

DEPARTMENT OF
ECOLOGY
State of Washington

WASHINGTON STATE DEPARTMENT OF ECOLOGY
EASTERN REGIONAL OFFICE
4601 NORTH MONROE
SPOKANE, WASHINGTON 99205-1295

FINAL STATEMENT OF BASIS FOR
AIR OPERATING PERMIT NUMBER 08AQ-E253
PONDERAY NEWSPRINT CORPORATION
USK, WASHINGTON

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1. LIST OF ABBREVIATIONS

AOP	Air Operating Permit
BACT	Best Available Control Technology
BTU	British Thermal Units
°C	Degrees Celsius
CAM	Compliance Assurance Monitoring
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMS	Continuous Opacity Monitoring System
dscf	Dry Standard Cubic Foot
dscf/m	Dry Standard Cubic Foot per minute
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
°F	Degrees Fahrenheit
FCAA	Federal Clean Air Act
ft ³	Cubic foot
gr/dscf	Grains per dry standard cubic foot
hr	Hour
lb	Pound
MMBtu	Million British Thermal Units
MRRR	Monitoring, Recordkeeping, and Reporting Requirement
NOC	Notice of Construction
NO _x	Oxides of Nitrogen
NSPS	New Source Performance Standard
O ₂	Oxygen
O&M	Operation & Maintenance
P.E.	Professional Engineer
PM	Particulate Matter
PM-10	Particulate Matter with aerodynamic diameter ≤ 10 micrometers
ppm	Parts per million
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RCW	Revised Code of Washington
RM	EPA Reference Method from 40 CFR Part 60, Appendix A
scfm	Standard Cubic Feet per Minute
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
T	Temperature
TAP	Toxic Air Pollutant
TPD	Tons Per Day
TPY	Tons Per Year
TSP	Total Suspended Particulate
VOC	Volatile Organic Compound
WAC	Washington Administrative Code
w%	Percentage by Weight
yr	Year

2. INTRODUCTION

This statement of basis summarizes the legal and factual basis for the air operating permit issued by the Washington State Department of Ecology. Unlike the air quality permit, this document is not legally enforceable. This statement of basis summarizes the emitting facility processes, air emissions, permitting and compliance history, the statutory or regulatory provisions that relate to the facility, and the steps taken to provide opportunities for public review of the permit. The permittee is obligated to follow the terms of the permit. Any errors or omissions in the summaries provided here do not excuse the permittee from the requirements of the permit

3. PERMIT AUTHORITY

Title V of the Federal Clean Air Act Amendments required all states to develop a renewable operating permit program for industrial and commercial sources of air pollution. The Washington State Clean Air Act (RCW 70.94 Revised Code of Washington) was amended in 1991 and 1993 to provide the Department of Ecology and Local Air Agencies with the necessary authority to implement a state-wide operating permit program. The law requires all sources emitting one hundred tons or more per year of a criteria pollutant, ten tons of a hazardous air pollutant, or twenty-five tons in the cumulative of hazardous air pollutants, to obtain an operating permit. Criteria pollutants include sulfur dioxide, nitrogen oxides, particulate matter, carbon monoxide, and volatile organic compounds.

Chapter 173-401 of the Washington Administrative Code (WAC), which specified the requirements of Washington State's Operating Permit Regulation, became effective November 4, 1993. United States Environmental Protection Agency (EPA) granted Washington's program interim approval December 9, 1994. Final approval of Washington's program was granted on August 13, 2001. The current version of the regulation was filed on September 16, 2002.

4. FACILITY INFORMATION

- 2.1 Company NamePonderay Newsprint Company
- 2.2 Facility Name.....Usk
- 2.3 Unified Business Identification Number 600-594-177
- 2.4 Facility Address422767 SR 20, Usk, WA 99180-9771
- 2.5 Facility Contact.....Mr. Brad Bardwell
- 2.6 Contact Phone Number (509) 445-1511

5. BASIS FOR TITLE V APPLICABILITY

WAC 173-401-200(19)(a) and (b) identify any source that emits or has the potential to emit one hundred tpy or more of any air pollutant, 10 tons of any HAP, or 25 tpy of any combination of HAP listed in §112(b) of the FCAA as a major source. Major sources are required to obtain Title V permits under 173-401-300(1)(a)(i).

Ponderay Newsprint has the potential to emit Volatile Organic Compounds (VOC) in excess of 100 tons per year and methanol in excess of 10 tons per year.

Table 3.1: Facility Potential to Emit (tons per year)						
	TSP/PM10	CO	NOx	SO2	VOC (as propane)	Methanol
FBB	12	70	84	54	0	
TMP	1				204	1.5
DI					0.4	
PM	1				23.1	4.5
Chip						
WWT	0.2		2.6	0.2	14.9	32.4
Bldg.		0.6			5.1	0.6
Total	14	71	87	54	247	39

Source: Title V application

6. ATTAINMENT CLASSIFICATION

The facility is located in an area classified as attainment for all criteria pollutants at the time of permit issuance.

7. SOURCE DESCRIPTION

- Chip Handling

Wood chips are delivered onsite by truck and are unloaded by truck dumper. Chips are routed to two storage piles on asphalt pads. One pad contains mostly pine chips, the other mostly hemlock and fir. Chips are withdrawn from the center bottom of the piles and transported to the screening building by underground conveyors. Sawdust and other fines are transported to a concrete storage bunker. Knots and oversize chips are separated by density and transported to an outside storage bunker. Material from the reject bunkers is moved by front end loader to the fluidized bed boiler (FBB) receiving hopper.

- Thermo-mechanical Pulping (TMP)

Screened chips are conveyed to Atmospheric Pre-steaming Bin #1, where steam is added to soften the chips. The exhaust from APS1 is routed to the *TMP heat recovery system (TMP1)*. The steamed chips go through chip washers where dirt, remaining fines, sawdust and knots are separated from the chips. Knots and heavies are separated by density into a scrap thickener and conveyed to the fluidized bed boiler. Chips are pumped to drainers where sawdust is removed by dewatering screens. The sawdust is conveyed to the Effluent Solids Dewatering (ESD) feed tank, where it is mixed with deinking system rejects. ESD material is partially dewatered and conveyed outside the TMP building, where eight to ten tons of fiber is recovered daily and used as fuel for the FBB.

Washed chips are conveyed to *Atmospheric Pre-Steamer Bin #2* (APS2) for further steam softening. Steam from APS2 is vented through the building roof. Chips from APS2 are transferred by screw feeders to the refining lines. Water recovered from screw feeders and dewatering screens is transferred to the *Whitewater Tank (TMP#3)*.

Refining is the process of physically separating chips into individual fibers by grinding between metal plates. Refining begins with further chip steaming in preheating bins that vent through the building roof. The grinding process generates heat, and water is added to lower the temperature and prevent burning the fibers. Water is converted to steam in the refiners and separated from the fibers in steam cyclones. Fibers recovered from the primary refiner steam cyclone are sent to the secondary refiner for further grinding, followed by separation in the secondary refiner steam cyclone. Steam from the primary and secondary refiner cyclones is routed to the reboiler—a heat exchanger which produces clean steam accounting for about 70% of the facility steam supply. TMP steam from the reboiler passes through a vent scrubber to remove remaining fibers before venting through the *TMP vent scrubber vent* on the building roof.

There are two primary refiner lines, designated A and B. Pulp from the two refiner lines is sent to a transfer tank (referred to as the *transfer tank*, or the *A&B transfer tank*) where TMP whitewater is added to dilute the pulp. The diluted pulp is transferred to the latency tank, where the fibers unwind. The latency tank vents through the building roof.

Pulp from the latency tank is screened to remove incompletely refined fiber bundles and long fibers, which are sent to the reject refiners. Pulp from the reject refiners is transferred to the *Refined SLF Tank* (the transfer tank for the reject refiners), and then to the latency tank. The *A&B transfer tank* and the *Refined SLF Tank* share a common vent identified as the *Refined SLF/Transfer Tank vent* (TMP4).

Screened pulp from the refiners is dewatered in disc filters (also known as “deckers”). The disc filters vent to the *TMP heat recovery system* (TMP1).

Refined pulp is pumped to the medium consistency (MC) storage tanks. Pulp from the MC storage tanks is bleached with sodium hydrosulfite ($\text{Na}_2\text{S}_2\text{O}_4$) in a closed bleach tube. Bleached pulp is pumped to the TMP water lock press where TMP whitewater is removed and returned to the TMP system. The dewatered pulp is diluted with paper machine whitewater and pumped to the TMP leveling chest.

Pulp production from the TMP mill is limited to an annual average of 598 oven-dried metric tons (657 short tons) per day by Order No. 00AQER-1819, 3rd Amendment.

