

US EPA ARCHIVE DOCUMENT

WEYERHAEUSER COMPANY
FLINT RIVER OPERATIONS

PROJECT XL

FINAL PROJECT AGREEMENT (FPA)

2000 MID YEAR PROGRESS REPORT

(JANUARY 00 - JUNE 00)

FLINT RIVER OPERATIONS PROJECT XL

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FLINT RIVER OPERATIONS PROJECT XL

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I. OVERVIEW:

Note: The 2000 Mid Year FPA Tables Two and Three summarize the facility's actual environmental performance results versus the FPA superior environmental goals. The 2000 Mid Year Progress Report narrative provides detailed technical information describing the specific actions taken by the facility to achieve the superior environmental performance goals. Please refer to the "Glossary of Terms" for an explanation of abbreviations.

General Status

Flint River continues to be recognized as an environmental leader in the Pulp & Paper industry. In May the Georgia Chamber of Commerce recognized Weyerhaeuser – Flint River Operations with an Environmental Leadership Award in the Water Quality category. Weyerhaeuser was recognized for a 13.5% reduction in final effluent per ton of production and for eighteen consecutive years of perfect compliance with its NPDES permit limits for wastewater discharged to the Flint River.

During the reporting period for this progress report emphasis has been placed on three MIM projects; Water Use Reduction, Environmental Management System, and HAPs Emissions Reduction.

In 2000 a high priority was placed on making progress in Water Use Reduction. Several projects were implemented that have reduced water usage by 0.5 MGD. Another project has just been funded that should decrease water usage by another 0.5 MGD during the latter half of this year. Progress in this area has also allowed the plant to initiate the 1 MGD reduction of the limits in the Surface Water Withdrawal permit.

The conversion of the Flint River Environmental Management System to conform to the ISO 14001 standard is making excellent progress. About 75% of the required documentation is complete. Training of plant personnel is scheduled for early fall and an audit of the entire system will be performed in November.

Superior performance has been demonstrated with more HAPs collected and destroyed from process vents and 83% more HAPs collected and destroyed from condensates than is required by MACT. This is evidenced by data that has been assembled, analyzed and reviewed with the US EPA and the Ga EPD. A site-specific MACT Rule was drafted and is now in the approval process with the regulatory agencies.

Facility Compliance Status

Review of Table Two of this report shows the water parameter results for the first six months of 2000 and the yearly historical results. Although it appears that BOD and TSS have increased this first half of the year and are over the limit, the lbs/ADMT unit of measure is not the same measure as used in the NPDES permit, which uses lbs/day. BOD and TSS are not over the NPDES permitted limit and the NPDES permit does include the more restrictive limits set forth in the FPA. A seasonal affect and the loss of some hydraulic volume of the 1st cell of the wastewater treatment system due to 20 years of use has caused these parameters to indicate an increase on a lbs/ADMT basis. A multi-year project has begun to regain most of the hydraulic volume of the 1st cell lagoon. The next annual progress report will eliminate the seasonal affect and it is expected that BOD and TSS will be reported within the limits of the FPA.

II. ENVIRONMENTAL PERFORMANCE UPDATE:

One of the primary purposes of the FPA was to delineate the level of superior environmental performance that 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 are updated in this report to reflect the facility's actual environmental performance through June 2000. The raw water usage has decreased below the MIM Phase IV goal. This has been achieved through water conservation efforts from both water reduction capital projects and water conservation awareness training of plant personnel. Action has been taken to initiate a reduction of the surface water withdrawal permit limit by 1 MGD as agreed to within the FPA. Effluent Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) appear to be higher than goal on a pounds per ton of finished product basis. However, within the NPDES permit pounds per day specification, the limit has not been exceeded. The six-month reporting frequency of this progress report does not align with the seasonal operational differences in the plant because of holding pond use during low river flow conditions. The NPDES permit is written with two different sets of limits for these parameters for the November through April and the May through October periods. The November through April limit is almost twice the limit of the other six months of the year. After periods of drought the river flow diminishes, and a portion of the mill effluent is diverted to the Holding Pond. The contents of this pond is slowly emptied when the river flow increases, which is during the early part of the year. Just as last year, we expect the BOD and TSS to be within the FPA targets for the annual report.

