoring Records Prepared in Ink

All bench sheets, laboratory analysis sheets, and other records to support the data reported on the Discharge Monitoring Report (DMR) must be prepared in ink. Pencil entries or *liquid paper* corrections must be prohibited by appropriate laboratory operating procedures. Changes to any supporting records that may be required to correct the original data must be made by lining through the original data. The date of the change and the initials of the individual making the change must be recorded in ink adjacent to the change.

5. Procedure for Calculating 7-Day Moving Average of Daily Maximum Values

The 7-day moving average of daily maximums must be calculated by averaging the daily maximum values of the previous 6 days with the daily maximum value for the day for which the 7-day moving average of daily maximums is being calculated. The 7-day moving average of daily maximums must be calculated continuously and must not be restarted at the beginning of a new month or period. If there is a break in the record of monitoring data for 3 days or fewer, such as due to malfunction of equipment, the 7-day moving average of daily maximums must be calculated using the average of the available data spanning the break in data. If there is a break in the record of monitoring data for 4 or more days, a new moving average must be calculated and reported beginning on the day that a total of 7 days of record have been accumulated. The days for which no 7-day average can be calculated must be reported as "no data".

6. Continuous Monitoring Defined

Continuous monitoring means the use of a primary device and instrument system to measure on a continuous basis the specified parameter. The device must measure the parameter (e.g. flow, temperature) a specific frequency (at least once every 15 minutes) and transmit data to be processed to provide the required result for the specified time period (e.g. daily maximum, daily average, etc.)

7. 24-hour Composite Sampling

If 24-hour composite samples cannot be collected as a result of equipment breakdown or malfunction, the permittees may use grab sampling techniques to complete monitoring requirements specified in this permit.

8. Summary of Selected Permit Report Submittals

Selected submittals required under this permit are summarized below. In the event of conflict or omission, the submittals required by the specific permit condition or other requirement shall govern.

Permit Condition	Submittal	Frequency	First Submittal Date
Schedule B.1.a)	Outfall Condition	2 nd and 4 th year	Within 30 days after inspection
Schedule B.2	Discharge Monitoring Report	1/month	By 45 th day after the end of the monitoring period
Schedule C.1	Certification of BMP plan	Once	within 30 days of issuance
Schedule C.2	Temperature Study Plan	N/A	See Schedule C
Schedule C.3	Turbidity Study	N/A	See Schedule C
Schedule C.4	Emergency Overflow Outfall Use	N/A	See Schedule C
Schedule D.3	BMP Annual Report	1/year	April 15 th
Schedule D.5	Dredging Management Plan	as required	60 days prior to dredging
Schedule D.14	Biocides Certification	Once	within 30 days of permit issuance
Schedule E.11	Pretreatment Program Annual Report	1/year	March 1

Schedule C

Compliance Conditions and Schedules

1. **Certification of Implementation of Best Management Practices (BMPs) in 40 CFR 430.**

Within thirty (30) days after permit issuance date, Boise Cascade must submit a certification to the Department's Northwest Region Office in Portland whether the BMPs specified in 40 CFR 430 have been implemented. With the certification, the permittee must submit a copy of the BMP plan.

2. **Temperature Study Plan**

Boise must comply with the following schedule:

Complete by:	Requirement:
Upon permit issuance	Boise must begin the evaluation of alternatives to reduce effluent heat load in accordance with Department's guidance.
Within 6 months after permit issuance	Boise must submit a <i>Water Quality Study Report</i> to the Department's Northwest Region Office. The <i>Water Quality Study Report</i> will contain an evaluation of the effect of the existing discharge on water quality within the stream segment where the facility discharges.
Within 12 months after permit issuance	Boise must submit to the Department's Northwest Region Office for review and approval an <i>Evaluation of Alternatives to Reduce Effluent Heat Load</i> . The <i>Evaluation of Alternatives to Reduce Effluent Heat Load</i> must include an inventory of the heat sources that are affecting the heat load discharged from the facility. The Alternatives Evaluation must consider alternatives for: (1) recycling and eliminating or reducing part of the discharge; (2) recycling selected waste streams to reduce the thermal load being discharged; (3) directly removing heat load from the wastewater and transferring it back to the process and (4) treatment technologies to reduce heat load from selected waste streams or treatment technologies to reduce overall heat load of the discharge. The Alternatives Evaluation must include criteria to rank projects. At a minimum, the criteria must include expected time to complete the project, technical feasibility, cost per unit of heat load reduced, and collateral environmental effects. The Alternatives Evaluation must include recommendations for preferred alternatives, which are reasonably available, and can be implemented to reduce effluent heat load.
Within 18 months after permit issuance	Unless Boise can demonstrate through improved effluent quality that the existing outfall location addresses water quality issues, Boise must submit its plan for relocation of outfall 001 to the Department's Northwest Region Office for review and approval. The <i>Outfall Modification Plan</i> must provide information justifying the location of the outfall and must include mixing and dilution analysis using EPA approved models for the new outfall location. The submittal must also provide plans and specifications, and a schedule for outfall relocation. Within two (2) months after Department approval, the permittees must submit all applications and supporting materials to the appropriate agencies as necessary to secure required approvals/permits for the project.
Within 18 months after Department approval of the <i>Evaluation of Alternatives to Reduce Effluent Heat Load</i>	Boise must implement necessary non-capital preferred alternatives to reduce effluent heat load discharged from the facility.

City of St. Helens File No. 84069	Boise Cascade Corp. File No.9582	Permit No. 101173 Expiration Date: 12/31/2008 Page 17 of 39
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Within 30 months after Department approval of the <i>Evaluation of Alternatives to Reduce Effluent Heat Load</i>	Boise must implement necessary capital preferred alternatives (excluding outfall modification) to reduce effluent heat load discharged from the facility.
Within 24 months after Department approval of the <i>Outfall Modification Plan</i> and permits/ approval from all required agencies	Boise must complete modifications to the outfall structure, and provide written notice to the Department's Northwest Region Office. Boise will not be in violation of this compliance schedule due to any delays caused by circumstances beyond the reasonable control of the permittees, including but not limited to: delays in obtaining required agency permit approvals, river conditions that prevent the safe installation of required structures, or any others delays that would prevent construction during the available window for in-stream project work. In such circumstances, the Department will extend the time frame for modification of the outfall structure, commensurate with the period of delay.
Within 6 months of completion of the outfall structure, if necessary	Boise must submit a mixing zone/dilution technical evaluation report for the modified outfall structure to the Department's Northwest Region Office. The mixing zone/dilution technical evaluation report will provide the applicable dilution factor(s) for the modified outfall structure, and for demonstrating compliance with water quality standards. Boise shall also submit a request for permit modification and applicable fees for revising temperature and/or heat load limits to comply with applicable water quality standards and/or applicable TMDL for temperature. The notification must also specify any additional actions necessary to meet the effluent limits for temperature.
Upon issuance of the modified NPDES Permit	The permittees must comply with the temperature standard in OAR 340-041-0205(2)(b) or any TMDL in effect at that time, or such numerical effluent heat load limits as may be in the permit at that time.