- Recycle Fiber Deinking (DI)

The deinking process uses recycled newsprint and magazine paper. Recycled material is agitated with water, caustic, hydrogen peroxide, sodium silicate, chelant and soap in a batch pulper and screened. Some fiber is rejected to the effluent solids dewatering (ESD) tank. Recycle fiber is then pumped to a floatation process where the ink and some of the fiber is removed to the ESD feed tank. The recycled fiber is pumped to a disc filter and

screw press. After the screw press the pulp is diluted with paper machine whitewater and pumped to the deink storage chest.

- Papermaking (PM)

The papermaking process begins at the blend chest, which receives pulp from the TMP leveling Chest, the Deink Storage Chest and the Broke Storage Chest. The pulp is diluted with water and pumped through centrifugal cleaners. The stock is approximately 99% water at this point. Stock from the cleaners is deaerated in a vacuum tank, screened and transferred to the paper machine head box. Stock from the head box is pumped between two pieces of open mesh fabric (“wires”) in the former. Water separated in the former section is transferred to the Off Machine Silo and the Save-all Feed Chest for reuse. Former exhaust fans draw mist from the former and vent through the roof. Sheets leaving the forming section are approximately 85% water.

Sheets from the former section are picked up by a suction roll containing a chamber under vacuum. Sheets are then transferred to the paper machine press section. Sheets are conveyed between a series of absorbent felts and a series of “nips”— where the sheet passes between two rollers that press water from the sheet. The vacuum in the press section is generated by a series of vacuum pumps that expel captured water into a vacuum sump. The vacuum sump is vented through the PM building roof. A pulper beneath the press section captures pieces of sheet during breaks or rethreading, repulps the sheet and pumps it to the Broke Storage Chest for reuse. The Press Pit Pulper vents through the PM building roof.

Sheets next enter the six-stage dryer section. Each section has progressively hotter dryer cans (large steam heated rolls) which, along with the dryer felts, convey the sheets through the dryers. Clean steam from the dryer cans condenses in the dryers and is returned back to the boilers to be reheated to steam.

A hood over the dryer section collects warm moist from the drying paper and vents to an economizer to recover heat before being discharged through three stacks in the roof (*PM1, PM2 and PM3*). About 20% of the dryer exhaust does not pass through the economizer, and vents separately through the roof (*PM4*). Sheets leaving the dryer section contain about 9% water.

A pulper beneath the dryer section (the “dry end pulper”) processes paper from paper breaks, machine threading and paper recovered from the ends of spools. The pulp goes to the Broke Storage Chest. The dry end pulper vents through the PM building roof.

Spools of paper from the dry end of the paper machine weigh about 30 tons, and are referred to as “jumbo rolls”. The jumbo rolls are transferred to the winder, where they are rewound to sizes required by customers. A “winder pulper” repulps waste paper and purchased pulp. The winder pulper vents through the PM building roof.

The paper machine has a capacity of 747 oven-dried metric tons (823 short tons) per day on an annual average. The 149 metric tons per day difference between paper machine

capacity and pulp production can be met through purchased pulp and recycled newsprint.

- Fluidized Bed Boiler (FBB)

The FBB began operation in November 2001 and burns a mixture of wastewater treatment sludge, reject fiber from the deinking process, and wood rejects from chip handling. Propane is burned during boiler startup and when needed for combustion of wet fuel. The FBB is rated at 64.1 MM Btu/hour, and supplies about 30% of facility steam. Selective Non-Catalytic Reduction (SNCR) was added to the FBB in 2003 to meet NOx emission limits.

- Large (Nebraska) Boiler

The Nebraska Boiler is the original boiler at the facility, and has been in service since 1985. The boiler burns propane and is rated at 203 MM Btu/hour. NOx emissions are controlled by an ultra-low-NOx burner and flue gas recirculation¹. NOx emissions are monitored by a Predictive Emissions Monitoring System (PEMS). Propane use is limited to 6 million gallons per 12 month period. The Nebraska boiler is usually kept in hot standby mode for use if the steam supply from other sources decreases.

8. EMISSION UNITS

Listed in Attachment 1 to Air Operating Permit

9. INSIGNIFICANT EMISSION UNITS

- Appendix C of the permittee's application included a list of emission units proposed as insignificant under WAC 173-401-530. Attachment 2 of the Air Operating Permit lists emission units which have been found by Ecology to meet the requirements of WAC 173-401-530.
- The following emission units were proposed by the permittee, but have been found by Ecology not to meet the requirements for insignificant emission units:
 - 9..1. The permittee listed the TMP lab, and CHIP² lab dryers, ovens, hoods and vacuum pumps as insignificant emission units under WAC 173-400- 533(3)—units or activities which may be determined to be insignificant on a case-by-case basis by the permitting authority. The permittee did not provide documentation enabling Ecology to make a case-by-case determination. The listed emission units will be considered significant emission units until such documentation is received.
 - 9..2. The permittee listed white water tanks as categorically insignificant under WAC 173-401-532(94). The TMP white water tank is subject to requirements

¹ The Nebraska boiler was originally fitted with a low-NOx burner—circa 1985 BACT. In 2000, PNC proposed refitting the boiler with an ultra-low NOx burner to ensure that plant-wide NOx emissions remained below the Title V threshold.

² The permittee's written comments on the Draft AOP included documentation for the Main Lab and WWT lab. The Main lab and WWT lab have been added to the list of insignificant emission units in AOP Table 2.

of Order No. 00AQER-1819, 3rd Amendment, and does not qualify as an insignificant emission unit.

- 9.3. The permittee listed transfer tanks as categorically insignificant under WAC 173-401-532(98). The Refined SLF/transfer tank is subject to requirements of Order No. 00AQER-1819, 3rd Amendment, and does not qualify as an insignificant emission unit.
- 9.4. The permittee listed the paper machine dry-end dryer section as categorically insignificant under WAC 173-401-532(107). The paper machine dryer section is subject to requirements of Order No. 00AQER-1819, 3rd Amendment, and does not qualify as an insignificant emission unit.

10. PERMITTING HISTORY

- Ponderay Newsprint (PNC) submitted a NOC application for construction of a thermo-mechanical pulp and paper mill in Usk, Washington on April 23, 1985. The application included a proposed propane-fire boiler rated at 150,000 pounds per hour steam at 125 psi. The boiler actually installed is rated at 180,000 pounds per hour steam at 250 psi (203 MM Btu), and has been referred to as the “large boiler” or the “Nebraska boiler”. Ecology did not issue a permit in response to the application.
- Order No. DE95AQ-E108 was issued on February 9, 1995 in response to a request from PNC for a regulatory order limiting NO_x emissions from the facility to below the Title V threshold. The sources of NO_x emissions were identified as a 203 MM Btu propane-fired boiler and a 20 MM Btu propane-fired boiler (the “small boiler”, or the “B&W Boiler”). The small boiler was not identified in the April 23, 1985 application, and was installed at the Usk plant after June 9, 1989. The Order limited total propane consumption by both boilers to less than 9,473,000 gallons per year.
- Order No. 00AQER-1819 was issued on December 7, 2000 as a “back permit” approving a proposal submitted by PNC on April 23, 1985. Because PNC had submitted a timely Notice of Construction application to Ecology, it was determined that the back permitting should evaluate the proposal under air quality regulations as they were in 1985. This resulted in BACT (circa 1985) being required on the large (Nebraska) boiler, determined to be low-NO_x burner technology limiting emissions to no more than 0.20 lbs NO_x/MMBTU heat input. The Order approved installation of the FBB under New Source Review, incorporated the synthetic minor limits from DE95AQ-E108 and rescinded that Order.

PNC further proposed to retrofit the large boiler with ultra-low NO_x burner technology in order to ensure that plant wide NO_x emissions remained below Title V thresholds. In order to make this action enforceable, the emission limit on the large boiler was reduced to 0.05 lbs NO_x/MMBTU heat input. No emission limitations were imposed on the smaller propane fired boiler.

The Order also limited Nebraska boiler propane use and paper machine production. NO_x emissions from the three boilers and plant-wide VOC emissions were limited to 99 tons per year each. The Order included limits on opacity, PM₁₀, NO_x, SO₂ CO and VOC emissions from the FBB

- Notice of Violation No. 03AQER-5048 was issued on March 13, 2003. Source testing of the FBB on April 16, 2002 measured NO_x and PM₁₀ emissions in excess of permit limits. Based on NO_x emission rates measured during the source test, the facility-wide potential-to-emit (PTE) for NO_x was greater than 100 tons—making the facility a major source subject to the title V program.
- Order No. 00AQER-1819, 1st Amendment was issued on July 11, 2003 in response to a request from PNC after stack testing of the FBB showed NO_x emissions in excess of the permit limit. PNC submitted a NOC application for the installation of a Selective Non-Catalytic Reduction (SNCR) system to control FBB NO_x emissions.

