FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST-8007

Boise Building Solutions
610 W. 3rd Avenue
Kettle Falls, WA 99141-9601

SUMMARY

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST 8007. The Department of Ecology is proposing to modify this permit, which was issued to the facility on March 24, 2005.

During the period of implementing the compliance schedule Option B of the current permit, Boise Building Solutions decided to alter its process water discharge destination. Instead of discharging the process water to a lined evaporation pond (new construction was planned for), the facility proposed to discharge the effluent to the city of Kettle Falls WWTP. Therefore, the permit modification is needed to evaluate the proposal.

The proposed project includes construction of a collection and conveyance system, installation of a 5000 gallon tank/vault for temporary storage and settling, installation of in-line flow meters, and pumps, and a wastewater monitoring station. The proposed schedule for the project is to submit engineering design to build document (plans and specifications) to Ecology by the end of May 2007, and the actual construction be done by the end of December 2007.

This permit has been modified to allow discharges to the City of Kettle Falls sewer system with the city's approval. The wastewater monitoring program has been modified to adjust for the change. This fact sheet explains the nature of the proposed discharges, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical basis for those decisions.

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INTRODUCTION

Washington State law (RCW 90.48.080 and 90.48.162) requires that a permit be issued before discharge of wastewater to waters of the state is allowed. Regulations adopted by the state include procedures for issuing permits (Chapter 173-216 WAC), and water quality criteria for ground waters (Chapter 173-200 WAC). They also establish requirements which are to be included in the permit.

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. The Department had not received any public comments for this permit during past issuance or modification of the permit and re-issuance of the permit. The Department will publish public notice for comments for modification of this permit. The Department will summarize responses from comments received during the 30 day public comment period. The summary and response to comments will be attached to the fact sheet in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant	Boise Building Solutions, Sawmill
Facility Address	610 W. 3rd Avenue, Kettle Falls, WA 99141
Type of Facility	Lumber Manufacturing
Type of Treatment:	Non-discharge, non-overflow evaporation pond
Discharge Location	Latitude: 48° 36' 38" N Longitude: 118° 04' 25" W.
Contact at Facility	Name: Jennifer Wasley Title: Environmental Engineer Telephone #: (509) 738-3219 Fax #: (509) 738-3292
Responsible Official	Name: Tom Insko Title : Region Manager Telephone #: (541) 962-2001 Fax #: (541) 962-2028

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

Boise Sawmill plant is located in Kettle Falls, Washington, approximately 80 miles north of Spokane on State Highway 395 (Figure 1). The facility occupies approximately 53 acres, and is upstream of Lake Roosevelt. The sawmill plant produces dimension lumber and by-product pulp chips and planer shavings. The sawmill facility consists of a log yard, sawmill, dry kilns, planning facility, hog fuel boiler, lumber storage, maintenance shop, warehouse and office building.

INDUSTRIAL PROCESSES

The sawmill production sequences include: log debarking, bucking, cutting, sorting, drying, planning, grading, trimming, sorting, and packaging for shipment. The facility production line normally operates five days a week, and 2 shifts per day. The hog fuel boiler is used to generate steam to feed the dry kilns for lumber drying.

The facility produces kiln dried finished lumber as its primary product. Secondary products include pulp chips, and planer shavings.

TREATMENT PROCESSES

The sources of process wastewater are mainly generated from boiler operation; equipment cooling, and equipment washing at the maintenance shop. These flows are listed as following:

Softeners back wash for water treatment system
Boiler blow down
Boiler mud drum
Sawmill cleanup waters and cooling waters
Heavy equipment washes at the shop (with oil & grease separator)
Kiln condensate

With the exception of the heavy equipment washwater (currently discharged to the City of Kettle Falls WWTP), these flows currently discharge to an on site earthen lined process water pond for evaporation. The facility recently proposed to build a collection and conveyance system to direct the remaining process waters to City of Kettle Falls WWTP sewer collection system. Figure 2 attached with the fact sheet illustrate schematic flows of the process waters and collection system.

The proposed modification project will include installation of a 5000 gallon vault; construction of collection system, and a pump station; installation a process wastewater monitoring station at the vault, and conversion of the existing process water pond to a storm water pond. Layout maps are attached as Figure 3 through Figure 8 to show potential dust suppression areas around the sawmill facility. Process water from the vault and water from the stormwater pond (existing process water pond) will be used seasonally for dust suppression. The proposed daily maximum

discharge of process water from the vault is 6,000 gallons per day, and average monthly of 4,500 gallons per day.