Plans, reports and all other submittals may be combined with those required by Schedule C.3.

3. Turbidity Compliance Schedule

Boise must comply with the following schedule:

Complete by:	Requirement:
Within 3 months after permit issuance	Boise must submit a Turbidity Study plan to the Department's Northwest Region Office. The study plan must include proposed methods, schedule and frequency for measuring turbidity at the following: one or more locations upstream of the Outfall 001 diffuser, at the downstream edge of the Outfall 001 mixing zone, and effluent turbidity.
Within 6 months after permit issuance	Boise must commence the Turbidity Study.
Within 18 months after permit issuance	Boise must submit an Interim Feasibility Evaluation that identifies reasonable methods that Boise can implement to reduce effluent turbidity through process changes, modification of existing equipment, outfall structure dilution improvements, or other modifications, controls or procedures.
Within 24 months after permit issuance	Boise must submit the completed Turbidity Study to the Department's Northwest Region Office.
Within 30 months after permit issuance	Boise must implement non-capital projects identified as preferred alternatives in the Interim Feasibility Evaluation.

City of St. Helens File No. 84069	Boise Cascade Corp. File No.9582	Permit No. 101173 Expiration Date: 12/31/2008 Page 18 of 39
Within 42 months after permit issuance	Boise must implement capital projects identified as preferred alternatives in the Interim Feasibility Evaluation, with the exception of any modifications to the outfall structure. Outfall structure modifications are subject to the compliance schedule requirements of Condition C.2.	
Within 6 months of completion of the outfall structure	Boise must submit a mixing zone/dilution technical evaluation report for the modified outfall structure to the Department's Northwest Region Office. The mixing zone/dilution technical evaluation report will provide the applicable dilution factor(s) for the modified outfall structure, and for demonstrating compliance with water quality standards. Boise shall also submit a request for permit modification and applicable fees for establishing turbidity limits to comply with applicable water quality standards. The notification must also specify any additional actions necessary to meet the effluent limits for turbidity. Until such time as the Department takes action on the modification request or renews the NPDES permit, the interim turbidity limits specified in Schedule A of the permit would apply.	
Upon issuance of the modified NPDES Permit	The permittees must comply with the turbidity standard in effect at that time, or such numerical effluent turbidity limits as may be in the permit at that time.	

Plans, reports and all other submittals may be combined with those required by Schedule C.2.

4. Compliance Schedule to Meet Provisions for Discharge from Outfall 008 and 009

Schedule A.8 requires the emergency overflows (outfall 008 and 009) to meet specific criteria for discharge. For example, emergency overflow discharges are prohibited to Waters of the State from May 22 through October 31 (dry season), except during a storm event greater than the one-in-ten-year, 24-hour duration storm event. In the wet season, emergency overflow discharges are allowed until December 31, 2009. On and after January 1, 2010, overflows are prohibited from November 1 through May 21 except during a storm event greater than a one-in-five-year, 24-hour storm event. With six (6) months after permit issuance date, the City must submit a report regarding whether the discharge from these outfalls meets the dry season criteria for overflow discharges to Waters of the State. Along with the report, the City must submit an implementation plan and schedule for complying with wet season overflow requirements by January 1, 2010.

5. Responsibility to Meet Compliance Dates

The permittees are expected to meet the compliance dates that have been established in this schedule. Either prior to or no later than 14 days following any lapsed compliance date, the permittee must submit to the Department a notice of compliance or noncompliance with the established schedule. The Director may revise a schedule of compliance if he determines good and valid cause resulting from events over which the permittees have little or no control.

Schedule D Special Conditions

1. **Primary Responsibility Defined**

"City", "City of St Helens", and "municipal" mean the City of St Helens, a municipal corporation, or its authorized representatives.

"Boise", "Boise Cascade", or "BCC," mean Boise Cascade Corporation, St Helens Kraft pulp and paper mill, its authorized representatives, or its successors.

"Joint" means the City of St Helens and Boise Cascade Corporation acting together by mutual agreement, contract, or other arrangement to fulfill the responsibilities and obligations of this NPDES permit.

"Permittee" or "permittees" mean either the City of St Helens or Boise Cascade Corporation or both entities acting together depending on the context in which the term is used.

- a) Notwithstanding paragraphs b) and c), the Department and the permittees agree that each permittee has primary responsibility for certain limitations and/or obligations. For a violation of a condition that is designated the primary responsibility of one permittee as set forth in Schedule A or other condition of this permit, any resulting enforcement action will be directed against the permittee with primary responsibility. However, if the permittee assigned primary responsibility does not act or respond in a timely manner upon its assigned responsibility, then the Department may proceed against both permittees at its discretion. For a violation of a condition that is designated as joint responsibility, any resulting enforcement action by the Department will be directed against both permittees.
- b) The permittees are jointly and severally responsible for compliance with this permit, and nothing herein shall preclude the Department from taking action against either or both permittees to enforce the terms and conditions of this permit.
- c) The Department considers the permittees to be a single entity for the purpose of escalating enforcement action in accordance with Department rules and policies.
- d) Primary responsibility is as follows:

Boise Responsibility: Boise has primary responsibility for any violation of effluent limitations or other obligation of this permit identified as a Boise responsibility.

City Responsibility: The City of St Helens shall have primary responsibility for any violation of effluent limitation or other obligation of this permit identified as "City of St. Helens".

Joint Responsibility: The City and Boise shall have joint responsibility for any violation of effluent limitations or other obligation of this permit identified as "Joint" or "Joint Responsibility" in this permit, and for any violation or other obligation of this permit that is not clearly identified in this permit as the primary responsibility of one or the other permittee.

- e) Nothing in this permit shall be construed as preventing the permittees from assigning responsibility between themselves in any way they mutually agree upon, except that such agreement will have no effect upon the Department or this permit.
- f) Designation of primary responsibility in this permit may be changed only by modification of this permit following the appropriate modification procedures.