T-BACT for ammonia emissions resulting from the installation of the SNCR was determined to be adjustment of the urea injection rate to maintain ammonia emissions to less than 35 ppmv.

Nebraska boiler propane usage was limited to 6 MM gallons per 12 month period—reduced by five gallons for every one gallon of propane burned in the small boiler.

Permit language was modified to clarify that the Nebraska boiler NO_x emission limit of 0.05 pounds/MM Btu does not apply to periods when the main burner is not operating.

The annual average paper production limit of 800 oven-dry metric tons per day was moved from the *Findings* section of Order No. 00AQER-1819 to the *Approval Conditions* section of the 1st Amendment.

- Notice of Violation No. 3975, and Settlement Agreement and Agreed Order No. 3996, issued January 24, 2007. Source testing in August 2006 demonstrated that the facility Potential to Emit (PTE) for VOC was greater than 100 tons per year. Violations identified were; operation of the facility after the time the date required for submittal of a complete AOP application, failure to submit a timely AOP application, and exceeding the VOC emission limitation in Order No. 00AQER 1819, 1st Amendment. As part of the Settlement Agreement, PNC agreed to pay a penalty of \$100,000—\$20,000 to Ecology's Air Pollution Control Account and \$80,000 to a Supplemental Environmental project (SEP).
- Order No. 00AQER-1819, 2nd Amendment, issued February 5, 2007. August 2006 test data from the pulping process showed potential to emit VOC exceeding the Title V threshold. Designation of the facility as a major source negated the purpose of the VOC synthetic minor emission limit established in Order No. 00AQER-1819.

In October 2006, PNC submitted a request to amend Order No. 00AQER-1819, 1st Amendment as follows:

- To delete emission limits voluntarily assumed to limit facility PTE below Title V thresholds.
- To delete conditions pertaining to the B&W (or “small”) boiler that had been removed from service.
- To revise certain emission limits and monitoring requirements to reflect experience gained through operation of the FBB.

The Second Amendment to Order No. 00AQER-1819 included the following changes.

- The synthetic minor limits on VOC emissions assumed to remain below the Title V major source thresholds were removed.
- August 2006 source testing showed that the facility potential to emit VOC is very close to the 250 tons per year PSD threshold. Ecology determined that a federally enforceable limit on TMP production of 598 metric tons per day was necessary to remain below the PSD threshold.
- The small boiler was permanently removed from service on October 31, 2005. Conditions pertaining to the small boiler were removed from the permit.
- Condition 6.2.3 of Order No. 00AQER-1819, 1st Amendment was revised to substitute an in-stack ammonia analyzer for the parametric monitoring method included in the 1st Amendment.
- Order No. 00AQER-1819, 3rd Amendment, issued 03/01/2010. PNC requested changes to monitoring, recordkeeping and reporting requirements included in the 2nd Amendment. The changes include clarifications and addition of specific wording to reduce gap-filling in the AOP.

Ecology made the following changes:

- Nebraska boiler monitoring required by the EPA-approved PEMS plan is added.
- Condition 6.3 was identified in Order No. 00AQER-1819 and its’ 1st and 2nd Amendments as a facility-wide reporting requirement. Condition 6.3 combined requirements for Excess Emissions and Monitoring System Performance Reports (required by 40 CFR 60.7 for NSPS standards with continuous monitoring systems) with general excess emission reporting. Condition 6.3 has been modified to require monthly excess emission reports for exceedances of all limitations included in the Order.
- Excess Emission and Monitoring System Performance Reports required by 40 CFR 60.7 are added.
- Monitoring for the FBB NO_x analyzer is added.
- Operation, maintenance and calibration requirements for the FBB ammonia analyzer are added.
- Periodic FBB stack testing for PM is added.

- Condition 4.2.6 of Order No. 00AQER-1819, 2nd Amendment required annual testing until 3 consecutive stack tests demonstrate compliance with emission limits. The requirement has been met and was removed from the Order.
- The permittee requested removal of the requirement for periodic testing of VOC emissions from the FBB. Previous testing showed VOC emissions less than 1% of the permit limit, and the requirement was removed.
- MACT applicability: 40 CFR 63, Subpart S – the Pulp and Paper NESHAP - affects pulping and bleaching systems at major sources that chemically and nonchemically pulp wood and non-wood fibers for pulp and paper production. PNC submitted an initial MACT notification on April 13, 1999. PNC stated that the facility was not a major source of HAP. Testing conducted in 2008 at the request of the EPA showed potential fugitive emissions of methanol from the wastewater treatment plant of 32.4 tons. On September, 17, 2009 PNC submitted an update to the original MACT notification, identifying the facility as a major source of HAP.

11. OPERATIONAL FLEXIBILITY

WAC 173-401-650 applies to “reasonably anticipated operating scenarios identified by the source in its application”. The permittee did not identify any reasonably anticipated operating scenarios in the AOP application.

12. PERMIT SHIELD

Requirements to which the permit shield is granted are listed in Table 7.1 of the AOP.

The following requirements were listed as inapplicable in Appendix B of the AOP application. Some of these are one-time requirements for which there is no documentation in Ecology files. One-time requirements which have been met are identified in Section 13. Others are applicable or applicable if triggered, and are not eligible for the Permit Shield in Section 7.1.

- 40 CFR 60.49b(a)-(c): Reporting and Recordkeeping Requirements for Db boilers:
Section 60.49b(a) requires notification of startup per 40 CFR 60.7
40 CFR 60.7(a)(1) requires notification of the date construction commenced within 30 days. Ecology files include correspondence indicating “intent to construct” dated April 23, 1985. Correspondence in Ecology indicates construction commenced in October 1987. There is no notification of construction commencement in Ecology files. The required notification may have been submitted to EPA.
40 CFR 60.7(a)(3) requires notification of actual startup within 15 days. There is no record of the notification in Ecology files. The required notification may have been submitted to EPA.
- Section 60.49b(c) contains ongoing monitoring and recordkeeping requirements for Predictive Emissions Monitoring Systems (PEMS).
- 40 CFR 61, Subpart E: National Emission Standards for Mercury:

The emission standards in 40 CFR 61.52(b), the stack sampling requirements in 40 CFR 61.53 or the sludge sampling requirements in 40 CFR 61.54 are applicable requirements which may require action by the permittee

- WAC 173-400-040(1): Visible emissions
WAC 173-400-070(2)(a) does not provide an alternative opacity limit for hog fuel boilers. WAC 173-400-070(2)(a) specifies that hog fuel boilers shall meet all provisions of WAC 173-400-040 except for up to 15 minutes once in any eight hours during soot blowing and grate cleaning. WAC 173-400-040(1) is applicable at all other times.

13. INITIAL OR ONE-TIME REQUIREMENTS

The following requirements are not included in the AOP as ongoing requirements.

For the Nebraska boiler:

- 40 CFR 60.49b(a)/40 CFR 60.7(a)(1) – submit notification of date construction commenced within 30 days. *There is no copy of a notification in Ecology files. Other information in the files indicates that construction commenced in October 1987. The required notification may have been submitted to EPA.*
- 40 CFR 60.7(a)(3) – submit notification of initial startup within 15 days. *There is no notification of initial startup in Ecology files. The required notification may have been submitted to EPA.*
- 40 CFR 60.46b(e): Conduct the initial performance test required by §60.8, using the continuous system for monitoring NO_x not later than 180 days after initial startup. *The initial performance test was completed on 9/13/1998.*
- 40 CFR 60.49b(b): submit test data from initial performance test and the performance evaluation of the CEMS. *There is no copy of the submittal in Ecology files. Ecology files contain a copy of the EPA response to a submittal dated 2/14/99.*
- 40 CFR 60.49b(c): submit plan for PEMS to EPA within 360 days of initial startup. *The monitoring plan was submitted to the EPA on 8/16/1999.*

For the Fluidized Bed boiler:

- 40 CFR 60.48c(a)(1)-(3) – notifications. *PNC submitted notifications of (1) and (3) on 12/4/2000. 40 CFR 60.48c(a)(2) is not applicable.*
- 40 CFR 60.7(a)(1) – submit notification of date construction commenced within 30 days. *Construction of the FBB commenced on 12/4/2000. Ecology received written notification on 12/14/ 2000*
- 40 CFR 60.7(a)(3) – submit notification of initial startup within 15 days. *Initial startup was on 11/1/2001. Ecology received written notification on 11/16/01.*

