



**STATEMENT OF BASIS FOR INLAND EMPIRE PAPER COMPANY'S  
CHAPTER 401 AIR OPERATING PERMIT  
AOP-1 (Renewal #3)**

**Prepared by: Joe Southwell**

**Date: 7/10/2013**

## LIST OF ABBREVIATIONS

BACT	Best available control technology
CFR	Code of Federal Regulations
CO	Carbon monoxide
dba	Doing business as
dscf	Dry standard cubic foot
ECOLOGY	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
FCAA	Federal Clean Air Act
gr/dscf	Grains per dry standard cubic foot
HAP	Hazardous air pollutant as designated under Title III of FCAA
MMBTU	Millions of British thermal units
MRRR	Monitoring, recordkeeping, & reporting requirements
NAA	Nonattainment area
NOC	Notice of Construction
NOx	Oxides of nitrogen
O <sub>2</sub>	Oxygen
O&M	Operation & maintenance
Pb	Lead
PM	Particulate matter
PM-10	Particulate matter, 10 microns or less in size
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
SRCAA	Spokane Regional Clean Air Agency
scf	Standard cubic foot
SO <sub>2</sub>	Sulfur dioxide
SOx	Oxides of sulfur
VOC	Volatile organic compounds
WAC	Washington Administrative Code

## DEFINITIONS OF WORDS AND PHRASES

Terms not otherwise defined in this permit have the meaning assigned to them in the referenced regulations.

Administrator	The administrator of the United States Environmental Protection Agency or her/his designee [WAC 173-401-200(12), 8/10/11]
Chapter 401 Permit	Any permit or group of permits covering a source, subject to the permitting requirements of Chapter 173-401 WAC, that is issued, renewed, amended, or revised pursuant to Chapter 173-401 WAC [WAC 173-401-200(5), 8/10/11]
Emission Limitation	A requirement established under the FCAA or Chapter 70.94 RCW which limits the quantity, rate or concentration of emissions of air contaminants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction and any design, equipment work practice, or operational standard promulgated under the FCAA or Chapter 70.94 RCW [WAC 173-400-030(27), 11/18/12]
Emissions Unit	Any part of a stationary source or source which emits or would have the potential to emit any pollutant subject to regulation under the Federal Clean Air Act, Chapter 70.94 RCW, or 70.98 RCW [WAC 173-400-030(23), 9/13/96]
Federal Clean Air Act	Federal Clean Air Act. also known as Public Law 88-206, 77 Stat. 392. December 17, 1963, 42 U.S.C. 7401 et seq., as last amended by the Clean Air Act Amendments of 1990, P.L. 101-549, November 15, 1990 [WAC 173-401-200(13), 8/10/11]
Opacity	The degree to which an object seen through a plume is obscured, stated as a percentage [WAC 173-400-030(58), 11/28/12]
PM Standard	An emission limitation on the amount of particulate matter an emissions unit may emit, generally expressed in terms of grains per dry standard cubic foot, pounds per hour, or some other concentration or emission rate.
Visible Emissions Standard	An emission limitation on visible emissions expressed in percent opacity

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AOP-1 RENEWAL #3**

Inland Empire Paper Company (IEPC) operates a pulp and paper mill, producing newsprint and specialty paper products at 3320 North Argonne in Spokane, WA. The facility is classified as a major source, as defined in Chapter 173-401 WAC, because the facility's potential to emit for oxides of nitrogen, given off during the papermaking process, is over 100 tons per year. Recent mill modernization efforts have reduced the mill's natural gas consumption by approximately 70% and have subsequently reduced actual oxides of nitrogen emissions below the major source threshold. However, the mill will maintain its major source status due to its potential to emit and to provide operational flexibility if needed in the future. The facility is not considered a major source of Hazardous Air Pollutants (HAPs). The highest potential to emit for a single HAP is < 1 ton per year, and the potential to emit for total HAPs is 4.1 tons per year.

As a major source, IEPC is required to apply for an operating permit under SRCAA's Title V air operating permit program as established in Chapter 173-401 WAC. WAC 173-401-700(8) requires that at the time a draft permit is released under the Title V program, a statement be provided setting forth the legal and factual basis for permit conditions, including reference to the applicable statutory or regulatory provisions for the conditions. This document provides the basis for the draft permit for the renewal of the air operating permit for IEPC.

The permit is organized into sections. The first section contains standard terms and conditions. This section is the same for all permits issued by SRCAA. The second section contains requirements that specifically apply to this facility, along with monitoring, recordkeeping, and reporting requirements sufficient to assure compliance with each applicable requirement. This section is divided into subsections to address different emission units or classes of emission units. The third and final section addresses requirements that have been deemed inapplicable to the source or to emission units located at the source, i.e., the permit shield per WAC 173-401-640(2).

After a brief summary of operations at the facility, the format of this Statement of Basis will follow that of the permit with the standard terms and conditions discussed first, followed by the applicable requirements, and finally the permit shield.

**FACILITY SUMMARY**

IEP produces 450 to 550 tons per day of newsprint and specialty paper products, containing up to 50% recycled fibers. The newsprint is produced from pulp manufactured by mechanical refining of waste wood chips received from local sawmills and recycling of old newspapers, magazines and office waste. The mill typically operates 24 hours per day, 365 days per year and has been in operation since 1911.

Emissions addressed by the operating permit arise primarily from the steam plant (boilers), the fluidized bed combustor (FBC), and the pulp refining lines. There are various other emitting

processes at the facility including wood chip handling and wastewater treatment. Generally, the papermaking process is as follows:

Wood chips for the refining process are received by truck or rail cars. The wood chip storage and handling system consists of a truck/rail car unloading station, belt conveyors for chip storage and outlet conveyance to the refiner systems, and a truck weigh scale. Chips are brought on-site and dumped into an unload station. The unload station has a live bottom to convey chips to an inclined belt conveyor. The inclined belt conveyor delivers the chips to a horizontal conveyor that distributes the chips to the chip storage area. Front end loaders are used to deliver chips to a reclaim conveying system that delivers chips to the process. Wood chips are then refined in the pulp mill, consisting of five individual Thermo-Mechanical Pulp (TMP) refiner lines, screening and cleaning equipment, a reject refining line, storage tanks and a bleaching system.

TMP lines #1 and #2 each have a primary and a secondary atmospheric refiner. In the refiners, the wood chips are mechanically broken down into fibers. Wood chips are metered from the chip silo to the primary refiners. The primary refiners discharge into vented conveyors which feed the secondary refiners. Refined stock is diluted and conveyed to a holding tank for cleaning and screening.

TMP lines #3 and #4 each have a primary, secondary, and tertiary refiner. Chips to these lines are preheated to 190 F in a steaming bin and then conveyed to the pressurized primary refiners. The partially refined pulp is blown out of the primary refiner to a cyclone separator which feeds the secondary refiner. Both secondary and tertiary refiners are atmospheric refiners, similar to the #1 and #2 TMP lines. Pulp from the tertiary refiners is diluted and conveyed to chests for cleaning and screening. The cleaning and screening stages consist of perforated and slotted pressurized screening systems and hydrocyclone cleaners to remove unrefined fibers and contaminants such as sand and bark.

In 2006, IEP increased the maximum pulp production capacity in the #3 and #4 refiner lines from 85 oven dried tons per day, each to 100 oven dried tons per day, each. As a part of this project (NOC #1321), IEP requested an annual throughput limit of 35,500 oven dried tons per year for each refiner to keep the annual VOC emission increase below 10 tons per year.

Unrefined fibers are reprocessed through the reject refining line, which consists of a primary and secondary atmospheric refiner, similar to the #1 and #2 TMP lines. The screened rejects are sent to an unrefined stock chest for storage. The contents of this chest are pumped to the rejects stock press. The unrefined fibers are transferred via screw conveyors to the primary refiner. After passing through the primary refiner, the partially refined pulp is then transferred via screw conveyors to the secondary refiner. Plates with bars mechanically work the unrefined fibers to make them featherlike. After exiting the secondary refiner, the refined pulp is then transferred to the refined stock chest, screened, and then sent to the cleaner feed chest.

In December 2009, a new state-of-the-art #5 TMP system was constructed at the facility. The new refiner equipment includes a heat recovery system (HRS) that efficiently recovers waste

heat which typically exits the stacks of the older style TMP refiners. The HRS is designed to condense the waste steam from the TMP refiner system, recovering the energy in the form of clean steam for use in IEP's processes. All waste steam from the new refiners is directed to a Venturi Scrubber. Any entrained fiber in the waste steam from the refiner system is conditioned in the Venturi Scrubber. The waste steam and saturated fiber are then directed to the Heat Recovery Unit (or Reboiler) where the fiber is removed in the sump by cyclonic action. The Reboiler is a vertical shell and tube falling film heat exchanger with the waste steam on the tube side and the boiler feed water on the shell side. The waste steam condenses during heat exchange and is collected in the sump. Approximately 7% of the waste steam exits the Reboiler into the Vent Condenser to flush out any non-condensables that can adversely affect the heat transfer efficiency of the Reboiler. The vent condenser is a shell-and-tube type heat exchanger that condenses the small amount of waste steam vented from the Reboiler. Of the 7% of waste steam from the vent condenser, only approximately one-half percent is non-condensable gas that is exhausted from the vent condenser to atmosphere. The recovered energy from this new system reduced IEP's dependence on natural gas by approximately 70% which resulted in significant mill-wide emissions reductions.

The #5 TMP line has sufficient capacity to effectively replace the #1 - #4 lines, however IEPC maintains the #1 - #4 lines for back-up purposes.

In addition to the TMP lines, additional pulp is produced in the recycling plant. The recycling plant can process up to 350 tons per day of old newspapers, magazines and office waste paper. The recycled paper is pushed onto a conveyor that feeds a pulper, which is periodically charged with recycled paper, water and de-inking chemicals. The pulper slurries the recycled paper and separates the ink from the fibers. After the pulper, the slurried pulp passes through multiple screening stages to remove contaminants and multiple washing and floatation stages to remove ink. After the pulp has been thoroughly de-inked, it is mixed with virgin pulp and bleached with hydrogen peroxide and sodium hydrosulfite to attain newsprint brightness. The bleached pulp is stored in a large surge tank before it is sent to the paper machine.

In the paper machine, the pulp undergoes dilution and one final stage of hydrocyclone cleaning and screening before being jetted between two forming fabrics. From the paper machine, the fiber is lifted off the forming fabric and conveyed into a press section for further water removal and surface consolidation. The press section de-waters the sheet from a moisture content of 86% to 52%. Out of the press section, the sheet is sent into a drying section consisting of 30 steam heated dryer cans. The dryer train decreases the moisture content to approximately 8 to 9%. The sheet is wound onto a 25 ton jumbo roll which is transferred to the winder. The winder produces publisher sized rolls that are then wrapped and labeled for shipment.

The paper making process requires steam primarily to dry the sheet on the paper machine. The primary source of low pressure steam is provided by the new #5 refiner heat recovery system. Steam may also be produced with a 120 MMBtu/hr and a 48 MMBtu/hr natural gas fired boilers. Both boilers may also be fired with No. 6 fuel oil in the event that natural gas supply is interrupted. The fluidized bed combustor also produces steam through the combustion of natural gas, wastewater sludge, de-inking sludge, paper sludge, and chip screen rejects. Two baghouses

control particulate emissions from the fluidized bed combustor and an aqua ammonia SNCR system controls emissions of NOx.

Wastewater from the mill is treated in the facility's wastewater treatment plant. The wastewater treatment system consists of a primary clarifier for solids separation, three moving bed Biofilm reactors (MBBRs) and an activated sludge process for reduction of organics (measured as BOD), a sludge de-watering process and a secondary clarifier for secondary solids separation. A dissolved air floatation (DAF) clarifier treats the de-ink plant process water. The secondary effluent is currently discharged to the Spokane River, but the mill's new NPDES permit will require enhanced treatment plant upgrades to reduce effluent phosphorus, nitrogen and BOD.

Sludge from the de-ink plant, primary clarifier and waste activated sludge (WAS) is delivered to the Fluidized Bed Combustor (FBC) via the Andritz press and FKC press. Natural gas is added to the FBC during start-up and times when the fluidized bed temperature is affected, due to "off-normal" sludge conditions such as excess moisture content or reduced energy value.

The FBC burns sludge utilizing a heated bed of sand suspended (fluidized) within a rising column of air. Sludge from the Andritz press is pneumatically conveyed and injected into the bed of sand. Sludge from the FKC press is injected into the FBC above the fluidized bed. Combustion of the sludge occurs in two zones. Within the bed itself, evaporation of the water and pyrolysis of the organic materials occur as the temperature of the sludge is rapidly raised. In the freeboard area (between the bed and the top of the FBC), the remaining free carbon and combustible gases are burned. The second zone functions essentially as an afterburner. Fluidization achieves nearly ideal mixing between the sludge and the combustion air, and the turbulence facilitates the transfer of heat from the hot sand to the sludge. The scrubbing action of the bed material on the fuel particle enhances the combustion process by stripping away the carbon dioxide and char layers that normally form around the fuel particle. This allows oxygen to reach the combustible material much more readily and increases the rate and efficiency of the combustion process. As the sludge burns, fine ash particles are carried out the top of the furnace.

In 2005, IEP increased the maximum sludge burn rate to 50 dtpd in the FBC with the addition of Selective Non-Catalytic Reduction system which injects aqueous ammonia (<20%) in a fine droplet-size mist of ammonia and air into the vapor space to reduce NOx emissions from the FBC.

The flue gases from the FBC are routed to a 1000 hp firetube type boiler (aka heat exchanger) for heat recovery. Prior to entering the boiler, the flue gases pass through an ash de-entrainment section. After the ash drop, the flue gases enter the firetube type boiler. After the flue gases leave the boiler, they are routed to two baghouses (60% flow to old baghouse, 40% flow to new baghouse installed in 2006) which operate in parallel, exhausting through one stack, and are therefore considered one overall particulate control system.

Ash collected from the FBC system is pneumatically conveyed to an ash storage chest with 2 to 3 days storage capacity. The ash handling system is controlled by a cyclone and baghouse. The ash from the FBC system may be transferred off-site in dry or wetted form. The preferable way

to dispose of the ash is to load the ash out dry and transport it in enclosed trucks where it is used as a cement admixture. Ash may also be transferred wet for disposal at the Graham Road Landfill site as an alternate disposal option.

Emissions from the facility include combustion emissions (primarily NO<sub>x</sub>, CO, and SO<sub>x</sub>) and pulping emissions (primarily VOCs). Annual criteria pollutant and HAP emissions from the facility for the last completed operating year emission inventory (2011) are listed in Table 1 below.

**Table 1 – 2012 Criteria Pollutant and HAP emissions**

<b>Pollutant</b>	<b>Emissions (tons/yr)</b>
PM10	60.6
Sulfur Dioxide (SO <sub>2</sub> )	0.2
Oxides of Nitrogen (NO <sub>x</sub> )	85.1
Carbon Monoxide (CO)	13.9
Volatile Organic Compounds (VOC)	17.2
Total Hazardous Air Pollutants (HAP)	< 1.0

**PERMITTING HISTORY**

SRCAA has issued the following Notice of Construction (NOC) approval orders to IEPC:

- NOC approved July 1981 for new wood chip transfer silo with a cyclone.
- NOC #238 approved 4/19/89 for two wood chip transfer silos with cyclones (cyclones used to slow down wood chip velocity and not for air pollution control purposes). No approval conditions were included with approval of NOC #238.
- NOC #317 approved 5/19/91 for the fluidized bed combustor (FBC) for the incineration of paper sludge and revised 11/93 and 3/97. This NOC was voided and replaced by NOC #1169 in 12/03.
- NOC #708 A & B approved 11/19/95 for the modification of the chemi/mechanical (cmp) refiner lines #3 & #4 to increase pulp production. This NOC was voided and replaced by NOC #1321 in 12/05.
- NOC #1096 approved 10/19/01 for reject refiner systems, revised 4/16/02 to increase pulp production to 58 dtpd, and 6/7/05 to increase pulp production limit to 100 dtpd.
- NOC #1169 approved 12/30/03 for expansion of the fluidized bed combustor (FBC) to burn 45 oven dried tons of sludge per day (dtpd) and installation of new P-84 bags in the existing 225 bag baghouse. On 6/10/05, the NOC was revised to increase sludge throughput to 50 dtpd & addition of Selective Non-Catalytic Reduction (ammonia). On

7/13/06, the NOC was revised to add a new supplemental baghouse. On 7/9/08, the NOC was revised to eliminate the requirement to use reagent to control SO<sub>2</sub> from the FBC.

- NOC #1250 approved 1/13/05 for new wood chip storage and handling system.
- NOC #1321 A & B approved 12/21/05 for expansion of Refiner Lines #3 & #4 (100 ODTDP Per Line).
- NOC #1463 approved 8/13/09 for installation of a new thermo-mechanical pulping (#5 TMP) system with a heat recovery system (HRS)

SRCAA has issued the following Air Operating Permits (AOP) to IEPC:

- AOP-1 issued 6/24/97, and revised 5/7/99 to include the requirements of 40 CFR Part 60, Subpart Dc.
- AOP-1 Renewal #1 issued 9/5/02, and revised on 11/16/04 to include the requirements of NOC #1169.
- AOP-1 Renewal #2 issued 10/1/07, and revised 3/15/10 to include the requirements of NOC #1463.

**40 CFR PART 63 SUBPART JJJJJJ - NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR INDUSTRIAL, COMMERCIAL, AND INSTITUTIONAL BOILERS AT AREA SOURCES (as amended 2/1/13).**

40 CFR 63, Subpart JJJJJJ applies to boilers operated at any industrial, commercial, or institutional facility that is an area source of hazardous air pollutants. The rule applies mostly to boilers that burn solid or liquid fuel as their primary fuel, however, boilers that burn bio-mass are also subject to the rule. Boilers burning gaseous fuels not combined with any solid fuels are not subject to the rule.

The IEPC facility is considered an area source of hazardous air pollutants. Per 63.11236, "bio-mass" means any biomass-based solid fuel that is not a solid waste, including but not limited to, wood residue and wood products (e.g., trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff ( e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. Per Heather Valdez, EPA Region 10, the material burned in the FBC is considered biomass (not a solid waste), therefore the FBC is considered an existing unit and is subject to the applicable parts of the rule, specifically the work practice standards and the one time-energy assessment requirement. The commercial industrial solid waste incineration (CISWI) rule for existing sources (40 CFR Part 60 Subpart DDDD) does not apply to the FBC, because EPA has made a categorical determination that the material burned in the FBC is considered non-hazardous secondary materials and is not considered a waste.

The applicable requirements of 40 CFR 63, Subpart JJJJJJ for the FBC are:

- Performance of an initial tune-up on the FBC by no later than 3/21/14.
- Performance of an energy assessment on the FBC by no later than 3/21/14
- Perform a tune-up on the FBC biennially.
- Keep records of energy assessment and tune-ups performed.

[40 CFR 63, Subpart JJJJJJ, 2/1/13]

### **GREENHOUSE GAS REQUIREMENTS**

On December 1, 2010, the Washington Department of Ecology promulgated a regulation, Chapter 173-441 WAC, for state reporting of greenhouse gas (GHG) emissions. Chapter 173-441 WAC establishes GHG reporting requirements that apply to owners and operators of certain facilities that directly emit GHG in Washington. The rule applies to any facility that emits 10,000 metric tons CO<sub>2</sub>e or more per calendar year in total GHG emissions.

For an existing facility that began operation before January 1, 2012, GHG emissions must be reported to the Washington Department of Ecology for calendar year 2012 and each subsequent calendar year. The report is due by March 31<sup>st</sup> of each calendar year for GHG emissions in the previous calendar year if a person is also required to report GHG emission to EPA under 40 CFR Part 98. The report is due by October 31<sup>st</sup> of each calendar year for GHG emissions in the previous calendar year if a person is not required to report GHG emissions to EPA under 40 CFR Part 98.

The state greenhouse gas (GHG) reporting requirements, given in Chapter 173-441 WAC, were added to the renewed air operating permit as Condition I.D.9. This condition was added to the “General Monitoring, Recordkeeping, & Reporting” section of the permit. The requirements apply because the IEPC facility’s actual GHG emissions are above 10,000 metric tons CO<sub>2</sub>e , therefore IEPC must report annual GHG emission to Ecology, as required in Chapter 173-441 WAC.

In addition to the state GHG reporting requirements, EPA has also promulgated some additional GHG rules, namely the “tailoring rule,” which sets thresholds for GHG emissions that define when permits under the PSD program and Title V program are required for new and existing facilities, and the federal GHG reporting rules.

#### Federal GHG reporting requirements

On October 30, 2009, and as amended on July 12, 2010, September 22, 2010, November 30, 2010, December 1, 2010, December 17, 2010, December 27, 2010, and March 18, 2011, EPA promulgated regulations for mandatory federal GHG reporting in 40 CFR Part 98. In general, the regulations require that facilities that emit 25,000 metric tons of CO<sub>2</sub>e must report their GHG emissions to EPA. However, as discussed in the preamble to the rule contained in the Federal Register notice, dated October 30, 2009, the federal GHG reporting requirements given in 40 CFR Part 98 are not considered “applicable requirements,” as defined in 40 CFR 70.2, under the title V operating permit program. Therefore, the federal GHG reporting requirements in 40 CFR Part 98 do not need to be included in the title V permit.

“Tailoring Rule”

On May 13, 2010, EPA issued a final rule that “tailors” the applicability criteria given in 40 CFR Parts 51, 52, 70, and 71 that determine which stationary sources and modification projects become subject to permitting requirements for GHG emissions under the PSD and title V programs of the Clean Air Act. The Washington Department of Ecology adopted the tailoring rule changes on the state level by revising Chapter 173-400 WAC (filed on 3/1/11).

Per the tailoring original rule, on and after July 1, 2011, any existing or new source with the potential to emit more than 100,000 tpy CO<sub>2</sub>e will need a Title V permit. For PSD, a project will only trigger permitting requirements if the project is expected to increase GHG emissions by more than 75,000 tpy CO<sub>2</sub>e.

After the original tailoring rule was promulgated, EPA issued an additional rulemaking which defers, for a period of three years, the application of the PSD and Title V permitting requirements to carbon dioxide (CO<sub>2</sub>) emissions from bioenergy and other biogenic stationary sources (biogenic CO<sub>2</sub>). Biogenic CO<sub>2</sub> emissions are defined as emissions of CO<sub>2</sub> from a stationary source directly resulting from the combustion or decomposition of biologically-based materials other than fossil fuels and mineral sources of carbon, including CO<sub>2</sub> from combustion of the biological fraction of municipal solid waste. Emissions from burning of paper sludge in the FBC are considered biogenic emissions.