According to the permit application cover letter statement, as much as 40% of the water discharged to the existing process water pond is storm water due to drainage patterns around the facility. Therefore the process water pond will be retained and converted to a new storm water pond. An estimated 75 gal/day of condensate water from the kilns will continue to be discharged to the pond. Some improvement will be made around the new storm water pond area by planting upland and wetland vegetations, and stabilizing stormwater conveyances to the pond. Seasonally, the water in the stormwater pond will be used as dust suppression. Monitoring of the water quality within the stormwater pond will continue two more years after the process water pond is converted to a storm water pond.

The City of Kettle Falls has approved this proposal, and the construction of the modification project will be completed by December 2007 and certified as such by March 2008.

PERMIT STATUS

The last permit was issued on March 24, 2005. An application for permit modification was submitted to the Department on August 7, 2006, and accepted by the Department on August 24, 2006.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on April 1, 2004. The facility has been in compliance with all the submittal requirements and monthly DMRs. The daily maximum discharge flows have been in the range of 4495 gallons per day to 9330 gallons per day which are below the permit limit of 9500 gallon per day. The pH measurement in the effluent was consistently high, but there was no compliance issues due to lack of pH limit in the current permit. It might be a concern once the discharge is connected to the city sewer with a pH limit range of 6.5 to 9.0.

WASTEWATER CHARACTERIZATION

Wastewater monitoring results are given in Table 1 below. It provides some base line information of process water at the pond.

From Table 1 below, it shows that the discharge daily flows stay within the permitted range of 9500 gallon per day, but well above 6000 gallons per day which is the new proposed daily maximum flow discharging to the city of Kettle falls. Boise has indicated that a strict process water conservation program will be implemented to reduce discharge volumes to the City of Kettle Falls WWTP.

Table 1. Summary of DMR data from May, 2005 to October 2005

Date	Effluent. daily max (gpd)	Effluent TDS (mg/l)	Effluent Nitrate (mg/l)	Effluent Chloride (mg/l)	Effluent Oil/grease [(1)] (mg/l)	Effluent TPH [(2)] (mg/l)	Effluent pH (s.u.)
5//2005	6668	890	0.7	224		<5 [(2)]	10.1
6/2005	6996	1060	0.6	310	34	<5 [(2)]	9.77
7/2005	6610	1310	0	500		<5 [(2)]	10.5
8/2005	7409	1880	0.08	849		<5 [(2)]	9.9
9/2005	9330	2020	0	921	34	<5 [(2)]	10.3
10/2005	8734	895	0.5	303		<5 [(2)]	10
11/2005	8062	960	0.5	356		<5 [(2)]	10.2
12/2005	6221	955	1	200	47	<5 [(2)]	11
1/2006	6358	384	0.6	66.7		<5 [(2)]	10.3
2/2006	4495	400	0.4	94.1		<5 [(2)]	9.95
3/2006	6412	488	0.6	118	18	5	10.2
4/2006	5989	616	0.7	134		4.42	10.2
5/2006	4757	573	0.3	178		1.5	10.3
6/2006	6674	845	0	262	27	1.1	9.77
7/2006	7132	1140	0	503		0.96	10.4
8/2006	7243	1710	0	765		1.1	10.4
9/2006	5223	1870	0.2	923	75	1.4	9.9
10/2006	5513	1470	0.2	639		0.75	9.8
Groundwater Standard		**500**	**10**	**250**			**6.5-8.5**

(1) Oil and grease is tested quarterly at the maintenance shop.
(2) Oil and grease was sampled during this period rather than Total Petroleum Hydrocarbons.

It appears that the TDS and chloride concentrations were high compared to the groundwater standard. This may be caused by the salt content in various boiler blow down waters. Nitrate and TPH (total petroleum hydrocarbon) appears to be low throughout the testing period. Tests for these two parameters will not continue when this permit is issued.

pH appears to be high and has been consistent with the historic data. This might be caused by the high alkalinity in the boiler blow down water. With the proposed connection to the City of Kettle Falls WWTP and the fact that the city's effluent has to meet ground water standard of pH 6.5-8.5 for the current land application system, Boise has proposed a monitoring program to determine if pH at Singer's lift station is within the allowable limits. Singer's lift station is immediately down gradient of the Boise Sawmill discharge to WWTP. If the pH of the combined sanitary and process water at Singer's lift station is outside the permit limits, Boise will need to neutralize their process water at the vault or implement other measures in order to meet the limit of 6.5-9.0 prior to discharge of the process water to the City of Kettle Falls WWTP.