- 40 CFR 60.7(a)(5) - provide notification of the date upon which demonstration of the continuous opacity monitoring system performance commences not less than 30 days prior to the date. *Ecology received written notification on December 28, 2001 that the field test for the FBB opacity monitor had been performed. No date was provided. Ecology files contain a field certification test report for September 21, 2001 and records of a 168-hour operational test beginning on February 16, 2002.*
- 40 CFR 60.7(a)(7) - provide notification that a continuous opacity monitoring system will be used to determine compliance with the applicable opacity standard during a performance test in lieu of Method 9 observation data as allowed by §60.11(e)(5). Notice to be submitted not less than 30 days prior to the performance test. *Notification was included in the Notice of Construction Application submitted by PNC on January 20, 2000.*
- 40 CFR 60.45c(a) - conduct an initial performance test as required by §60.8 (no later than 180 days from startup). *FBB startup was 11/1/2001. The initial performance test was performed on 4/18/2002.*
- 40 CFR 60.8(b): provide 30 days prior notice of performance tests. *Ecology received notice of the scheduled initial test on 3/18/2002.*
- 40 CFR 60.11(e)(4) - Record FBB COMS data during initial performance test and submit results with test report. *No COMS or Method 9 data were included in the report of the initial performance test. COMS data were collected during the test. Ponderay Newsprint submitted copies of COMS data upon request from Ecology on November 5, 2007.*
- 40 CFR 61: National Emission standards for Mercury - §61.53(d) requires testing for FBB mercury emissions within 90 days of initial startup. *There are no reports of initial testing in Ecology files. 40 CFR 61.54(g) requires retention of test records for two years. FBB startup was on November 1, 2001, so retention of records beyond November 1, 2003 is not required.*
- Order No. 00AQER-1819, 2nd Amendment, condition 4.2.4.1 required installation and operation of an ammonia analyzer on FBB exhaust stack within 180 days of permit issuance (by 8/23/2007). *PNC notified Ecology by email that the ammonia monitor was installed and operating as of 7/23/2007.*
- Order No. 00AQER-1819, 2nd Amendment, 2/5/2007, Condition 7 - Required that an updated O&M manual for the FBB be completed and available on site within 180 days of the initial performance test following installation of SNCR. The initial performance test following installation of SNCR was on 1/27/ 2004. Completion of the O&M manual was required by 7/25/2004. *The permittee notified Ecology by email that the O&M manual was completed and available on 2/10/2004.*

- Order No. 00AQER-1819, 2rd Amendment, 2/5/2007, Condition 4.2.3.3 required that ammonia analyzer data: “Shall be collected and recorded for a minimum 80% of annual FBB operating hours for the first 12 months of operation...” *The first 12 months of operation have passed, and this portion of the data availability requirement has not been included as a ongoing requirement.*
- Initial MACT applicability determination. The facility is in the source category subject to 40 CFR 63, Subpart S— National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry. 40 CFR 63.1(b)(3) requires the owner/operator of a source which is in a regulated source category, but is not subject to the standard because the source is an area source complete a detailed applicability determination containing the information in 40 CFR 63.10(b)(3).

Ecology files contain an initial notification letter from Ponderay Newsprint dated April 13, 1999. The letter stated that the facility was not a major source of HAP.

Upon request from Paul Boys of the Environmental Protection Agency’s Region 10 in September 2008, PNC conducted testing for methanol emissions from the facility wastewater treatment system. Testing showed a methanol potential to emit from the wastewater treatment plant of 32.4 tons. The facility-wide methanol potential to emit is reported as 39 tons. PNC is a major source of hazardous air pollutants as defined in 40 CFR 63.2. PNC submitted an updated initial notification on September 17, 2009

14. CLARIFICATIONS

- 40 CFR 60.43c(b)(1) limits particulate emissions from Dc boilers with annual capacities for wood greater than 30% to 0.10 lb/MMBtu.
40 CFR 60.43c(b)(2) limits particulate emissions from Dc boilers with annual capacities for wood less than 30% and a federally enforceable requirement limiting the annual capacity factor for wood to 0.30 lb/MMBtu.
Ponderay Newsprint’s NOC application proposed a capacity factor for sludge of 71% and wood of 29%. There is no federally enforceable requirement limiting the annual capacity factor for wood – therefore, the 0.10 lb/MMBtu limit applies.
- Order No. 00AQER-1819, 3rd Amendment, Condition 5.1.3.1 refers to emission points from the thermo-mechanical pulping process. The conditions apply to “TMP vents tested in August 2006”.
The TMP vents tested in August 2006 were: the *TMP heat recovery system vent*; the *Atmospheric pre-steaming bin #2 vent*; the *TMP Whitewater tank vent*; and the *Refined SLF/transfer tank vent*. These emission point designations are used in the AOP.
- MRRR 6M: The wording in this requirement closely follows 40 CFR 60.46b – *Compliance and Performance Test Methods and Procedures for Particulate Matter and Nitrogen Oxides*. The terms “monitor” and “monitoring” have different meanings in 6M a) and 6M b). The following is provided for clarification.

6M a): “Testing: Initial compliance with the NO_x standard in condition 5.2.3 shall be determined by performance testing using a continuous emission monitoring system (CEMS) for NO_x emissions under 40 CFR 60.48b(b). NO_x from the Nebraska boiler shall be monitored for 30 successive operating days and the 30-day average emission rate used to determine compliance with the emission standard.³” *The continuous monitoring system referenced is a Continuous Emission Monitoring System (CEMS), defined as “the total equipment necessary for the determination of a gas or particulate matter concentration or emission rate using pollutant analyzer measurements”.*

6M b): “Monitoring: The permittee shall monitor boiler operating conditions and calculate 30-day rolling average NO_x emission rates on a daily basis as specified in the Predictive Emission Monitoring system (PEMS) plan approved by EPA Region 10.” *The monitoring method is a Predictive Emission Monitoring System (PEMS), defined as “the total equipment necessary for the determination of a gas concentration or emission rate using process or control device operating parameter measurements..” PEMS data is not used for compliance determination, but provides credible evidence regarding compliance with the standard.*

15. STREAMLINING

- AOP condition 5.3.3
40 CFR 60.43c(b)(1)—Standards for Particulate Matter: Limits emissions of particulate matter from the FBB stack to less than 0.10 lb/MM Btu heat input. Condition 4.1.1 of Order No. 00AQER-1819, 3rd Amendment, limits PM-10 emissions to less than 0.043 lb/MM Btu.
Since the condition included in the NOC order is more stringent and is expressed in the same units as the requirement in §60.43c(c), it is appropriate to apply streamlining to this requirement.
- AOP condition 5.3.3
WAC 173-400-050(1),(3)—limits emissions of particulate matter from combustion and incineration units to less than 0.1 gr/dscf, corrected to 7% oxygen (0.13 gr/dscf at 3% oxygen). Condition 4.1.1 of Order No. 00AQER-1819, 3rd Amendment, limits PM-10 emissions to less than 0.043 lb/MM Btu.
Since the condition included in the NOC order is more stringent and is expressed in the same units as the requirement in WAC 173-400-050(1),(3), it is appropriate to apply streamlining to this requirement
- AOP CONDITION 2.8.2

³ 40 CFR 60.46b requires an initial 30-day performance test. Subsequent 30-day tests may be required by Ecology or the EPA.

40 CFR 60.7(f)—records retention: requires that all records required be maintained for two years from the date of the record. Standard Condition 2.9.1 of the AOP requires maintenance of all records for five years.

Since the condition required by WAC 173-401-615(2(c)) is more stringent and is expressed in the same units as the requirement in 40 CFR 60.7(f), it is appropriate to apply streamlining to this requirement.

- MRRR 6M and 10M
Order No. 00AQER-1819, 3rd Amendment—records retention: Conditions 3.2.1.4.3, 3.2.2, and 7 require maintaining records for two years. Standard Condition 2.9.1 of the AOP requires maintenance of all records for five years.
Since the condition required by WAC 173-401-615(2(c)) is more stringent and is expressed in the same units as the requirements in the Order, it is appropriate to apply streamlining to this requirement

16. ENFORCEABILITY

Unless specifically designated otherwise, all terms and conditions of the Air Operating Permit, including any provisions designed to limit the source's potential to emit, are enforceable by EPA, and citizens, under the Federal Clean Air Act.

Those terms and conditions which are designated as state-only enforceable (S); are not included in the current State Implementation Plan (SIP) and are enforceable only by Ecology. All terms and conditions of the Air Operating Permit are enforceable by Ecology.

For permit conditions that have been included in the SIP, two dates are given. The first date is the date for the regulation that was adopted into the SIP. The second date is for the current version of the regulation. If a regulation is cited with no reference to enforceability, it is federally enforceable. For example, Standard condition 2.10.2.4.2 is followed by the notation “[WAC 173-400-107(3), 8/20/93, 9/6/07 (S)]”. In this case, the 8/20/93 version of WAC 173-400-107(3) is included in the SIP and is federally enforceable. The 9/6/07 version of WAC 173-400-107(3) is State-only enforceable.

17. GAP-FILLING

Where an applicable requirement does not include sufficient monitoring, recordkeeping and reporting to satisfy WAC 173-401-615(1) & (2), the permit will establish adequate monitoring, recordkeeping and reporting. This is known as gap-filling. Applicable requirements for which gap-filling is proposed can be identified by the note following the MRRR citation, indicating that at least a portion of the MRRR is from gap-filling.