2. Whole Effluent Toxicity (Bioassay) Testing- Primary responsibility: Joint.

a) The permittee must conduct whole effluent toxicity tests as specified in Schedule B of this permit.

b) Bioassay tests may be dual end-point tests, only for the fish tests, in which both acute and chronic end-points can be determined from the results of a single chronic test (the acute end-point shall be based upon a 48-hour time period).

c) **Acute Toxicity Testing - Organisms and Protocols**

(1) The permittee must conduct 48-hour static renewal tests with the *Ceriodaphnia dubia* (water flea) and the *Pimephales promelas* (fathead minnow).

(2) The presence of acute toxicity will be determined as specified in Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition, EPA/600/4-90/027F, August 1993 or newer.

(3) An acute bioassay test must be considered to show toxicity if there is a statistically significant difference in survival between the control and 100 percent effluent, unless the permit specifically provides for a Zone of Immediate Dilution (ZID). If the permit specifies such a ZID, acute toxicity must be indicated when a statistically significant difference in survival occurs at dilutions greater than that which is found to occur at the edge of the ZID.

d) **Chronic Toxicity Testing - Organisms and Protocols**

(1) The permittee must conduct tests with: *Ceriodaphnia dubia* (water flea) for reproduction and survival test endpoint, *Pimephales promelas* (fathead minnow) for growth and survival test endpoint, and *Raphidocelis subcapitata* (green alga formerly known as *Selenastrum capricornutum*) for growth test endpoint.

(2) The presence of chronic toxicity shall be estimated as specified in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Third Edition, EPA/600/4-91/002, July 1994 or newer.

(3) A chronic bioassay test is considered to show toxicity if a statistically significant difference in survival, growth, or reproduction occurs at dilutions greater than that which is found to occur at the edge of the mixing zone. If there is no dilution data for the edge of the mixing zone, any chronic bioassay test that shows a statistically significant effect in 100 percent effluent as compared to the control is considered to show toxicity.

e) **Quality Assurance**

(1) Quality assurance criteria, statistical analyses and data reporting for the bioassays must be in accordance with the EPA documents stated in this condition and the Department's Whole Effluent Toxicity Testing Guidance Document, January 1993.

f) **Evaluation of Causes and Exceedances**

(1) If toxicity is shown, as defined in sections c.(3) or d.(3) of this permit condition, another toxicity test using the same species and Department approved methodology must be conducted within two weeks, unless otherwise approved by the Department. If the second test also indicates toxicity, the permittee shall follow the procedure described in section f.(2) of this permit condition.

(2) If two consecutive bioassay test results indicate acute and/or chronic toxicity, as defined in sections c.(3) or d.(3) of this permit condition, the permittee must evaluate the source of the toxicity and submit a plan and time schedule. Upon approval by the Department, the permittee must implement the plan. Evaluations must be completed and plans submitted to the Department within 6 months unless otherwise approved in writing by the Department.

g) Reporting

(1) Along with the test results, the permittee must include: 1. the dates of sample collection and initiation of each toxicity test; 2. the type of production; and 3. the flow rate at the time of sample collection. Effluent at the time of sampling for bioassay testing should include samples of required parameters stated under Schedule B.1 of this permit.

(2) The permittee shall make available to the Department, on request, the written standard operating procedures they, or the laboratory performing the bioassays, are using for all toxicity tests required by the Department.

h) Reopener

(1) If bioassay testing indicates acute and/or chronic toxicity, the Department may reopen and modify this permit to include new limitations and/or conditions as determined by the Department to be appropriate, and in accordance with procedures outlined in Oregon Administrative Rules, Chapter 340 - Division 45.

3. Best Management Practices (BMP) - Primary responsibility: Boise.

a) Reporting:

Reports required by 40 CFR 430.03(i) must be submitted once per year, not later than April 15, for the preceding calendar year.

b) The permittee must comply with the BMP requirements in 40 CFR 430.03(c) through (i). For informational purposes, the requirements are summarized below.

- The permittee must implement BMPs in accordance with 40 CFR 430.03(c).
- The permittee have a BMP plan in accordance with 40 CFR 430.03(d).
- The permittee must amend the BMP plan in accordance with 40 CFR 430.03(e).
- The permittee must review and certify the BMP plan in accordance with 40 CFR 430.03(f).
- The permittee must keep BMP records in accordance with 40 CFR 430.03(g).
- The permittee must establish Wastewater Treatment System Influent Action Levels in accordance with 40 CFR 430.03(h).
- The permittee must comply with the BMP Monitoring, Corrective Action and Reporting requirements in 40 CFR 430.03(i).

The applicable sections of 40 CFR 430.03 are copied below for informational purposes. In the event the wording below disagrees with the wording of 40 CFR 430.03, then the wording of 40 CFR 430.03 will prevail.

c) 40 CFR 430.03(c): Requirement to implement Best Management Practices

Each mill subject to this section must implement the Best Management Practices (BMPs) specified in paragraphs c)(1) through (10) of this section. The primary objective of the BMPs is to prevent leaks and spills of spent pulping liquors, soap, and turpentine. The secondary objective is to contain, collect, and recover at the immediate process area, or otherwise control, those leaks, spills, and intentional diversions of spent pulping liquor, soap, and turpentine that do occur. BMPs must be developed according to best engineering practices and must be implemented in a manner that takes into account the specific circumstances at each mill. The BMPs are as follows:

(1) The mill must return spilled or diverted spent pulping liquors, soap, and turpentine to the process to the maximum extent practicable as determined by the mill, recover such materials outside the process, or discharge spilled or diverted material at a rate that does not disrupt the receiving wastewater treatment system.

(2) The mill must establish a program to identify and repair leaking equipment items. This program must include:

(i) Regular visual inspections (e.g., once per day) of process areas with equipment items in spent pulping liquor, soap, and turpentine service;

(ii) Immediate repairs of leaking equipment items, when possible. Leaking equipment items that cannot be repaired during normal operations must be identified, temporary means for mitigating the leaks must be provided, and the leaking equipment items repaired during the next maintenance outage;

(iii) Identification of conditions under which production will be curtailed or halted to repair leaking equipment items or to prevent pulping liquor, soap, and turpentine leaks and spills; and

(iv) A means for tracking repairs over time to identify those equipment items where upgrade or replacement may be warranted based on frequency and severity of leaks, spills, or failures.