Along with the permit application, the Permittee submitted the test results for one grab sample for total metals. The test results are as following:

Calcium:	6.53 mg/l
Magnesium:	2.54 mg/l
Copper:	0.052 mg/l
Lead:	0.0028 mg/l
Silver:	ND
Zinc:	0.012 mg/l
Sodium:	226 mg/l
Mercury:	5.8 ng/l (0.0058 µg/l)

The one time test data showed metals that were tested for were all below the ground water standard. The City of Kettle Falls contacted Ecology expressing concerns about the Mercury test result. However the process water Mercury test result of 5.8 ng/l was below the ground water standard of 2 µg/l, and was also below surface water quality standard of 12 ng/l. The City has requested (a letter attached as Figure 9) that Boise Sawmill facility conduct additional tests for the metals: Arsenic, Cadmium, Chromium, Nickel and Mercury. Prior to connection of the process water to the City of Kettle Falls WWTP, Boise will collect at least one additional representative sample and have it analyzed for those metals listed above and 5 additional metals requested by the City.

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be either technology- or water quality-based. Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not pollute the waters of the State.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of preventing, control, and treatment of discharges to waters of the state (WAC 173-216-110). There are federal categorical limitations for this facility listed under 40 CFR Part 429, Subpart K (429.120) –Sawmills and Planing Mills Subcategory. This subpart applies to processing procedures including: bark removal, sawing, resawing, edging, trimming, planning and machining. Effluent limitations (40CFR, 429.121) for existing point source state: There shall be no discharge of process wastewater pollutants into navigable waters. Subpart L (429.130)—Finishing Subcategory covers processes from: drying, planning, dipping, staining, end coating, moisture proofing, fabrication, and by-product utilization timber processing operations. Effluent limitations (40CFR, 429.131) for existing point source must achieve the degree of effluent reduction attainable by the application of the best practicable control technology (BPT): There shall be no discharge of process wastewater pollutants into navigable waters.

The sources of process wastewater from this sawmill facility are from boiler blow downs and maintenance shop discharges. The federal regulation does not cover these waste streams. However, state regulations (RCW 90.48, WAC 173-216-110, WAC 173-220-130, and WAC

173-221A) require: all wastewater must be treated using all known, available, and reasonable treatment (AKART) prior to discharge wastewaters to waters of the state.

EFFLUENT LIMITATIONS BASED ON LOCAL LIMITS

In order to protect City of Kettle Falls Wastewater Treatment Plant from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, limitations for certain parameters are necessary.

The facility's maintenance shop is currently connected to the city's sewer system. And the proposed settling vault will be connected to the city sewer at a different location as Figure 2 shown. The City of Kettle Falls has not established the pretreatment standard for industry users at this time; therefore, Ecology will not impose effluent limitations for Boise Sawmill's discharge other than flow and pH. The flow limitation is based on the permit application proposed number and the pH is a basic measure for wastewater strength. The limit is based on city's ordinance and the POTW's effluent limit of 6.5 to 8.5. Overall, the effluent limitation for the Boise Sawmill is set as following:

Daily maximum:	6,000 gallon per day
Monthly average:	4,500 gallon per day
Effluent pH:	within 6.0-11.0 s.u. (Per City of Kettle Fall's Letter, Figure 11).

These limitations apply only after the discharge conversion to the city of Kettle Falls sewer system is completed, and the point of compliance is set at the 5000 gallon process water vault.

Boise has proposed a monitoring program to determine if pH at Singer's lift station is within the allowable limits. Singer's lift station is immediately down gradient of the Boise Sawmill discharge to WWTP. If pH of the combined sanitary wastewater and process water at Singer's lift station is outside the permit limits, Boise will need to neutralize their process water at the vault or implement other measures in order to meet the limit of 6.0- 11.0 prior to discharge of the process water to the City of Kettle Falls WWTP.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, that ground water criteria are not violated, and that effluent limitations are being achieved (WAC 173-216-110).

WASTEWATER MONITORING

The monitoring schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Table 2 below lists the parameters that will be monitored at the existing process water pond and continue two years after it converts to a storm water storage pond. The monitoring period will be from the permit issuance date to March 31, 2010.