18. PUBLIC PARTICIPATION

No comments were received during the public comment period.

19. MONITORING, RECORDKEEPING AND REPORTING REQUIREMENT SUFFICIENCY

No Additional Monitoring: The permittee must certify compliance with these conditions annually. Certification requires a reasonable inquiry to determine if the requirement was met during the reporting period.

MRRR 1M: This MRRR was designed to ensure that complaints from the public are recognized, investigated and any appropriate corrective action taken. Recordkeeping provides documentation of all complaints and the facility response to each.

MRRR 2M: O&M Manuals include manufacturer's recommendations for equipment operation, maintenance and inspection schedules and requirements for response to upset conditions. Operation in accordance with O&M Manuals is considered to constitute good air pollution control practice.

MRRR 3M: Periodic walk-around surveys are a simple and direct method of detecting the presence of fugitive emissions. The presence of visible emissions is an indication that reasonable precautions to prevent release of air contaminants or to prevent fugitive dust from becoming airborne are not being taken. No emission standards apply to fugitive emissions or fugitive dust, so a presence/absence determination is acceptable monitoring.

MRRR 4M: Incorporates three specific reporting requirements from Order No. 00AQER-1819, 3rd Amendment.

MRRR 5M: This MRRR is applied to emission units that are subject to an opacity standard, but are not equipped with continuous opacity monitoring systems (COMS). This includes the general opacity standards in WAC 173-400-040, (1), (1a) and (1b). A monthly visible emission observation is considered to be sufficient monitoring for the emission units at the source. The monitoring provides periodic evaluation of each emission point, while requiring visible emission testing using EPA Method 9 or Department of Ecology Method 9A only when visible emissions are observed and cannot be eliminated quickly.

MRRR 6M: Incorporates Nebraska boiler testing, monitoring, recordkeeping and reporting requirements from 40 CFR 60, Subpart Db and Order No. 00AQER-1819, 3rd Amendment.

MRRR 7M: Incorporates Continuous Opacity Monitoring System (COMS) testing, monitoring, recordkeeping and reporting requirements from 40 CFR 60.7, 60.8, 60.13, 40 CFR 60, Subpart Dc and Order No. 00AQER-1819, 3rd Amendment.

MRRR 8M: Includes Compliance Assurance Monitoring (CAM) for the fluidized bed boiler. CAM monitoring must provide reasonable assurance of compliance with emission limitations or standards for a pollutant specific emission unit (PSEU). The fluidized bed boiler is subject to CAM for emissions of particulate matter and SO₂.

40 CFR 64.3(d) allows the use of a continuous opacity monitoring system as CAM for particulate matter if opacity data provides a reasonable assurance of compliance with the particulate limit. Opacity measured during an April 2002 stack test was less than 2% while grain loading was 500% of the permit limit. The baghouse was inspected after the test, and several broken bags were discovered. Use of a COMS does not provide a reasonable assurance of compliance with the particulate limit.

The permittee has proposed continuous monitoring of baghouse pressure drop and a program of baghouse internal inspection and leak checks as CAM for particulate matter. Ecology has determined that the proposed monitoring provides a reasonable assurance of compliance with the particulate limit.

The permittee has proposed use of an SO₂ Continuous Emission Monitoring System (CEMS) as CAM for SO₂. Ecology has determined that the proposed monitoring provides a reasonable assurance of compliance with the SO₂ limit

MRRR 9M: Includes fluidized bed boiler source testing requirements from 40 CFR 60.11 and Order No. 00AQER-1819, 3rd Amendment. Source testing demonstrates compliance with limits on PM, NO_x, SO₂, CO, ammonia and opacity.

MRRR 10M: The fluidized bed boiler uses a NO_x analyzer to monitor NO_x emission rates during periods between stack tests. This MRRR includes operational requirements to assure data quality, and recordkeeping and reporting requirements. Use of the in-stack analyzer provides a reasonable assurance of compliance with emission limits during the period between required stack tests.

MRRR 11M: The permittee uses a selective non-catalytic reduction (SNCR) system to control NO_x emissions from the fluidized bed boiler. Operation of SNCR systems may result in emissions of unreacted ammonia (referred to as *ammonia slip*). The permittee has installed an ammonia monitor to monitor the effective maintenance of the SNCR system. Order No. 00AQER-1819, 3rd Amendment includes a one-hour average 35 ppm_{dv} limit on ammonia emissions. This MRRR includes requirements for operating the ammonia monitor and requires actions to restore the SNCR system to normal operation if ammonia emissions exceed a one hour average of 30 ppm_{dv}.

MRRR 12M: 40 CFR 61 – National Emission Standards for Hazardous Air Pollutants, Subpart E – National Emission Standard for Mercury includes standards for facilities which incinerate or dry wastewater treatment plant sludge. Mercury emissions may not exceed 7.1 lb mercury per 24-hour period. Compliance with mercury emission standards can be demonstrated by sludge sampling and testing. Sources for which emissions are below the standard, but greater than 3.5 lb mercury per 24 hour period are required to monitor mercury emissions at least once per year.

Sources for which emissions are less than 3.5 lb mercury per 24-hour period are required to maintain records of sludge sampling and other determinations for a minimum of two years, and notify the administrator of any changes in operation which could potentially increase mercury emissions.

Testing of sludge incinerated in the fluidized bed boiler demonstrates potential mercury emissions of less than 0.001 pounds per 24-hour period. No periodic monitoring of mercury emissions is required. MRRR 12M includes the applicable requirements. The requirement to retain sludge sampling records is increased to 5 years.

MRRR 13M: Specifies the method by which pulp production is calculated for comparison with the pulp production limit.

MRRR 14M: Periodic source testing of TMP mill vents provides reasonable assurance that the plant-wide potential to emit VOC remains below the 250 tons per year PSD threshold. Requires the use of stack test methods specified in Order No. 00AQER-1819, 3rd Amendment. General source testing requirements in Standard Condition are referenced.

MRRR 15M: Specifies the method by which paper machine production is calculated for comparison with production limits.

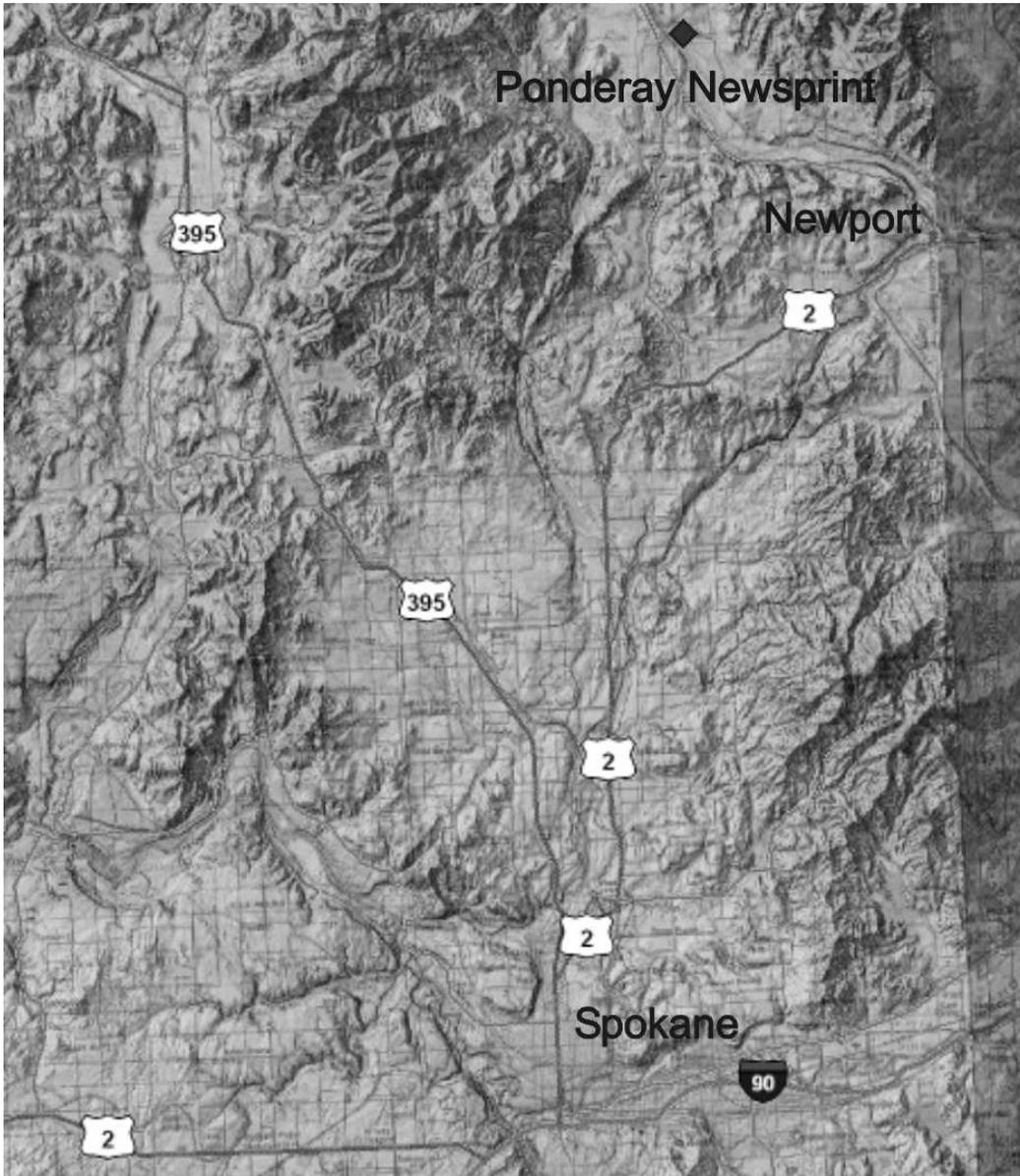
MRRR 16M: Periodic source testing of paper machine dryer hood vents provides reasonable assurance that the plant-wide potential to emit VOC remains below the 250 tons per year PSD threshold. Requires the use of stack test methods specified in Order No. 00AQER-1819, 3rd Amendment. General source testing requirements in Standard Condition are referenced.