(3) The mill must operate continuous, automatic monitoring systems that the mill determines are necessary to detect and control leaks, spills, and intentional diversions of spent pulping liquor, soap, and turpentine. These monitoring systems should be integrated with the mill process control system and may include, e.g., high level monitors and alarms on storage tanks; process area conductivity (or pH) monitors and alarms; and process area sewer, process wastewater, and wastewater treatment plant conductivity (or pH) monitors and alarms.

(4) The mill must establish a program of initial and refresher training of operators, maintenance personnel, and other technical and supervisory personnel who have responsibility for operating, maintaining, or supervising the operation and maintenance of equipment items in spent pulping liquor, soap, and turpentine service. The refresher training must be conducted at least annually and the training program must be documented.

(5) The mill must prepare a brief report that evaluates each spill of spent pulping liquor, soap, or turpentine that is not contained at the immediate process area and any intentional diversion of spent pulping liquor, soap, or turpentine that is not contained at the immediate process area. The report must describe the equipment items involved, the circumstances leading to the incident, the effectiveness of the corrective actions taken to contain and recover the spill or intentional diversion, and plans to develop changes to equipment and operating and maintenance practices as necessary to prevent recurrence. Discussion of the reports must be included as part of the annual refresher training.

(6) The mill must establish a program to review any planned modifications to the pulping and chemical recovery facilities and any construction activities in the pulping and chemical recovery areas before these activities commence. The purpose of such review is to prevent leaks and spills of spent pulping liquor, soap, and turpentine during the planned modifications, and to ensure that construction and supervisory personnel are aware of possible liquor diversions and of the requirement to prevent leaks and spills of spent pulping liquors, soap, and turpentine during construction.

(7) The mill must install and maintain secondary containment (i.e., containment constructed of materials impervious to pulping liquors) for spent pulping liquor bulk storage tanks equivalent to the volume of the largest tank plus sufficient freeboard for precipitation. An annual tank integrity testing program, if coupled with other containment or diversion structures, may be substituted for secondary containment for spent pulping liquor bulk storage tanks.

(8) The mill must install and maintain secondary containment for turpentine bulk storage tanks.

(9) The mill must install and maintain curbing, diking or other means of isolating soap and turpentine processing and loading areas from the wastewater treatment facilities.

(10) The mill must conduct wastewater monitoring to detect leaks and spills, to track the effectiveness of the BMPs, and to detect trends in spent pulping liquor losses. Such monitoring must be performed in accordance with paragraph (i) of this section.

d) 40 CFR 430.03(d): Requirement to develop a BMP Plan

(1) Each mill subject to this section must prepare and implement a BMP Plan. The BMP Plan must be based on a detailed engineering review as described in paragraphs d)(2) and (3) of this section. The BMP Plan must specify the procedures and the practices required for each mill to meet the requirements of paragraph c) of this section, the construction the mill determines is necessary to meet those requirements including a schedule for such construction, and the monitoring program (including the statistically derived action levels) that will be used to meet the requirements of paragraph (i) of this section. The BMP Plan must also specify the period of time that the mill determines the action levels established under paragraph (h) of this section may be exceeded without triggering the responses specified in paragraph (i) of this section.

(2) Each mill subject to this section must conduct a detailed engineering review of the pulping and chemical recovery operations-- including but not limited to process equipment, storage tanks, pipelines and pumping systems, loading and unloading facilities, and other appurtenant pulping and chemical recovery equipment items in spent pulping liquor, soap, and turpentine service--for the purpose of determining the magnitude and routing of potential leaks, spills, and intentional diversions of spent pulping liquors, soap, and turpentine during the following periods of operation:

- (i) Process start-ups and shut downs;
- (ii) Maintenance;
- (iii) Production grade changes;
- (iv) Storm or other weather events;
- (v) Power failures; and
- (vi) Normal operations.

(3) As part of the engineering review, the mill must determine whether existing spent pulping liquor containment facilities are of adequate capacity for collection and storage of anticipated intentional liquor diversions with sufficient contingency for collection and containment of spills. The engineering review must also consider:

- (i) The need for continuous, automatic monitoring systems to detect and control leaks and spills of spent pulping liquor, soap, and turpentine;
- (ii) The need for process wastewater diversion facilities to protect end-of-pipe wastewater treatment facilities from adverse effects of spills and diversions of spent pulping liquors, soap, and turpentine;
- (iii) The potential for contamination of storm water from the immediate process areas; and
- (iv) The extent to which segregation and/or collection and treatment of contaminated storm water from the immediate process areas is appropriate.

e) 40 CFR 430.03(e) Amendment of BMP Plan.

(1) Each mill subject to this section must amend its BMP Plan whenever there is a change in mill design, construction, operation, or maintenance that materially affects the potential for leaks or spills of spent pulping liquor, turpentine, or soap from the immediate process areas.

(2) Each mill subject to this section must complete a review and evaluation of the BMP Plan five years after the first BMP Plan is prepared and, except as provided in paragraph e)(1) of this section, once every five years thereafter. As a result of this review and evaluation, the mill must amend the BMP Plan within three months of the review if the mill determines that any new or modified management practices and engineered controls are necessary to reduce significantly the likelihood of spent pulping liquor, soap, and turpentine leaks, spills, or intentional diversions from the immediate process areas, including a schedule for implementation of such practices and controls.

f) 40 CFR 430.03(f) Review and certification of BMP Plan.

The BMP Plan, and any amendments thereto, must be reviewed by the senior technical manager at the mill and approved and signed by the mill manager. Any person signing the BMP Plan or its amendments must certify to the permitting or pretreatment control authority under penalty of law that the BMP Plan (or its amendments) has been prepared in accordance with good engineering practices and in accordance with this regulation. The mill is not required to obtain approval from the permitting or pretreatment control authority of the BMP Plan or any amendments thereto.

g) 40 CFR 430.03(g) Record keeping requirements.

(1) Each mill subject to this section must maintain on its premises a complete copy of the current BMP Plan and the records specified in paragraph g)(2) of this section and must make such BMP Plan and records available to the permitting or pretreatment control authority and the Regional Administrator or his or her designee for review upon request.

(2) The mill must maintain the following records for three years from the date they are created:

- (i) Records tracking the repairs performed in accordance with the repair program described in paragraph c)(2) of this section;
- (ii) Records of initial and refresher training conducted in accordance with paragraph c)(4) of this section;
- (iii) Reports prepared in accordance with paragraph c)(5) of this section; and
- (iv) Records of monitoring required by paragraphs c)(10) and (i) of this section.

h) 40 CFR 430.03(h) Establishment of wastewater treatment system influent action levels.

