

US EPA ARCHIVE DOCUMENT

WEYERHAEUSER COMPANY  
FLINT RIVER OPERATIONS

PROJECT XL

FINAL PROJECT AGREEMENT (FPA)

*1999 ANNUAL PROGRESS REPORT*

(JANUARY 99 - DECEMBER 99)

# **FLINT RIVER OPERATIONS PROJECT XL**

## **1999 ANNUAL PROGRESS REPORT**

**(JANUARY 99 - DECEMBER 99)**

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## **FLINT RIVER OPERATIONS PROJECT XL**

### **1999 ANNUAL PROGRESS REPORT**

**(JANUARY 99 - DECEMBER 99)**

#### **I. OVERVIEW:**

*Note: The 1999 Annual FPA Tables One, Two and Three summarize the facility's actual environmental performance results versus the FPA superior environmental goals. The 1999 Annual Progress Report narrative provides detailed technical information describing the specific actions taken by the facility to achieve the superior environmental performance goals. Beginning with this report, Table Three was modified by adding additional information for Energy Conservation. Data for total plant steam usage and Power Boiler steaming rate are the new items. Please refer to the "Glossary of Terms" for an explanation of abbreviations.*

#### **General Status**

Last year the plant committed to return the number of reportable air excursions to lower historical levels. This goal was accomplished through employee training and plant process improvements. Water usage reduction in the plant is now a main focus area. Several factors caused water usage to increase during the first six months, but the second half of 1999 saw a reduction that consistently remained below the Phase IV goal. Plans are moving forward that should continue to favorably impact the reduced water usage commitment in the Project XL agreement. The same is true for converting the Flint River environmental management system to one that conforms with the ISO 14001 standard. Documentation of environmental aspects began in 1999 and we anticipate completing this MIM project by the end of 2000.

Solid waste to the plant landfill increased slightly in 1999. A significant amount of investigative work was accomplished during the year to search for a beneficial use for these plant residuals. Composting trials were successfully completed in the previous year and proved that at least some of the solid waste residuals can be made into a beneficial product. One company in Georgia very much wanted this compost material, but the trucking costs to transport it to their location was too high for consideration. We have also investigated the requirements to install a composting process on the plant site. Although the capital costs are high, we continue to look into this option.

The past year also yielded energy conservation improvements. The average annual steaming rate of the Power Boiler was slightly less than the previous year. Much effort was placed against HAP's emission reductions to get to a position of writing the site-specific MACT Rule for Flint River which should occur early in 2000. The plant continues to remain below the new water (effluent) parameters that were lowered in the NPDES permit in the first year of this XL agreement.

Flint River is always eager to share experiences and learnings as a Project XL program participant to any interested parties. Several of these opportunities occurred this past year and included a briefing to customers of Flint River's product and other local stakeholder groups.

#### **Facility Compliance Status**

In the last several progress reports, the number of reportable air permit incidents have been reviewed and the plant's concern over the increase from previous years was stated. These reportable air permit incidents have been minor in nature and usually represent emissions from equipment for a time period that only slightly exceeds what is allowed in

the Air Quality Permit during malfunctions or process upsets. At the last annual stakeholders meeting, the site manager assured stakeholders that processes would be put in place to return the number of reportable incidents to historical levels. This goal was achieved during 1999. There were a total of 37 incidents in 1999. 14 of these occurred in the first month of the year, prior to last year's annual stakeholder meeting and before improvement plans were implemented. The incident rate for the remaining 11 months matched the historical level. Improvement steps included adding environmental limits with alarms to the plant process control system, improved documentation of proper procedures, and operator training.

There were no reportable spills from process equipment during 1999. All other processes operated within environmental permit limits for waste water treatment, solid waste, surface water, groundwater, and drinking water throughout the year.