MRRR 17M:

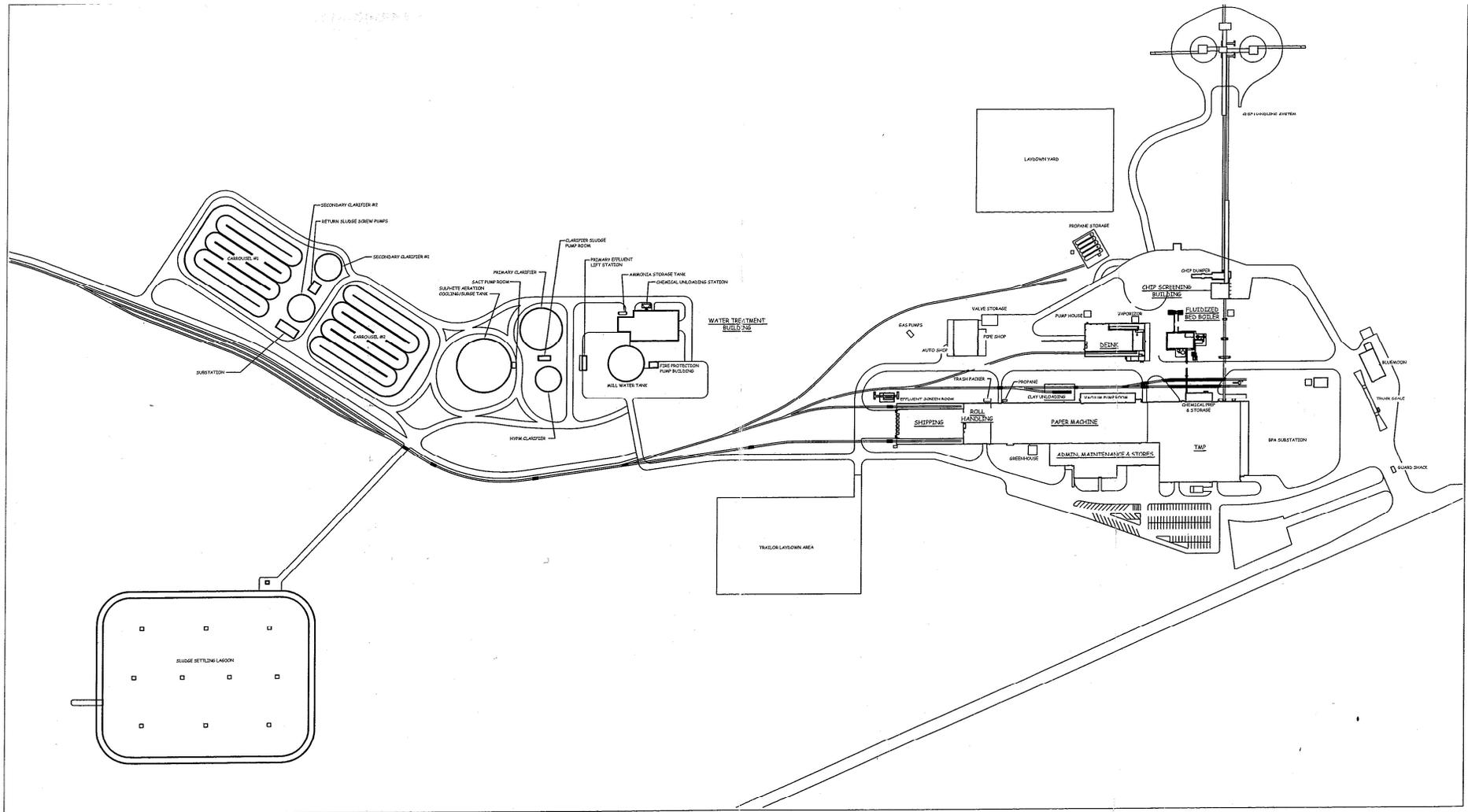
- WAC 173-400-040(6) limits SO₂ emissions from combustion sources to less than 1,000 ppm, corrected to a specific O₂ percentage.
Condition 5.3.5 requires periodic stack testing for SO₂ emissions from the Fluidized Bed Boiler.
The Nebraska boiler burns only propane. Using the Gas Processors Association Commercial Propane value of 15 gr /100 scf and a HHV of 2,522 Btu/scf., Nebraska boiler operating data from the 2006 RATA, and equation 7.5 from EPA reference method 20 we calculate a stack gas SO₂ concentration of approximately 19 ppm.
- WAC 173-400-050(1) & (3) limit particulate matter emissions from combustion and incineration units to 0.1 grains/dscf particulate matter, corrected to 7% O₂.
The only units subject to this standard are the Fluidized Bed Boiler and the Nebraska Boiler.
The FBB is limited to less than 0.02 grains PM-10/dry standard cubic foot, and compliance is demonstrated by periodic stack testing. Compliance with the 0.02 grains/dry standard cubic foot limit ensures compliance with WAC 173-400-050(1)
The Nebraska Boiler burns only propane. Using the AP-42 emission factor of 0.6 lb PM/1000 gallons propane and stack data from the 2006 Nebraska boiler RATA we calculate a concentration of approximately 0.005 grains PM/dry standard cubic foot. PM emissions from the Nebraska Boiler will not exceed 0.1 grains/dry standard cubic foot if only propane is combusted. The permittee may certify compliance with the emission limit if no fuel other than propane is combusted.

MRRR 18M: Includes recordkeeping sufficient to verify that the RMP has been submitted, reviewed and updated.