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: Significant progress has been achieved with the reorganization and documentation of the Flint River EMS so that it conforms to the ISO 14001 standard. Most of the high level documentation has been completed, significant environmental aspects have been identified and 50% of those have been documented. A three part training package has been prepared that will provide the needed information about responsibilities within an EMS for plant leadership, team leaders, and all mill employees. An internal audit of the EMS is scheduled for November 2000, with follow-up items completed by the end of the year. At that time, a fully functioning EMS that conforms with ISO 14001 will be in place.

MIM Phase V Implementation

In 2000, MIM Phase V Feasibility Studies continued in the following areas: Solid Waste Reductions, Energy Conservation, HAPs Emission Reductions and Water Use Reduction. The Timberlands Resource Strategies were fully implemented in 1997.

Solid Waste Reduction: Solid waste generation for the first half of 2000 was 482 lbs/ADMT. This is a slight reduction from 1999's performance of 498 lbs/ADMT. Except for lime mud, other process residuals showed slightly lower generation rates than for the same period in 1999. Wastewater Primary Clarifier sludge decreased 0.8%, Power Boiler flyash decreased 1.7%, Screening Room "knots" decreased 2.3%, and Woodyard wastes decreased 72.6%. However, lime mud increased 7.7% due to mechanical problems resulting in significant additional downtime. Since lime mud is the largest quantity of waste generated, any change has a large impact on the overall performance.

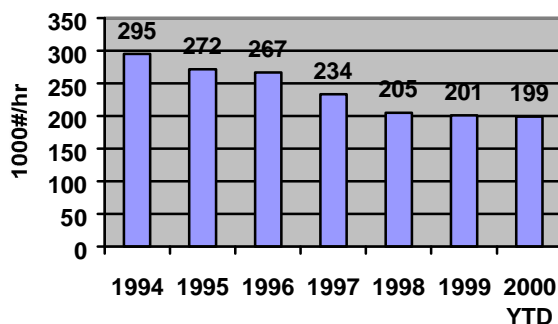
The mill will be initiating a major study over the next 6 months to determine scope required to meet the 2006 solid waste goal. The major opportunities are lime mud and composting. Potential Calciner modifications will be studied. In addition, the plan to refine composting methods and cost was completed. If possible, approval will be sought during the 1st half of 2001.

The Power Boiler advanced control study is in progress. This study is investigating ways to reduce combustion air and increase thermal efficiency through more complete combustion. This should result in a decrease of flyash from the boiler. The study is expected to take approximately one year to complete.

Land Application Feasibility Trial: This trial is continuing into the second growing season. Soil sampling and growth rate has taken place on a quarterly basis. No affect on the mortality rate of seedlings was observed after the first growing season, however, growth rate is expected to be positively impacted in subsequent years.

Energy Conservation: Three energy conservation projects are currently in progress to improve the efficient use of steam in the plant. These are Recovery Boiler sootblower steam, Power Boiler advanced controls, and the Turbo Generator exhaust pressure control. Each of these is expected to increase the efficiency of the boilers and result in less steam generation needed to operate the plant. As the graph below indicates, Power Boiler steaming rate has decreased steadily from the years prior to the XL agreement. One major steam saving project, which was identified in the completed energy conservation study, has been placed on the plant's Major Capital Funding plan for consideration in 2001.

Power Boiler Steaming Rate



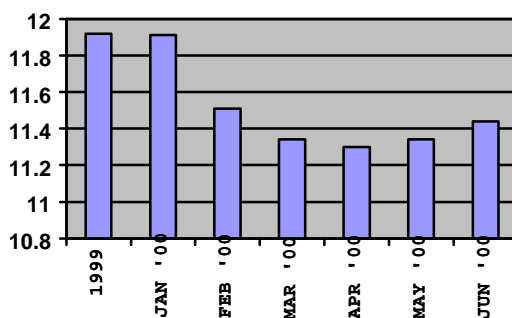
As an outcome of the Energy Conservation Study an energy goal of 20.0 M#/ADMT (thousands of pounds of steam per air dried metric ton of production) was set. This target depends both on low steam generation and reliable operation of the plant to achieve finished product production goals. Prior to this Project XL agreement, the plant was delivering 22.44 M#/ADMT (see Table Three of this report). When the goal is achieved it will require 2440 fewer pounds of steam to make one ton of pulp. Less steam production equates to less criteria air pollutants being generated, less water usage and less generation of boiler ash (solid waste).