(1) Each mill subject to this section must conduct a monitoring program, described in paragraph h)(2) of this section, for the purpose of defining wastewater treatment system influent characteristics (or action levels), described in paragraph h)(3) of this section, that will trigger requirements to initiate investigations on BMP effectiveness and to take corrective action.

(2) Each mill subject to this section must employ the following procedures in order to develop the action levels required by paragraph (h) of this section:

- (i) Monitoring parameters. The mill must collect 24-hour composite samples and analyze the samples for a measure of organic content (e.g., Chemical Oxygen Demand (COD) or Total Organic Carbon (TOC)). Alternatively, the mill may use a measure related to spent pulping liquor losses measured continuously and averaged over 24 hours (e.g., specific conductivity or color).
- (ii) Monitoring locations. For direct dischargers, monitoring must be conducted at the point influent enters the wastewater treatment system. For indirect dischargers monitoring must be conducted at the point of discharge to the POTW. For the purposes of this requirement, the mill may select alternate monitoring point(s) in order to isolate possible sources of spent pulping liquor, soap, or turpentine from other possible sources of organic wastewaters that are tributary to the wastewater treatment facilities (e.g., bleach plants, paper machines and secondary fiber operations).

(3) By the date prescribed in paragraph j)(1)(iii) of this section, each existing discharger subject to this section must complete an initial six-month monitoring program using the procedures specified in paragraph h)(2) of this section and must establish initial action levels based on the results of that program. A wastewater treatment influent action level is a statistically determined pollutant loading determined by a statistical analysis of six months of daily measurements. The action levels must consist of a lower action level, which if exceeded will trigger the investigation requirements described in paragraph i) of this section, and an upper action level, which if exceeded will trigger the corrective action requirements described in paragraph i) of this section.

(4) By the date prescribed in paragraph j)(1)(vi) of this section, each existing discharger must complete a second six-month monitoring program using the procedures specified in paragraph h)(2) of this section and must establish revised action levels based on the results of that program. The initial action levels shall remain in effect until replaced by revised action levels.

(5) By the date prescribed in paragraph j)(2) of this section, each new source subject to this section must complete a six-month monitoring program using the procedures specified in paragraph h)(2) of this section and must develop a lower action level and an upper action level based on the results of that program.

(6) Action levels developed under this paragraph must be revised using six months of monitoring data after any change in mill design, construction, operation, or maintenance that materially affects the potential for leaks or spills of spent pulping liquor, soap, or turpentine from the immediate process areas.

i) 40 CFR 430.03(i) Monitoring, corrective action, and reporting requirements.

(1) Each mill subject to this section must conduct daily monitoring of the influent to the wastewater treatment system in accordance with the procedures described in paragraph h)(2) of this section for the purpose of detecting leaks and spills, tracking the effectiveness of the BMPs, and detecting trends in spent pulping liquor losses.

(2) Whenever monitoring results exceed the lower action level for the period of time specified in the BMP Plan, the mill must conduct an investigation to determine the cause of such exceedance. Whenever monitoring results exceed the upper action level for the period of time specified in the BMP Plan, the mill must complete corrective action to bring the wastewater treatment system influent mass loading below the lower action level as soon as practicable.

(3) Although exceedances of the action levels will not constitute violations of an NPDES permit or pretreatment standard, failure to take the actions required by paragraph i)(2) of this section as soon as practicable will be a permit or pretreatment standard violation.

(4) Each mill subject to this section must report to the NPDES permitting or pretreatment control authority the results of the daily monitoring conducted pursuant to paragraph i)(1) of this section. Such reports must include a summary of the monitoring results, the number and dates of exceedances of the applicable action levels, and brief descriptions of any corrective actions taken to respond to such exceedances. Submission of such reports shall be at the frequency established by the NPDES permitting or pretreatment control authority, but in no case less than once per year.

4. Reopening of Permit

This permit shall be reopened and modified or reissued to incorporate water quality-based effluent limitations or one or more new or revised waste load allocations (WLAs) and associated implementation schedules resulting from a Total Maximum Daily Load (TMDL) for any of the parameters associated with the permittee's discharge. This permit may be reopened and modified or reissued to incorporate the results of water quality studies and any associated changes to effluent limitations or any other affected condition of this permit.

Nothing in this condition shall limit reopening of this permit for reasons specified in Schedule F, General Conditions. Nothing in this condition shall abridge the public process associated with permit modification or re-issuance.

5. Management of Wastewater Solids - Primary responsibility: Joint.

Sludge management plans for beneficial reuse of solids from the City's primary treatment facility, Boise's primary treatment facility, and the secondary solids from the ASB have not been submitted at the time of permit issuance. Approval of beneficial reuse of solids from the Boise primary treatment facility may be requested by submitting a sludge management plan to the Department for review and approval. The solids from the City's primary treatment facility and the secondary ASB are regulated by Oregon Administrative Rules (OAR) 340-50, which includes procedures for obtaining approval for beneficial reuse of the solids. Approval of beneficial reuse of solids from the City's primary treatment facility and the secondary ASB require a modification of the NPDES permit. Until such time as beneficial reuse is

approved by the Department, solids from the City's primary treatment facility, Boise's primary treatment facility, and the secondary solids from the ASB must be disposed at a properly licensed and permitted solid waste disposal facility.

At least 60 days prior to dredging secondary solids from the ASB, the permittee must submit for Department approval a Dredging Project Management Plan (DPMP). The DPMP must describe

- (a) The project objectives,
 - (b) Dredging methods,
 - (c) Project schedule,
 - (d) Methods to maintain normal operation of the ASB,
 - (e) Proposed contingency actions during upset, and
 - (f) The name and location of the solid waste disposal facility where the solids will be disposed.
- Dredging shall not commence prior to approval of the DPMP by the Department. Dredging shall be conducted according to the approved DPMP.

6. Spills and Unplanned Discharges - Primary responsibility: Joint

An adequate contingency plan for prevention and handling of spills and unplanned discharges must be in place at all times. A continuing program of employee orientation and education shall be maintained to ensure awareness of the necessity of good in-plant control and quick and proper action in the event of a spill or accident.