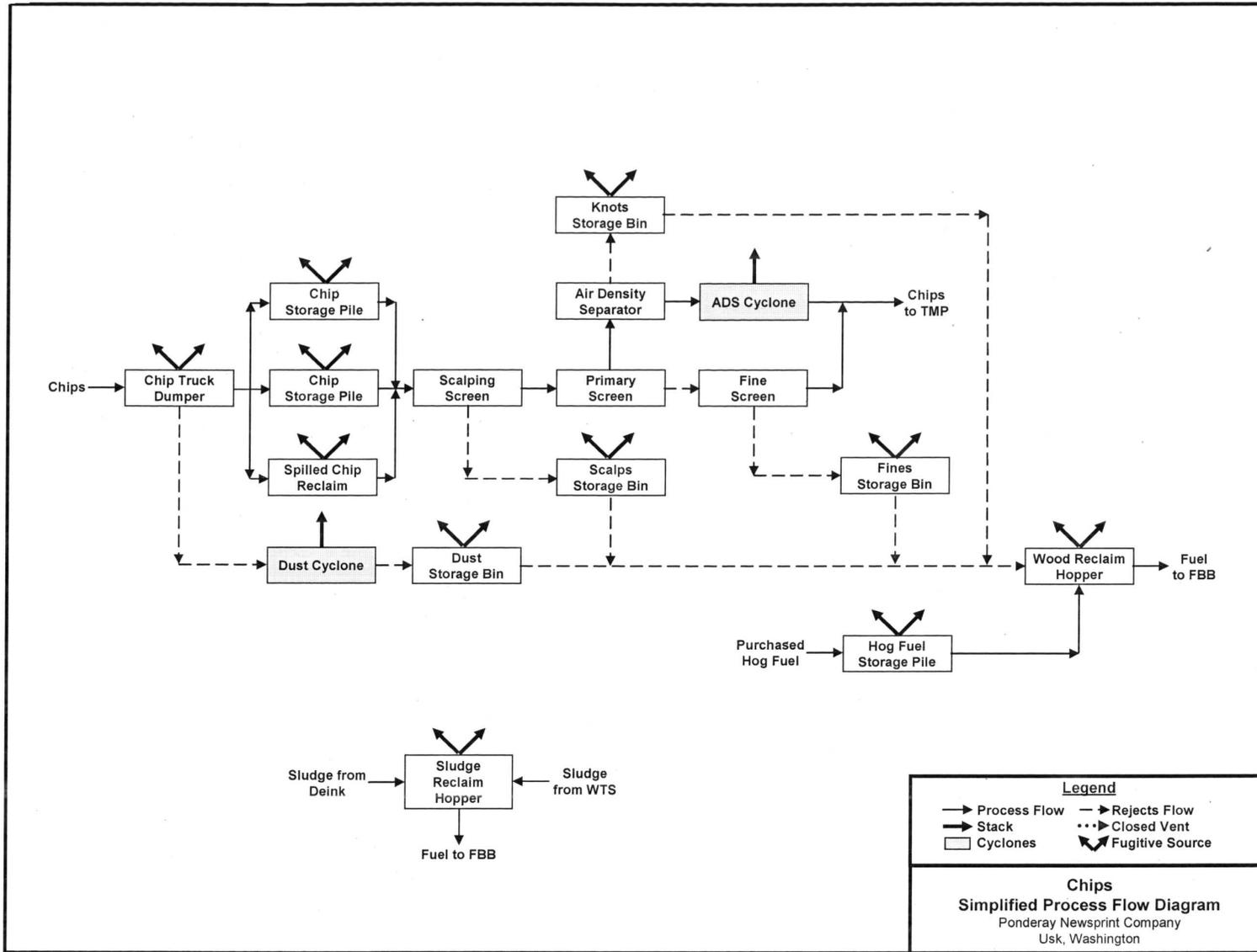
ATTACHMENT 1: LOCATION MAP



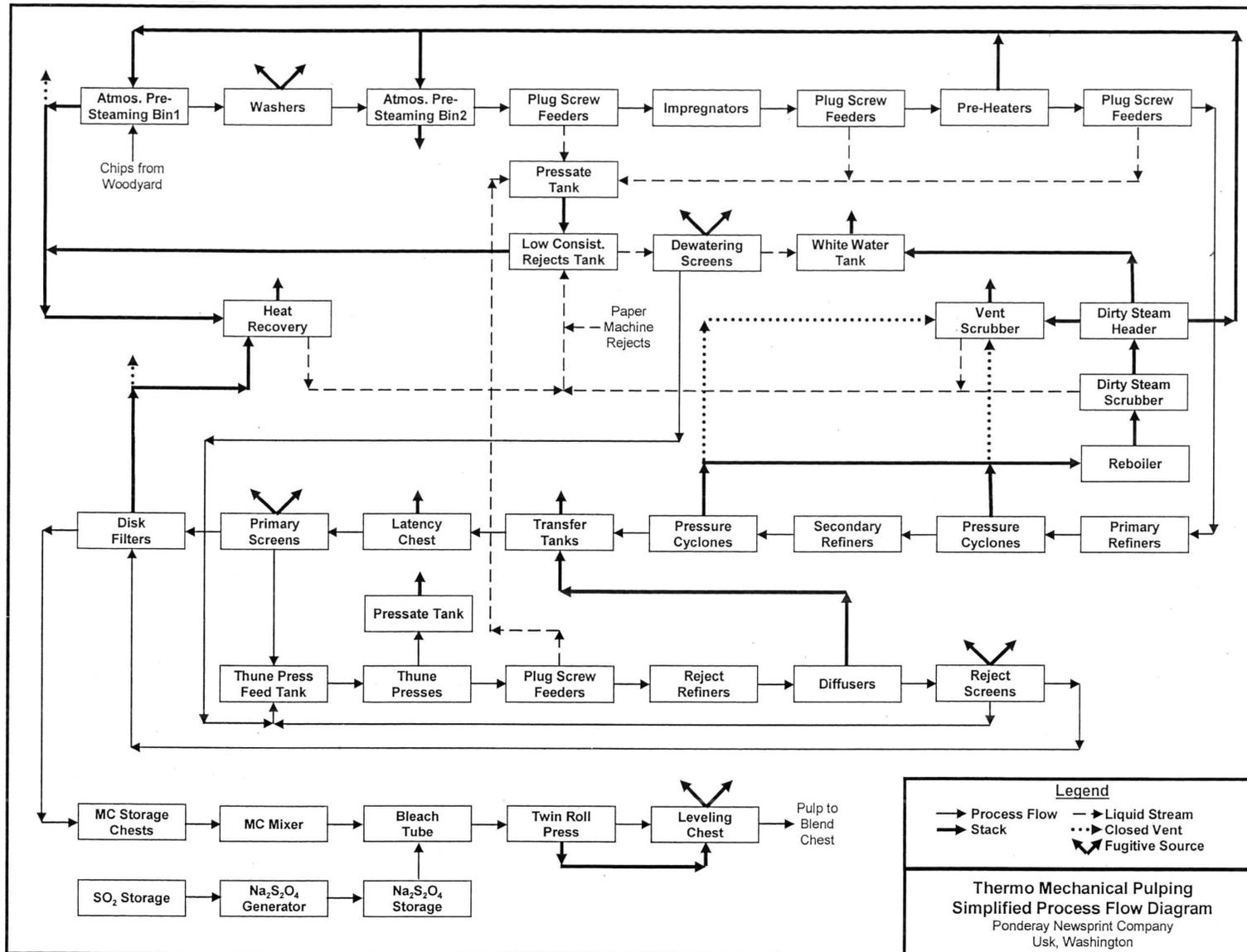
ATTACHMENT 2: SITE PLAN



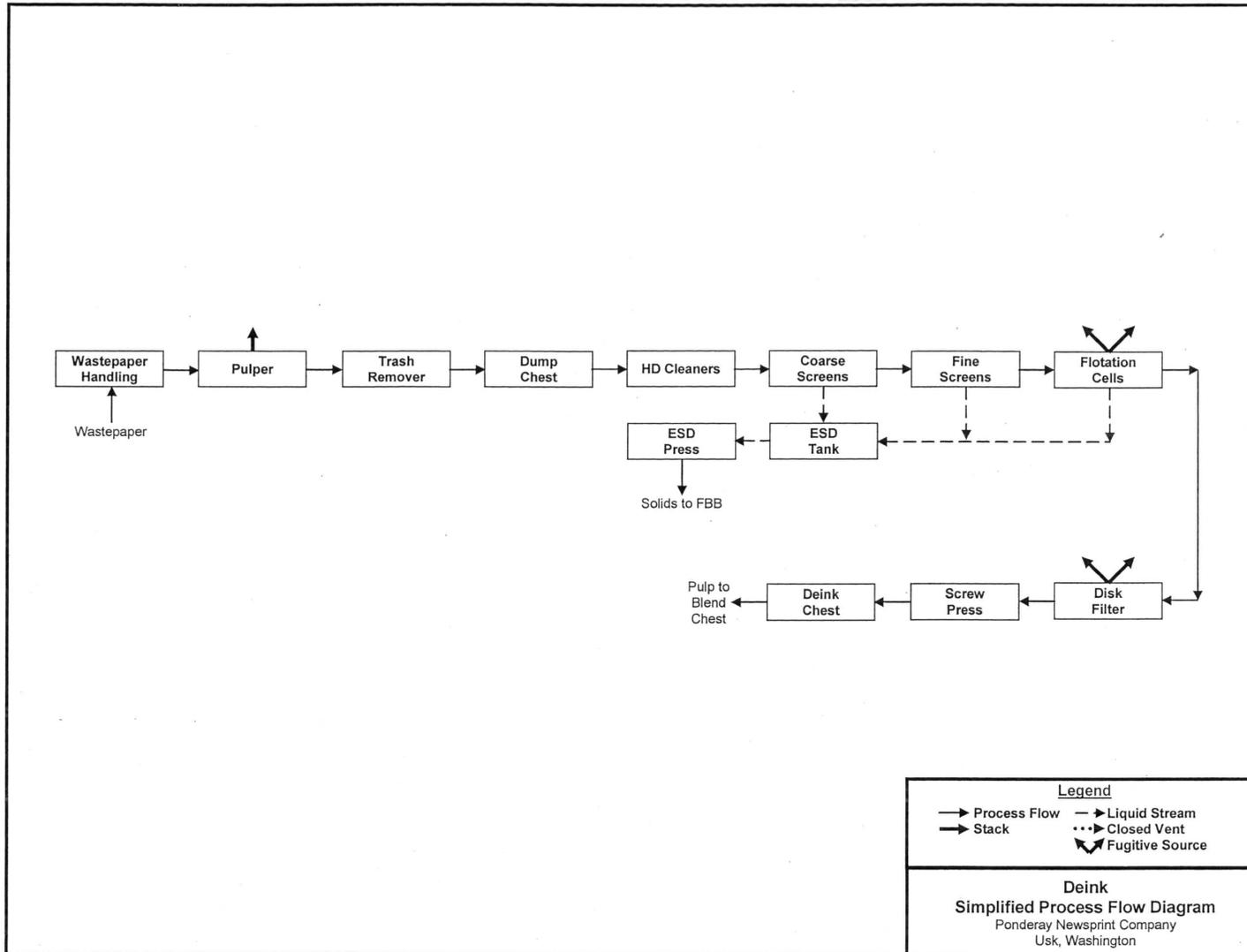
ATTACHMENT 3: CHIP HANDLING



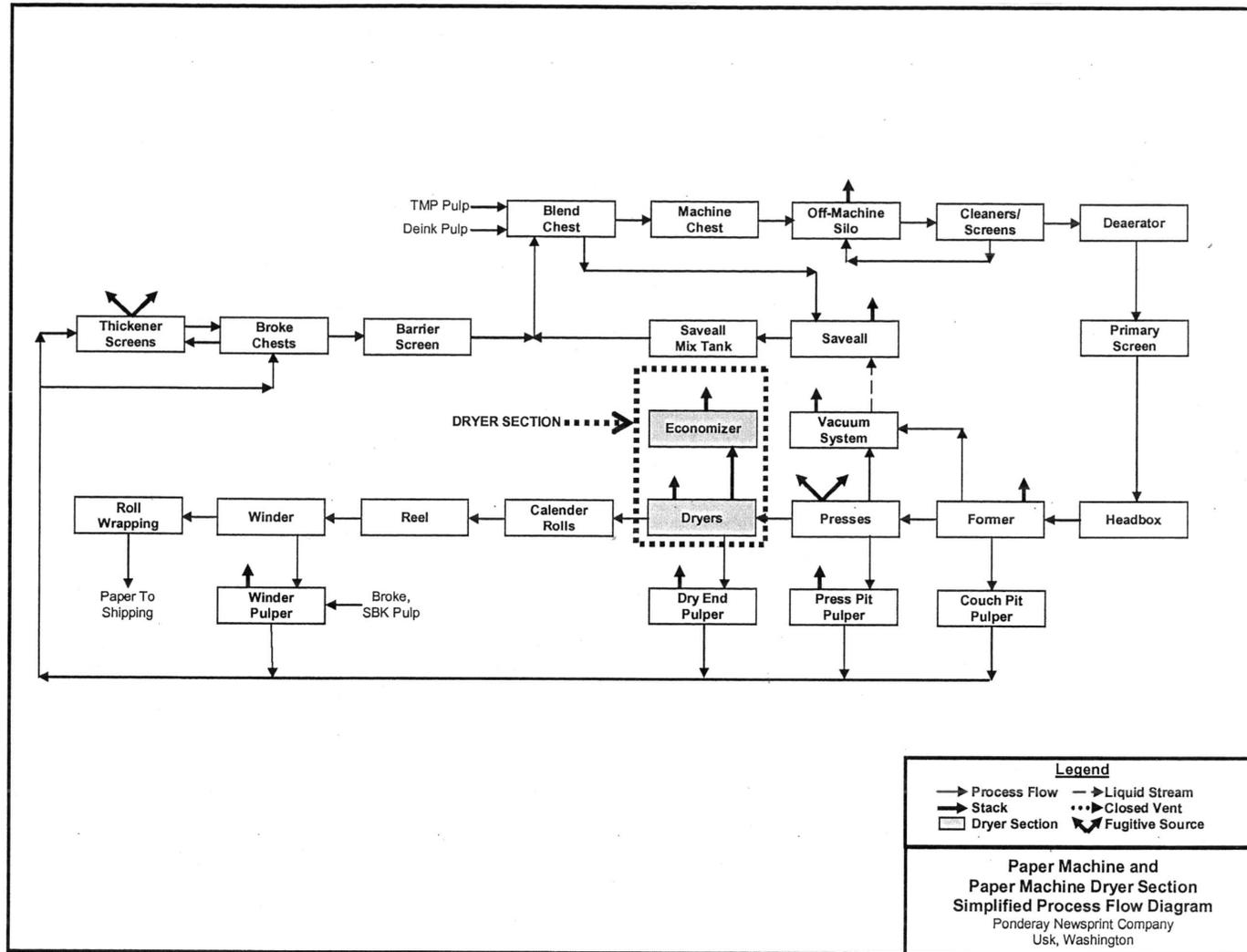