## **II. ENVIRONMENTAL PERFORMANCE UPDATE:**

One of the primary objectives of the FPA was to delineate the level of superior environmental performance that the Flint River Operations would achieve under its MIM evolution strategy. These superior environmental performance targets were specified in Tables Two and Three of the FPA. The tables have been updated to reflect the facility's actual environmental performance through December '99. In sum, water quality parameters continue to show superior environmental performance; water usage is not yet achieving targeted levels. Raw water usage increased primarily due to unusual unreliable operations during the first five months of 1999. Secondly, Flint River experienced increased customer demand for higher brightness pulp, which requires more water in the manufacturing process, adding to the increased usage. The permit limit for surface water withdrawal has not been exceeded. However, the increased use of water has delayed the implementation of a reduction in the permit limit of 1 million gallons per day (MGD). (Refer to the Water Use Reduction paragraph under MIM Phase V Implementation for information on plans to reduce water usage and sustain the Phase IV goal.) We continue to focus on creative non-capital as well as capital solutions to attain our water reduction goals.

BOD, TSS, and AOX have remained below the new tighter permit limits that were established in 1997 as part of this agreement. Solid Waste generation was a little higher than 1998, but we have achieved nearly half of the Phase V goal in this area. Hazardous waste generation remains at a very low level, maintaining the plant status as a Conditionally Exempt Small Quantity Generator. Bleach Plant effluent flow has remained at the same level. A feasibility study was completed to look at options to reduce the flow by 50%. (See this topic under MIM Phase V Implementation for more information.)

## **III. MINIMUM IMPACT MANUFACTURING:**

### **MIM Phase IV Implementation**

MIM Phase IV covers the construction and operation of several process technology improvements (Isothermal Cooking - Brownside Optimization, Odor Control Upgrade, Energy Steam Reductions) and the conversion of Flint River Operation's environmental management system (EMS) to conform to ISO 14001. All of these MIM Phase IV projects have been completed in a previous year with the exception of ISO 14001 EMS.

**ISO 14001 EMS:** This project requires a great deal of effort for environmental resources to document the significant environmental aspects and the supporting management structure. Due to our focus on the HAP's reduction project and the requirements of other mandatory programs such as the Cluster Rule and Risk Management Plans (RMP), only moderate progress has been made during 1999. The Guidance Document was completed by personnel from corporate resources, Flint River, and another Weyerhaeuser facility. Several significant environmental aspects have been documented and about twenty-five others remain to be completed. Most of the supporting documentation and structure for ISO 14001 already exists, or needs only minor updating, within the plant's ISO 9002 Quality System. A milestone schedule for completing this MIM project will be developed early in 2000 with anticipated completion by the end of the year.

### MIM Phase V Implementation

During 1999, MIM Phase V Feasibility Studies continued in the following areas: Solid Waste Reductions, Energy Conservation, HAP's Emission Reductions, Water Use Reduction and Bleach Plant Effluent Reductions. The Timberlands Resource Strategies were fully implemented in 1997.

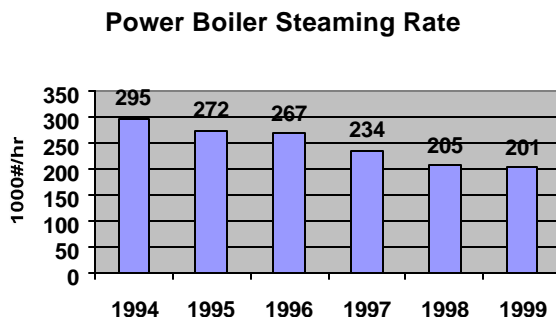
**Solid Waste Reductions:** There have been both performance gains and challenges with solid waste generation performance targets. Solid waste generation in 1999 was 498 lbs/ADMT of production. This is a slight increase over the 1998 performance of 461 lbs/ADMT. Progress in reducing waste generation was impacted by continuing Calcliner operating and mechanical issues and an increase in Wastewater Primary Clarifier sludge. On a positive note, reductions of 126 tons in Screening Room "knots" and 630 tons of Power Boiler flyash were realized. In addition, Woodyard "sticks" from the Debarking Drum are being recovered back to the fiberline via the log flume.

Year 2000 waste reduction efforts in this area will focus on reducing lime mud by continuing the Calcliner throughput and reliability study, reducing fiber losses from the pulping process, and reducing Power Boiler flyash by performing a thermal efficiency study and installing advanced process controls on the boiler.