On 2/5/13, IEPC submitted the following PTE estimate of their total GHG emissions, based on the maximum fuel consumption rating of the boilers and FBC:

Unit Name	Fuel	Nameplate/ Rating	Annual Fuel PTE Capacity	Annual Metric Tons*
Fluidized Bed	Paper Sludge	50 dtpd	18,250 dtpy	20,450.80
Boiler #1	Natural Gas	40,000 pph	340 MCF/year	18,042.30
Boiler #2	Natural Gas	100,000 pph	850 MCF/year	45,105.77
<b>Totals</b>				<b>83,598.87</b>

\*Given as CO<sub>2</sub>e

Based on PTE emission estimates given above, the facility’s potential for GHG is 83,598 tons as CO<sub>2</sub>e, with 20,450.8 tons of the GHG emissions considered biogenic.

Since GHG PTE emissions are under 100,000 tpy, IEPC is not considered major for GHG under the tailoring rule. SRCAA is meeting the requirements of the tailoring rule by incorporating the applicable state GHG reporting requirements under Chapter 173-441 WAC into this Title V permit. While it is unlikely that IEPC will increase their PTE GHG emissions to the PSD permitting level, the permit incorporates the newly revised version of Chapter 173-400 WAC, which adopted the tailoring rule new source review thresholds on a state level. The newly revised version of Chapter 173-400 WAC adopted by reference the subparts of 40 CFR 52.21,

in effect on July 20, 2011, into WAC 173-400-720, "Prevention of significant deterioration (PSD)," which includes the tailoring rule new source review thresholds. The renewed permit requires that IEPC meet the requirements given in the newly revised version of Chapter 173-400 WAC for any new source review project that might occur (Condition I.G.1). This condition will ensure that IEPC obtain a PSD permit and meet BACT for any future project that will cause an increase of GHG emissions above the thresholds established in the tailoring rule.

### **COMPLIANCE HISTORY**

SRCAA has performed a compliance inspection at IEPC at least once every year since 1996. During that time, SRCAA has issued two Notices of Violation to IEPC.

In May 2003, SRCAA issued NOV #6969 to IEPC for missing hourly parametric monitoring data for the Fluidized Bed Combustor baghouse and ash handling baghouse. The violation has been resolved.

In May 2006, SRCAA issued NOV #7447 to IEPC because the source test performed on the baghouse outlet on the Fluidized Bed Combustor with the increased sludge throughput of 50 dtpd showed that the particulate matter (PM10) emissions exceeded the PM10 emission limit contained in Notice of Construction (NOC) #1169 Condition 6 (as revised on 6/10/05). The violation has been resolved because IEPC installed a new supplemental baghouse on the FBC to handle the increased PM10 emissions from increasing the sludge throughput to 50 dtpd. IEPC performed a source test on the FBC particulate control system (which consists of the original baghouse and the supplemental baghouse operating in parallel with the airflow split between them) which showed PM10 emissions below the PM10 emission limit contained in NOC #1169.

### **EMISSION UNITS**

Emission units at IEPC with specific air quality requirements that are contained in a federal requirement (e.g., New Source Performance Standard) or a Notice of Construction approval order (i.e., either emission limitations or specific monitoring, recordkeeping, and reporting requirements) can be broken into three main categories: fluidized bed combustor, pulp mill, and wood chip storage and handling system sources. These emission units are also subject to the facility-wide emission limitations and associated monitoring, recordkeeping, and reporting requirements. A section on each of these categories follows. There are also several emission units that are considered "significant" emission units, but do not have additional requirements that apply. These sources are subject only to the facility-wide emission limitations and associated monitoring, recordkeeping, and reporting requirements and are listed after the four categories listed above. At the end of this section, the insignificant emission units at IEPC are discussed and listed.

### **Fluidized Bed Combustor**

Significant fluidized bed combustor emission units are listed in Table 2 below. The fluidized bed combustor was originally installed in 1991 to burn 30 tons of sludge per day and controlled by a baghouse (FBC and baghouse were approved under NOC #317). In 2003, the fluidized bed combustor was expanded to 45 tons per day and approved (expansion approved under NOC

#1169; NOC #317 was voided when NOC #1169 was issued). In 2005, the FBC was expanded to 50 tons per day (expansion approved under revision to NOC #1169). In 2006, a new supplemental baghouse was added to the FBC to handle the additional particulate matter emissions associated with the increased sludge throughput of 50 tons per day (addition of supplemental baghouse approved under revision to NOC #1169). The two FBC baghouses (original baghouse and supplemental baghouse) operate in parallel with the airflow from the FBC split between them. In January 2007, SRCAA approved IEPC's request to use Graymont Lime reagent in the FBC at an addition rate of 75 lbs/hour. Previously, IEPC was approved to use dolomite and quicklime as reagents in the FBC. In July 2008, NOC #1169 was revised to remove the requirement to use reagent to control SO<sub>2</sub> emissions from the sludge burned in the FBC. The reason that the reagent requirements were removed from NOC #1169 is because IEPC conducted testing to show that they could meet the required SO<sub>2</sub> emission limit for the FBC without the addition of reagent. See the NOC #1169 Revision #4 file for more information.

**Table 2 – Fluidized Bed Combustor Significant Emission Units**

Emission Unit Description	EMISSION AREA NUMBER USED IN PERMIT (Process #-Discharge Point #)	Fuels Used	Air Pollution Control Equipment
Fluidized Bed Combustor (23.0 MMBtu/hr (LHV) and 20,000 acfm at 400 F) with capacity to burn 50 oven-dried tons per day sludge (NOC #1169)	2-1*	Natural gas and wood waste derived fuels, including chip screen rejects, paper sludge, and de-inking sludge	<ul style="list-style-type: none"> <li>• Lime-based reagents (approved in letter dated 1/22/07) for SO<sub>2</sub> control;</li> <li>• Two baghouses operated in parallel for particulate matter control (Ultra Industries Inc. BW-225-120-III "original" baghouse and Aeropulse, Inc. Model No. PR-128(6)-10-WIP-H-N "supplemental" baghouse (approved in NOC #1169); and</li> <li>• Selective non-catalytic reduction system (ammonia injection system) for NO<sub>x</sub> control (approved in NOC #1169)</li> </ul>
Ash Handling System – no NOC issued	2-2 & 2-3	N/A	Baghouse

\*The Fluidized Bed Combustor exhausts through the same stack as Boiler #2

**Pulp Mill Sources**

Significant emission units from the pulp mill are listed in Table 3 below. Refiner lines #1 - #4

were installed prior to SRCAA 's Notice of Construction program. Refiner Lines #1 and #2 are listed under Table 5 below because they do not have any applicable requirements other than facility-wide requirements. Refiner Lines #3 and #4 are chemi-mechanical pulp (CMP) lines originally installed in 1980 (Line #3) and 1982 (Line #4). Refiner Lines #3 and #4 were modified in 1995 to increase pulp production to 85 dry tons per day per line (approved by SRCAA under NOC #708). In 2005, Refiner Lines #3 and #4 were expanded to process 100 dry tons per day (approved by SRCAA under NOC #1321; NOC #708 was voided when NOC #1321 was issued). Refiner Lines #3 & #4 each have a primary, secondary, and tertiary refiner. The refiner line #3 has two exhaust stacks: one on the primary refiner/cyclone and one on the secondary refiner. The refiner line #4 has three exhaust stacks: one on the primary refiner/cyclone, one on the conveyor, and one on the secondary refiner.

The #5 refiner line was constructed in 2009; the new system was approved under NOC #1463, and has enough capacity to effectively replace the four existing refiner lines at the facility. However, IEPC maintains the ability to operate the four existing refiner line when the #5 TMP is down for maintenance. Additionally, IEPC has preserved the capability to operate all five lines concurrently at some future time if market conditions for wood supply or recycled materials change. The #5TMP is expected to have an average annual up time of approximately 95%. Emissions from the #5TMP are exhausted through a start-up scrubber exhaust (during start-up operation) and a vent condenser (during normal operation).

Unrefined fibers are reprocessed through a reject refining line, which consists of a primary and secondary atmospheric refiner. Both the primary and secondary reject refiner exhaust to the atmosphere. The reject refiner system was originally installed in 1978. The original system consisted only of the primary reject refining stage. The system was modified in 1988, to add the secondary reject refiner. Due to legislation requiring recycled fiber content in newsprint, IEPC installed a newspaper recycling plant in 1991. With the recycling plant online, the refining capacity was reduced because the mill had excess pulp producing capacity. Therefore, after 1991, the reject refining line was not used extensively. In April 2001, IEPC brought a new paper machine online. With the new paper machine, the mill reject throughput was at 40 tons per day. IEPC submitted a NOC application for the reject refiner line when the first AOP renewal application was submitted to SRCAA . Since the reject refiner line was not used during the initial review of the Air Operating Permit for IEPC, this equipment was not referenced on the original Air Operating Permit application or in SRCAA 's inspection reports. The reject refining line was approved by SRCAA under NOC #1096. In April 2002, SRCAA approved IEPC's request to increase the pulp processing limit for the reject refiner line to 58 dtpd (approved under revision to NOC #1096). In June 2005, SRCAA approved IEPC's request to increase the pulp processing limit for the reject refiner line to 100 dtpd (approved under revision to NOC #1096).

### **Table 3 – Pulp Mill Significant Emission Units**

Emission Unit Description	EMISSION AREA NUMBER USED IN PERMIT (Process #- Discharge Point #)	Fuels Used	Air Pollution Control Equipment
#3 CMP Primary Refiner approved to process 100 dtpd (NOC #1321)	3-4	N/A	Cyclone
#3 CMP Secondary Refiner approved to process 100 dtpd (NOC #1321)	3-5	N/A	None
#4 CMP Primary Refiner approved to process 100 dtpd (NOC #1321)	3-6	N/A	Cyclone
#4 CMP Secondary Refiner approved to process 100 dtpd (NOC #1321)	3-9	N/A	None
#4 CMP Conveyor approved to process 100 dtpd (NOC #1321)	3-10	N/A	None
#4 CMP Secondary Refiner approved to process 100 dtpd (NOC #1321)	3-11	N/A	None
Primary Reject Refiner approved to process 100 dtpd (NOC #1096)	3-14	N/A	None
Secondary Reject Refiner approved to process 100 dtpd (NOC #1096)	3-14	N/A	None
#5 TMP System, rated at 475 dtpd with heat recovery system (re-boiler, vent condenser, and start-up scrubber) (NOC #1463)	N/A – Installed after application was submitted	N/A	Re-boiler, vent condenser, and start-up scrubber

### Wood Chip Storage and Handling System Sources

Significant emission units from the wood chip storage and handling system are listed in Table 4 below. In 2005, IEPC replaced their existing pneumatic wood chip handling system with a new gravity conveyance handling system, approved under NOC #1250. NOC #1250 was reviewed under SRCAA Regulation I, Section 5.07.B, "Replacement or substantial alteration of emission control equipment" and SRCAA Regulation I, Section 5.02.F, which states that SRCAA implements and enforces the requirements of WAC 173-400-114 for replacement or substantial alteration of emission control technology at an existing stationary source. Because SRCAA

Regulation I, Article V and WAC 173-400-114 are not in the State Implementation Plan, the conditions of this NOC approval are not federally enforceable.

The new wood chip storage and handling system consists of a new truck / rail car unloading station, inlet screening and conveyance systems, outlet conveyance systems, and an additional truck weigh scale. All conveyors and transfer points are enclosed to minimize sawdust emissions. All emissions from the wood chip storage and handling system are considered fugitive emissions.

IEPC has discontinued using and maintaining their old wood chip equipment, which originally consisted of an old truck dump and east and west pneumatic chip flinger systems, as a back-up system to the new chip handling system. The east and west chip flinger towers were removed from the site in September 2008, rendering the system inoperable.

**Table 4 - Wood Chip Storage and Handling Significant Emission Units**

Emission Unit Description	EMISSION AREA NUMBER USED IN PERMIT (Process #- Discharge Point #)	Fuels Used	Air Pollution Control Equipment
Wood Chip Storage and Handling System (new truck / rail car unloading station, inlet screen and conveyance systems, outlet conveyance systems, and truck weigh scale) (NOC #1250)	N/A – Installed after application was submitted	N/A	None

**Other Emission Units**

The following miscellaneous emission units are considered significant emission units, but do not have specific requirements (i.e., Notice of Construction approval conditions, NSPS standards, etc.) that apply. These sources are subject only to the facility-wide emission limitations. The following emission units were constructed prior to the existence of SRCAA’s new source review program: #1 & #2 RMP exhausts (Refiner Lines #1 & #2 were installed in 1966) and Boilers #1 and #2 (#1 boiler was installed in 1955 and #2 boiler was installed in 1959). The wastewater treatment plant was installed in 1989. At that time, SRCAA did not require registration of wastewater treatment plants. Consequently, a Notice of Construction for this project was not required by SRCAA. The paper machine was installed in 2001. During SRCAA’s review of the paper machine in 1998, there was no published emissions information on paper machine emissions. Therefore, a Notice of Construction was not required for the paper machine. However, there is more recent information from the National Council of the Paper Industry for Air and Stream Improvement (NCASI) that paper machines are a source of VOC emissions. Therefore, the paper machine / dryers are considered significant emission units and subject to the facility-wide emission limitations. Significant miscellaneous emission units, identified in the

permit application, are given in Table 4 below.

**Table 5 – Significant Emission Units Subject Only to Facility-wide Emission Limitations**

Emission Unit Description	EMISSION AREA NUMBER USED IN PERMIT (Process #- Discharge Point #)	Fuels Used	Air Pollution Control Equipment
Wastewater Treatment Plant (2 primary clarifiers, aeration basin, and 1 secondary clarifier)	2-4	N/A	None
Paper Machine and Dryers	N/A	N/A	N/A
#1 RMP Chip Silo Separator	3-7	N/A	Cyclone
#2 RMP Chip Silo Separator	3-12	N/A	Cyclone
#1 RMP Exhaust	3-8	N/A	None
#2 RMP Exhaust	3-13	N/A	None
#1 Boiler (48 MMBTU/hr)	2-5	Natural gas with fuel oil #6 back-up	None
#2 Boiler (120 MMBTU/hr)	2-1*	Natural gas with fuel oil #6 back-up	None

\*Boiler #2 exhausts through the same stack as the Fluidized Bed Combustor

**Insignificant Emission Units**

Insignificant emission units (IEUs) include any activity or emission unit located at a major source which qualifies as insignificant under the criteria listed in WAC 173-401-530. These units and activities are exempt from permit program requirements, except as provided in WAC 173-401-530.

Insignificant emission units are subject to the generally applicable requirements (i.e., facility-wide emission limitations). According to WAC 173-401-530, testing, monitoring, recordkeeping, and reporting are not required for insignificant emission units unless determined by the permitting authority to be necessary to assure compliance or unless it is otherwise required by a generally applicable requirements in the State Implementation Plan (SIP). SRCAA has determined that testing, monitoring, recordkeeping, and reporting are not necessary for the insignificant emission units presented in Table 6 to assure compliance with the generally applicable requirements. SRCAA’s determination was based on the following:

- SRCAA has not documented a violation of any of the generally applicable requirements

in the past from the list of IEUs in Table 6 (i.e., the IEUs have had a consistent compliance history); and

- Most of the IEUs are tanks that emit small quantities of pollutants; and
- The majority of the IEUs are emission units or activities that are not directly vented (i.e., do not have an exhaust stack).

A list of the IEUs, identified in the permit application, is presented below in Table 6. Emissions from units designated insignificant, based solely on WAC 173-401-530(1)(a), must remain below threshold levels.

**Table 6 – Insignificant Emission Units**

<b>Emission Unit Description</b>	<b>Basis / Justification for IEU Designation</b>
Laboratory Operations	WAC 173-401-533(51) & (73)
Propane Heater, rated at 150,000 BTU/hr	WAC 173-401-533(2)(r)
Propane Heater, rated at 350,000 BTU/hr	WAC 173-401-533(2)(r)
Portable Propane Heaters, each rated at 350,000 BTU/hr, used during the Christmas shutdown to keep the mill warm	WAC 173-401-533(2)(r)
Mill lube oil storage tanks	WAC 173-401-532(3)
Clean condensate tanks	WAC 173-401-532(4) & (96)
Bleaching towers	WAC 173-401-532(4)
Liquid Sodium hydrosulfite tanks	WAC 173-401-532(4)
Hydrogen peroxide (50%) tanks	WAC 173-401-532(4) & (100)
Surfactant tanks (2)	WAC 173-401-532(4)
Water treatment polymer tank	WAC 173-401-532(4)
Sodium silicate tank	WAC 173-401-532(4)
Sodium hydroxide (50%) tanks (2)	WAC 173-401-532(4)
Alum tank	WAC 173-401-533(4) & (97)
Aqua ammonia (20%) tank	WAC 173-401-533(4)
Ammonium polyphosphate sol tank	WAC 173-401-533(4)
Deink process storage tanks	WAC 173-401-532(4) & (98)
Mill lubricants and hydraulic fluid reservoirs and pumping equipment	WAC 173-401-532(3) & (4)
Broke beaters & repulpers	WAC 173-401-532(98)
Stock chests and pulp handling	WAC 173-401-532(4) & (98)
Mill maintenance gases	WAC 173-401-532(5)
Maintenance & repair	WAC 173-401-532(5), (12), (33), (45), (55), & (74)
Dumpsters	WAC 173-401-532(6) & (79)
Auto repair & maintenance shop vehicle exhaust	WAC 173-401-532(7)
Mill vents from rooms, buildings and enclosures that contain permitted emission units or activities	WAC 173-401-532(9)
Building exhaust vents	WAC 173-401-532(9)

Building openings (doors, windows, etc.)	WAC 173-401-532(9)
Steam leaks	WAC 173-401-532(89)
Mill fork lifts & clamp trucks	WAC 173-401-532(10)
Mill cutting torches	WAC 173-401-532(12)
Maintenance metal press	WAC 173-401-532(18)
Sweeping, vacuuming, and mopping activities	WAC 173-401-532(32) & (35)
Portable drums & totes	WAC 173-401-532(42)
Lawn & landscape activities	WAC 173-401-532(43)
Vehicle maintenance	WAC 173-401-532(45) & (77)
Mill air conditioning & refrigerators	WAC 173-401-532(46)
Steam vents, safety & relief valves	WAC 173-401-532(47) & (87)
Mill bathrooms & showers	WAC 173-401-532(48) & (50)
Mill office activities	WAC 173-401-532(49)
Fire training & fire fighting equipment	WAC 173-401-532(52)
Woodworking	WAC 173-401-532(55)
Hydroblasting & sandblasting	WAC 173-401-532(55)
Paper machine winders & slitters	WAC 173-401-532(55), (72), & (111)
Boiler house oxygen scavenger	WAC 173-401-532(61)
Structural changes	WAC 173-401-532(67)
Batteries & battery chargers	WAC 173-401-532(77)
Air compressors, pneumatically operated equipment, & hand tools	WAC 173-401-532(88)
Process water & white water storage tanks	WAC 173-401-532(94)
Paper forming, drying and cooling systems	WAC 173-401-532(106) & (107)
Vacuum system exhaust	WAC 173-401-532(108)
Stock cleaning	WAC 173-401-532(110)
Sludge dewatering & handling	WAC 173-401-532(114)
Screw press vents	WAC 173-401-532(115)
Polymer tanks and associated pumping & handling	WAC 173-401-532(117)

equipment used for solids dewatering & flocculation	
Degreaser, 20 gal. Capacity (2 units)	WAC 173-401-530(4)(d) – VOC emissions of 0.057 tons/year per unit are below threshold of 2 tons/year
Degreaser, 50 gal. Capacity	WAC 173-401-530(4)(d) – VOC emissions of 0.142 tons/year are below threshold of 2 tons/year
LPG tank, 1000 gallon	WAC 173-401-533(2)(d)
Water cooling tower, 900 gpm Capacity	WAC 173-401-533(2)(m)
Welding operations – average welding rod usage at IEPC is 1 lb/day, which is less than threshold of 1 ton/day	WAC 173-401-533(2)(i)

### **STANDARD TERMS AND CONDITIONS (Section I)**

This section of IEPC's permit contains standard terms and conditions that apply to all sources in SRCAA 's Title V program. These conditions have been reviewed by EPA and include all terms required in Chapter 173-401 WAC as well as requirements from other air quality laws and regulations. The standard terms have been organized in seven subsections including:

PERMIT ADMINISTRATION (Section I.A);  
INSPECTION & ENTRY (Section I.B);  
EMERGENCY PROVISIONS (Section 1.C);  
GENERAL MONITORING, RECORDKEEPING, & REPORTING (Section I.D);  
COMPLIANCE CERTIFICATION (Section I.E);  
TRUTH AND ACCURACY OF STATEMENTS AND DOCUMENTS AND TREATMENT OF DOCUMENTS (Section I.F); and  
APPLICABLE WHEN TRIGGERED REQUIREMENTS (Section I.G).

A discussion of each subsection follows. The requirements in each section are briefly discussed, along with the citations for each requirement. Using the same methodology as the permit, requirements that are not required under the FCAA are indicated by the phrase "STATE/LOCAL ONLY" after the legal citation. Although, in and of itself, Chapter 173-401 WAC is not federally enforceable, the requirements of this regulation are based on federal requirements for the operating permit program. Upon issuance of the permit, the terms based on Chapter 173-401 WAC will become federally enforceable for the source.

**NOTE:** The filing or promulgation date for each requirement is also given. This date may be important if an earlier version of the requirement is in the State Implementation Plan (SIP). In many instances, a revision may have occurred within a section that does not affect the requirement being cited. If this is the case, the most recent filing or promulgation date is given,

along with the SIP version date in parentheses, and the requirement is federally enforceable. If a change was made in the requirement, both the earlier, SIP approved, requirement and the most recent requirement would go in the permit. The version in the SIP would be federally enforceable, and the more recent version would be enforceable at the state or local level.

If a new rule or a newer version of a rule has been submitted to EPA for inclusion in the SIP and EPA has proposed action, but not taken final action, the permit will be drafted so that when EPA action does occur, the requirement will become federally enforceable.

## **I.A Permit Administration**

Below are standard terms included in the subsection, Permit Administration. Generally the language tracks the rule language closely with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirement.