ATTACHMENT 4: TMP PROCESS



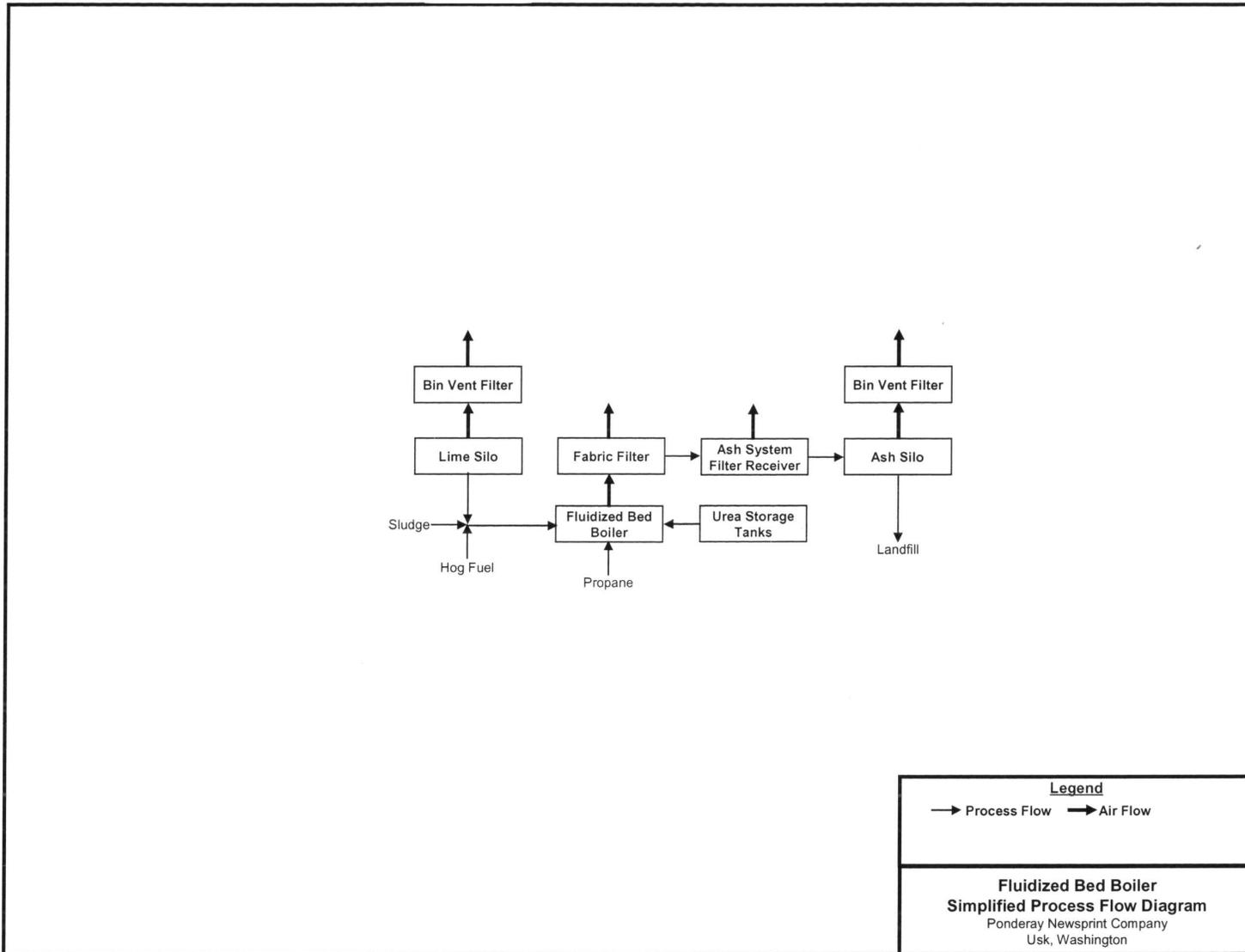
ATTACHMENT 5: DEINK PROCESS



ATTACHMENT 6: PAPER MACHINES/DRYERS



ATTACHMENT 7: FLUIDIZED BED BOILER



ATTACHMENT 8: WASTEWATER TREATMENT