**Composting Feasibility Trial:** An economic evaluation of composting has been completed. This evaluation shows composting of the organic based process residuals to be economically viable. A plan to further refine the composting process and evaluate economics is currently being developed.

**Land Application Feasibility Trials:** The Weyerhaeuser study plans for application of compost and some process wastes on small test plots as forest and crop amendments are on schedule. Due to last year's drought, first measurements for survivability and growth will be conducted this spring. The long-term study being conducted by the University of Georgia using process solid wastes for silvicultural and agricultural soil productivity remains on schedule. An area of interest for future development is the use of lime mud as a lime substitute and compost application on selected row crops in the local area.

**Energy Conservation:** Gains continue to be made in the area of energy conservation. Emphasis in the plant continues on finding methods to reduce steam usage. Two capital projects from the completed energy conservation study were investigated. Creative non-capital projects that were developed are still yielding good results. The non-capital projects were implemented in 1998 and the results as indicated in the chart below show the average annual steaming rate of the Power Boiler continuing to decline. A reduction in Power Boiler steaming rate has a direct relationship to favor less criteria air pollutants being emitted from this piece of equipment. There has been a 27% decrease in Power Boiler steaming rate since the baseline years preceding this Project XL agreement.



Looking forward to 2000, two additional energy saving projects are scheduled to enter the company's capital management program for evaluation.

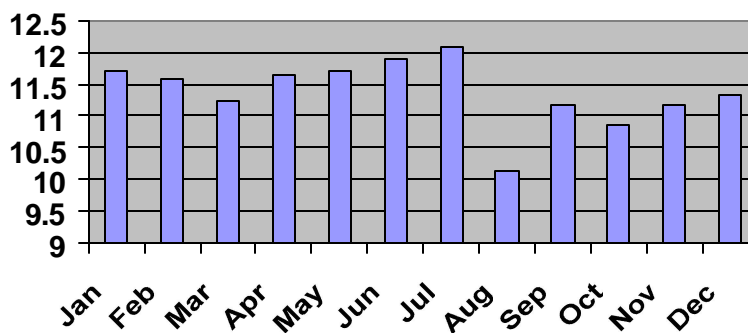
Additional data has been added to Table Three under the existing heading of "Energy Conservation". The annual total plant steam usage per ADMT of production and the Power Boiler annual average steaming rate results have been inserted for all the years covered in the table.

**HAP's Emission Reductions:** There was extensive focus on HAP's analysis to achieve reduction targets. Early in 1999 Weyerhaeuser met with the EPA and the GaEPD to review the results of the testing done on all the process vents currently collected by the NCG system and other vents that are required to be collected by the Cluster Rule. A review of the data confirms that Flint River is collecting and destroying more HAP's through its present NCG collection systems (includes most of the vents required by the Cluster Rule and several other vents that are not required), than if only the Cluster Rule vents were collected. It was agreed Weyerhaeuser would be granted flexibility through the terms of the XL agreement. The few vents specified under the MACT Rule not collected would not be required to be added to the NCG system due to the demonstrated superior performance.

In July, the plant performed 30 days of testing for methanol content in condensate streams. The results of this testing indicated that with a change in piping, more methanol in condensate could be diverted to biological treatment. The piping change was made and in October another 21 days of testing was performed. Another follow-up meeting was arranged with the EPA and the GaEPD in December. The results document that the condensate collection system is treating 83% more methanol than what is required by the Cluster Rule in biological treatment alone. This does not take into account recycle of condensate back to the process nor destruction of HAP's in the NCG gases in the boilers. It is not clear if Weyerhaeuser may receive any additional flexibility in this area of superior environmental performance.

**Water Use Reductions:** Performance targets have not yet been achieved in total water usage. The first six months of 1999 was a period of unusually high operating problems in the pulp mill. The plant was 12,000 tons below the production forecast at that point in time. During periods of operating problems, the plant uses more water than would be normally anticipated. In addition, some quality issues drove the operation to increase water usage while making a high brightness product for a particular customer. As a result, water consumption was high in the first half of the year. The first goal in this Project XL agreement was to lower the surface water permit monthly average daily usage by 1.0 MGD. The new permit limit would then be 11.5 MGD. During the second half of the year, the plant usage was below this limit. Flint River believes it will have plans, processes and projects in place to consistently remain below 11.5 MGD by mid year. We anticipate submitting an application to lower the surface water permit by early July, 2000.