I.A.1. Federal Enforceability. All permit conditions are federally enforceable unless specified in the permit as a state or local only requirement. [WAC 173-401-625, 10/4/93]

I.A.2. Duty to Comply. The permittee must comply with the terms and conditions of the permit. [WAC 173-401-620(2)(a), 10/4/93]

I.A.3. Schedule of Compliance. The permittee must continue to comply with all applicable requirements and must comply with new requirements on a timely basis. [WAC 173-401-630(3), 10/4/93]

I.A.4. Need to Halt or Reduce Activity Not a Defense. The permittee cannot use the fact that it would have been necessary to halt or reduce an activity as a defense in an enforcement action. [WAC 173-401-620(2)(b), 10/4/93]

I.A.5. Permit Actions. This term discusses modification, revocation, reopening, and/or reissuance of the permit for cause. If IEPC files a request to modify, revoke, reissue, or terminate the permit, the request does not stay any permit condition, nor does notification of planned changes or anticipated noncompliance. [WAC 173-401-620(2)(c), 10/4/93]

I.A.6. Reopening for Cause. This term lists instances when the permit must be reopened and revised, including times when additional requirements become applicable, when the permit contains mistakes, or when revision or revocation is necessary to assure compliance with applicable requirements. [WAC 173-401-730, 10/4/93]

I.A.7. Emissions Trading. No permit revision will be required, under any approved, economic incentives, marketable permits, emissions trading, and other similar programs or processes, for changes that are provided for in the permit. [WAC 173-401-620(2)(g), 10/4/93]

I.A.8. Property Rights. The permit does not convey any property rights of any sort, or any exclusive privilege. [WAC 173-401-620(2)(d), 10/4/93]

I.A.9. Duty to Provide Information. The permittee must furnish, within a reasonable time to SRCAA , any information, including records required in the permit, that is requested in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. [WAC 173-401-620(2)(e), 10/4/93]

I.A.10. Duty to Supplement or Correct Application. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, must promptly submit such supplementary facts or corrected information. The permittee must also provide information as necessary to address any new requirements that become applicable after the date a complete application has been filed but prior to the release of a draft permit. [WAC 173-401-500(6), 9/16/02]

I.A.11. Permit Fees. The permittee must pay fees as a condition of this permit in accordance with SRCAA 's fee schedule and RCW 70.94.162. Failure to pay fees in a timely fashion will subject the permittee to civil and criminal penalties, as prescribed in Chapter 70.94 RCW. [WAC 173-401-620(2)(f), 10/4/93]

I.A.12. Severability. If any provision of the permit is held to be invalid, all unaffected provisions of the permit will remain in effect and enforceable. [WAC 173-401-620(2)(h), 10/4/93]

I.A.13. Permit Appeals. The permit or any conditions in it may be appealed only by filing an appeal with the pollution control hearings board and serving it on SRCAA within thirty days of receipt pursuant to RCW 43.21B.310. This provision for appeal is separate from and additional to any federal rights to petition and review under §505(b) of the FCAA, including petitions filed pursuant to 40 CFR 70.8(c) and 70.8(d). [WAC 173-401-620(2)(i), 10/4/93] [WAC 173-401-735(1), 4/2/97]

I.A.14. Permit Renewal and Expiration. The permit is in effect for five years. The permittee's right to operate this source terminates with the expiration of the permit unless a timely and complete application for renewal is submitted. Chapter 173-401-710(1) allows SRCAA to set, in the permit, the due date for the renewal as long as it is no more than 18 months and no less than six months prior to expiration of the permit. SRCAA specifies in the permit that the renewal must be submitted no more than 18 months and less than 12 months prior to the permit expiration. The facility may continue to operate subject to final action by SRCAA on the application, as long as a timely and complete application has been filed and all requested additional information necessary to process the permit is submitted by the deadline specified in writing by SRCAA . [WAC 173-401-610, 10/4/93] [WAC 173-401-705, 10/4/93] [WAC 173-401-710(1), 9/16/02]

I.A.15. Permit Continuation. The permit will not expire until the renewal permit has been issued or denied if a timely and complete application has been submitted. [WAC 173-401-620(2)(j), 10/4/93]

I.A.16. Permit Shield. Compliance with a permit condition is deemed compliance with the applicable requirements identified in the permit upon which that condition is based, as of the date of permit issuance except that this shield will not affect the following:

- a. The provisions of Section 303 of the FCAA (emergency orders), including the authority of the Administrator under that section;
- b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
- c. The ability of EPA to obtain information from the permittee pursuant to Section 114 of the FCAA;
- d. The ability of SRCAA to establish or revise requirements for the use of reasonably available control technology (RACT) as provided in Chapter 252, Laws of 1993.

[WAC 173-401-640(1) & (4), 10/4/93]

## **I.B Inspection and Entry**

Below are standard terms included in the subsection, Inspection & Entry. This subsection of the permit contains requirements for allowing authorized access to a facility for purposes of assuring/determining compliance with air quality requirements. Generally the language tracks the rule language closely with only minor changes for clarity and conciseness. There is no intent to alter the effect of the requirements.

I.B.1. Inspection and Entry. No person shall obstruct, hamper, or interfere with any authorized representative of SRCAA who requests entry for the purpose of inspection, and who presents appropriate credential; nor shall any person obstruct, hamper or interfere with any such inspection. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow SRCAA, or an authorized representative, to perform the following:

- a. enter upon the permittee's premises where a chapter 401 source is located or emissions-related activity is 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 air

pollution control equipment), practices, or operations regulated or required under this permit; and

d. as authorized by WAC 173-400-105 and the FCAA, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements.

[WAC 173-401-630(2), 10/4/93] [NOC #1169, Condition 16, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08] [NOC #1321, Condition 9, 12/21/05] [NOC #1096, Condition 7, 10/19/01, as revised on 4/16/02 and 6/7/05] [NOC #1250, Condition 6, 1/13/05] [NOC #1463, Condition 9, 8/13/09] [SRCAA Regulation I, Section 2.02.E&F, 3/4/04 – STATE/LOCAL ONLY]

Nothing in this condition shall limit the ability of EPA to inspect or enter the premises of the permittee under Section 114 of the FCAA. [WAC 173-401-640(4)(d), 10/4/93]

I.B.2. Obstruction of Access. No person shall obstruct, hamper, or interfere with any authorized representative of SRCAA who requests entry for the purpose of inspection, and who presents appropriate credential; nor shall any person obstruct, hamper or interfere with any such inspection. [RCW 70.94.200, 1998 - STATE/LOCAL ONLY]

### **I.C. Emergency Provisions**

Below are standard terms that are included in the subsection, Emergency Provisions. This subsection of the permit contains provisions, governing the treatment of periods of emissions in excess of applicable standards, when such emissions stem from unforeseeable events or arise from start-up, shutdown or maintenance, where design or operational practices could not preclude such emissions. Generally, the language closely tracks the rule language, with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirements.

I.C.1. Emergencies. An emergency, as defined in WAC 173-401-645(1), constitutes an affirmative defense to an enforcement action for non-compliance with a technology-based emission limitation if all the conditions of WAC 173-401-645(3) and (4) are met and the permittee submits notification of the emergency to SRCAA in accordance with Condition I.D.7-Prompt Reporting of Deviations and submits a report in accordance with Condition I.C.4-Emergency, Excess Emissions, Upset Conditions and/or Breakdown Reports below.

This provision is in addition to the affirmative defense for unavoidable excess emissions found in Condition I.C.2-Excess Emissions and Condition I.C.3-Report of Breakdown below. [WAC 173-401-645, 10/4/93] [WAC 173-401-615(3)(b), 9/16/02]

I.C.2. Excess Emissions. This term incorporates the excess emissions provisions of

Chapter 173-400 WAC. If excess emissions due to startup or shutdown conditions, scheduled maintenance, or upsets are determined to be unavoidable under the procedures and criteria in WAC 173-400-107 (until the effective date of EPA's incorporation of WAC [173-400-108](#) and [173-400-109](#) into the Washington state implementation plan) or WAC 173-400-108 and WAC 173-400-109 (on and after the effective date of EPA's incorporation of WAC [173-400-108](#) and [173-400-109](#) into the Washington state implementation plan), such emissions are violations of the applicable statute, regulation, permit, or regulatory order but are not subject to penalty. The permittee shall submit a notification of the excess emissions in accordance with Condition I.D.7-Prompt Reporting of Deviations below, and upon request by SRCAA, submit a report in accordance with Condition C.5-Emergency, Excess Emissions, Upset Conditions and/or Breakdown Reports below. [WAC 173-400-107, 108, 109, 3/1/11] [WAC 173-401-615(3)(b), 9/16/02]

I.C.3. Report of Breakdown. This term establishes the conditions under which violations of SRCAA Regulation I may be excused. If pollutants are emitted in excess of the limits established by SRCAA Regulation I as a direct result of unavoidable upset conditions or unavoidable and unforeseeable breakdown of equipment or control apparatus, SRCAA may excuse the permittee from penalties if the permittee submits a notification of the breakdown is reported in accordance with Condition I.D.7-Prompt Reporting of Deviations below and upon request by SRCAA's control officer, submits a report in accordance with Condition I.C.4-Emergency, Excess Emissions, Upset Conditions and/or Breakdown Reports.

The control officer, upon receipt of a report from the permittee describing a breakdown, may:

- a. Allow operation exempt from penalties, but only for a limited time period, after which the permittee will be required to comply with SRCAA Regulation I or be subject to the penalties in SRCAA Regulation I, Section 2.11. Such an exemption may be withdrawn if the exempt operation becomes a cause of complaints; or
- b. Require that the permittee curtail or cease operations until repairs are completed if the quantity of pollutants or the nature of the pollutants could cause damage.

Note: This provision does not provide relief against federally enforceable applicable requirements. [SRCAA Regulation I, Section 6.08, 3/4/04- STATE/LOCAL ONLY]

[SRCAA Regulation I, Section 6.08, 3/4/04 - STATE/LOCAL ONLY]

I.C.4. Emergency, Excess Emissions, Upset Conditions and/or Breakdown Reports. This term incorporates the reporting requirements of WAC 400-107, WAC 108, and WAC 109. In the event of emergencies, excess emissions, upset conditions, and/or breakdowns (see Conditions I.C.1, I.C.2, & I.C.3 above), if requested by SRCAA, or if required under an applicable requirement, the permittee shall submit a full written report

including:

- a. Date, time, and duration of the event,
- b. Known causes of the event;
- c. Records documenting the permittee's actions in response to the excess emissions event;
- d. Steps taken to repair the breakdown, if applicable, including a schedule to complete the repairs;
- e. Corrective actions taken, including preventative measures to be taken to minimize or eliminate the chance of recurrence;
- f. Information on whether emission monitoring and pollution control systems were operating at the time of the exceedance. If either or both systems were not operating, information on the cause and duration of the outage; and
- g. All additional information required under WAC 173-400-107 (until the effective date of EPA's incorporation of WAC [173-400-108](#) and [173-400-109](#) into the Washington state implementation plan) or WAC 173-400-109 (on and after the effective date of EPA's incorporation of WAC [173-400-108](#) and [173-400-109](#) into the Washington state implementation plan) supporting the claim that the excess emissions were unavoidable.

[WAC 173-401-615(3)(b), 9/16/02] [WAC 173-400-107, 108, 109, 3/1/11] [SRCAA Regulation I, Section 6.08, 3/4/04 – STATE/LOCAL ONLY]

#### **I.D General Monitoring, Recordkeeping, & Reporting**

Below are standard terms included in the subsection, General Monitoring, Recordkeeping, & Reporting. This subsection contains general requirements for monitoring, recordkeeping, and reporting. Monitoring, recordkeeping, & reporting requirements (MRRR) that apply to specific emission standards or specific emission activities are located in the second section of the permit. Generally, the language tracks the rule language closely, with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirements. However, in the terms, Monitoring Reports and Data Recovery, attempts have been made to clarify SRCAA's expectation of how the requirements will be met. The discussions below provide more detail on these efforts and the regulatory authority relied upon to establish the terms.

I.D.1. Records of Required Monitoring Information. This term details what records must be kept relating to monitoring. [WAC 173-401-615(2)(a), 9/16/02]

I.D.2 Permanent Shutdown of an Emission Unit. If an emission unit is permanently shut

down, thereby rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the shutdown, to meet any monitoring, recordkeeping, and reporting requirements, no longer applicable for that emission unit, once any residual requirements have been met. All records, relating to the shutdown emission unit, generated while the emission unit was in operation, shall be kept in accordance with Conditions I.D.1- Records of Required Monitoring Information and I.D.5 – Retention of Records.

Contemporaneous with the shutdown of the emission unit, the permittee shall record the date that operation of the emission unit ceased, using a log or file on site. The shutdown date shall be reported to SRCAA on the monitoring report, required under Condition I.D.6 – Monitoring Reports, covering the period during which the shutdown occurred. [WAC 173-401-725(4)(a), 10/4/93] [WAC 173-401-650(1)(a), 10/4/93]

I.D.3. Operational Flexibility. In the event that an emission unit is not operated during a period equal to or greater than the monitoring period designated, no monitoring is required. Recordkeeping and reporting must note the reason why and length of time that the emission unit was not operated. [WAC 173-401-650(1)(a), 10/4/93]

I.D.4. Records of Changes. The permittee must keep records of changes made at the source that result in emissions of a regulated air pollutant, subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from such a change. [WAC 173-401-615(2)(b), 9/16/02]

I.D.5. Retention of Records. The permittee must keep monitoring data and support information for a period of five years. Records may be kept in electronic format, however, originals of support information, generated in hardcopy format, must be kept for the required five years. [WAC 173-401-615(2)(c), 9/16/02]

I.D.6. Monitoring Reports. The permittee must submit monitoring reports to SRCAA as follows:

- Monitoring report covering the period from January 1 – June 30 each year shall be submitted to SRCAA and postmarked no later than July 30 of the same calendar year; and
- Monitoring report covering the period from July 1 – December 31 each year shall be submitted to SRCAA and postmarked no later than April 15 of the following calendar year.

The reports shall be certified as required in Condition I.D.11-Report Submittals. Provided, where this permit requires reporting more frequently than once every six months, the responsible official's certification need only be submitted once every six months, covering all required reporting since the date of the last certification. The report shall include the following information for the reporting period:

- a. A summary of monitoring results;
- b. Clear identification of all instances of deviations from permit requirements; and
- c. Any permanent emission unit shutdowns and 27-Permanent Shutdown of an Emission Unit, respectively.

[WAC 173-401-615(3)(a), 9/16/02] [WAC 173-401-615(1) & (2), 9/16/02]

I.D.7. Prompt Reporting of Deviations. The permittee must promptly report deviations from permit requirements, the probable cause of such deviations, and any corrective measures taken. (Prompt is defined in this permit term and is consistent with the reporting time limits of terms in the Emergency Provisions section.) [WAC 173-401-615(3)(b), 9/16/02]

I.D.8. Emission Inventory. The permittee must submit an inventory of emissions from the source each year and must maintain records sufficient to document reported emissions. [WAC 173-400-105(1), 8/20/93] [WAC 173-400-105(1), 11/28/12 – STATE/LOCAL ONLY]

I.D.9. Reporting of Emissions of Greenhouse Gases. The permittee shall comply with the applicable requirements given in Chapter 173-441 WAC related to the reporting of emissions of greenhouse gases. [Chapter 173-441 WAC, 12/1/10 – STATE/LOCAL ONLY]

I.D.10. WAC 173-401-530(1)(a) Insignificant Emission Units. Emissions from emission units designated insignificant based solely on WAC 173-401-530(1)(a) must remain below threshold levels. Upon request from SRCAA, the permittee must demonstrate that the actual emissions from such a unit or activity are below the applicable emission thresholds. [WAC 173-401-530(6), 9/16/02]

I.D.11. Report Submittals. This term provides the address to which reports must be sent and requires all reports to be certified by a responsible official. [WAC 173-401-520, 10/4/93]

I.D.12. Rendering Device or Method Inaccurate. IEPC may not render inaccurate any monitoring device or method required under Chapter 70.94 or 70.120 RCW, or any ordinance, resolution, regulation, permit, or order in force pursuant thereto. [WAC 173-400-105(8), 9/20/93] [WAC 173-400-105(8), 11/28/12 – STATE/LOCAL ONLY]

## **I.E Compliance Certification**

As part of SRCAA 's Title V program, sources are required to submit annual compliance certifications. (SRCAA may require more frequent certifications if the source is out of compliance or if an underlying requirement specifies more frequent submittals.) This subsection of the permit addresses the details of these compliance certification submittals including, how

often submittals must occur, what the submittals must contain and to whom the certifications must be sent. Generally, the language tracks the rule language closely, with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirements.

I.E.1. Compliance Certification Submittals. This term covers the frequency for submitting compliance certifications. [WAC 173-401-630(5)(a), 10/4/93]

I.E.2. Compliance Certification Contents. This term describes what must be included in each compliance certification. [WAC 173-401-630(5)(c), 10/4/93] [WAC 173-401-530(c), 9/16/02]

I.E.3. Credible Evidence. For the purpose of submitting compliance certifications or establishing violations, the permittee shall not preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. [40 CFR 60.11(g), 1/12/11] [WAC 173-400-115, 11/28/12]

I.E.4. Submittal to EPA. This term requires that certifications be sent to EPA as well as SRCAA . [WAC 173-401-630(5)(d), 10/4/93]

#### **I.F Truth and Accuracy of Statements and Documents and Treatment of Documents**

Below are standard terms contained in the subsection, Truth and Accuracy of Statements and Documents and Treatment of Documents. The terms are based on SRCAA 's Regulation I & II. Generally, the language tracks the rule language closely, with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirements.

I.F.1. False Information. IEPC may not make any false statement, representation, or certification in any form, notice, or report required under Chapter 70.94 or 70.120 RCW or any ordinance, resolution, regulation, permit, or order in force pursuant thereto. In addition, this term prohibits willfully making false statements to SRCAA in any matter within SRCAA's jurisdiction. [WAC 173-400-105(6), 8/20/93] [WAC 173-400-105(6), 11/28/12 – STATE/LOCAL ONLY] [SRCAA Regulation I, 2.08.A & E, 3/4/04 - STATE/LOCAL ONLY]

I.F.2. Alteration of Documents. This term prohibits the reproduction or alteration of any document issued by SRCAA , if the purpose of such is to evade or violate any requirement. [SRCAA Regulation I, 2.08.B, 3/4/04 - STATE/LOCAL ONLY]

I.F.3. Availability of Documents. Any order required to be obtained by SRCAA Regulation I must be available on the premises designated on the order. [SRCAA Regulation I, 2.08.C, 3/4/04 - STATE/LOCAL ONLY]

I.F.4. Posting of Notices. Notices which SRCAA requires to be displayed shall be posted. The permittee may not mutilate, obstruct, or remove any notice unless

authorized to do so by the SRCAA . [SRCAA Regulation I, 2.08.D, 3/4/04 - STATE/LOCAL ONLY]

### **I.G Applicable When Triggered Requirements**

The subsection, Applicable When Triggered Requirements, contains requirements that do not apply to the facility unless certain activities at the site trigger the requirement. SRCAA has included these requirements in the permit, either because they are often triggered at sources or are important enough that their inclusion in the permit is warranted. Generally the language tracks the rule language closely with only minor changes for clarity or conciseness. There is no intent to alter the effect of the requirements. However, in the term, Source Testing, language has been added to clarify what an approved test method is, as the rule does not elaborate on what “approved” means. The discussion below provides more detail in regards to this.

I.G.1. New Source Review. Prior to the establishment of a new source, including modifications, the permittee may be required to file and obtain approval under SRCAA 's Notice of Construction program. [Chapter 173-400 WAC, 11/28/12 – STATE/LOCAL ONLY] [Chapter 173-460 WAC, 5/20/09 - STATE/LOCAL ONLY] [SRCAA Regulation I, Article V, 5/3/07 - STATE/LOCAL ONLY]

I.G.2. Replacement or Substantial Alteration of Existing Control Equipment. Prior to replacing or substantially altering existing control equipment, the permittee shall file and obtain approval under SRCAA 's Notice of Construction program. [WAC 173-400-114, 8/15/01 - STATE/LOCAL ONLY] [SRCAA Regulation I, Article V, 3/4/04 - STATE/LOCAL ONLY]

I.G.3. Demolition and Renovation (Asbestos). The permittee must comply with applicable local, state, and federal requirements regarding demolition and renovation. [40 CFR Part 61 Subpart M, 2006] [WAC 173-400-075, 11/28/12] [SRCAA Regulation I, Article IX, 8/5/10 - STATE/LOCAL ONLY]

I.G.4. Source Testing. To demonstrate compliance Ecology or SRCAA may conduct or require that a test be conducted using approved EPA methods from 40 CFR Parts 51, 60, 61, and 63 which are adopted by reference or approved procedures contained in "Source Test Manual - Procedures for Compliance Testing," State of Washington, Department of Ecology, as of September 20, 2004, on file at Ecology. All testing shall be performed in accordance with SRCAA Regulation I, Section 2.09, “Source Tests.” The permittee may be required to provide the necessary platform and sampling ports for Ecology personnel or others to perform a test of an emission unit. Ecology or SRCAA shall be allowed to obtain a sample from any emission unit. The permittee shall be given an opportunity to observe the sampling and to obtain a sample at the same time.

Methods or procedures shall be considered approved if the source submits a source test plan to SRCAA at least 30 days prior to the testing date, or a shorter time if designated in writing by SRCAA, and SRCAA approves the plan in writing. In order to maintain the approved status for the methods and/or procedures, any changes to the plan shall be

approved by SRCAA in writing prior to implementation.

[WAC 173-400-105(4), 8/20/93] [WAC 173-400-105(4), 11/28/12 - STATE/LOCAL ONLY] [WAC 173-401-615(1), 9/16/02] [SRCAA Regulation I, Section 2.09, 2/7/08]

I.G.5. Chemical Accident Prevention Provisions. If regulated substances are stored on-site in quantities, at the process level, that are above the threshold quantities, as determined under 40 CFR §68.115, the permittee shall comply with the requirements of 40 CFR Part 68 - Chemical Accident Prevention Provisions no later than either three years after the date on which a regulated substance present above a threshold quantity is first listed under 40 CFR §68.130, or the date on which a regulated substance is first present above a threshold quantity in a process. [40 CFR Part 68, 1999]

### **EMISSION LIMITATIONS & MONITORING, RECORDKEEPING & REPORTING (Section II)**

This section contains emission limitations and emission related requirements, including general requirements for the facility. The section is divided into several subsections. The first subsection lists limitations that apply facility-wide. Subsequent subsections focus on individual emission units or classes of similar emission units. As in all other sections of the permit, requirements that are not required under the FCAA are indicated by the phrase "STATE/LOCAL ONLY" after the legal citation.