Table 2. Wastewater Monitoring

Parameter	Sample Point	Sample frequency	Sample Type
Flow (gpd)	* Pump meters + estimate	1/month	* meter + estimate
TDS (mg/l)	The pond	1/quarter	grab
Sulfate (mg/l)			grab
Chloride (mg/l)			grab
pH (s.u.)			grab

***** Currently, pumps are located at several places where flows are calculated based on pumping data. Several other flows are estimated flow based on usage. Once Boise connects its process water to the City of Kettle Falls WWTP and converts the existing process water pond to a stormwater pond, the requirement to monitor flow will no longer apply; all discharge to the stormwater pond at that time will be by overland flow and gravity discharge only.

Table 3 below lists the final monitoring program after the completion of the connection of the process water from the vault to the City of Kettle Fall's POTW system. The monitoring station will be installed at the vault, and the system will be ready to operate by December 31, 2007. Beside discharge flow and pH, salt concentration levels will be monitored through tests for Sulfate, Chloride and TDS. The metals monitoring data will be used to establish base line information in case the city of Kettle Falls changes its discharge to a surface water body vs. the current land application practice. After two years of monitoring data collection, Boise may request a reduction in frequency of the monitoring and in the specific analysis tested for in the process water at the vault and at the maintenance shop.

Table 3. Wastewater Monitoring (Starting January 2008)

Parameter	Sample Point	Sample frequency	Sample Type
Flow (gpd)	vault	daily	meter
pH	vault	1/monthly	grab
Sulfate (mg/l)			grab
Chloride (mg/l)			grab
TDS (mg/l)			grab
Copper total (mg/l)		annually	grab
lead total (mg/l)			grab
Arsenic total (mg/l)			grab
Cadmium total (mg/l)			grab
Chromium total (mg/l)			grab
Nickel total (mg/l)			grab
Zinc total (mg/l)			grab
Mercury (mg/l)			grab
Oil & grease (mg/l)	maintenance shop	1/quarter	grab

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-216-110).

OPERATIONS AND MAINTENANCE

The proposed permit contains condition S.4. as authorized under Chapter 173-240-150 WAC and Chapter 173-216-110 WAC. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that the pond is properly maintained to limit impacts to groundwater.

NON-ROUTINE AND UNANTICIPATED DISCHARGES

Occasionally, this facility may generate wastewater which is not characterized in their permit application because it is not a routine discharge and was not anticipated at the time of application. These typically are waters used to pressure test storage tanks or fire water systems or leaks from drinking water systems. These are typically clean waste waters but may be contaminated with pollutants. The permit contains an authorization for non-routine and unanticipated discharges. The permit requires a characterization of these waste waters for pollutants and examination of the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and opportunities for reuse, Ecology may authorize a direct discharge via the process wastewater outfall or through a stormwater outfall for clean water, require the wastewater to be placed through the facilities wastewater treatment process or require the water to be reused.

SPILL PLAN

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The proposed permit requires the Permittee to develop and implement a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The Spill Plan can be included in the O & M Manual in a independent section.

COMPLIANCE SCHEDULE

State regulations (WAC 173-216-110, WAC 173-240-130) requires all industry facilities to explore applicable method to prevent, control, and treat waste discharges using all known, available, and reasonable treatment (AKART). The issue of concern is integrity of the wastewater storage/evaporation pond system. A detailed compliance schedule is as follows:

Engineering and Design to Build Report : No later than May 31, 2007, the Permittee should submit the engineering plans and specifications for the proposed upgrade project. This will include plans for vault/tank, pretreatment system, monitoring station, pump station, pipelines connecting to city of Kettle Falls sewer etc.

Final Construction No later than December 31, 2007, the Permittee should construct the proposed conversion upgrade project as designed. Ecology might conduct a field inspection during, or after the construction project. No later than March 31, 2008, the facility shall submit to Ecology the certificate of the construction.

O & M Manual: No later than August 31, 2008, An O&M Manual should be submitted to our office regarding the newly upgraded wastewater system.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to ground water permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the payment of permit fees. Condition G10 describes the penalties for violating permit conditions.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, and to protect human health and the beneficial uses of waters of the State of Washington. The Department proposes that the permit be issued for 5 years.

REFERENCES FOR TEXT AND APPENDICES

Washington State Department of Ecology, 1993. Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems, Ecology Publication # 93-36. 20 pp.

Washington State Department of Ecology, 1996. Implementation Guidance for the Ground Water Quality Standards, Ecology Publication # 96-02.