**1999 Surface Water Monthly Average  
(MGD)**



The longer term goal of the XL agreement is to reach a total water usage level of 10.18 MGD. The plant is committed to continue moving toward this goal. During 1999, daily water usage was given higher visibility by

the operating teams when this parameter was added to the shift results tracking tool. When water usage could not be significantly lowered through administrative controls, the teams asked for additional assistance to find an engineering solution. Whitewater usage in the Product Unit was identified as an area of opportunity and this resulted in upgrading the whitewater pump late in the year. Other initiatives including capital and non-capital projects will continue through 2000 to make a step change towards the long-term water usage goal.

**Bleach Plant Effluent Reductions:** The feasibility study as outlined in the FPA was completed a couple of years ago. The study was done to determine the equipment required, effects on product quality and effluent, and estimated capital costs. Based on the completed feasibility study, the current path forward is not technically and economically feasible. Pulp purchasers in Europe and North America have indicated no interest in paying a higher price to cover manufacturing costs for pulp from a mill with a closed bleach plant. Weyerhaeuser has technical resources searching for R&D work from within the industry that may uncover new opportunities to reduce bleach plant effluent. Weyerhaeuser remains committed to this MIM project and will seek alternate ways to move toward the goal during the next six years of the agreement.

#### **IV. STAKEHOLDER INVOLVEMENT:**

Weyerhaeuser Company openly communicates concerning the status of operation under the FPA, answering all questions and inquiries. On February 4, 1999 the second annual stakeholders meeting was held at the facility near Oglethorpe, Georgia. This meeting was open to the public and was advertised in area newspapers and courthouses. The feedback obtained from the meeting was very supportive of both the Project XL Program and Weyerhaeuser Company's environmental performance. The third annual stakeholders meeting is scheduled for February 3, 2000.

U.S. EPA has maintained an updated Project XL Internet page, which contains a copy of the approved FPA document and other associated information. This 1999 Annual Progress Report will be available on U.S. EPA's Project XL Internet page at <http://www.epa.gov/ProjectXL>.

The following is a listing of meetings and conferences that Weyerhaeuser personnel have attended and participated in to share information regarding the FPA and Project XL during 1999:

Presentation to a Georgia Tech Environmental Management Course

Included a discussion of Project XL

Participated in a Project XL cost/benefit review with EPA, stakeholder representatives and other XL participants in Washington, DC

Weyerhaeuser Environmental Audit Workshop

Presented program on Flint River Operations Project XL Experience & Minimum Impact Manufacturing "Learning Together" Conference on Environmental Management Systems, Environmental Performance and Regulatory Innovation

Discussed Weyerhaeuser's experience with Project XL and the benefits of including an EMS as part of the agreement

Multi-State Working Group meeting on Regulatory Innovation

Presented material of Weyerhaeuser's Project XL and Environmental Management Systems

University of Minnesota, Center for Environmental & Health Policy

Discussed the Project XL stakeholder process

Presentation to Weyerhaeuser Environmental Functional Team

Presented material and discussed Project XL with Weyerhaeuser plant environmental staff

Presentation to Purchasing representatives from Procter & Gamble, Co. (Customer of Flint River Operations)

Gave a presentation on Weyerhaeuser's Project XL and answered questions about environmental performance

Lions Club Meeting, Cordele, Ga.

Gave a presentation to approximately 75 community residents on Weyerhaeuser's Project XL and answered questions about environmental performance



## **V. FINAL PROJECT AGREEMENT IMPLEMENTATION:**

### **Regulatory Actions**

During 1999, the regulatory initiatives have been the continued development of the site specific rule for implementing the alternative compliance approach for the MACT I standard.

The modification to the water withdrawal permit is expected at mid year, 2000.