This section of the permit is formatted differently from the STANDARD TERMS AND CONDITIONS section. Requirements are presented in tables. The actual requirement is given in the third column of the emission limitation tables. The regulatory basis for the applicable requirement is listed in the second column of the tables. The averaging time and reference test method, used to determine compliance with the requirements, are listed in the fourth and fifth columns, if applicable. The monitoring, recordkeeping, and reporting requirements (MRRR) used to determine compliance with the requirement are listed in the last column of the emission limitation tables.

The MRRR are enforceable and are given in the last subsection of the permit. It should be noted that while a violation of a MRRR is a violation of the permit, it is not necessarily a violation of the underlying emission limitation.

For IEPC, this section contains five subsections:

FACILITY-WIDE EMISSION LIMITATIONS (Section II.A)  
FLUIDIZED BED COMBUSTOR EMISSION LIMITATIONS (Section II.B);  
PULP MILL EMISSION LIMITATIONS (Section II.C);  
WOOD CHIP STORAGE AND HANDLING EMISSION LIMITATIONS (Section II.D); and  
MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (MRRR)  
(Section II.E).

Each subsection and its contents are discussed in detail below except for the MRRR. MRRR are discussed in context of the applicable requirement(s) to which they apply. If 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 gapfilling. Applicable requirements for which gapfilling is proposed can be identified by the note, following the MRRR citation, indicating that at least a portion of the MRRR is from gapfilling.

## **II.A. Facility-wide Emission Limitations**

This subsection contains applicable emission limitations which apply facility-wide. These emission limitations are applicable to all significant and insignificant emission units at the facility. However, monitoring, recordkeeping, and reporting requirements are not required for the insignificant emission units because SRCAA has determined that they are not necessary to assure compliance with facility-wide emission limitations. IEPC is required to certify compliance with the facility-side emission limitations for insignificant emission units.

The following requirements are included in this section.

Condition II.A.1: Use of reasonably available control technology, in accordance with WAC 173-400-114 – STATE/LOCAL ONLY. [WAC 173-400-040, 8/20/93] [WAC 173-400-040, 3/1/11 – STATE/LOCAL ONLY]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period

Condition II.A.2: Visible emissions may not exceed 20% except as allowed in WAC 173-400-040. [WAC 173-400-040(2), (2)(a), & (2)(b), 3/1/11 (8/20/93)]

MRRR: IEPC must perform weekly inspections during daylight hours for the purpose of identifying visible emissions. The requirements for the weekly inspections are specified in the permit (e.g., observer shall be educated in the general procedures for determining the presence of visible emissions, each inspection shall consist of a 15-second visual observation of each emission source, etc.) Weekly inspections should reasonably assure compliance because IEPC has a consistent compliance history (i.e., the likelihood of violation is low) and because the processes conducted at the facility do not vary a lot over time (i.e., the facility runs at a relatively constant production rate).

If visible emissions are observed during an inspection or are otherwise observed by the permittee, the permittee shall verify and certify that:

1) the visible emissions or PM emissions are not the result of equipment malfunction, and the equipment, if any, from which the emissions are released,

is performing its normal, designed function;

2) the air pollution control equipment, if any, is being operated properly in accordance with normal operating procedures; and

3) if the visible emissions are the result of fugitive emissions, reasonable precautions are being taken to minimize emissions.

If 1), 2), and/or, 3) are not being met, corrective action must be taken as soon as possible, but no later than three days from discovery, to correct the problem.

Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in Condition I.D.7-Prompt Reporting of Deviations.

If visible emissions are still observed and 1), 2), and 3) are being met, the permittee shall perform visible emissions testing and, if a particulate matter standard applies, particulate testing, according to the following.

As a means of demonstrating compliance with the visible emissions standard(s), the permittee shall perform, or have performed, RM 9 (August 20, 1996) or Ecology Method 9A (September 20, 2004), whichever is applicable, on the source of the visible emissions. The test shall occur within a reasonable timeframe but no later than 24 hours after discovery of the emissions. If the visible emissions exceed the applicable standard, the permittee shall take timely and appropriate corrective action (as soon as possible, but within 24 hours) to address the problem. The results of the RM 9 or Ecology Method 9A test shall be submitted to SRCAA within two working days of the test.

As a means of demonstrating compliance with PM emission limit(s), the permittee shall perform, or have performed, RM 5 (February 2000) on the source of the emissions. The test shall occur within a reasonable timeframe but no later than 30 days after discovery of the emissions. The results of the RM 5 test shall be submitted to SRCAA as soon as possible but no later than 45 days after the testing. If measured emissions exceed the applicable standard, the permittee shall take appropriate and timely corrective action to address the problem.

Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in Condition I.D.7-Prompt Reporting of Deviations.

[WAC 173-401-615(1) & (2), 9/16/02] [WAC 173-400-050(1), 1/10/05 (2/19/91)]  
[WAC 173-400-060, (2/19/91)] [WAC 173-400-060, 1/10/05 – STATE/LOCAL ONLY]  
[WAC 173-400-105(4), 8/20/93] [WAC 173-400-105(4), 11/28/12 –

STATE/LOCAL ONLY] NOTE: This is a gapfilling MRRR.

Condition II.A.3: Visible Emissions shall not equal or exceed 20%, as specified in SRCAA Regulation I, Section 6.02 - STATE/LOCAL ONLY

MRRR: The same monitoring is required as for Visible Emissions, WAC 173-400-040, in Condition II.A.2. [WAC 173-401-615(1) & (2), 9/16/02]

Condition II.A.4: No person shall cause or permit the emission of particulate matter from any source to be deposited beyond the property under direct control of the owner or operator of the source in sufficient quantity to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited or to interfere unreasonably with the use and enjoyment of the property upon which the material is deposited [WAC 173-400-040(3), 3/1/11 - STATE/LOCAL ONLY] [SRCAA Regulation I, Section 6.05.A, 3/4/04(11/12/93)]

MRRR: IEPC must perform weekly inspections of the facility during daylight hours while the facility is in operation to verify that this requirement is being met. Records must be kept of each inspection, including the name of the observer, the date and time of the inspection, and the observations made during the inspection. Records shall be kept in accordance Condition I.D.5- Retention of Records, and, upon request, such records shall be made available for inspection by SRCAA staff or other authorized representatives.

In addition, IEPC must record and investigate complaints received regarding air quality problems. Complaints shall be investigated as soon as possible, but no later than 8 hours of receipt or by the end of the first regular business day during which the complaint was received, whichever is later. Receipt of a complaint does not, in and of itself, establish a violation. Records shall be kept of each complaint investigation, including the date and time that the complaint was received, the date and time of the complaint investigation, and observations made during the investigation. Records shall be kept in accordance Condition I.D.5- Retention of Records, and, upon request, such records shall be made available for inspection by SRCAA staff or other authorized representatives.

If potential violations of the requirement(s) are observed during the weekly inspections, as part of the complaint investigation, and/or at any other time, IEPC is required to take timely and appropriate corrective action. Action shall be considered timely and appropriate if the problem is solved as soon as possible, but no later than 24 hours of first observing the problem. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the requirement to report any permit deviations as required in Condition I.D.7-Prompt Reporting of Deviations. Records shall be kept of all correction action(s) taken by the

permittee. Records shall be kept in accordance Condition I.D.5- Retention of Records, and, upon request, such records shall be made available for inspection by SRCAA staff or other authorized representatives.

[WAC 173-401-615(1) &(2), 9/16/02] NOTE: This is a gapfilling MRRR.

Condition II.A.5: Reasonable precautions must be taken to:

- a. Prevent PM from becoming airborne when constructing, altering, repairing, or demolishing buildings, appurtenances, and roads;
- b. Prevent tracking of PM onto paved roadways open to the public;
- c. Prevent the release of air contaminants, as specific in WAC 173-400-040(3)(a), if located in an attainment area and not impacting a NAA;
- d. Prevent PM from becoming airborne when handling, transporting, and /or storing PM; and
- e. Prevent fugitive dust from becoming airborne and source must be maintained and operated to minimize emissions.

[SRCAA Regulation I, Section 6.05.C, 3/4/04(11/12/93)] [SRCAA Regulation I, 6.05.D, 3/4/04(11/12/93)] [WAC 173-400-040(4)(a), 3/4/04(11/12/93)] [SRCAA Regulation I, Section 6.05.B, 3/4/04(11/12/93)] [WAC 173-400-040(9)(a), 3/4/04(8/20/93)]

MRRR: The same monitoring is required as for WAC 173-400-040(2) – Fallout, see Condition II.A.4, above. IEPC must perform weekly inspections during daylight hours while the emission unit and/or activity is in operation to ensure that the requirements are being met, investigate complaints, and take corrective action if potential problems are identified. [WAC 173-401-615(1) & (2), 9/16/02] NOTE: This is a gapfilling MRRR.

Condition II.A.6: Recognized good practices and procedures must be used to reduce odors to a reasonable minimum, in accordance with WAC 173-400-040(5) – STATE / LOCAL ONLY [WAC 173-400-040(5), 3/4/04] – STATE / LOCAL ONLY

MRRR: The monitoring is the same as required for WAC 173-400-040(2) - Fallout, see Condition II.A.4 above. IEPC must perform weekly inspections, investigate complaints, and take corrective action if potential problems are identified. [WAC 173-401-615(1) & (2), 9/16/02] NOTE: This is a gapfilling MRRR.

Condition II.A.7: It shall be unlawful for any person to cause or allow the emission of any air contaminant in sufficient quantities and of such characteristics and duration as is, or is likely to be:

- a. Injurious to the health and safety of human, animal or plant life;
- b. Injurious or cause damage to property; or
- c. Which unreasonably interferes with enjoyment of life and property.

Compliance with this requirement shall be determined per the provisions given in SRCAA Regulation I, Section 6.04 (4/2/10) [SRCAA Regulation I, Section 6.04, 4/2/10- STATE/LOCAL ONLY]

MRRR: The monitoring is the same as for Condition II.A.6 which also pertains to odors. [WAC 173-401-615(1) & (2), 9/16/02] Note: At least a portion of this MRRR is gapfilling.

Condition II.A.8: No person shall cause or permit the emission of any air contaminant from any source if it is detrimental to the health, safety, or welfare of any person, or causes damage to property or business- STATE/LOCAL ONLY [WAC 173-400-040(6), 3/1/11(8/20/93)] [SRCAA Regulation I, Section 6.06.A, 3/4/04- STATE/LOCAL ONLY]

MRRR: The same monitoring is required as for WAC 173-400-040(2) – Fallout, see Condition II.A.4, above. IEPC must perform weekly inspections during daylight hours to assure that the requirement is met, investigate complaints, and take corrective action if potential problems are identified. [WAC 173-401-615(1) & (2), 9/16/02] NOTE: This is a gapfilling MRRR.

Condition II.A.9: No person shall cause or permit the installation or use of any means which conceals or masks an emission of an air contaminant which would otherwise violate any provisions of Chapter 173-400 WAC - STATE/LOCAL ONLY [WAC 173-400-040(8), 3/1/11(8/20/93)] [SRCAA Regulation I, 6.07, 3/4/04- STATE/LOCAL ONLY]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this prohibited activity was conducted during the reporting period.

Condition II.A.10: Particulate matter emissions from combustion and incineration units shall not exceed 0.1 gr/dscf corrected to 7% oxygen, as specified in WAC 173-400-050(1) & WAC 173-400-050(3). NOTE: The exception in WAC 173-400-050(3) is STATE/LOCAL ONLY. This exception allows for an alternate correction to measured concentrations (other than 7% oxygen) if determined by SRCAA to be representative of normal operations. [WAC 173-400-050(1) & WAC 173-400-050(3), 11/28/12 (2/19/91)]

MRRR:

The only emission units that are subject to this requirement are the two boilers and the Fluidized Bed Combustor at IEPC. The Fluidized Bed Combustor is subject to a more stringent grain loading standard in Condition 70 (0.023 gr/dscf required in NOC #1169), so compliance with the more stringent grain loading limit will assure compliance with the 0.1 gr/dscf emission limit.

For the two boilers, because of the general correlation between particulate matter emissions and visible emissions (i.e., visible emissions are an indicator of particulate matter), monitoring focuses on identifying visible emissions. IEPC must perform weekly inspections during daylight hours for the purpose of identifying visible emissions. Weekly inspections should reasonably assure compliance because the boilers have a consistent compliance history and run at a constant production rate on a fairly consistent fuel.

The two boilers have not been source tested for particulate in the past, so there is not an established relationship between particulate emissions and opacity for the boilers. However, the “no visible emissions” (a.k.a., “smoke / no smoke”) concept is acceptable monitoring for the particulate emission standard because SRCAA is of the opinion that something will be visible before a compliance problem exists.

If visible emissions are observed, IEPC must verify and certify that:

- 1) the visible emissions or PM emissions are not the result of equipment malfunction, and the equipment, if any, from which the emissions are released, is performing its normal, designed function;
- 2) the air pollution control equipment, if any, is being operated properly in accordance with normal operating procedures; and
- 3) if the visible emissions are the result of fugitive emissions, reasonable precautions are being taken to minimize emissions.

If visible emissions are still observed and 1), 2), and 3) are being met, the permittee shall perform RM5 particulate testing on the source of the emissions. The test shall occur within a reasonable timeframe but no later than 30 days after discovery of the emissions. The results of the RM 5 test shall be submitted to SRCAA as soon as possible but no later than 45 days after the testing. If measured emissions exceed the applicable standard, the permittee shall take appropriate and timely corrective action to address the problem.

In addition to the weekly inspections to ensure that the boilers are kept in proper working order, IEPC will be required to service the boilers at least once each calendar year to assure proper combustion is occurring and that the boilers are in proper operating condition. Records must be kept of the date and results of each boiler service. Lastly, IEPC will be required to certify that only

natural gas and #6 fuel oil (as back up fuel) were used in the boilers.

[WAC 173-401-615(1) & (2), 9/16/02] [WAC 173-400-050(1), 11/28/12 (2/19/91)] [WAC 173-400-060, (2/19/91)] [WAC 173-400-060, 1/10/05 – STATE/LOCAL ONLY] [WAC 173-400-105(4), 8/20/93] [WAC 173-400-105(4), 11/28/12 – STATE/LOCAL ONLY] NOTE: This is a gapfilling MRRR.

Condition II.A.11: Particulate matter emissions from general process units shall not exceed 0.1 gr/dscf, as specified in WAC 173-400-060 [WAC 173-400-060, 2/19/91] [WAC 173-400-060, 1/10/05 – STATE/LOCAL ONLY]

MRRR: The same monitoring is required as for Condition II.A.10. Because of the general correlation between particulate matter emissions and visible emissions (i.e., visible emissions are an indicator of particulate matter), monitoring focuses on identifying visible emissions.

[WAC 173-401-615(1) & (2), 9/16/02] [WAC 173-400-050(1), 1/10/05 (2/19/91)] [WAC 173-400-060, (2/19/91)] [WAC 173-400-060, 1/10/05 – STATE/LOCAL ONLY] [WAC 173-400-105(4), 8/20/93] [WAC 173-400-105(4), 11/28/12 – STATE/LOCAL ONLY] NOTE: This is a gapfilling MRRR.

Condition II.A.12: SO<sub>2</sub> emissions from each unit shall not exceed 1000 ppm on a dry basis, corrected to 7% oxygen, as specified in WAC 173-400-040(6). [WAC 173-400-040(7), 3/1/11(8/20/93)] NOTE: The second paragraph of WAC 173-400-040(7) is STATE/LOCAL ONLY

MRRR: Because SO<sub>2</sub> emissions at this source would only occur from combustion units, monitoring for this requirement consists of using only allowed fuels. The permit limits IEPC to use of natural gas, propane (LPG), and/or fuel oil #2 for all units except for #1 & #2 Boilers which can also burn fuel oil #6 and the FBC which can burn natural gas, deinking sludge, and paper sludge. Using AP-42 emission factors for boilers, the SO<sub>2</sub> emissions from the boilers will not exceed the 1000 ppm SO<sub>2</sub> emission limit when burning natural gas or fuel oil #6.

IEPC has tested the SO<sub>2</sub> emissions from the FBC at least annually in the past. The most recent test, performed on 11/20/12, showed SO<sub>2</sub> emissions of 0.32 ppm<sub>dv</sub> from the FBC, which is well below the 1000 ppm limit. Since the FBC runs at a consistent rate with a consistent sludge as the primary fuel, certifying that only allowed fuels were burned should assure compliance with the SO<sub>2</sub> limit.

In addition, the FBC is subject to a more stringent SO<sub>2</sub> standard in Condition II.B.2 (4.05 lb/hr, which correlates to ~56 ppm<sub>v</sub>, required in NOC #1169), so compliance with the more stringent SO<sub>2</sub> emission limit will assure compliance with the 1000 ppm SO<sub>2</sub> emission limit.

[WAC 173-401-615(1) & (2), 9/16/02] NOTE: This is a gapfilling MRRR.

Condition II.A.13: No use of excess stack height or dispersion techniques to meet ambient air quality standards or PSD increments except as allowed under WAC 173-400-200. [WAC 173-400-200, 1/10/05(2/19/91)]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this prohibited activity was conducted during the reporting period.

Condition II.A.14: No varying of emissions according to atmospheric conditions or ambient concentrations except as allowed under WAC 173-400-205. [WAC 173-400-200, 2/19/91]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this prohibited activity was conducted during the reporting period.

Condition II.A.15: No outdoor burning, except as allowed under Chapter 173-425 WAC and/or Regulation I of SRCAA, Section 6.01 [Chapter 173-425 WAC, 3/13/00(10/18/90)] [SRCAA Regulation I, Section 6.01, 11/6/08 - STATE/LOCAL ONLY]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this prohibited activity was conducted during the reporting period.

Condition II.A.16: Handling and use of chlorofluorocarbons (CFCs) must be in accordance with 40 CFR Part 82. [40 CFR Part 82, 2006]

MRRR: Additional monitoring, recordkeeping, and reporting requirements are not necessary to assure compliance with this condition, because the monitoring, recordkeeping, and reporting requirements are included with the applicable requirement (i.e., 40 CFR Part 82, 2006). As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

## **II.B. Fluidized Bed Combustor Emission Limitations**

This portion of the permit covers the fluidized bed combustor (FBC) and ash handling system.

Significant fluidized bed combustor emission units are listed in Table 2 on Page 10. The FBC was originally installed in 1991 to burn 30 tons of sludge per day and controlled by a baghouse (FBC and baghouse were approved under NOC #317). In 2003, the FBC was expanded to 45 tons per day and approved (expansion approved under NOC #1169; NOC #317 was voided when NOC #1169 was issued). In 2005, the FBC was expanded to 50 tons per day (expansion approved under revision to NOC #1169). In 2006, a new supplemental baghouse was added to the FBC to handle the additional particulate matter emissions associated with the increased sludge throughput of 50 tons per day (addition of supplemental baghouse approved under revision to NOC #1169). The two FBC baghouses (original baghouse and supplemental baghouse) operate in parallel with the airflow from the FBC split between them. In January 2007, SRCAA approved IEPC's request to use Graymont Lime reagent in the FBC at an addition rate of 75 lbs/hour. In July 2008, NOC #1169 was revised to eliminate the requirement to use the reagent for control of SO<sub>2</sub> emissions from the FBC; this was based on test data provided by IEPC which showed that the FBC can meet the SO<sub>2</sub> limit without using reagent.

Source testing of the FBC occurred after it was expanded to 50 tons per day (March 2006 test) and for particulate again after the supplemental baghouse was added (October 2006 test). This testing showed compliance with the emission limitations of NOC #1169. Many of the MRRR below rely on the assumption that, if operational conditions are similar to those present during the testing are maintained (e.g., the baghouse is operating, temperatures are similar, etc...), emissions from the unit should be in compliance with the NOC and thereby with this operating permit.

The following requirements are included in this section.

Condition II.B.1: A copy of NOC #1169 and the conditions of approval shall be kept on site and made available to SRCAA personnel upon request. [NOC #1169, Condition 1, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Condition II.B.2: SO<sub>2</sub> emissions from the combined new fluidized bed combustor baghouse exhaust and the original fluidized bed combustor baghouse system exhaust stack shall not exceed 4.05 pounds per hour. [NOC #1169, Condition 4, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: NOC #1169 requires IEPC to measure the SO<sub>2</sub> emissions from the fluidized bed combustor at least once every calendar year; using a portable SO<sub>2</sub> monitor, or by an alternate method approved by SRCAA. The results of the November 20, 2012 SO<sub>2</sub> testing showed SO<sub>2</sub> emissions were at 0.03 lb/hr at a fuel feed rate of ~50 dry tons/day of paper sludge, which is well below the SO<sub>2</sub> emission limit.

To ensure that the fuel is consistent with the fuel used during the testing, IEPC is required to certify that only natural gas, de-inking sludge, paper sludge, and/or chip screen rejects have been used to fuel the fluidized bed combustor during each reporting period.

[NOC #1169, Conditions 3 & 6, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

Condition II.B.3: NOx emissions from the combined new fluidized bed combustor baghouse exhaust and the original fluidized bed combustor baghouse system exhaust stack shall not exceed 243 ppm corrected to 7% oxygen. [NOC #1169, Condition 4, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: NOC #1169, the approval for the FBC, required initial source testing to measure NOx emissions. Source testing performed on 3/28/06 with the FBC at 50 dry tons per day showed that the NOx emissions from the FBC baghouse exhaust averaged 180.1 ppm at 7% O<sub>2</sub>, which is below the NOx emission limit of 243 ppm.

As part of the source testing conducted in March 2006, IEPC conducted ammonia optimization testing to determine the minimum ammonia addition rate necessary for the SNCR system to inject into the vapor space of the FBC. Per testing results, a minimum of 2.0 gallons per hour ammonia injection rate is required to meet the 243 ppm NOx limit. To ensure that the minimum ammonia injection rate is met, at all times that the fluidized bed combustor is in operation with a throughput of 50 dry tons per day, IEPC is required to continuously monitor the ammonia flow into the vapor space of the FBC to ensure that the 2.0 gallon per hour injection rate is met. At least once every hour, the ammonia flow rate into the FBC must be recorded. If the ammonia flow drops below 2 gallons per hour, corrective action must be taken within 30 minutes to bring the ammonia flow to at least 2 gallons per hour. If corrective action does not bring the ammonia flow to the required minimum rate (i.e., 2 gallons per hour) within 30 minutes, the permittee shall reduce the wood waste derived fuel to the combustor to 45 dry tons per day or less until the ammonia flow problem has been resolved.