7. Environmental Supervision and Management

a) Applicable to Boise

Boise must designate a mill environmental supervisor to coordinate and carry out all necessary functions related to maintenance and operation of mill waste collection, treatment, and disposal facilities. This person shall be allowed access to all information relevant to the generation of wastes in the various mill process areas.

b) Applicable to the City of St. Helens

The City must comply with Oregon Administrative Rules (OAR), Chapter 340, Division 49, "Regulations Pertaining To Certification of Wastewater System Operator Personnel" and accordingly:

- i) The permittee must have its wastewater system supervised by one or more operators who are certified in a classification and grade level (equal to or greater) that corresponds with the classification (collection and /or treatment) of the system to be supervised as specified in this permit. A "supervisor" is defined as the person exercising authority for establishing and executing the specific practice and procedures of operating the system in accordance with the policies of the permittee and requirements of the waste discharge permit. "Supervise" means responsible for the technical operation of a system, which may affect its performance or the quality of the effluent produced. Supervisors are not required to be on-site at all times.
- ii) The permittee's wastewater system may not be without supervision for more than thirty (30) days. During this period, and at any time that the supervisor is not available to respond on-site (i.e. vacation, sick leave or off-call), the permittee must make available another person who is certified at no less than one grade lower than the system classification.
- iii) If the wastewater system has more than one daily shift, the permittee must have the shift supervisor, if any, certified at no less than one grade lower than the system classification.
- iv) The permittee is responsible for ensuring the wastewater system has a properly certified supervisor available at all times to respond on-site at the request of the permittee and to any other operator.

v) The permittee must notify the Department of Environmental Quality in writing within thirty (30) days of replacement or redesignation of certified operators responsible for supervising wastewater system operation (including shifts). The notice shall be filed with the Water Quality Division, Operator Certification Program. This requirement is in addition to the reporting requirements contained under Schedule B of this permit.

vi) Upon written request, the Department may grant the permittee reasonable time, not to exceed 120 days, to obtain the services of a qualified person to supervise the wastewater system. The written request must include justification for the time needed, a schedule for recruiting and hiring, the date the system supervisor availability ceased, and the name of the alternate system supervisor(s).

8. Pollution Prevention Program - Primary responsibility: Joint

A program of pollution prevention must be maintained with the purpose to: (1) reduce, recycle and reuse water, stock, and chemicals, (2) substitute less toxic chemicals for more toxic chemicals, (3) eliminate the use of certain chemicals, and (4) use best management practices (BMPs *) to improve housekeeping and spill response through better training and better operations and maintenance procedures.

* Note that BMPs as used in this paragraph are not related to BMPs as required in 40 CFR Part 430.

9. Flow Measurements - Primary responsibility: Joint

The following additional requirements shall apply to General Condition C2, Flow Measurements:

Devices used to measure the Outfall 001 flow shall be capable of measuring flows with a maximum deviation of less than ± 5 percent from true discharge rates throughout the range of expected discharge volumes. Devices shall be calibrated at least once annually and calibration records shall be available for inspection by the Department.

Methods used to estimate flows in cases where flow measurement is impractical must be reviewed at least once within 36 months of permit issuance to either demonstrate the adequacy of the method or determine if better methods are available.

10. Discharge of River Water from Pressure Relief Valves - Primary responsibility: Boise

Water from pressure relief valves on the river water supply may be returned to the Columbia River or Multnomah Channel without limitation or monitoring.

11. Fact Sheet and Permit Evaluation Report

The Department has prepared a Fact Sheet/Permit Evaluation Report that, among other things, discusses the applicable standards and guidelines used as the basis for the permit conditions. While the Fact Sheet/Permit Evaluation Report is not part of the permit itself, it may be used to aid the permittee and the Department in the interpretation and application of the permit conditions.

12. Operation and Maintenance Manual - Primary responsibility: City

The permittee must prepare and retain on file for review by the Department an operation and maintenance (O&M) manual for the equipment and processes that the permittee is responsible for. The O&M manual must be prepared in sufficient detail to implement the requirements of General Condition B.1, Proper Operation and Maintenance.

The O&M manual must include the contents given in the guideline document *Department of Environmental Quality, Guidelines for Writing Sewage Treatment Plant O&M Manuals* as applicable to the permittee's facility. The manual must cover laboratory controls, quality assurance procedures, and operation of back-up or auxiliary facilities or systems.

13. Biocides Certification - Primary responsibility: Boise

Within 30 days of permit issuance, Boise must certify to the Department that pentachlorophenol and trichlorophenol are not used as biocides. The Department must be notified at least 30 days prior to initial use of these chemicals for biocides.

14. Default Department Comment Period

If not otherwise stated in this permit and if a permit condition requires the permittee to take an action the timing of which is based on a response from the Department and if comments, approvals, or denials have not been otherwise received, the permittee shall proceed with the subsequent action 60 days after the complete and final submittal as if a response of "no comment" or "approved without comment" was received.

15. Memorandum of Agreement

In 1998, Boise, the City and the Department entered into a Memorandum of Agreement (MOA) that held Boise directly responsible for exceedances of the BOD, TSS and AOX limits of the City's NPDES permit. This proposed joint NPDES Permit continues Boise's primary responsibilities for these three pollutants and also makes Boise primarily responsible for exceedances of several other pollutants as identified in the permit. Upon the issuance of this joint permit, the MOA is no longer needed and will be terminated by the parties.

16. Application for Renewal of NPDES Permit

By no later than July 31, 2007, the permittees must submit an application for renewal of this NPDES permit. The Department is requiring that the renewal application be submitted by this date to ensure that the next permit renewal will occur along with the other NPDES permits in the Columbia River Basin. Note that the application for renewal of the NPDES is separate from the modification requests specified in Schedule C.2 and C.3 of this permit.

Schedule E

Pretreatment Activities

The City of St. Helens shall implement the following pretreatment activities:

1. The City shall conduct and enforce its Pretreatment Program, as approved by the Department, and comply with the General Pretreatment Regulations (40 CFR Part 403). The City shall secure and maintain sufficient resources and qualified personnel to carry out the program implementation procedures described in this permit.
2. The City shall adopt all legal authority necessary to fully implement its approved pretreatment program and to comply with all applicable State and Federal pretreatment regulations. The City must also establish, where necessary, contracts or agreements with contributing jurisdictions to ensure compliance with pretreatment requirements by industrial users within these jurisdictions. These contracts or agreements shall identify the agency responsible for all implementation and enforcement activities to be performed in the contributing jurisdictions. Regardless of jurisdictional situation, the City is responsible for ensuring that all aspects of the pretreatment program are fully implemented and enforced.
3. The City shall update its inventory of industrial users at a frequency and diligence adequate to ensure proper identification of industrial users subject to pretreatment standards, but no less than once per year. The City shall notify these industrial users of applicable pretreatment standards in accordance with 40 CFR § 403.8(f)(2)(iii).
4. The City shall enforce categorical pretreatment standards promulgated pursuant to Section 307(b) and (c) of the Act, prohibited discharge standards as set forth in 40 CFR § 403.5(a) and (b), or local limitations developed by the City in accordance with 40 CFR § 403.5(c), whichever are more stringent, or are applicable to nondomestic users discharging wastewater to the collection system. Locally derived discharge limitations shall be defined as pretreatment standards under Section 307(d) of the Act.