### **FPA Section IX: Implementation Schedule**

Progress against the implementation timelines outlined in FPA Section IX. - Implementing Project XL for Flint River Operations, is as follows:

#### **Mechanisms That Are Enforceable:**

WATER:	Items 1, 2, 3, 4, 5 - Completed in NPDES permit.
WATER USAGE:	Item 1 – Application to reduce permit by 1.0 MGD expected in July, 2000.
SOLID WASTE:	Item 1 – Permit modification request submitted in late 1998. No written authorization yet received.
AIR:	Items 1, 2, 3, 4, 5, 6 - Completed in PSD air quality permit. Item 7 – In progress

#### **Mechanisms That Are Not Enforceable:**

ISO 14001 EMS:	Item 1 - Work in progress, to be completed in 2000.
WATER:	Item 1 - Following timelines per the original FPA.
SOLID WASTE:	Item 1 - Completed. Item 2 - Feasibility studies in progress for composting and land application initiatives; following timelines per the original FPA for 50% reduction.
HAZARDOUS WASTE:	Item 1 - Completed.
BLEACH PLANT:	Item 1 - Following timelines per the original FPA for 50% reduction.
ENERGY:	Item 1 – In-depth feasibility study complete. Item 2 - Following timelines per the original FPA.

## **VI. SCHEDULE:**

### **Next Six Months**

The key focus areas for continued successful implementation of the FPA over the next six months will be the following:

- Identify and implement water conservation measures to sustain the MIM Phase IV monthly average goal of 11.5 MGD.
- Apply for a reduction in the surface water withdrawal permit when sustained capability below 11.5 MGD is validated at mid year, 2000.
- Define possible water reuse and reduction opportunities that would reduce Bleach Plant effluent flow.
- Continue efforts in Energy Conservation and establish a goal for desired Power Boiler annual average steaming rate.
- Complete the development of the MACT I site-specific rule for the facility.
- Complete the effort to convert Flint River Operation's EMS into ISO 14001 EMS in 2000.
- Implement the applicable Cluster Rule requirements according to timelines within the regulation.
- Focus on continued reduction of Solid Waste in Wastewater Clarifier Sludge by optimizing the finish fiber cleaners, Screening Room "Knots" reinjection into the Digester, Calciner throughput and reliability, and recovery of Woodyard "sticks" from the Debarking Drum.

### Long Term Schedule

Over the longer term, Weyerhaeuser will continue to look for opportunities to reduce Bleach Plant effluent as well as plant water usage. Solid waste reduction will also be a focus area since composting trials were successful and we will continue to search for a long-term economic use for these residuals. In addition to the Project XL FPA initiatives, other regulatory requirements to be implemented include the following: Cluster Rule Liquor Best Management Practices, Compliance Assurance Monitoring requirements and state issuance of the facility's Title V Air Permit. Additionally, we will continue our on-going dialogue with Stakeholders seeking their input on our facility's long-term MIM Vision, including the Lake Blackshear Watershed Association, Macon County Local Emergency Planning Committee, Georgia Southwestern State University, representatives of local and state governments, and local neighbors and facility employees.

Weyerhaeuser Project Contact Listing:

Please contact the below listed Weyerhaeuser individuals for more information regarding this FPA:

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**GLOSSARY OF TERMS**

ADMT	Air Dry Metric Ton - measure of the facility's finished product = 2,205 lbs
AOX	Adsorbable Organic Halide - measurement of the amount of chlorinated organic compounds.
BOD5	Biological Oxygen Demand - the amount of oxygen consumed in five days by biological processes breaking down organic matter.
COD	Chemical Oxygen Demand - the measure of oxygen required to oxidize all compounds in water, both organic and inorganic.
EMS	Environmental Management System
EPA	United States Environmental Protection Agency
EPD	Georgia Environmental Protection Division
FPA	Final Project Agreement
HAP	Hazardous Air Pollutant
ISO	International Standards Organization
NCG	Non-Condensable Gas
NPDES	National Pollutant Discharge Elimination System
MIM	Minimum Impact Manufacturing - a holistic pollution prevention strategy to minimize the impact on the natural environment (air, soil, water).
MACT	Maximum Achievable Control Technology
ORP	Oxidation Reduction Potential
SO <sub>2</sub>	Sulfur Dioxide
TRS	Total Reduced Sulfur
TSS	Total Suspended Solids - a measurement of the amount of suspended solids in an effluent water sample.
XL	eXcellence and Leadership