The NOx emissions from the FBC are predominantly a result of fuel-bound nitrogen. Therefore, if the fuel burned in the FBC is consistent with the fuel used during the source test, the NOx emissions should not exceed the level measured during the last source test. During the source test, paper sludge (which included chip screen rejects at the time), de-inking sludge, and natural gas were used as fuel in the FBC. To ensure that the fuel does not change, IEPC will be required to certify that only natural gas, deinking sludge, paper sludge, and/or chip screen rejects have been used as fuel in the FBC.

In addition to the ammonia addition and certification that acceptable fuels were used, IEPC is required to perform a combustion test on the fluidized bed combustor to verify compliance with the NOx limit at least once during each calendar year, unless SRCAA approves a less frequent testing schedule. The most recent combustion test, performed on November 20, 2012, showed NOx emissions of 102.2 ppmdv corrected to 7% O2, which is well below the limit of 243 ppm corrected to 7% oxygen.

[NOC #1169, Conditions 5 and 15, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08] [WAC 173-401-615(1)&(2), 9/16/02] – NOTE: Portion of this MRRR are gapfilled]

Condition II.B.4: CO emissions from the combined new fluidized bed combustor baghouse exhaust and the original fluidized bed combustor baghouse system exhaust stack shall not exceed 50 ppm corrected to 7% oxygen. [NOC #1169, Condition 4, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: NOC #1169, the approval for the FBC, required initial source testing to measure CO emissions. Source testing performed on 3/28/06 with the FBC at 50 dry tons per day showed that the CO emissions from the FBC baghouse exhaust averaged 2.1 ppm at 7% O2, which is below the CO emission limit of 50 ppm.

CO emissions from the FBC are a product of incomplete combustion, which are related to time, temperature, and turbulence within the FBC. Turbulence is a function of the design of the equipment, and is not something that varies over time. Therefore, since the CO emissions were well below the emission limit during the initial source test, it can be assumed that the turbulence in the FBC is adequate for proper combustion. The FBC has been designed for residence time of at least 2 seconds, at bed temperatures ranging from 1400 to 1800° F. The residence time depends on the size of the combustion chamber and will not change unless the unit is modified. Therefore, based on the initial source test results, it can be assumed that the residence time in the FBC is adequate for proper combustion. During the March 2006 source test, the average vapor space temperature was 1781.7° F. Condition II.B.12 of this permit requires that the vapor space temperature in the fluidized bed combustor be maintained at a minimum temperature of 1600°F, with a residence time of at least 2 seconds, whenever burning wood waste derived fuel (i.e., de-inking sludge, paper sludge, and/or chip screen rejects). If the FBC is operated in this combustion temperature range, CO emissions are expected to remain below the emission standard. For this reason, IEPC will be required to continuously monitor and record bed and vapor space temperature, in lieu of CO measurements. Records shall be kept, on the stripchart or SRCAA approved recording device, of the date, time when wood waste derived fuel is stopped being fed to the combustor, time when wood waste derived fuel commences being fed to the

combustor, and explanation for each occasion when wood waste derived fuel (i.e., de-inking sludge, paper sludge, and/or chip screen rejects) is not burned in the fluidized bed combustor.

If the fluidized bed combustor's vapor space temperature falls below 1600° F, when wood waste derived fuel is being burned in the fluidized bed combustor, corrective action must be taken within 30 minutes to bring the vapor space temperature above 1600° F. Records shall be kept, on the stripchart or SRCAA approved recording device, of the date, time when the vapor space temperature dropped below 1600° F, time when the vapor space temperature rose above 1600° F, and corrective action taken for each occasion when the vapor space temperature falls below 1600° F. If corrective action cannot bring the vapor space temperature to the required minimum temperature (i.e., 1600° F) within 30 minutes, IEPC shall stop feeding wood derived waste to the combustor and keep records as described above. Records of these temperatures must be kept in accordance with Condition I.D.1-Records of Required Monitoring Information and Condition I.D.5-Retention of Records and, upon request, made available to SRCAA staff or other authorized representatives.

In addition to the continuous vapor space temperature monitoring, IEPC is required to perform a combustion test on the fluidized bed combustor to verify compliance with the CO limit at least once during each calendar year, unless SRCAA approves a less frequent testing schedule. The most recent combustion test, performed on November 20, 2012,, showed CO emissions of 0.29 ppmdv corrected to 7% O2.

[NOC #1169, Condition 5 & 11, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

Condition II.B.5: VOC emissions from the combined new fluidized bed combustor baghouse exhaust and the original fluidized bed combustor baghouse system exhaust stack shall not exceed 30 ppm (total nonmethane hydrocarbons weighted as methane). [NOC #1169, Condition 4, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: NOC #1169, the approval for the FBC, required initial source testing to measure VOC emissions. Source testing performed on 3/28/06 with the FBC at 50 dry tons per day showed that the VOC emissions from the FBC baghouse exhaust averaged 0.6 ppm (as methane) at 7% O2, which is below the VOC emission limit of 30 ppm.

Like CO, VOC emissions from the FBC are a product of incomplete combustion, which are related to time, temperature, and turbulence within the FBC. Therefore, the monitoring involves continuously monitoring the FBC

vapor space temperature as a surrogate to VOC emissions (described in the MRRR associated with Condition II.B.4). If the vapor space temperature falls below 1600° F when sludge is being burned in the FBC, corrective action must be taken within 30 minutes, or the FBC must be shut down. [NOC #1169, Condition 11, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

Condition II.B.6: Ammonia emissions from the combined new fluidized bed combustor baghouse exhaust and the original fluidized bed combustor baghouse system exhaust stack shall not exceed 20 ppm. [NOC #1169, Condition 4, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: NOC #1169, the approval for the FBC, required initial source testing to measure ammonia emissions. Source testing performed on 3/28/06 with the FBC at 50 dry tons per day showed that the ammonia emissions from the FBC baghouse exhaust averaged 1.04 ppm at 7% O<sub>2</sub>, which is below the ammonia emission limit of 20 ppm.

During the stack test on 3/28/06, the ammonia injection rate was 4.0 gallons per hour. IEPC keeps the ammonia injection pumps set at an ammonia flow rate at or above 3.0 gallons per hour. IEPC is required to continuously monitor the ammonia flow into the vapor space of the FBC at all times that the fluidized bed combustor is in operation with a throughput of 50 dry tons per day. At least once every hour, the ammonia flow rate into the FBC must be recorded. IEPC does not want to over-inject ammonia into the FBC because it is costly. The permit only requires that they inject 2 gph into the FBC; however, to be conservative, IEPC runs the SNCR system with an ammonia injection rate of 3.0 gph or higher. Since IEPC operates the FBC with an ammonia injection rate that is less than the level during the 3/28/06 stack test (i.e., less than 4 gallons per hour), the ammonia emissions should remain consistent with the level measured during the stack test, which were well below the 20 ppm emission limit.

[NOC #1169, Condition 5 & 11, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08] [WAC 173-401-615(1)&(2), 9/16/02] – NOTE: This is a gapfilling MRRR]

Condition II.B.7: Visible emissions from the fluidized bed combustor stack (downstream of both FBC baghouses) shall not exceed 10% for more than 3 minutes in any one hour period. [NOC #1169, Condition 7, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: The required monitoring was established for the purposes of Compliance Assurance Monitoring (CAM) for the Fluidized Bed Combustor, authorized by 40 CFR Part 64, 7/1/01. CAM must be designed to provide reasonable assurance of compliance with emission limitations or standards for a pollutant-

specific emission unit (PSEU). In order for a PSEU to be subject to CAM, the three conditions described below must be met. The manner in which they are met by the FBC for particulate matter is discussed below:

1. The PSEU must have pre-controlled emissions of the applicable pollutant which exceeds the major source thresholds established in WAC 173-401-200(17). In the case of the FBC, IEPC has estimated the pre-controlled PTE of particulate matter to be 1200 tpy (based on average of 200 tons of ash produced per month and assumption that 50% of ash would be emitted if uncontrolled). This exceeds the major source threshold of 100 tpy, established in WAC 173-401-200(17).

For emission units subject to CAM, if the post-controlled PTE is estimated to be more than 100 tons per year, the unit is considered a large emissions unit. For large emissions units, data collection frequency must be at least 4 times per hour. The post-controlled PTE of particulate matter from the FBC is estimated to be 8.6 tons per year, based on the grain loading limit of 0.023 gr/dscf. Therefore, the FBC is not considered to be a large emissions unit, since post-controlled emissions are less than 100 tons per year. Per 40 CFR 64.3(b)(iii), the frequency of data collection may be less frequent than 4 times per hour, but must include some data collection at least once per 24-hour period.

2. The PSEU must utilize air pollution control equipment to reduce emissions of the applicable pollutant to a level that meets the established emission limit(s). In the case of the FBC, the particulate emissions of the PSEU are controlled by two pulse-jet baghouses operated in parallel (the exhaust from the FBC is split 60% / 40% between the two baghouses). It is not possible for the FBC exhaust to by-pass the baghouses. Therefore, CAM does not need to address the potential for bypass.
3. The PSEU must be subject to an emission limit for the applicable pollutant. In the case of the FBC, the PSEU is subject to a grain loading particulate limit of 0.023 gr/dscf, given in a Notice of Construction approval, (see Condition II.B.8) and a 10% opacity limit, given in a Notice of Construction approval (Condition II.B.7).

The proposed CAM has been designed to rely on three performance indicators: FBC opacity monitoring, FBC baghouse pressure drop monitoring, and FBC baghouse inlet temperature monitoring. Each of these is discussed in detail below:

a. FBC Opacity Monitoring

Visible emissions (opacity) was selected as one of the performance indicators

because it is required to be used under 40 CFR 64.3(d). This section states that if a Continuous Opacity Monitor (COM) is required pursuant to other authority under the Act or state or local law, the owner or operator shall use such system to satisfy the requirements of the CAM rule. The NOC for the FBC requires the use of a COM to demonstrate compliance with the opacity standard. The FBC is subject to an opacity standard of 10%, for not more than 3 minutes during any one hour period.

IEPC is required to monitor the opacity from the fluidized bed combustor (downstream of both baghouses), with a COM and data processing and recording equipment meeting the requirements of 40 CFR 60.13 (1995) and 40 CFR 60, Appendix B (1995). Records of the opacity shall be kept in accordance with Condition I.D.1-Records of Required Monitoring Information and Condition I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

Daily monitor checks shall be made, including verifying that the recorder is working and that the daily calibration results are showing that the COM is meeting accuracy requirements. If results indicate a malfunction, the monitor shall be serviced as expeditiously as possible to correct the deficiency. In addition, the monitor shall be audited at least every quarter and shall maintain a calibration error of 3% or less, calculated in accordance with 40 CFR Part 60, Appendix B, Performance Specification 1 (1998). If greater errors are detected during any audit, the source of the error shall be identified, corrected, and the monitor re-audited as expeditiously as possible. Correction of the error shall be considered expeditious as long as the COM meets the data availability requirement described below. Records of each daily check and quarterly audit shall be kept in accordance with Condition I.D.1- Records of Required Monitoring Information and Condition I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

IEPC will be required to recover valid opacity monitoring data for at least 90% of the applicable monitoring periods during each month. Monitoring period means the period over which data are averaged to determine compliance with the applicable requirement. Monitoring periods do not include any period that the fluidized bed combustor does not operate. The 90% value is not explicit in any rule. WAC 173-401-615(1)(b) provides the authority to establish these minimum requirements in that it requires that permits stipulate "periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit..."

SRCAA believes that 100% data recovery is not always attainable and that Control Officer review of every instance where data recovery is less than 100% is of questionable value. Instead, SRCAA has determined that a data recovery

level of 90% to 100% is acceptable. If the data recovery for any month is lower than 90%, IEPC must file a report within 30 days of the end of that month, explaining the circumstances leading to the lower data recovery percentage. The report will be used to determine if the problem was unavoidable. The monitoring condition will allow IEPC to recover a lower percentage of opacity data than 90% if IEPC can show that the lower rate is due to unavoidable monitoring system malfunctions.

In determining whether a malfunction was unavoidable, the following criteria shall be considered:

- whether the malfunction was caused by poor or inadequate operation, maintenance, or any other reasonably preventable condition;
- whether the malfunction was of a recurring pattern indicative of inadequate operation or maintenance; and
- whether the permittee took appropriate action as expeditiously as practicable to correct the malfunction.

A report shall be filed with SRCAA no later than 30 days after the end of every month during which data was recovered for less than 90% of the monitoring periods for an applicable requirement. The report shall provide the reason the data was not collected (e.g., a description of the malfunction), information regarding operation of the monitored process during the monitoring system malfunction (e.g., process parameters which would be indicative of the compliance status of the process with applicable requirements), information regarding the above three bulleted items, and any further actions that the permittee will take to ensure adequate collection of such data in the future.

The indicator range selected is an opacity less than 10% (3-minute average, as measured by the COM). If the opacity during any 3-minute average exceeds 10% in any one hour period, an exceedance of the opacity standard has occurred, and corrective action shall be initiated as soon as possible, but no later than 12 hours after discovery of the violation to identify and correct the problem. The goal of the corrective action taken shall be to achieve compliance with the opacity standard as soon as possible and to prevent recurrence of the problem. Records of all corrective actions taken and the results of such actions shall be kept, in accordance with Condition I.D.1- Records of Required Monitoring Information and Condition I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. IEPC is required to report all opacity exceedances to SRCAA as part of the semiannual monitoring report, described in Condition I.D.6. The report shall include the date, time, duration, and magnitude of all opacity exceedances that occurred during the reporting period. The report shall also

include a description of all corrective actions taken and the results of such actions.

b. FBC baghouse pressure drop monitoring

Baghouse pressure drop was selected as one of the performance indicators because it provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop may indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged, the bags are becoming blinded, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags, but this is also indicated by the presence of visible emissions, which was the first indicator discussed. A pressure drop across the baghouse also serves to indicate that there is airflow through the control device.

IEPC is required to monitor the pressure drop across the two fluidized bed baghouses continuously with a differential pressure gauge whenever the Fluidized Bed Combustor is in operation. At least once every hour, the instantaneous pressure drop across the baghouses must be recorded. Hourly pressure drop records shall be kept in accordance with Condition I.D.1- Records of Required Monitoring Information and Condition I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. The baghouse pressure gauges must be calibrated quarterly, in accordance with the manufacturer recommended procedures. Records of each quarterly calibration shall be kept in accordance with Condition I.D.1- Records of Required Monitoring Information and Condition I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

The indicator range chosen for the baghouse pressure drop is 2 to 8 inches of water. This range is based on manufacturer recommendations and on IEPC observations of the normal operational pressure drops values. If the pressure drop is outside of this acceptable range, an excursion has occurred, and corrective action must be taken as soon as possible, but no later than 12 hours from discovery, to return the equipment to normal operation (i.e., pressure drop brought within acceptable range) and to prevent recurrence of the problem. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in Condition I.D.7-Prompt Reporting of Deviations. Records shall be kept of the date, time, duration, and magnitude of all pressure drop excursions. In addition, records shall be kept of all corrective actions taken and the results of such actions. All records shall be kept in accordance with Condition I.D.1- Records of Required Monitoring Information and Condition I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. IEPC is required

to report all pressure drop excursions to SRCAA as part of the semiannual monitoring report, described in Condition I.D.6. The report shall include the date, time, duration, and magnitude of all pressure drop excursions that occurred during the reporting period. The report shall also include a description of all corrective actions taken and the results of such actions.

c. FBC temperature monitoring

Baghouse inlet temperature was selected as a performance indicator because it assures the integrity of the bags, especially for a baghouse controlling a combustion process like the FBC. An increase in temperature may cause a concern about burning the bags.

Similar to the pressure drop, IEPC is required to monitor the baghouse inlet temperature continuously for both baghouses with a thermocouple and temperature monitor or gauge whenever the Fluidized Bed Combustor is in operation. At least once every hour, the instantaneous baghouse inlet temperature must be recorded. Hourly temperature records shall be kept in accordance with Condition I.D.1-Records of Required Monitoring Information and Condition I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. The baghouse inlet temperature monitor or gauge must be calibrated annually, in accordance with the manufacturer recommended procedures. Records of each annual calibration shall be kept in accordance with Condition I.D.1- Records of Required Monitoring Information and Condition I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

The indicator range chosen for the temperature is 250°F to 425°F. This range is based on manufacturer recommendations and on IEPC observations of the normal operational temperature values. The average baghouse inlet temperature during the initial particulate source test in October 2006 was 356.5° F. Temperatures higher than 425° F, indicate the potential for the bags to burn. Temperatures lower than 250° F indicate a potential problem with the FBC. If the baghouse inlet temperature is outside of the acceptable range, an excursion has occurred, and corrective action must be taken as soon as possible, but no later than 12 hours from discovery, to return the equipment to normal operation (i.e., baghouse inlet temperature brought within acceptable range) and to prevent recurrence of the problem. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in Condition I.D.7-Prompt Reporting of Deviations. Records shall be kept of the date, time, duration, and magnitude of all baghouse inlet temperature excursions. In addition, records shall be kept of all corrective actions taken and the results of such actions. All records shall be kept in

accordance with Condition I.D.1- Records of Required Monitoring Information and Condition I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. IEPC is required to report all baghouse inlet temperature excursions to SRCAA as part of the semiannual monitoring report, described in Condition I.D.6. The report shall include the date, time, duration, and magnitude of all baghouse inlet temperature excursions that occurred during the reporting period. The report shall also include a description of all corrective actions taken and the results of such actions.

[NOC #1169, Conditions 8, 12, & 13, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08] [40 CFR Part 64, 7/1/01]

Condition II.B.8 Particulate matter (PM10) emissions from the combined new fluidized bed combustor baghouse exhaust and the original fluidized bed combustor baghouse system exhaust stack shall not exceed 0.023 gr/dscf (front half and back half) corrected to 7% oxygen. [NOC #1169, Condition 6, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: The required monitoring was established for the purposes of Compliance Assurance Monitoring (CAM), authorized by 40 CFR Part 64, 7/1/01. CAM must be designed to provide reasonable assurance of compliance with emission limitations or standards for the pollutant specific emission unit (PSEU). In order for a PSEU to be subject to CAM, the three conditions described in the MRRR for Condition II.B.7 must be met. These three conditions are met by the FBC, as explained in the MRRR for Condition II.B.7.

The proposed CAM is the same as for the opacity standard (Condition II.B.7) and has been designed to rely on three performance indicators: FBC opacity monitoring, FBC baghouse pressure drop monitoring, and FBC baghouse inlet temperature monitoring. The indicator ranges for the grain loading standard are the same as those described in the MRRR for Condition II.B.7 for the opacity standard. The applicability of these indicator ranges to the grain loading standard is described below.

a. FBC Opacity Monitoring

Visible emissions (opacity) was selected as one of the performance indicators because it is required to be used under 40 CFR 64.3(d). This section states that if a COM is required pursuant to other authority under the Act or state or local law, the owner or operator shall use such system to satisfy the requirements of the CAM rule. The NOC for the FBC requires the use of a COM to demonstrate compliance with the opacity standard. The FBC is subject to an opacity standard of 10%, for no more than 3 minutes during any one hour period. 40 CFR 634.3(d)(3)(ii) requires that an indicator range for a

COM be used to assure compliance with a particulate matter standard. This section states that if an opacity standard applies to the emissions unit, such limit may be used an appropriate indicator range after considering the type of control device and other site-specific factors applicable to the emissions unit.

NOC #1169, the approval for the FBC, required one-time source testing to measure particulate emissions. Source testing performed on 10/4/06 (after the supplemental baghouse was installed) with the FBC at 50 dry tons per day showed that the PM emissions from the FBC baghouse exhaust averaged 0.0178 gr/dscf @ 7% O<sub>2</sub>, which is below the PM emission limit of 0.023 gr/dscf @ 7% O<sub>2</sub>. During the test, ammonia was injected into the FBC at a rate of 3.3 gph. The ammonia injection rate is important because higher ammonia injection rates can increase the back half particulate catch (condensable PM emissions). IEPC keeps the ammonia injection pumps at a flow rate of 3.0 gph or above. IEPC does not want to over-inject ammonia into the FBC because it is costly. The permit only requires that they inject 2 gph into the FBC; however, to be conservative, IEPC runs the SNCR system with an ammonia injection rate of 3.0. Since IEPC operates the FBC with an ammonia injection rate that is equivalent or less than the level during the 10/4/06 stack test (i.e., less than 3.3 gph), the back half particulate emissions should remain consistent with the level measured during the stack test, which were in compliance with the PM emission limit.

There is no direct correlation between grain loading and visible emissions for the FBC. However, opacity is an appropriate performance indicator for the grain loading limit because it is indicative of good operation and maintenance of the baghouse. When the baghouse is operating optimally, there should be minimal visible emissions from the exhaust. In general, an increase in visible emissions indicates reduced performance of the baghouse (e.g., loose or torn bags). If the baghouse is in good working order, the emissions should be similar to those measured during the last source test.

Since the FBC is subject to a 10% opacity limit (based on a three minute average), an opacity of less than 10% will be used as the indicator range for the grain loading standard. The opacity from the FBC typically runs from 0 – 5.6% opacity, with an average of 1.6% during the past six month period. Therefore, an indicator range of 10% would detect any potential problems with the baghouse. If the opacity during any 3-minute average exceeds 10%, IEPC must initiate corrective action as soon as possible, but no later than 12 hours after discovery of the violation to identify and correct the problem. The goal of the corrective action taken shall be to achieve compliance with the opacity standard as soon as possible and to prevent recurrence of the problem. Records of all corrective actions taken and the results of such actions shall be kept, in accordance with I.D.1- Records of Required Monitoring Information and

I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. IEPC is required to report all opacity exceedances to SRCAA as part of the semiannual monitoring report, described in I.D.6. The report shall include the date, time, duration, and magnitude of all opacity exceedances that occurred during the reporting period. The report shall also include a description of all corrective actions taken and the results of such actions.

b. FBC baghouse pressure drop monitoring

Baghouse pressure drop was selected as one of the performance indicators because it provides a means of detecting a change in operation that may lead to an increase in emissions. An increase in pressure drop may indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged, the bags are becoming blinded, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags, but this is also indicated by the presence of visible emissions, which was the first indicator discussed. IEPC is required to monitor the pressure drop across the fluidized bed baghouses continuously with a differential pressure gauge whenever the Fluidized Bed Combustor is in operation. At least once every hour, the instantaneous pressure drop across the baghouses must be recorded. The baghouse pressure gauge must be calibrated quarterly, in accordance with the manufacturer recommended procedures.