A technical evaluation of the need to revise local limits shall be performed at least once during the term of this permit and must be submitted to the Department as part of the City's NPDES permit application, unless the Department requires in writing that it be submitted sooner. Limits development will be in accordance with the procedures established by the Department.

5. The City shall issue individual discharge permits to all Significant Industrial Users in a timely manner. The City shall also reissue and/or modify permits, where necessary, in a timely manner. Discharge permits must contain, at a minimum, the conditions identified in 40 CFR § 403.8(f)(1)(iii). Unless a more stringent definition has been adopted by the City, the definition of Significant Industrial User shall be as stated in 40 CFR § 403.3(t).
6. The City shall randomly sample and analyze industrial user effluents at a frequency commensurate with the character, consistency, and volume of the discharge. At a minimum, the City shall sample all Significant Industrial Users for all regulated pollutants twice per year, and shall conduct a complete facility inspection once per year. Additionally, at least once every two years the City shall evaluate the need for each Significant Industrial User to develop a slug control plan. Where a plan is deemed necessary, it shall conform to the requirements of 40 CFR § 403.8(f)(2)(v).

Where the City elects to conduct all industrial user monitoring in lieu of requiring self-monitoring by the user, the City shall gather all information which would otherwise have been submitted by the user. The City shall also perform the sampling and analyses in accordance with the protocols established for the user.

Sample collection and analysis, and the gathering of other compliance data, shall be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions. Unless specified otherwise by the Director in writing, all sampling and analyses shall be performed in accordance with 40 CFR Part 136.

7. The City shall review reports submitted by industrial users and identify all violations of the user's permit or the City's local ordinance.
8. The City shall investigate all instances of industrial user noncompliance and shall take all necessary steps to return users to compliance. The City's enforcement actions shall track its approved Enforcement Response Plan, developed in accordance with 40 CFR § 403.8(f)(5). If the City has not developed an approved Enforcement Response Plan, it shall develop and submit a draft to the Department for review within 90 days of the issuance of this permit.
9. The City shall publish, at least annually in the largest daily newspaper published in the City's service area, a list of all industrial users which, at any time in the previous 12 months, were in Significant Noncompliance with applicable pretreatment requirements. For the purposes of this requirement, an industrial user is in Significant Noncompliance if it meets one or more of the criteria listed in 40 CFR 403.8(f)(2)(vii).
10. The City must develop and maintain a data management system designed to track the status of the industrial user inventory, discharge characteristics, and compliance. In accordance with 40 CFR § 403.12(o), the City shall retain all records relating to pretreatment program activities for a minimum of three years, and shall make such records available to the Department and USEPA upon request. The City shall also provide public access to information considered effluent data under 40 CFR Part 2.
11. The City shall submit by March 1 of each year, a report that describes the City's pretreatment program during the previous calendar year. The content and format of this report shall be as established by the Department.
12. The City shall submit in writing to the Department a statement of the basis for any proposed modification of its approved program and a description of the proposed modification in accordance with 40 CFR § 403.18(b). No substantial program modifications may be implemented by the City prior to receiving written authorization from the Department.

Schedule F General Conditions

SECTION A. STANDARD CONDITIONS

1. **Duty to Comply**

The permittees must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468B.025 and is grounds for enforcement action; for permit termination, suspension, or modification; or for denial of a permit renewal application.

2. **Penalties for Water Pollution and Permit Condition Violations**

Oregon Law (ORS 468.140) allows the Director to impose civil penalties up to \$10,000 per day for violation of a term, condition, or requirement of a permit.

In addition, a person who unlawfully pollutes water as specified in ORS 468.943 or ORS 468.946 is subject to criminal prosecution.

3. **Duty to Mitigate**

The permittees shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition, upon request of the Department, the permittees shall correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. **Duty to Reapply**

If the permittees wish to continue an activity regulated by this permit after the expiration date of this permit, the permittees must apply for and have the permit renewed. The application shall be submitted at least 180 days before the expiration date of this permit.

The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. **Permit Actions**

This permit may be modified, suspended, revoked and reissued, or terminated for cause including, but not limited to, the following:

- a. Violation of any term, condition, or requirement of this permit, a rule, or a statute;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts; or
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the permittees for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. **Toxic Pollutants**

The permittees shall comply with any applicable effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the

regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit References

Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittees shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittees to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by permittees only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities

a. Definitions

- (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality and/or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.

- (1) Bypass is prohibited unless:
 - (a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;

- (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
 - (c) The permittees submitted notices and requests as required under General Condition B.3.c.
 - (2) The Director may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, when the Director determines that it will meet the three conditions listed above in General Condition B.3.b.(1).
- c. Notice and request for bypass.
 - (1) Anticipated bypass. If the permittees knows in advance of the need for a bypass, it shall submit prior written notice, if possible at least ten days before the date of the bypass.
 - (2) Unanticipated bypass. The permittees shall submit notice of an unanticipated bypass as required in General Condition D.5.

4. Upset

- a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittees. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
- b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of General Condition B.4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- c. Conditions necessary for a demonstration of upset. Permittees who wish to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittees can identify the causes(s) of the upset;
 - (2) The permitted facility was at the time being properly operated;
 - (3) The permittees submitted notice of the upset as required in General Condition D.5, hereof (24-hour notice); and
 - (4) The permittees complied with any remedial measures required under General Condition A.3 hereof.
- d. Burden of proof. In any enforcement proceeding the permittees seeking to establish the occurrence of an upset has the burden of proof.

5. Treatment of Single Operational Event

For purposes of this permit, A Single Operational Event which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation. A single operational event is an exceptional incident which causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one Clean Water Act effluent discharge pollutant parameter. A single operational event does not include Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational event is a violation.