## 1999 ANNUAL ACTUALS FPA - TABLE ONE

### MINIMUM IMPACT MILL - KEY ENVIRONMENTAL DATA PARAMETERS

Parameters important to demonstrating continuous improvement towards a Minimum Impact Mill are:

ENVIRONMENTAL PARAMETER		1996 ACTUAL	1997 ACTUAL	1998 ACTUAL	1999 ACTUAL				
<b>WATER</b>									
Water Usage (MMGD)		11.91	11.74	11.49	11.92				
Bleach Plant Effluent Volume (m3/ADMT)		20	20	20	20				
Final Effluent Volume (gal/ADMT)		11,704	11,365	11,366	9,833				
BOD (lbs/ADMT)		3.52	3.01	2.13	2.83				
COD (lbs/ADMT)		53.8	36.5	35.5	35.3				
TSS (lbs/ADMT)		3.58	3.13	2.80	3.87				
AOX (kg/ADMT)		0.10	0.10	0.10	0.10				
Dioxin - 2,3,7,8 TCDD		non detect	non detect	non detect	non detect				
Color (lbs/ADMT)		115	94	87	86				
Nutrients: NH3-N & Total P (lbs/ADMT)		NH3-N 0.14	Tot P 0.15	NH3-N 0.15	Tot P 0.13	NH3-N 0.20	Tot P 0.14	NH3-N 0.15	Tot P 0.14
Chronic Toxicity – Ceriodaphnia (IC25 Annual Average)		55	81	47	55				
<b>AIR</b>									
Particulate (tons/year) (1)		423	385	390	395				

Total Reduce Sulfur (tons/year) (2)		39	35	33	35
Chloroform (tons/year) (3)		0.94	0.89	1.00	0.98
Chlorine (tons/year) (3)		0.18	0.18	0.19	0.19
Chlorine Dioxide (tons/year) (3)		0.67	0.68	0.70	0.68
CO (tons/year) (6)		1676	1454	1573	1599
NOx (tons/year) (4)		832	769	795	814
SO2 (tons/year) (4)		271	624	582	303
VOC's as C (tons/year) (5)		636	669	652	632
Opacity - Recovery Boiler (% Excess Opacity Emissions/year)		0.65%	1.70%	0.70%	0.50%
HAP's (tons/year) (5)		425	429	426	428
<b>SOLID WASTE</b>					
Solid Waste Generation (lbs/ADMT)		505	409	461	498
Solid Waste Disposition		on-site landfill	on-site landfill	on-site landfill	on-site landfill
Hazardous Waste Generation Status (7)		SQG	Conditionally Exempt SQG	Conditionally Exempt SQG	Conditionally Exempt SQG
<b>OTHER</b>					
Accidental Releases/Spills (#/year)		0	1 (Sulfuric Acid spill to ground)	0	0
Reportable Permit Incidents (#/year)					
- Air Permit Incidents (8)		25	27	59	37
- All Other Permits (NPDES, Landfill, Potable Water, Water Withdrawal)		0	0	1	0

				(Potable Water)	
Sara 313 (# Reportable Chemicals/year) (9)		10	11	11	11
Energy Steam Usage (MlbsSteam/ADMT) (10)		22.44	20.94	20.56	20.53
Community Complaints					
* Site Appearance		None	None	None	None
* Odor (#/year)		2	3	3	8
* Noise (#/year)		0	0	0	0