The indicator range chosen for the baghouse pressure drop is: 2 to 8 inches of water. This range is based on manufacturer recommendations and on IEPC observations of the normal operational pressure drops values. The average baghouse pressure drop measured during the initial source test in October 2006 was 2.7 inches of water. The pressure drop across the baghouse averaged 2.9 inches of water during the past six month period, with 5.6 inches of water as the maximum. If the pressure drop is outside of the acceptable range, an excursion has occurred, and corrective action must be taken as soon as possible, but no later than 12 hours from discovery, to return the equipment to normal operation (i.e., pressure drop brought within acceptable range) and to prevent recurrence of the problem. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations. Records shall be kept of the date, time, duration, and magnitude of all pressure drop excursions. In addition, records shall be kept of all corrective actions taken and the results of such actions. All records shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. IEPC is required to report all pressure drop excursions to SRCAA as part of the semiannual monitoring report, described in I.D.6. The

report shall include the date, time, duration, and magnitude of all pressure drop excursions that occurred during the reporting period. The report shall also include a description of all corrective actions taken and the results of such actions.

c. FBC temperature monitoring

Baghouse inlet temperature was selected as a performance indicator because it assures the integrity of the bags, especially for baghouses controlling a combustion process like the FBC. An increase in temperature may cause a concern about burning the bags. Similar to the pressure drop, IEPC is required to monitor the baghouse inlet temperature from both baghouses continuously with a thermocouple and temperature monitor or gauge whenever the Fluidized Bed Combustor is in operation. At least once every hour, the instantaneous baghouse inlet temperature must be recorded. The baghouse inlet temperature monitor or gauge must be calibrated annually, in accordance with the manufacturer recommended procedures.

The indicator range chosen for the temperature is: 250°F to 425°F. This range is based on manufacturer recommendations and on IEPC observations of the normal operational temperature values. The FBC baghouse operates at an average temperature of 364° F. The average baghouse temperature during the initial source test for particulate, conducted in October 2006, was 356.5° F. Temperatures higher than 425° F, indicate the potential for the bags to burn. Temperatures lower than 250° F indicate a potential problem with the FBC. If the baghouse inlet temperature is outside of the acceptable range, an excursion has occurred, and corrective action must be taken as soon as possible, but no later than 12 hours from discovery, to return the equipment to normal operation (i.e., baghouse inlet temperature brought within acceptable range) and to prevent recurrence of the problem. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations. Records shall be kept of the date, time, duration, and magnitude of all baghouse inlet temperature excursions. In addition, records shall be kept of all corrective actions taken and the results of such actions. All records shall be kept in accordance with I.D.1-Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. IEPC is required to report all baghouse inlet temperature excursions to SRCAA as part of the semiannual monitoring report, described in I.D.6. The report shall include the date, time, duration, and magnitude of all baghouse inlet temperature excursions that occurred during the reporting period. The report shall also include a description of all corrective actions taken and the results of such actions.

Overall, the proposed CAM is expected to assure compliance with the grain loading standard. If the opacity level is 10% or less (the opacity limit given in Condition II.B.7 of this permit), as measured by the COM, based on a three minute average, and the temperature and pressure drop are kept within the acceptable ranges, the baghouse will be assumed to be in good working order. If the baghouse is in good working order, the level of emissions should be similar to those measured during the last source test.

[NOC #1169, Conditions 8, 12, & 13, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08] [40 CFR Part 64, 7/1/01]

Condition II.B.9: Only natural gas, de-inking sludge, paper sludge, chip screen rejects, and/or other SRCAA approved fuels shall be used to fire the fluidized bed combustor. [NOC #1169, Condition 3, 12/20/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: IEPC will be required to certify that only these fuels are used. [WAC 173-401-615(1), 9/16/02] – This is a gapfilling MRRR

Condition II.B.10: No more than 50 tons of wood waste derived fuel (i.e., de-inking sludge, paper sludge, and/or chip screen rejects) shall be burned in the FBC each day. [NOC #1169, Condition 3, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: Per NOC #1169, at least once every six months, IEPC is required to physically measure and record the amount of wood waste derived fuel (i.e., de-inking sludge, paper sludge, and/or chip screen rejects) burned in the fluidized bed combustor, according to the method described in the May 5, 2003 memo from Inland Empire Paper Company. Records shall be kept in accordance with I.D.5, and, upon request, shall be made available for inspection by SRCAA staff or other authorized representatives.

In addition, IEPC is required to keep records of types and amounts of natural gas and wood waste derived fuel burned in the FBC each day. Wood waste derived fuel shall include chip screen rejects, paper sludge, and de-inking sludge. In lieu of records of the amount of wood waste derived fuel burned each day, it is acceptable for the permittee to multiply the number of hours that the fluidized bed combustor operates each day by the maximum rated capacity of the fluidized bed combustor (i.e., 50 tons per day). [NOC #1169, Condition 3, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

Condition II.B.11 Ash from the fluidized bed combustor shall be handled in a manner to minimize fugitive emissions. [NOC #1169, Condition 9, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: In order to ensure that fugitive emissions from the ash handling are minimized, IEPC must do the following:

a. The fluidized bed combustor ash collection system baghouse shall be properly maintained and operated at all times that particulate matter emissions from the unit are occurring. Proper operation and maintenance shall include, but is not limited to:

i. Maintaining the vacuum in the ash transfer line within the following range: 3 to 20 inches of water (vacuum); and

ii. Maintaining the ash baghouse pressure drop within the following range: 2 to 15 inches of water.

The acceptable range for the vacuum in the ash transfer line (i.e., 3-20 inches of water) and the acceptable baghouse pressure drop range (2 to 15 inches of water) were provided by IEPC and represent the ranges for proper operation of the equipment. These ranges are based on manufacturer recommendations.

IEPC will be required to perform hourly checks of the vacuum in the ash transfer line and the pressure drop across the ash handling baghouse filters.

If the vacuum in the ash transfer line or baghouse pressure drop are outside the above ranges, corrective action will be taken as soon as possible, but no later than three days from discovery, to correct the problem.

Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations.

Records of each hour's readings and any corrective actions taken as a result of such readings shall be kept, in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

b. If the fluidized bed combustor ash is to be shipped wet, prior to transferring to trucks for transport, the fluidized bed combustor ash shall be wetted to 15% moisture. Moisture analyses shall be performed weekly to verify the required moisture content is being met. Records of all analyses shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representative.

c. If the fluidized bed combustor ash is to be shipped dry, the transfer of ash into the shipping container shall be completely enclosed. The permittee shall observe each transfer to assure no visible emissions leave the enclosure. If emissions are observed by the permittee, appropriate corrective action shall be taken. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the requirement to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations.

Records shall be kept of each transfer, including the date and time of the transfer, a description of emissions observed, if any, corrective actions taken, if any, and other information required in I.D.1-Records of Required Monitoring Information. Records shall be kept in accordance with I.D.5- Retention of Records, and, upon request, such records shall be made available for inspection by SRCAA staff or other authorized representatives.

[WAC 173-401-615(1) & (2), 8/15/01] – This is a gapfilling MRRR

Condition II.B.12: Vapor space temperature in the fluidized bed combustor shall be maintained at a minimum of 1600°F, with a residence time of at least 2 seconds, whenever wood waste derived fuel (i.e., de-inking sludge, paper sludge, and/or chip screen rejects) is being burned in the combustor. [NOC #1169, Condition 10, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: The FBC has been designed with a residence time of at least 2 seconds in the temperature range that IEPC operates the unit. The residence time depends on the size of the combustion chamber and will not change unless the unit is modified.

Per NOC #1169, IEPC is required to continuously monitor the vapor space temperature in the FBC and keep records. If the fluidized bed combustor's vapor space temperature falls below 1600° F when wood waste derived fuel is being burned in the fluidized bed combustor, corrective action must be taken within 30 minutes to bring the vapor space temperature above 1600° F. Records shall be kept, on the stripchart or SRCAA approved recording device, of each occasion when the vapor space temperature falls below 1600° F, including the date, time when the vapor space temperature dropped below 1600° F, time when the vapor space temperature rose above 1600° F, and corrective action taken. If corrective action cannot bring the vapor space temperature to the required minimum temperature (i.e., 1600° F) within 30 minutes, the permittee shall stop feeding wood derived waste to the combustor.

Records shall be kept, on the stripchart or SRCAA approved recording device,

of each occasion when the flow of wood waste derived fuel (i.e., de-inking sludge, paper sludge, and/or chip screen rejects) to the combustor is stopped, including the date, time when wood waste derived fuel is stopped being fed to the combustor, time when wood waste derived fuel commences being fed to the combustor, and explanation for each shutdown. All required records shall be kept in accordance with I.D.1-Records of Required Monitoring Information and I.D.5- Retention of Records and, upon request, shall be made available for inspection by SRCAA staff or other authorized representatives. [NOC #1169, Condition 11, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

Condition II.B.13: At all times that the fluidized bed combustor is in operation with a throughput of 50 dry tons per day, the selective non-catalytic reduction system shall be in operation and injecting a 20% aqua ammonia solution into the vapor space of the FBC at a minimum flow rate of 2.0 gallons per hour or an alternate flow rate approved by SRCAA. [NOC #1169, Condition 15, 12/30/03 as revised on 3/29/04, 6/10/05, and 7/13/06, 7/9/08]

MRRR: At all times that the fluidized bed combustor is in operation with a throughput of 50 dry tons per day, IEPC is required to continuously monitor the ammonia flow into the vapor space of the FBC. At least once every hour, the ammonia flow rate into the FBC must be recorded. Hourly ammonia flow rate records shall be kept in accordance with I.D.1-Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

If the ammonia flow drops below 2 gallons per hour, corrective action must be taken within 30 minutes to bring the ammonia flow to at least 2 gallons per hour. Records shall be kept of the date, time when the ammonia flow dropped below 2 gallons per hour, time when the ammonia flow rose to at least 2 gallons per hour, and any corrective action taken. All records shall be kept for five years in accordance with I.D.5 and upon request, made available to SRCAA staff or other authorized representatives. If corrective action does not bring the ammonia flow to the required minimum rate (i.e., 2 gallons per hour) within 30 minutes, the permittee shall reduce the wood waste derived fuel to the combustor to 45 dry tons per day or less until the ammonia flow problem has been resolved.

[WAC 173-401-615(1)&(2), 9/16/02] – NOTE: This is a gapfilling MRRR

Condition II.B.14: Mercury emissions to the atmosphere from the FBC exhaust stack shall not exceed 3.2 kg (7.1 lbs) per 24 hour period. [40 CFR 61.52(b), 2000]

MRRR: Mercury emissions from the FBC occur primarily as a result of mercury in the paper and de-ink sludge. The mercury in the sludge is emitted from the FBC (i.e., it is not removed in the FBC). Therefore, the mercury level in the sludge

is an indicator of the mercury emissions from the FBC. IEPC has tested its paper and de-ink sludges for mercury, and the results showed mercury levels of less than 600 grams per 24 hour period. 40 CFR §61.55 does not require any further monitoring if emissions are below 1600 grams per 24 hour period. IEPC must use only the fuels allowed in its approved Notice of Construction (i.e., natural gas, paper sludge, de-ink sludge, and/or chip screen rejects.) With the use of these fuels, mercury emissions should be below the emission standard. [WAC 173-401-615(1) & (2), 9/16/02] – NOTE: This is a gapfilling MRRR

Condition II.B.15: Incineration shall occur during approved hours only. (This unit is approved for 24-hour per day operation.) Incinerator is a unit of approved design only. [SRCAA Regulation I, Section 6.03.C, 9/1/05

MRRR: No monitoring is required. The FBC is a unit of approved design. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Condition II.B.16: Records shall be kept of the types and amounts of fuel combusted each day in the FBC. [WAC 173-400-115, 1/10/05] [40 CFR §60.48c(g), 2006]

MRRR: The MRRR for this condition are outlined in the NSPS, given in 40 CFR 60, Subpart Dc. The following records shall be kept for the fluidized bed combustor:

- a. Records of types and amounts of fuel burned each day. Fuel types shall include natural gas and wood waste derived fuel. Wood waste derived fuel shall include chip screen rejects, paper sludge, and de-inking sludge. Since it is not possible for IEPC to monitor the amount of wood waste derived fuel sent to the boiler each day, it is acceptable for IEPC to multiply the number of hours that the fluidized bed combustor operates each day by the maximum rated capacity of the fluidized bed combustor (i.e., 50 tons per day) to determine the amount of wood waste derived fuel is burned each day;
- b. Records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the fluidized bed combustor; and
- c. Records of the occurrence and duration of any malfunction of the fluidized bed combustor's air pollution control equipment.

The records shall be kept in a file and each record shall be kept for at least 5

years<sup>1</sup> following the date of the record. The records shall also be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5 – Retention of Records and shall be made available to SRCAA staff or other authorized representatives. [40 CFR §60.48c(g), 60.48c(i), 60.7(b), & 60.7(f), 1998] [NOC #1169, Conditions 5 & 18, 12/30/03 as revised on 4/29/04, 6/10/05, and 7/13/06]

Condition II.B.17: At all times, including periods of startup, shutdown, and malfunction, the fluidized bed combustor, two baghouses, and Selective Non-Catalytic Reduction (SNCR) system shall be operated in a manner consistent with good air pollution control practices. [WAC 173-400-115, 1/10/05] [40 CFR §60.11(d), 2000] [NOC #1169, Condition 2, 12/30/03 as revised on 4/29/04, 6/10/05, 7/13/06, and 7/9/08]

MRRR: Per NOC #1169, IEPC is required to develop an operation and maintenance (O&M) plan which provides a description of how the fluidized bed combustor, two baghouses, and selective non-catalytic reduction system will be operated to minimize emissions. Manufacturer O&M plans are generally acceptable. The plan shall include the manufacturer recommended pressure drop ranges for the baghouses.

Maintenance records shall be kept to document that the O&M plan is being followed. Records shall be kept in accordance with I.D.5, and, upon request, shall be made available for inspection by SRCAA staff or other authorized representatives.

[NOC #1169, Condition 2, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08]

Condition II.B.18: Particulate matter emissions from general process units shall not exceed 0.1 gr/dscf, as specified in WAC 173-400-060 [WAC 173-400-060, 2/19/91] [WAC 173-400-060, 1/10/05 – STATE/LOCAL ONLY] Note: This requirement applies specifically to the ash handling system portion of the Fluidized Bed Combustor. The FBC is not considered a general process unit because the definition for “general process unit” given in Chapter 173-400 WAC excludes combustion units.

MRRR: The required monitoring was established for the purposes of Compliance Assurance Monitoring (CAM) for the ash handling system authorized by 40 CFR Part 64, 7/1/01. CAM must be designed to provide reasonable assurance of compliance with emission limitations or standards for the pollutant specific

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<sup>1</sup> 40 CFR 60.7(f) and 60.48c(l) require that records be kept for at least two years. The requirement in WAC 173-401-615 that records be kept for five years overrides the two year requirement.

emission unit (PSEU). In order for a PSEU to be subject to CAM, the three conditions described below must be met. The manner in which they are met by the FBC is discussed below:

1. The PSEU must have pre-controlled emissions of the applicable pollutant which exceed the major source thresholds established in WAC 173-401-200(17). In the case of the ash handling system, IEPC has estimated the pre-controlled PTE of particulate matter to be 1200 tpy (based on average of 200 tons of ash produced per month and assumption that 50% of ash would be emitted). This exceeds the major source threshold of 100 tpy established in WAC 173-401-200(17).

For emission units subject to CAM, if the post-controlled PTE is estimated to be more than 100 tons per year, the unit is considered a large emissions unit. For large emissions units, data collection frequency must be at least 4 times per hour. The post-controlled PTE of particulate matter from the ash handling system are estimated to be less than 1 ton. Therefore, the ash handling system is not considered to be a large emissions unit, since post-controlled emissions are less than 100 tons per year. Per 40 CFR 64.3(b)(iii), the frequency of data collection may be less than 4 times per hour, but shall include some data collection at least once per 24-hour period.

2. The PSEU must utilize air pollution control equipment to reduce emissions of the applicable pollutant to a level that meets the established emission limit(s). In the case of the ash handling system, the particulate emissions of the PSEU are controlled by a pulse-jet baghouse. The ash is pneumatically transferred from the FBC to the ash storage area. The baghouse is used to control emissions as the ash gets dumped into the ash storage area. The ash is then loaded out from the ash storage area. The ash load-out area is not controlled. It is not possible for the ash handling system to by-pass the baghouse. Therefore, CAM does not need to address the potential for bypass.
3. The PSEU must be subject to an emission limit for the applicable pollutant. In the case of the ash handling system, the PSEU is subject to a particulate limit of 0.1 gr/dscf grain loading limit, given in SRCAA and state regulations (Condition II.B.18), and a 20% opacity limit, given in state and local regulations (Conditions II.B.19 & II.B.20).

The proposed CAM has been designed to rely on four performance indicators: ash handling baghouse pressure drop monitoring, ash handling baghouse visible emissions monitoring, ash transfer line vacuum monitoring, and ash load-out monitoring. Each of these is discussed in detail below:

a. Ash handling baghouse pressure drop monitoring

Baghouse pressure drop was selected as one of the performance indicators because it provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop may indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged, the bags are becoming blinded, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags, but this is also indicated by the presence of visible emissions. A pressure drop across the baghouse also serves to indicate that there is airflow through the control device.

IEPC is required to monitor the pressure drop across the ash handling baghouse continuously with a differential pressure gauge whenever the Fluidized Bed Combustor is in operation. At least once every hour, the instantaneous pressure drop across the baghouse must be recorded. Hourly pressure drop records shall be kept in accordance with I.D.1-Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. The baghouse pressure gauge must be calibrated quarterly, in accordance with the manufacturer recommended procedures. Records of each quarterly calibration shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

The indicator range chosen for the baghouse pressure drop is: 2 to 15 inches of water. This range is based on manufacturer recommendations and on IEPC observations of the normal operational pressure drops values. The pressure drop across the baghouse averaged 3.3 inches of water during the past 6 months, with the range being from 2.0 – 6.2 inches of water. A wider pressure drop range is needed for this baghouse because when a slug of ash comes through the ash handling system, the pressure drop temporarily spikes. If the pressure drop is outside of this acceptable range, an excursion has occurred, and corrective action must be taken as soon as possible, but no later than 12 hours from discovery, to return the equipment to normal operation (i.e., pressure drop brought within acceptable range) and to prevent recurrence of the problem. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations. Records shall be kept of the date, time, duration, and magnitude of all pressure drop excursions. In addition, records shall be kept of all corrective actions taken and the results of such actions. All records shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. IEPC is required to report all

pressure drop excursions to SRCAA as part of the semiannual monitoring report, described in I.D.6. The report shall include the date, time, duration, and magnitude of all pressure drop excursions that occurred during the reporting period. The report shall also include a description of all corrective actions taken and the results of such actions.

b. Ash handling baghouse visible emissions monitoring

Visible emissions from the ash handling baghouse was selected as one of the performance indicators because it is indicative of good operation and maintenance of the baghouse. There is no established relationship between visible emissions and particulate emissions from the ash handling baghouse because the ash handling baghouse has not been source tested in the past. However, when the baghouse is operating properly, there should not be any visible emissions from the exhaust. Any increase in visible emissions indicates reduced performance of a particulate control device, therefore, the presence of visible emissions is used as a performance indicator.

The selected indicator range is a no-visible-emissions standard. This indicator range was selected because an increase in visible emissions is indicative of an increase in particulate matter and a monitoring technique which does not require a Method 9 certified observer is desired. IEPC will be required to perform weekly inspections during daylight hours, while the ash handling baghouse is operating, for the purpose of monitoring the ash handling baghouse exhaust for the presence of visible emissions. A weekly frequency was selected because visible emissions are only one of four performance indicators used to ensure the particulate and opacity limits are met. If visible emissions were the sole performance indicator, the required inspection frequency would be more often than weekly. IEPC must keep records of the date, time, and results of each inspection, in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representative. If no visible emissions are observed from the ash handling baghouse, no corrective action is required. If visible emissions are observed, the following actions shall be taken:

If visible emissions are observed from the ash handling baghouse, an excursion has occurred, and the permittee must verify that all equipment is performing its normal, designed function and is being operated according to standard procedures. If any equipment is not performing as described, corrective action shall be initiated as soon as possible, but no later than 12 hours after discovery of the problem. The goal of the corrective action taken shall be to eliminate visible emissions as soon as possible and to prevent recurrence of the problem. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve

the permittee from the obligation to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations. Records shall be kept of the date, time, duration, and magnitude of all excursions. In addition, records shall be kept of all corrective actions taken and the results of such actions. All records shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. If the corrective action taken results in a return to conditions under which visible emissions are not observable, no further corrective action is required.

If after corrective action is taken, visible emissions are still observed, the permittee shall perform, or have performed, Ecology Method 9A and EPA Method 5 on the ash handling baghouse exhaust. The Ecology Method 9A and EPA Method 5 tests shall occur as soon as possible, but no later than 30 days after the subsequent observation of visible emissions. Records of all Ecology Method 9A and EPA Method 5 tests performed shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. If the visible emissions, as determined by Ecology Method 9A, do not exceed any applicable opacity standards (i.e., standards given in Conditions II.B.19 & II.B.20), and the particulate emissions, as determined by EPA Method 5, do not exceed any applicable particulate standards (i.e., standard given in Condition II.B.18), no further corrective action is required.