APPENDICES

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to modify the permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on January 10, 2007 and Colville Statesman Examiner to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on February 21, 2007 in Colville Statesman Examiner to inform the public that a draft permit and fact sheet is available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying

between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator
Department of Ecology
Eastern Regional Office
4601 N. Monroe, Suite 202
Spokane, WA 99205

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (509) 329-3451, or by writing to the address listed above.

This permit was written by Ying Fu.

APPENDIX B--GLOSSARY

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation--The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Engineering Report--A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of

industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Soil Scientist--An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5,3,or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Dissolved Solids--That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent pollution of the receiving water.

APPENDIX C – FIGURES, SCHEMATICS AND TABLES

Figure 1 Boise Sawmill Location Map

APPENDIX D – RESPONSE TO COMMENTS

The following is our response to comments received on March 26, 2007 by Bart Barlow of Boise Building Solutions (attached as Figure 10), regarding the draft permit and the fact sheet.

ISSUE No. 1

Mr. Barlow's letter requested that some wording be changed under S1. and S2.A of the permit.

RESPONSE No. 1

These requests have been granted. The original language of "Beginning on March 1, 2008…expiration date of this permit" under S1. was replaced by "Upon connection to the City of Kettle Falls POTW, but no later than December 31, 2007".

The word "interim" was deleted under provision S2.A and the monitoring for oil & grease was deleted from the first table. The Oil & Grease test is covered under the second table of S2.A and the test will start after January 2008.

ISSUE No. 2

Mr. Barlow requested some language change in the fact sheet, under section of Summary and Background Information.

RESPONSE No. 2

These changes have been made according to requested. These wording modifications should have been done during factual review period, but obviously it was missed.

ISSUE No. 3

In the fact sheet, under Summary of Compliance with the Previous Permit, Mr. Barlow pointed out that the existing permit does not have a pH limit.

RESPONSE No. 3

This comment was accepted. The last sentence of the paragraph was replaced by "The pH measurement in the effluent was consistently high, but there was no compliance issues due to lack of pH limit in the current permit. It might be a concern once the discharge is connected to the City of Kettle Falls' sewer system with a pH limit range of 6.5 to 9.0".

ISSUE No. 4

Mr. Barlow pointed out that the Table 1 in the fact sheet shows the ground water standard for pH is of 6.5 to 8.5. However the permit suggested a pH limit of 6.5 to 9.0 for this facility.

RESPONSE No. 4

The ground water standard for pH of 6.5 to 8.5 is set for City of Kettle Falls discharge effluent. It is expected any influent wastewater outside this range will be treated and to meet the limit at the point of discharge.

Boise's combined process water at the 5,000 gallon vault will be discharged to the City's sewer collection system and is defined as influent for the City's POTW. Most medium and large size city around Spokane area have established pretreatment standard for industry users, and the pH local limit is around 6.5 to 11.0 (which can be the pH limit for Boise facility). However, City of Kettle Falls has not established their local pretreatment standard, therefore Ecology decided to set more stringent pH limit for industry users and determined the pH limit be 6.5 to 9.0.

ISSUE No. 5

Mr. Barlow suggested that Boise install a pH probe at City's Singers Lift Station which is downstream of Boise's 5000 gallon vault, and move the compliance point to the Singer's lift station to meet pH limit of 6.5 to 9.0 there.

RESPONSE No. 5

Pretreatment standard is set for industry users and the point of compliance is always restricted at the pretreatment unit discharge point (or before mixing with domestic sewer). Dilution before meeting compliance requirement is not allowed. Mr. Barlow's suggestion of meeting pH limit of 6.5 to 9.0 at Singers lift station is indicating mixing (or diluting) Boise's process water with the city's domestic sewer will enable the industry wastewater to meet the pH limit which is unacceptable to Ecology's practice and standard.

During this permit public review period, we received a letter from City of Kettle Falls (Figure 11) indicating that a pH range of 6.0 to 11.0 is acceptable for this facility. Further more, as the letter pointed out that the Singer's Lift Station is immediately down stream of Boise's 5000 gallon vault unit, the daily flow of 10,000 gpd at the city's lift station will provide some mixing for the process water.

Therefore a temporary pH neutralization system can be installed to deal with possible occasional pH excursions outside the 6.0 and 11.0 ranges. At mean time, a pH study/monitoring system should be in place at the Singer's Lift Station. This pH study project suggested in Mr. Barlow's letter (Figure 10) should collect continuous pH data prior to, during and after the process water connection completed to the city sewer, with a 2 month duration of the pH monitoring program.