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- 1 Emissions calculated from Recovery boiler, Power boiler, Calciner, Smelt dissolving tank and fugitives.
  - 2 Emissions calculated from Recovery boiler, Calciner, Smelt dissolving tank and process vents.
  - 3 Emissions calculated from all process vents. Figures for 1995, 1996, and 1997 have been revised to indicate emissions from all process vents and to correct a conversion factor error. The data for these items are derived from SARA 313 estimates.
  - 4 Emissions calculated from Recovery boiler, Power boiler, Calciner and Smelt dissolving tank.
  - 5 Emissions calculated from Recovery boiler, Power boiler, Calciner, Smelt dissolving tank, process vents and fugitives.
  - 6 Emissions calculated from Recovery boiler, Power boiler, Calciner, Smelt dissolving tank and process vents.
  - 7 Small quantity generator status is < 2,200 lbs/month hazardous waste generation; Conditionally Exempt SQG < 220 lbs/month.
  - 8 Number of air permit incidents reported in quarterly excess emissions reports for 1995, 1996, 1997. Includes air pollution control equipment malfunctions, excess emissions incidents, continuous emission monitor malfunctions, non condensable gas collection system venting incidents and surrogate parameters exceedances. No enforceable actions taken.
  - 9 The SARA 313 chemicals reported for 1995: acetaldehyde, ammonia, catechol, chlorine, chlorine dioxide, cresols, formic acid, hydrochloric acid, methanol, nitrate, phenol, sulfuric acid. Reported 1996: acetaldehyde, ammonia, catechol, chlorine, chlorine dioxide, cresols, hydrochloric acid, methanol, phenol, sulfuric acid. Reported 1997: acetaldehyde, ammonia, catechol, chlorine, chlorine dioxide, cresols, methanol, phenol, sulfuric acid, nitrate, formic acid. The facility's SARA 313 calculations are primarily based on industry emissions factors which are being revised annually.
  - 10 Energy steam usage is the quantity of on-site steam generation from the Recovery and Power Boilers required to produce an air dry metric ton of finished fluff pulp.

## 1999 ANNUAL ACTUALS FPA - TABLE TWO

### FLINT RIVER BASELINE PERFORMANCE AND MIM IV GOALS TO BE INCLUDED IN ENFORCEABLE PERMITS

ENVIRONMENTAL PARAMETER <sup>1</sup>	BASELINE <sup>2</sup>	1996 ACTUAL	1997 ACTUAL	1998 ACTUAL	1999 ACTUAL	FPA AGREEMENT MIM PHASE IV GOAL
Raw Water Usage (million gallons/day)	11.18	11.91	11.74	11.49	11.92	11.50
Effluent Discharged to Flint River						
BOD (lbs./ADMT)	4.32	3.52	3.01	2.13	2.83	3.80
TSS (lbs./ADMT)	4.65	3.58	3.13	2.80	3.87	4.09
AOX (kg./ADMT)	0.11	0.10	0.10	0.10	0.10	0.15

<sup>1</sup> Applicable regulatory requirements are unaffected for all regulated environmental parameters that are not listed in Table Two.

<sup>2</sup> Baseline conditions are derived from average monthly values for calendar 1993, 1994 and 1995.



### 1999 ANNUAL ACTUALS FPA - TABLE THREE

#### **FLINT RIVER BASELINE PERFORMANCE AND MIM GOALS THAT WILL *NOT* BE INCLUDED IN ENFORCEABLE PERMITS**

ENVIRONMENTAL PARAMETER	BASELINE	1996 ACTUAL	1997 ACTUAL	1998 ACTUAL	1999 ACTUAL	FPA AGREEMENT MIM PHASE V GOAL
Solid Waste Generation (lbs/ADMT)	690	505	409	461	498	310
Hazardous Waste Generation	Small Qty.Gen.	Small Qty.Gen.	Conditionally Exempt SQG	Conditionally Exempt SQG	Conditionally Exempt SQG	Conditionally Exempt SQG
Bleach Plant Flow (m <sup>3</sup> /ADMT)	20	20	20	20	20	10
Environmental Management System	Flint River EMS	Flint River EMS	Flint River EMS	Flint River EMS	Flint River EMS	ISO 14001
Energy Conservation				Feasibility Study in Progress	Feasibility Study Completed	To Be Determined (early 2000)
Total Plant Steam Usage (m#/ADMT) (Power Boiler + Recovery Boiler)	21.58	22.44	20.94	20.56	20.53	
Power Boiler Steaming Rate (m#/hr)	274	267	234	205	201	