HAPs Emissions Reduction: As stated in the 1999 Annual Progress Report there has been an extensive focus on HAPs to achieve reduction targets and demonstrate superior environmental performance. The study of process vents that are required to be collected by the Cluster Rule as well as the additional vents that Weyerhaeuser collects determined that more HAPs are collected than what is required. The US EPA and Ga EPD agree with the data and have offered flexibility by not requiring collection of the four uncollected vents that are listed in MACT. During the past six months a draft site-specific MACT Rule has been written to formalize this agreement (as specified in the FPA) and is in circulation for approval within the EPA. In the latter half of 1999, Weyerhaeuser performed two rounds of testing for methanol content in condensate streams. Although no additional flexibility will be granted, a piping change was made to the process which allows the condensate collection system to treat 83% more methanol than required by the Cluster Rule in biological treatment alone. Additional HAPs are also treated by recycle and by destruction of NCG gases in the boilers.

Water Use Reduction: Excellent progress was made on reducing water usage in the plant during the first six months of 2000. The average daily water usage has dropped by approximately 500,000 gallons per day. A water reduction team was formed that used various methods to raise the awareness level of employees to

conserve water and to discuss the potential of several projects to permanently lower water usage. We also conducted a successful experiment that determined replacing the water in the paper machine wire pit not really necessary when changing grades to a higher brightness product. Additionally, a flow measurement device and control valve was placed in the pipeline of water going to the wire pit for continuous monitoring. Several shower nozzles in the Woodyard operation were resized and replaced with smaller nozzles. An automatic shutoff valve was installed so that when this area of the plant is not in operation the flow of water to the nozzles is turned off.

Total Water Average Usage (MGD)



Another project has just been approved for the expenditure of capital funds to reclaim and reuse cooling water that passes through the bearings of several large fans in the boiler areas. When completed, this project is expected to reduce water usage by about another 500,000 gal./day. The ultimate goal of reducing water usage to 10.18 MGD is seen as achievable and several other water saving projects are on the capital spending plan over the next few years.

The plant has maintained surface water usage below 11.5 MGD during this entire six month reporting period. Steps have been taken to initiate the more restrictive water usage limits in our surface water withdrawal permit so that the maximum 24 hour withdrawal and the not to exceed monthly average are reduced by 1 MGD respectively (as called for in the FPA).

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 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. In addition to Weyerhaeuser's own technical resources looking for new developments in the industry, the state of Georgia has funded several pulp and paper industry research projects, three of which involve bleaching and bleach effluents. Any developments from these projects will be closely studied. 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 openly communicates concerning the status of operation under the FPA, answering all questions and inquiries. On February 3, 2000 the third 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's environmental performance.

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 2000 Mid Year Progress Report will be available on U.S. EPA's Project XL Internet page at <http://www.epa.gov/ProjectXL/weyer/>.

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 the first half of 2000:

Presentation to the Adrian Dominican Sisters (Weyerhaeuser Stockholders concerned about pulp Bleaching throughout the industry)

Spoke of Weyerhaeuser environmental performance and Project XL

Project XL Annual Stakeholders Meeting

Presented Project XL Progress Report

Interviewed by "Georgia & Southeast Environmental News"

Article focused on Project XL; Weyerhaeuser's Site-Specific MACT Rule

Participated in a conference call with Alberta, Canada Environmental consultant

Answered questions on Project XL for understanding in Canada

Interviewed by "Pulp & Paper Magazine"