6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations

a. Definitions

- (1) "Overflow" means the diversion and discharge of waste streams from any portion of the wastewater conveyance system including pump stations, through a designed overflow device or structure, other than discharges to the wastewater treatment facility.
- (2) "Severe property damage" means substantial physical damage to property, damage to the conveyance system or pump station which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow.
- (3) "Uncontrolled overflow" means the diversion of waste streams other than through a designed overflow device or structure, for example to overflowing manholes or overflowing into residences, commercial establishments, or industries that may be connected to a conveyance system.

b. Prohibition of overflows. Overflows are prohibited unless:

- (1) Overflows were unavoidable to prevent an uncontrolled overflow, loss of life, personal injury, or severe property damage;
- (2) There were no feasible alternatives to the overflows, such as the use of auxiliary pumping or conveyance systems, or maximization of conveyance system storage; and
- (3) The overflows are the result of an upset as defined in General Condition B.4. and meeting all requirements of this condition.

c. Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any means.

d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permittees becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D.5.

7. Public Notification of Effluent Violation or Overflow

If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permittees shall take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

8. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Sampling and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and shall be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than \$20,000 per day of violation, or by imprisonment of not more than four years or both.

5. Reporting of Monitoring Results

Monitoring results shall be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports shall be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permittees

If the permittees monitor any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report. Such increased frequency shall also be indicated. For a pollutant parameter that may be sampled more than once per day (e.g., Total Chlorine Residual), only the average daily value shall be recorded unless otherwise specified in this permit.

7. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean, except for bacteria which shall be averaged as specified in this permit.

8. Retention of Records

Except for records of monitoring information required by this permit related to the permittees' sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

9. Records Contents

Records of monitoring information shall include:

- a. The date, exact place, time and methods of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

10. Inspection and Entry

The permittees shall allow the Director, or an authorized representative upon the presentation of credentials to:

- a. Enter upon the permittees' premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
- d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes

The permittees shall comply with Oregon Administrative Rules (OAR) 340, Division 52, "Review of Plans and Specifications". Except where exempted under OAR 340-52, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers shall be commenced until the plans and specifications are submitted to and approved by the Department. The permittees shall give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

2. Anticipated Noncompliance

The permittees shall give advance notice to the Director of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit shall be transferred to a third party without prior written approval from the Director. The permittees shall notify the Department when a transfer of property interest takes place.

4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

5. Twenty-Four Hour Reporting

The permittees shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally (by telephone) within 24 hours, unless otherwise specified in this permit, from the time the permittees becomes aware of the circumstances. During normal business hours, the Department's Regional office shall be called. Outside of normal business hours, the Department shall be contacted at 1-800-452-0311 (Oregon Emergency Response System).

A written submission shall also be provided within 5 days of the time the permittees becomes aware of the circumstances. If the permittees is establishing an affirmative defense of upset or bypass to any offense under ORS 468.922 to 468.946, and in which case if the original reporting notice was oral, delivered written notice must be made to the Department or other agency with regulatory jurisdiction within 4 (four) calendar days. The written submission shall contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;
- c. The estimated time noncompliance is expected to continue if it has not been corrected;
- d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
- e. Public notification steps taken, pursuant to General Condition B.7.

The following shall be included as information that must be reported within 24 hours under this paragraph:

- a. Any unanticipated bypass which exceeds any effluent limitation in this permit.
- b. Any upset which exceeds any effluent limitation in this permit.
- c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in this permit.

The Department may waive the written report on a casebycase basis if the oral report has been received within 24 hours.

6. Other Noncompliance

The permittees shall report all instances of noncompliance not reported under General Condition D. 4 or D.5, at the time monitoring reports are submitted. The reports shall contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;

- c. The estimated time noncompliance is expected to continue if it has not been corrected; and
- d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. Duty to Provide Information

The permittees shall furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permittees shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permittees becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it shall promptly submit such facts or information.

8. Signatory Requirements

All applications, reports or information submitted to the Department shall be signed and certified in accordance with 40 CFR 122.22.

9. Falsification of Information

A person who supplies the Department with false information, or omits material or required information, as specified in ORS 468.953 is subject to criminal prosecution.

10. Changes to Indirect Dischargers - [Applicable to Publicly Owned Treatment Works (POTW) only]

The permittees must provide adequate notice to the Department of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants and;
- b. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
- c. For the purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

11. Changes to Discharges of Toxic Pollutant - [Applicable to existing manufacturing, commercial, mining, and silvicultural dischargers only]

The permittees must notify the Department as soon as they know or have reason to believe of the following:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or

- (4) The level established by the Department in accordance with 40 CFR 122.44(f).
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) Five hundred micrograms per liter (500 µg/L);
 - (2) One milligram per liter (1 mg/L) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (4) The level established by the Department in accordance with 40 CFR 122.44(f).

SECTION E. DEFINITIONS

1. BOD means five-day biochemical oxygen demand.
2. TSS means total suspended solids.
3. mg/L means milligrams per liter.
4. kg means kilogram.
5. m³/d means cubic meters per day.
6. MGD means million gallons per day.
7. Composite sample means a sample formed by collecting and mixing discrete samples taken at least one time per hour and based on time or flow.
8. FC means fecal coliform bacteria.
9. Technology based permit effluent limitations means technology-based treatment requirements as defined in 40 CFR 125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-41.
10. CBOD means five-day carbonaceous biochemical oxygen demand.
11. Grab sample means an individual discrete sample collected over a period of time not to exceed 15 minutes.
12. Quarter means January through March, April through June, July through September, or October through December.
13. Month means calendar month.
14. Week means a calendar week of Sunday through Saturday.
15. Total residual chlorine means combined chlorine forms plus free residual chlorine.
16. The term "bacteria" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and E. coli bacteria.
17. POTW means a publicly owned treatment works.
18. L/s means liters per second.

19. $\mu\text{g/L}$ means microgram per liter.
20. $^{\circ}\text{C}$ means degrees Celsius.
21. TU_a means acute toxicity units.
22. TU_c means chronic toxicity units
23. NOEC means "no observed effect concentration."
24. LC_{50} means the effluent concentration at which 50 percent of the test organisms died.
25. "Shall" means a mandatory action or requirement; a duty to perform a specified function or activity.
26. "Must" means the same as "shall."
26. "May" means permissive; optional; not required.
27. m^3/s means cubic meters per second
28. RM means river mile (above mouth)
29. "t" or "ton" means a mass of 2000 pounds
30. "metric ton" means a mass of 1000 kilograms
31. ADT means Air Dried Ton
32. MDT means Machine Dried Ton