If a violation of any applicable opacity standard (i.e., standards given in Conditions II.B.19 & II.B.20) is documented, and/or a violation of any applicable particulate standard (i.e., standard given in Condition II.B.18), an exceedance has occurred, and appropriate corrective action shall be initiated as soon as possible, but no later than 24 hours after discovery of the violation, to identify and correct the problem causing the exceedance. The goal of the corrective action taken shall be to achieve compliance with the opacity and particulate standards as soon as possible and to prevent recurrence of the problem. Once corrective action has been taken to address the problem, the permittee shall perform, or have performed, Ecology Method 9A (i.e., if an opacity exceedance occurred) and/or EPA Method 5 (i.e., if a particulate exceedance occurred) on the source of the emissions to demonstrate compliance with the opacity and/or particulate standards. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations. Records of all Ecology Method 9A and EPA Method 5 tests performed shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

IEPC must report all ash handling baghouse opacity excursions and opacity and/or particulate matter exceedances to SRCAA as part of the semiannual monitoring report, described in I.D.6. The report shall include the date, time, duration, and magnitude of all excursions and exceedances that occurred during the reporting period. The report shall also include a description of all corrective actions taken and the results of such actions.

c. Ash transfer line vacuum monitoring

Ash transfer line vacuum was selected as one of the performance indicators because it provides a way to ensure that the ash is properly transported from the FBC to the ash storage area. An increase in ash transfer line vacuum may indicate a problem in the ash handling baghouse. A decrease in the ash transfer line vacuum may indicate that the ash is not adequately pressurized for transport and may not be captured in the ash handling system.

The permittee shall continuously monitor the vacuum in the ash transfer line with a differential pressure gauge whenever the ash handling system is in operation. At least once every hour, the instantaneous vacuum in the ash transfer line must be recorded. Hourly pressure drop records shall be kept in accordance with I.D.1-Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. The ash transfer line pressure gauge must be calibrated quarterly, in accordance with the manufacturer recommended procedures. Records of each quarterly calibration shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

The indicator range chosen for the ash transfer line vacuum is: 3 to 20 inches of water (vacuum). This range is based on manufacturer recommendations and on IEPC observations of the normal operational vacuum values. The vacuum in the ash transfer line averaged -8.5 inches of water during the past 6 months, with the range being from -3.0 to -20.0 inches of water. If the vacuum in the ash transfer line is outside of this acceptable range, an excursion has occurred, and corrective action must be taken as soon as possible, but no later than 12 hours from discovery, to return the equipment to normal operation (i.e., vacuum brought within acceptable range) and to prevent recurrence of the problem. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations. Records shall be kept of the date, time, duration, and magnitude of all pressure drop excursions. In addition, records shall be kept of all corrective actions taken and the results of such actions. All records shall be

kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

IEPC is required to report all ash transfer line vacuum excursions to SRCAA as part of the semiannual monitoring report, described in I.D.6. The report shall include the date, time, duration, and magnitude of all excursions that occurred during the reporting period. The report shall also include a description of all corrective actions taken and the results of such actions.

d. Ash load-out monitoring

Ash load-out monitoring was selected as one of the performance indicators because there is the potential for fugitive emissions during ash load-out. The ash load-out is not controlled. IEPC either ships the ash wet or dry. If IEPC ships the ash wet, a moisture content of 15% by weight was selected as the indicator range. At this moisture content, the ash should be sufficiently wet such that there are no fugitive emissions. If IEPC ships the ash dry, a no-visible- emissions standard was selected as the indicator range. To allow for either wet or dry ash load-out, IEPC is required to comply with either 1. or 2. below:

1. If the fluidized bed combustor ash is to be shipped wet, prior to load-out, the ash shall be wetted to 15% moisture by weight. A moisture analyses must be performed no more than 24 hours prior to each load-out to verify that the required moisture content is being met. Records of the date and time of each ash load-out and the results from the each required moisture analyses shall be kept, in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representative. If the moisture analyses results show that the moisture content of the ash is below 15% by weight, an excursion has occurred, and corrective action must be taken before the ash is loaded out to bring the ash up to the required moisture content. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations. Records shall be kept of the date, time, duration, and magnitude of all excursions. In addition, records shall be kept of all corrective actions taken and the results of such actions. All records shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

2. If the fluidized bed combustor ash is to be shipped dry, the load-out of ash must be completely enclosed. IEPC must observe each ash load-out to

assure no visible emissions leave the enclosure. Records of the date and time of each ash load-out and results of the observations of each load-out shall be kept, in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representative. If no visible emissions are observed, no corrective action is required. If visible emissions are observed, the following actions shall be taken:

If visible emissions are observed leaving the enclosure during an ash load-out, an excursion has occurred, and the permittee must verify that all equipment is performing its normal, designed function and is being operated according to standard procedures. If any equipment is not performing as described, corrective action shall be initiated as soon as possible, but no later than 12 hours after discovery of the problem. The goal of the corrective action taken shall be to eliminate visible emissions as soon as possible and to prevent recurrence of the problem. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations. Records shall be kept of the date, time, duration, and magnitude of all excursions. In addition, records shall be kept of all corrective actions taken and the results of such actions. All records shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. If the corrective action taken results in a return to conditions under which visible emissions are not observable, no further corrective action is required.

If after corrective action is taken, visible emissions are still observed, the permittee shall perform, or have performed, Ecology Method 9A and EPA Method 5 on the ash load-out enclosures. The Ecology Method 9A and EPA Method 5 tests must occur as soon as possible, but no later than 30 days after the subsequent observation of visible emissions. Records of all Ecology Method 9A and EPA Method 5 tests performed shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives. If the visible emissions, as determined by Ecology Method 9A, do not exceed any applicable opacity standards (i.e., standards given in Conditions II.B.19-II.B.20), and the particulate emissions, as determined by EPA Method 5, do not exceed any applicable particulate standards (i.e., standard given in Condition II.B.18), no further corrective action is required.

If a violation of any applicable opacity standard (i.e., standards given in Conditions II.B.19-II.B.20) is documented, and/or a violation of any applicable particulate standard (i.e., standard given in Condition II.B.18), an exceedance

has occurred, and appropriate corrective action shall be initiated as soon as possible, but no later than 24 hours after discovery of the violation, to identify and correct the problem causing the exceedance. The goal of the corrective action taken shall be to achieve compliance with the opacity and particulate standards as soon as possible and to prevent recurrence of the problem. Once corrective action has been taken to address the problem, the permittee shall perform, or have performed, Ecology Method 9A (i.e., if an opacity exceedance occurred) and/or EPA Method 5 (i.e., if a particulate exceedance occurred) on the source of the emissions to demonstrate compliance with the opacity and/or particulate standards. Taking corrective action does not relieve the permittee from complying with the underlying requirement, nor does it relieve the permittee from the obligation to report any permit deviations as required in I.D.7-Prompt Reporting of Deviations. Records of all Ecology Method 9A and EPA Method 5 tests performed shall be kept in accordance with I.D.1- Records of Required Monitoring Information and I.D.5-Retention of Records and, upon request, shall be made available to SRCAA staff or other authorized representatives.

IEPC must report all ash load-out opacity excursions and opacity and/or particulate matter exceedances to SRCAA as part of the semiannual monitoring report, described in I.D.6. The report shall include the date, time, duration, and magnitude of all excursions and exceedances that occurred during the reporting period. The report shall also include a description of all corrective actions taken and the results of such actions.

The ash handling system has not been stack tested in the past. According to engineering data provided by IEPC on the baghouse, the emissions from the baghouse should be ~ 0.0127 gr/acfm when the ash handling system / baghouse is properly operated. Therefore, the proposed CAM should be sufficient to assure compliance with a 0.1 gr/dscf limit. If the baghouse is operated within the acceptable pressure drop range with no visible emissions, the ash transfer line vacuum is kept within the acceptable range, and the ash load-out is conducted properly (i.e., above 15% moisture if shipped wet and with no visible emissions if shipped dry), particulate emissions should be lower than 0.1 gr/dscf.

[40 CFR Part 64, 7/1/01]

Condition II.B.19: Visible emissions shall not exceed 20%, as specified in WAC 173-400-040. [WAC 173-400-040(1), 173-400-040(2)(a), & 173-400-040(2)(b), 1/10/05(8/20/93)] Note: This requirement applies to the ash handling system, as the FBC is subject to a more stringent 10% opacity standard in Condition II.B.7.

MRRR: The required monitoring was established for the purposes of Compliance

Assurance Monitoring (CAM), authorized by 40 CFR Part 64, 7/1/01. CAM must be designed to provide reasonable assurance of compliance with emission limitations or standards for the pollutant specific emission unit (PSEU). In order for a PSEU to be subject to CAM, the three conditions described in the MRRR for Condition II.B.18 must be met. These three conditions are met by the ash handling system, as explained in the MRRR for Condition II.B.18.

The proposed CAM is the same as for the particulate matter standard (Condition II.B.18). The proposed CAM has been designed to rely on four performance indicators: ash handling baghouse pressure drop monitoring, ash handling baghouse visible emissions monitoring, ash transfer line vacuum monitoring, and ash load-out monitoring. The indicator ranges for the opacity standard are the same as those described in the MRRR for Condition II.B.18 for the particulate matter standard. The applicability of these indicator ranges to the opacity standard is described below.

a. Ash handling baghouse pressure drop monitoring

Baghouse pressure drop was selected as one of the performance indicators because it provides a means of detecting a change in operation that may lead to an increase in emissions. An increase in pressure drop may indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged, the bags are becoming blinded, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags, but this is also indicated by the presence of visible emissions. If IEPC keeps the pressure drop within the acceptable range (i.e., 2-15 inches of water), the opacity standard should be met.

b. Ash handling visible emissions monitoring

Visible emissions was selected as one of the performance indicators because it is indicative of good operation and maintenance of the baghouse. When the baghouse is operating properly, there should not be any visible emissions from the exhaust. Any increase in visible emissions indicates reduced performance of a particulate control device, therefore, the presence of visible emissions is used as a performance indicator. Since the selected indicator range is no visible emissions, the CAM assures compliance with the 20% opacity limit.

c. Ash transfer line vacuum monitoring

Ash transfer line vacuum was selected as one of the performance indicators because it provides a way to ensure that the ash is properly transported from the FBC to the ash storage area. An increase in ash transfer line vacuum may indicate a problem for the ash handling baghouse. A decrease in the ash

transfer line vacuum may indicate that the ash is not adequately pressurized for transport and may not be captured in the ash handling system. If IEPC keeps the ash transfer line vacuum in the acceptable range (i.e., 3-20 inches of water), the opacity standard should be met.

d. Ash load-out monitoring

Ash load-out monitoring was selected as one of the performance indicators because there is the potential for fugitive emissions during ash load-out. The ash load-out is not controlled. IEPC either ships the ash wet or dry. If IEPC ships the ash wet, a moisture content of 15% by weight was selected as the indicator range. At this moisture content, the ash should be sufficiently wet such that there are no fugitive emissions. If IEPC ships the ash dry, no visible emissions was selected as the indicator range. If IEPC sufficiently wets the ash (i.e., keeps it above 15%) or does not have any visible emissions during dry ash load-out, the CAM should assure compliance with the 20% opacity limit.

[40 CFR Part 64, 7/1/01]

Condition II.B.20: Visible Emissions shall not equal or exceed 20%, as specified in Regulation I of SRCAA, Section 6.02 - STATE/LOCAL ONLY [SRCAA Regulation I, Section 6.02, 3/4/04 - STATE/LOCAL ONLY]

MRRR: The required monitoring was established for the purposes of Compliance Assurance Monitoring (CAM), authorized by 40 CFR Part 64, 7/1/01. The monitoring is the same as for Condition II.B.19. [40 CFR Part 64, 7/1/01]

Condition II.B.21: By no later than January 20, 2014, an Initial Notification shall be submitted to EPA. The Initial Notification shall contain the information specified in 40 CFR 63.9(b). [63.11225(a)(2), 2/1/13]

MRRR: The monitoring for this federal condition is given in the rule, 40 CFR 63, Subpart JJJJJJ. The Initial Notification shall contain the information specified in 40 CFR 63.9(b), and signed by a responsible official. Records must be kept of the Initial Notification submitted to EPA. All records shall be kept in accordance with Condition I.D.1-Records of Required Monitoring Information and Condition I.D.5-Retention of Records. [40 CFR 63.11225, 2/1/13]

Condition II.B.22: By no later than March 21, 2014, a performance tune-up shall be conducted on the FBC as specified in 40 CFR 63.11223(b). 40 CFR §63.11214(b), 2/1/13]

MRRR: The monitoring for this federal condition is given in the rule, 40 CFR 63, Subpart JJJJJJ. By no later than July 19, 2014, the permittee shall submit a Notification of Compliance Status Report to EPA, Region 10. The Notification

of Compliance Status Report shall include the information and certification(s) of compliance as described in 40 CFR 63.11225(4)(i)-(v), as applicable, and signed by a responsible official. Records must be kept of the initial tune-up and energy assessment performed, and of Notification of Compliance Status Reports submitted to EPA. All records shall be kept in accordance with Condition I.D.1-Records of Required Monitoring Information and Condition I.D.5-Retention of Records.. [40 CFR 63.11225, 2/1/13]

Condition II.B.23: By no later than March 21, 2014, a one-time energy assessment must be performed on the FBC as specified in 40 CFR 63.11214 and Table 2 of 40 CFR 63 Subpart JJJJJJ. [40 CFR §63.11214, 2/1/13]

MRRR: The monitoring for this federal condition is given in the rule, 40 CFR 63, Subpart JJJJJJ, and is the same as for Condition II.B.22. By no later than July 19, 2014, the permittee shall submit a Notification of Compliance Status Report to EPA, Region 10. The Notification of Compliance Status Report shall include the information and certification(s) of compliance as described in 40 CFR 63.11225(4)(i)-(v), as applicable, and signed by a responsible official. Records must be kept of the initial tune-up and energy assessment performed, and of Notification of Compliance Status Reports submitted to EPA. All records shall be kept in accordance with Condition I.D.1-Records of Required Monitoring Information and Condition I.D.5-Retention of Records.. [40 CFR 63.11225, 2/1/13]

Condition II.B.24: After the performance tune described in Condition II.B.22, a tune-up shall be conducted on the FBC biennially, as described in 40 CFR 63.11223 (b). Each biennial tune-up must be conducted no more than 25 months after the previous tune-up. [40 CFR §63.11223(a), 2/1/13]

MRRR: The monitoring for this federal condition is given in the rule, 40 CFR 63, Subpart JJJJJJ. Beginning in 2015, by no later than March 1 of every calendar year, a compliance certification report shall be prepared, and upon request, submitted to EPA, Region 10, or delegated authority. The compliance certification report shall contain the information specified in 40 CFR 63.11225(b)(1)&(2) and include records of the most recent biennial tune-up. Records of compliance certification reports shall be kept in accordance with Condition I.D.1-Records of Required Monitoring Information and Condition I.D.5-Retention of Records. [40 CFR 63.11225, 2/1/13]

Condition II.B.25: At all times the FBC and associated air pollution control and monitoring equipment must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR §63.11205(a), 2/1/13]

MRRR: The monitoring for this condition is same as for Condition II.B.17. Per NOC

#1169, IEPC is required to develop an operation and maintenance (O&M) plan which provides a description of how the fluidized bed combustor, two baghouses, and selective non-catalytic reduction system will be operated to minimize emissions. Manufacturer O&M plans are generally acceptable. The plan shall include the manufacturer recommended pressure drop ranges for the baghouses.

Maintenance records shall be kept to document that the O&M plan is being followed. Records shall be kept in accordance with I.D.5, and, upon request, shall be made available for inspection by SRCAA staff or other authorized representatives.

Additionally, beginning in 2015, by no later than March 1 of every calendar year, a compliance certification report shall be prepared, and upon request, submitted to EPA, Region 10, or delegated authority. The compliance certification report shall contain the information specified in 40 CFR 63.11225(b)(1)&(2) and include records of the most recent biennial tune-up. Records of compliance certification reports shall be kept in accordance with Condition I.D.1-Records of Required Monitoring Information and Condition I.D.5-Retention of Records.

[NOC #1169, Condition 2, 12/30/03 as revised on 3/29/04, 6/10/05, 7/13/06, and 7/9/08] [40 CFR 63.11225, 2/1/13]

Some conditions of the approved Notice of Construction, NOC #1169, for the fluidized bed combustor are no longer applicable because they are one time requirements that have been satisfied. These conditions are listed below and are not included in IEPC's operating permit. It should also be noted that there are some one-time requirements that were included as part of NOC #1169, which were already satisfied and therefore were taken out of the NOC #1169 approval order during one of the permit revisions (e.g., initial source testing requirement for NOx, CO, ammonia, SO2, and PM10 with FBC at 50 tons per day, which occurred prior to the installation of the supplemental FBC baghouse). These requirements that are no longer contained in the most current NOC #1169 approval order are not listed in the table below.

CITATION	DESCRIPTION	REASON NOT INCLUDED IN THE PERMIT
NOC #1169, Condition 1, 12/30/03, as revised on 3/29/04, 6/10/05, and 7/13/06	SRCAA must be notified seven days prior to start-up of the supplemental FBC baghouse.	Notification was received prior to start-up. This is a one-time requirement that has been met.
NOC #1169, Condition 2, 12/30/03, as revised on 3/29/04, 6/10/05, and 7/13/06	Approval becomes void if supplemental baghouse is not constructed within 18 months	Supplemental baghouse was installed within 18 months, so this condition is no longer applicable.
NOC #1169, Condition 7,	Source testing must be done	Source testing of the FBC with the

12/30/03, as revised on 3/29/04, 6/10/05, and 7/13/06	within 90 days after the supplemental baghouse commences operation to demonstrate compliance with the particulate emission limit.	supplemental baghouse was conducted on October 4, 2006. Results showed that the FBC was in compliance with the particulate emission limit. Test results showed average PM grain loading was 0.0178 gr/dscf (front and back half combined), which is lower than PM limit of 0.023 gr/dscf given in Condition 6 of NOC #1169.
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### II.C. Pulp Mill Emission Limitations

This portion of the permit covers the pulp mill emission limitations. Significant pulp mill emission units are listed in Table 3 on Page 11. The entire pulp mill (refiner lines #1 - #4) was installed prior to SRCAA's Notice of Construction program. Refiner Lines #3 and #4 were modified in 1995 to increase pulp production to 85 dry tons per day per line (approved by SRCAA under NOC #708). In 2005, Refiner Lines #3 and #4 were expanded to process 100 dry tons per day (approved by SRCAA under NOC #1321; NOC #708 was voided when NOC #1321 was issued). The #5 TMP Refiner Line was constructed in 2009 (approved under NOC #1463).

Refiner Lines #3 & #4 each have a primary, secondary, and tertiary refiner. The refiner line #3 has two exhaust stacks: one on the primary refiner/cyclone and one on the secondary refiner. The refiner line #4 has three exhaust stacks: one on the primary refiner/cyclone, one on the conveyor, and one on the secondary refiner.

The pulp mill also includes a reject refining line, which consists of a primary and secondary atmospheric refiner. The reject refiner system was originally installed in 1978. The original system consisted only of the primary reject refining stage. The system was modified in 1988, to add the secondary reject refiner. After 1991, when the newsprint recycling plant was on-line, the reject refining line was not used extensively. In April 2001, IEPC brought a new paper machine online. With the new paper machine, the mill reject throughput was at 40 tons per day. IEPC submitted a NOC application for the reject refiner line when the first AOP renewal application was submitted to SRCAA. Since the reject refiner line was not used during the initial review of the Air Operating Permit for IEPC, this equipment was not referenced on the original Air Operating Permit application or in SRCAA's inspection reports. The reject refining line was approved by SRCAA under NOC #1096. In April 2002, SRCAA approved IEPC's request to increase the pulp processing limit for the reject refiner line to 58 dtpd (approved under revision to NOC #1096). In June 2005, SRCAA approved IEPC's request to increase the pulp processing limit for the reject refiner line to 100 dtpd (approved under revision to NOC #1096).

In 2009, IEPC installed a new thermo-mechanical pulping line with a heater recovery system at the facility. The new system (#5 TMP) was approved under NOC #1463, and has enough capacity to effectively replace the four refiner existing lines at the facility. However, IEPC maintains the ability to operate the four existing refiner line when the #5 TMP is down for

maintenance. Additionally, IEPC has preserved the capability to operate all five lines concurrently at some future time if market conditions for wood supply or recycled materials change. The #5TMP is expected to have an average annual up time of approximately 95%. Emissions from the #5TMP are exhausted through a start-up scrubber exhaust (during start-up operation) and a vent condenser (during normal operation).

The following requirements are included in this section.

Condition II.C.1: Particulate matter emissions from each of the #3 and #4 refiner line exhaust stacks shall not exceed 0.04 gr/dscf. [NOC #1321, Condition 6, 12/21/05]

MRRR: For the two refiner lines, because of the general correlation between particulate matter emissions and visible emissions (i.e., visible emissions are an indicator of particulate matter), monitoring focuses on identifying visible emissions. IEPC must perform weekly inspections during daylight hours for the purpose of identifying visible emissions. Weekly inspections should reasonably assure compliance because the refiner lines have a consistent compliance history and run at a constant production rate.

The refiner lines have not been source tested for particulate in the past, so there is not an established relationship between particulate emissions and opacity for the boilers. However, the “no visible emissions” (a.k.a., “smoke / no smoke”) concept is acceptable monitoring for the particulate emission standard because SRCAA is of the opinion that because we concur that something will be visible before a compliance problem exists.

If visible emissions are observed, IEPC must verify and certify that:

- 1) the visible emissions or PM emissions are not the result of equipment malfunction, and the equipment, if any, from which the emissions are released, is performing its normal, designed function;
- 2) the air pollution control equipment, if any, is being operated properly in accordance with normal operating procedures; and
- 3) if the visible emissions are the result of fugitive emissions, reasonable precautions are being taken to minimize emissions.

If visible emissions are still observed and 1), 2), and 3) are being met, IEPC must perform RM5 particulate testing on the source of the emissions. The test shall occur within a reasonable timeframe but no later than 30 days after discovery of the emissions. The results of the RM 5 test shall be submitted to SRCAA as soon as possible but no later than 45 days after the testing. If measured emissions exceed the applicable standard, the permittee shall take appropriate and timely corrective action to address the problem.

[WAC 173-401-615(1) & (2), 9/16/02] [WAC 173-400-050(1), 1/10/05 (2/19/91)]  
[WAC 173-400-060, (2/19/91)] [WAC 173-400-060, 1/10/05 – STATE/LOCAL  
ONLY] [WAC 173-400-105(4), 8/20/93] [WAC 173-400-105(4), 11/28/12 –  
STATE/LOCAL ONLY] NOTE: This is a gapfilling MRRR.

Condition II.C.2: A copy of the Notice of Construction and the conditions of approval shall be kept on site and made available to SRCAA personnel upon request. [NOC #1321, Condition 3, 12/21/05]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Condition II.C.3: The exhaust stacks associated with the refiner lines #3 & #4 shall exhaust vertically. No elbows, tees, or stack caps that impede the vertical flow of exhaust air shall be installed at the end of the stacks. [NOC #1321, Condition 4, 12/21/05]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Condition II.C.4: Visible emissions from each of the exhaust stacks associated with the refiner lines #3 & #4 shall not exceed 10% opacity. [NOC #1321, Condition 4, 12/21/05]

MRRR: The monitoring is the same as for Condition II.A.2. IEPC must perform weekly inspections during daylight hours for the purpose of identifying visible emissions. Weekly inspections should reasonably assure compliance because the refiner lines have a consistent compliance history and run at a constant production rate. In addition, the pulp that is processed through the refiner lines has high moisture content, so particulate emissions are not expected.

If visible emissions are observed, IEPC must verify and certify that:

- 1) the visible emissions or PM emissions are not the result of equipment malfunction, and the equipment, if any, from which the emissions are released, is performing its normal, designed function;
- 2) the air pollution control equipment, if any, is being operated properly in accordance with normal operating procedures; and
- 3) if the visible emissions are the result of fugitive emissions, reasonable precautions are being taken to minimize emissions.

If visible emissions are still observed and 1), 2), and 3) are being met, as a

means of demonstrating compliance with the visible emissions standard(s), the permittee shall perform, or have performed, RM 9 (July 1, 1993) on the source of the visible emissions. The test shall occur within a reasonable timeframe but no later than 24 hours after discovery of the emissions. If the visible emissions exceed the applicable standard, the permittee shall take timely and appropriate corrective action (as soon as possible, but within 24 hours) to address the problem. The results of the RM 9 test shall be submitted to SRCAA within two working days of the test.

[WAC 173-401-615(1) & (2), 9/16/02] [WAC 173-400-050(1), 1/10/05 (2/19/91)] [WAC 173-400-060, (2/19/91)] [WAC 173-400-060, 1/10/05 – STATE/LOCAL ONLY] [WAC 173-400-105(4), 8/20/93] [WAC 173-400-105(4), 11/28/12 – STATE/LOCAL ONLY] NOTE: This is a gapfilling MRRR.

Condition II.C.5: Visible emissions from each chip silo separator and cyclone separator shall not exceed 5% opacity. [NOC #1321, Condition 7, 12/21/05]

MRRR: The monitoring is the same as for Condition II.C.4 IEPC must perform weekly inspections during daylight hours for the purpose of identifying visible emissions. Weekly inspections should reasonably assure compliance because the chip silo separator and cyclone separator have a consistent compliance history and do not have moving parts. In addition, the wood chips are large, so particulate emissions are not expected. The purposes of the chip silo separator and cyclone separator are to size the wood chips; not for air pollution purposes. Provided that the pulp mill is operated using proper operating procedures, there should not be any particulate emissions from the silo separators and cyclone separators.

[WAC 173-401-615(1) & (2), 9/16/02] [WAC 173-400-050(1), 1/10/05 (2/19/91)] [WAC 173-400-060, (2/19/91)] [WAC 173-400-060, 1/10/05 – STATE/LOCAL ONLY] [WAC 173-400-105(4), 8/20/93] [WAC 173-400-105(4), 11/28/12 – STATE/LOCAL ONLY] NOTE: This is a gapfilling MRRR.

Condition II.C.6: No more than 35,500 tons of oven dried pulp shall be processed in refiner line #3 or #4 during any consecutive 12 month period. [NOC #1321, Condition 8, 12/21/05]

MRRR: The monitoring for this condition is contained in NOC #1321, which is the approval order for the refiner lines #3 & #4. No later than the 15<sup>th</sup> of each month, the amount of pulp processed in refiner line #3 and #4 during the previous month must be totaled and recorded. If the amount of pulp processed in either refiner line #3 or #4 during any month exceeds 2,950 oven dried tons, the amount of pulp processed in refiner line #3 and #4 during the last consecutive twelve month period shall be totaled and recorded. Records shall be kept in accordance with I.D.5- Retention of Records, and, upon request,

such records shall be made available for inspection by SRCAA staff or other authorized representatives. [NOC #1321, Condition 8, 12/21/05]

Condition II.C.7: A copy of the approved NOC #1096 and the conditions of approval must be kept on site and made available to SRCAA personnel upon request. [NOC #1096, Condition 1, 10/19/01 as revised on 4/16/02 and 6/7/05]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Condition II.C.8: The reject refiner system shall be maintained in proper working condition, according to the manufacturer recommended practices and procedures. [NOC #1096, Condition 2, 10/19/01 as revised on 4/16/02 and 6/7/05]

MRRR: IEPC is required to keep the manufacturer operation and maintenance plan for the reject refiner system (i.e., primary refiner and secondary refiner) on site. Records shall be kept to document that the manufacturer recommended practices and procedures are being followed. Records shall include information required in I.D.1- Records of Required Monitoring Information. Records shall be kept in accordance with I.D.5- Retention of Records, and, upon request, such records shall be made available for inspection by SRCAA staff or other authorized representatives. [WAC 173-401-615(1) & (2), 9/16/02] – this is a gapfilling MRRR

Condition II.C.9: The primary and secondary refiner stacks shall exhaust vertically. No elbows, tees, or stack caps that impede the vertical flow of exhaust air shall be installed at the end of the stacks. [NOC #1096, Condition 3, 10/19/01 as revised on 4/16/02 and 6/7/05]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Condition II.C.10: Visible emissions from the primary and secondary reject refiner stacks shall not exceed 5% opacity. [NOC #1096, Condition 4, 10/19/01 as revised on 4/16/02 and 6/7/05]

MRRR: The monitoring is the same as for Condition II.C.4. IEPC must perform weekly inspections during daylight hours for the purpose of identifying visible emissions. Weekly inspections should reasonably assure compliance because the refiner lines have a consistent compliance history and run at a constant production rate. In addition, the pulp that is processed through the refiner lines has high moisture content, so particulate emissions are not expected.

[WAC 173-401-615(1) & (2), 9/16/02] [WAC 173-400-050(1), 1/10/05 (2/19/91)]  
[WAC 173-400-060, (2/19/91)] [WAC 173-400-060, 1/10/05 – STATE/LOCAL  
ONLY] [WAC 173-400-105(4), 8/20/93] [WAC 173-400-105(4), 11/28/12 –  
STATE/LOCAL ONLY] NOTE: This is a gapfilling MRRR.

Condition II.C.11: No more than 100 tons of oven dried pulp per day, as measured at the dewatering screw press feed, shall be processed in the primary or secondary reject refiner. [NOC #1096, Condition 5, 10/19/01 as revised on 4/16/02 and 6/7/05]

MRRR: Per NOC #1096, IEPC is required to keep records of the total amount of oven dried pulp processed in the primary and secondary reject refiners each day. Records shall include information required in I.D.1- Records of Required Monitoring Information. Records shall be kept in accordance with I.D.5- Retention of Records, and, upon request, such records shall be made available for inspection by SRCAA staff or other authorized representatives. [NOC #1096, Condition 5, 10/19/01 as revised on 4/16/02 and 6/7/05]

Condition II.C.12: Within 90 days after the reject refiner system achieves a potential throughput of 100 tons of oven dried pulp per day, a stack test shall be performed on the primary and secondary refiner exhausts to quantify the chloroform emissions. [NOC #1096, Condition 6, 10/19/01 as revised on 4/16/02 and 6/7/05]

MRRR: Because of “bottle-necking” issues in the process flow downstream of the refiner system, IEPC has not yet achieved a potential throughput of 100 tons of oven dried pulp per day and has not performed the testing described above. However, per NOC #1096, within 90 days after the reject refiner system does achieve a potential throughput of 100 tons of oven dried pulp per day, a stack test shall be performed on the primary and secondary refiner exhausts to quantify the chloroform emissions. The testing, specified below, shall be conducted, unless alternate test methods or equivalent tests are requested in writing and approved by SRCAA:

- a. The source test plan is subject to SRCAA approval. It is the responsibility of IEPC to submit the source test plan sufficiently in advance for SRCAA to review and approve the plan, prior to the test.
- b. During the test, the primary and secondary refiners shall be operated as close to 100% of the maximum capacity as possible (i.e., 100 tons of oven dried pulp per day).
- c. The source test shall consist of three separate test runs.
- d. The following constituents shall be measured during each test run:
  - i. Volumetric flow rate, per EPA Method 1; and
  - ii. Chloroform, per EPA Method TO-14.

- e. A report, detailing the source test results, shall be submitted to SRCAA for approval no later than 45 days after each test is performed. If the results show that total chloroform emissions from the reject refining system (primary and secondary refiners) are lower than 10 pounds per year (Small Quantity Emission Rate for chloroform given in Chapter 173-460 WAC), no further analysis is required. However, if the results show that total chloroform emissions from the reject refining system are higher than 10 pounds per year, IEPC must submit an analysis to SRCAA which demonstrates ambient impact compliance for chloroform, according to the requirements given in WAC 173-460-080. If IEPC cannot demonstrate compliance with the requirements of WAC 173-460-080 for chloroform, a request for a second tier analysis, according to WAC 173-460-090, shall be submitted to SRCAA.

[NOC #1096, Condition 6, 10/19/01 as revised on 4/16/02 and 6/7/05]

Condition II.C.13: A copy of the Notice of Construction and the conditions of approval shall be kept on site and made available to SRCAA personnel upon request. [NOC #1463, Condition 5, 8/13/09]

MRRR: No monitoring is required. As with all permit terms, IEPC must certify compliance with this condition annually, which includes making a reasonable inquiry to determine if this requirement was met during the reporting period.

Condition II.C.14: The #5 TMP system and heat recovery system shall be maintained in proper working condition, according to the manufacturer recommended practices and procedures. [NOC #1463, Condition 6, 8/13/09]

MRRR: NOC #1463 requires that IEPC must keep maintenance records for the #5 TMP system and heat recovery system for the previous 5 years of operation and make these records available to SRCAA personnel upon request. [NOC #1463, Condition 6, 8/13/09]

Condition II.C.15: Visible emissions from the vent condenser exhaust and the start-up scrubber exhaust associated with the #5 TMP shall not exceed 5% opacity. [NOC #1463, Condition 7, 8/13/09]

MRRR: The monitoring for this condition is the same as for Condition II.A.2. IEPC must perform weekly inspections during daylight hours for the purpose of identifying visible emissions. Weekly inspections should reasonably assure compliance because the refiner lines have a consistent compliance history and run at a constant production rate. In addition, the pulp that is processed through the refiner lines has high moisture content, so particulate emissions are not

expected.

If visible emissions are observed, IEPC must verify and certify that:

- 1) the visible emissions or PM emissions are not the result of equipment malfunction, and the equipment, if any, from which the emissions are released, is performing its normal, designed function;
- 2) the air pollution control equipment, if any, is being operated properly in accordance with normal operating procedures; and
- 3) if the visible emissions are the result of fugitive emissions, reasonable precautions are being taken to minimize emissions.

If visible emissions are still observed and 1), 2), and 3) are being met, as a means of demonstrating compliance with the visible emissions standard(s), the permittee shall perform, or have performed, RM 9 (July 1, 1993) on the source of the visible emissions. The test shall occur within a reasonable timeframe but no later than 24 hours after discovery of the emissions. If the visible emissions exceed the applicable standard, the permittee shall take timely and appropriate corrective action (as soon as possible, but within 24 hours) to address the problem. The results of the RM 9 test shall be submitted to SRCAA within two working days of the test.

[WAC 173-401-615(1) & (2), 9/16/02] [WAC 173-400-050(1), 1/10/05 (2/19/91)] [WAC 173-400-060, (2/19/91)] [WAC 173-400-060, 1/10/05 – STATE/LOCAL ONLY] [WAC 173-400-105(4), 8/20/93] [WAC 173-400-105(4), 11/28/12 – STATE/LOCAL ONLY] NOTE: This is a gapfilling MRRR.

Condition II.C.16: No more than 475 tons of oven dried pulp per day shall be processed in the #5 TMP line. [NOC #1463, Condition 8, 8/13/09]

MRRR: NOC #1463 requires that IEPC must keep of the amount of oven dried pulp processed in the #5 TMP each day. Records shall be kept for the previous 5 years of operation and made available to SRCAA personnel upon request. [NOC #1463, Condition 8, 8/13/09]

Some conditions of the approved Notice of Constructions for the pulp mill lines, NOC #1321 (refiner lines #3 & #4), and NOC #1463 (# 5 refiner line) are no longer applicable because they are one time requirements that have been satisfied. These conditions are listed below and are not included in IEPC's operating permit.

CITATION	DESCRIPTION	REASON NOT INCLUDED IN THE PERMIT
NOC #1321, Condition 1,	SRCAA must be notified seven	Notification was received prior to start-

12/21/05	days prior to start-up of the refiner lines #3 & #4 after the expansion project has been completed.	up. This is a one-time requirement that has been met.
NOC #1321, Condition 2, 12/21/05	Approval becomes void if construction of expansion project for refiner lines #3 & #4 is not constructed within 18 months	Expanded refiner lines were constructed within 18 months, so this condition is no longer applicable.
NOC #1463, Condition 1, 8/13/09	SRCAA shall be notified of the anticipated start-up date of the #5 TMP system with a heat recovery system.	Notification was received prior to start-up. This is a one-time requirement that has been met.
NOC #1463, Condition 2, 8/13/09	<p>The NOC #1463 order of approval shall become invalid if:</p> <ul style="list-style-type: none"> <li>a. Construction is not commenced within eighteen months after the receipt of the approval, or</li> <li>b. Construction is discontinued for a period of eighteen months or more, or</li> <li>c. Construction is not completed within eighteen months of commencement.</li> </ul> <p>SRCAA may extend any of the eighteen month periods referenced above, provided the proponent demonstrates that an extension is justified and the criteria given in SRCAA Regulation I, Section 5.13.B are met.</p>	The approved equipment was installed within 18 months, so this condition is no longer applicable.
NOC #1463, Condition 3, 8/13/09	No later than 90 days after the #5 TMP line commences steady-state operation, IEPC shall perform testing to quantify formaldehyde, acetaldehyde, and total VOC emissions from the vent condenser exhaust and start-up scrubber exhaust.	This requirement was completed on 6/4/10. The test results showed that formaldehyde emissions from the #5 TMP line had potential to exceed the applicable Acceptable Source Impact Levels (ASIL) at the line PTE production rate of 475 ODTDP.
NOC #1463, Condition 4, 8/13/09	The #5 TMP line shall comply with the requirements of Chapter 173-460 WAC (version in effect on April 7, 2009).	Results from the testing, required per NOC #1463, Condition 3, Condition showed that formaldehyde emissions from the #5 TMP line had potential to exceed the applicable Acceptable Source Impact Levels (ASIL) at the line PTE production rate of 475 ODTDP. On

		<p>8/2/10, IEPC submitted a compliance plan to SRCAA detailing actions and deadlines that IEPC will implement to bring the #5 TMP line into compliance with the requirements of Chapter 173-460 (version in effect on April 7, 2009). The compliance plan was completed on 10/14/10. On 12/9/10, revised air dispersion modeling was performed, using AERMOD, to demonstrate compliance with the requirements of Chapter 173-460 WAC. No further action is required to verify compliance with the requirements of Chapter 173-460.</p>
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**II.D. Wood Chip Storage and Handling System Sources**

This portion of the permit covers the wood chip storage and handling system emission limitations. Significant wood chip storage & handling system emission units are listed in Table 4 on Page 14. In 2005, IEPC replaced their existing open-pile wood chip storage system with a new enclosed chip storage system (approved under NOC #1250, which was reviewed under SRCAA Regulation I, Section 5.07.B, “Replacement or substantial alteration of emission control equipment” and SRCAA Regulation I, Section 5.02.F, which states that SRCAA implements and enforces the requirements of WAC 173-400-114 for replacement or substantial alteration of emission control technology at an existing stationary source. Because SRCAA Regulation I, Article V and WAC 173-400-114 are not in the State Implementation Plan, the conditions of this NOC approval are not federally enforceable.

The new wood chip storage and handling system consists of a new truck / rail car unloading station, inlet screening and conveyance systems, outlet conveyance systems, and an additional truck weigh scale. All conveyors and transfer points to and from the silos are enclosed to minimize sawdust emissions. All emissions from the wood chip storage and handling system are considered fugitive emissions.

IEPC has discontinued using and maintaining their existing open-pile wood chip storage system as a back-up system to the new chip handling system approved under NOC #1250. The existing system originally consisted of a truck dump and east & west pneumatic chip flinger systems. The east and west chip flinger towers were removed from the site in September 2008, which effectively rendered the system inoperable.

The following requirements are included in this section.

Condition II.D.1: The wood chip storage and handling system shall be maintained in proper working condition. – STATE / LOCAL ONLY [NOC #1250, Condition 3, 1/13/05

– STATE / LOCAL ONLY]

MRRR: Per NOC #1250, IEPC is required to develop and implement an operation and maintenance (O&M) plan within 30 days of start-up of the wood chip storage and handling system. The O&M plan shall include a description and schedule for periodic inspections of the equipment to ensure there are no leaks which would cause particulate emissions. IEPC developed an O&M plan for the system in 2005. Records shall be kept for the previous 5 years of operation of the dates and results of all equipment inspections performed and dates and nature of any other maintenance performed. Records shall be kept in accordance with I.D.5-Retention of Records, and, upon request, such records shall be made available for inspection by SRCAA staff or other authorized representatives. [NOC #1250, Condition 3, 1/13/05 – STATE / LOCAL ONLY]

Condition II.D.2: The truck / rail car unloading station shall be maintained and operated in a manner which minimizes fugitive particulate emissions, including but not limited to the following:

- a. The area around the unloading station shall be kept clean; and
- b. Any material that has been spilled or tracked out onto paved areas shall be promptly cleaned.

[NOC #1250, Condition 5, 1/13/05 – STATE / LOCAL ONLY]

MRRR: To assure compliance with this requirement, IEPC is required to implement an O&M plan which includes a description and schedule for periodic inspections of the equipment to ensure there are no leaks which would cause particulate emissions.

In addition, IEPC is required to perform weekly inspections of the facility during daylight hours while the facility is in operation to verify that this requirement is being met and record and investigate complaints received regarding air quality problems. If potential violations are observed, IEPC must take timely and appropriate corrective action.

[NOC #1250, Condition 3, 1/13/05 – STATE / LOCAL ONLY] [WAC 173-401-615(1) & (2), 9/16/02] – NOTE: Portions of this MRRR are gapfilled

Some conditions of the approved Notice of Constructions, NOC #1250, for the new wood chip storage and handling system, are no longer applicable because they are one time requirements that have been satisfied. These conditions are listed below and are not included in IEPC's operating permit.

CITATION	DESCRIPTION	REASON NOT INCLUDED IN THE PERMIT
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NOC #1250, Condition 1, 1/13/05	SRCAA must be notified seven days prior to start-up of the new wood chip storage and handling system	Notification was received prior to start-up. This is a one-time requirement that has been met.
NOC #1250, Condition 2, 1/13/05	Approval becomes void if construction of the new wood chip storage and handling system is not constructed within 18 months	New wood chip storage and handling system was constructed within 18 months, so this condition is no longer applicable.

**PERMIT SHIELD FINDINGS (Section III)**

This final section of the permit lists regulations for which the facility has requested, and SRCAA proposes to grant, a permit shield per WAC 173-401-640(2). The findings on which this shield is based are given below. These findings are summarized in the permit.

**Requirements For Which a Shield Will Be Granted**

1PS. 40 CFR Part 60, Subparts D & Db (New Source Performance Standards for Fossil Fuel-Fired Industrial Steam Generators), 1999

Findings: IEPC's #2 Boiler, rated at 120 MMBTU/hour, was constructed in 1959. The boiler has not been modified or reconstructed, as defined in 40 CFR Part 60, since installation. Because of the construction date and heat input rating of #2 Boiler, 40 CFR 60, Subparts D and Db do not apply to this boiler. Subpart D applies only to boilers rated at more than 250 MMBTU/hour constructed after August 17, 1971. Subpart Db applies only to boilers constructed, modified or reconstructed after June 19, 1984.

2PS. 40 CFR Part 60, Subpart Dc (New Source Performance Standards for Fossil Fuel-Fired Industrial Steam Generators), 1999

Findings: IEPC's #1 Boiler, rated at 48 MMBTU/hour, was constructed in 1955. The boiler has not been modified or reconstructed, as defined in 40 CFR Part 60, since installation. Because of the construction date of #1 Boiler, 40 CFR 60, Subpart Dc does not apply to this boiler. Subpart Dc applies only to boilers constructed, modified or reconstructed after June 9, 1989.

3PS. Chapter 173-434 WAC (State Regulation for Solid Waste Incineration Facilities), 12/22/03 – STATE/LOCAL ONLY

Findings: Chapter 173-434 WAC, SOLID WASTE INCINERATOR FACILITIES, applies to all solid waste incinerators designed to burn 12 tons or more per day. Solid waste is defined in the rule to exclude wood waste or sludge from waste water treatment plants. The sludge burned in the permittee's fluidized bed combustor is sludge from the facility's

wastewater treatment plant. Because the sludge is, by definition, not solid waste, this rule does not apply to the permittee's fluidized bed combustor.

4PS. Chapter 173-490 WAC (Emission Standards and Control for Sources of VOCs), 2/2/98

Findings: This chapter applies only to areas that have been classified as nonattainment for ozone. In addition, the rule only regulates specific categories of VOC sources. These categories include

- Petroleum refineries;
- Petroleum liquid storage tanks;
- Gasoline loading terminals;
- Bulk gasoline plants;
- Gasoline dispensing facilities;
- Surface coaters;
- Open top vapor degreasers;
- Conveyorized degreasers;
- Cutback asphalt paving;
- Cold cleaners;
- Dry cleaners;
- Graphic arts systems;
- Surface coating of miscellaneous metal parts and products;
- Surface coating of flatwood paneling; and
- Aerospace assembly and component coating operations

Because Spokane County is not currently a nonattainment area for ozone, the shield can be granted because the rule does not apply.

PREPARED BY: \_\_\_\_\_  
Joe Southwell

DATE: \_\_\_\_\_

This Statement of Basis and the Operating Permit to which it applies have been reviewed by:

\_\_\_\_\_, P.E.  
April Westby, P.E.

DATE: \_\_\_\_\_

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William Dameworth, Control Officer

DATE:

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