Follow-up article on progress with Project XL

Interviewed by "Clean Air News" and "Environmental Compliance Alert"

Provided information on progress with Project XL

V. FINAL PROJECT AGREEMENT IMPLEMENTATION:

Regulatory Actions

During the first half of 2000, one regulatory initiative was the finalization of the site-specific rule for implementing the alternative compliance approach for the MACT I standard. Also, the modification to the water withdrawal permit has been requested and will be fully implemented early in the second six months of 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 - The request for more restrictive water usage limits has been submitted.
SOLID WASTE:	Item 1 - Permit modification request submitted in late 1998. No action to date by Georgia EPD.
AIR:	Items 1, 2, 3, 4, 5, 6 - Completed in PSD air quality permit. Item 7 - A site-specific MACT Rule has been drafted and is currently in the EPA approval process.

Mechanisms That Are Not Enforceable:

ISO 14001 EMS:	Item 1 - Work in progress, completion scheduled for December 2000.
WATER:	Item 1 - Following timelines per the original FPA.
SOLID WASTE:	Item 1 - Completed. Item 2 - Land application study in progress, second year seedling growth results will be measured in late 2000. Composting trial completed, evaluating commercial agreement for composting manufacturing process. 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 completed. Item 2 - Complete, Goal for total plant steam production is 20.0 M#/ADMT.

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 additional water conservation measures or projects to drive towards the goal of 10.18 MGD total water usage;
- Define possible water reuse and reduction opportunities that would reduce Bleach Plant effluent flow;
- Continue efforts in Energy Conservation;
- Complete the effort to convert Flint River Operation's EMS into ISO 14001 EMS in 2000;
- Focus on continued reduction of Solid Waste from the Calciner with the implementation of a rate and reliability study;
- Implement the applicable Cluster Rule requirements according to timelines within the regulation.

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, 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
M#/ADMT	Unit of measure: Thousands of Pounds (steam) per ADMT
M#/hr	Unit of measure: Thousands of Pounds (steam) per Hour
MACT	Maximum Achievable Control Technology
MGD	Million Gallons per Day
MIM	Minimum Impact Manufacturing - a holistic pollution prevention strategy to minimize the impact on the natural environment (air, soil, water).
NPDES	National Pollutant Discharge Elimination System
ORP	Oxidation Reduction Potential
SO ₂	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 L_eadership

1999 MIDYEAR ACTUALS FPA - TABLE TWO

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

ENVIRONMENTAL PARAMETER ¹	BASELINE ²	1996 ACTUAL	1997 ACTUAL	1998 ACTUAL	1999 ACTUAL	2000 ACTUAL YTD	FPA AGREEMENT MIM PHASE IV GOAL
Raw Water Usage (million gallons/day)	11.18	11.91	11.74	11.49	11.92	11.47	11.50
Effluent Discharged to Flint River							
BOD (lbs./ADMT)	4.32	3.52	3.01	2.13	2.83	4.01	3.80
TSS (lbs./ADMT)	4.65	3.58	3.13	2.80	3.87	4.60	4.09
AOX (kg./ADMT)	0.11	0.10	0.10	0.10	0.10	0.09	0.15

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

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

1999 MIDYEAR 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	2000 ACTUAL YTD	FPA AGREEMENT MIM PHASE V GOAL
Solid Waste Generation (lbs/ADMT)	690	505	409	461	498	482	310
Hazardous Waste Generation	Small Qty.Gen.	Small Qty.Gen.	Conditionally Exempt SQG	Conditionally Exempt SQG	Conditionally Exempt SQG	Conditionally Exempt SQG	Conditionally Exempt SQG
Bleach Plant Flow (m ³ /ADMT)	20	20	20	20	20	20	10
Environmental Management System	Flint River EMS	Flint River EMS	Flint River EMS	Flint River EMS	Flint River EMS	75% Complete	ISO 14001
Energy Conservation				Feasibility Study in Progress	Feasibility Study Completed		
Total Plant Steam Usage (M#/ADMT) (Power Boiler + Recovery Boiler)	21.58	22.44	20.94	20.56	20.53	20.62	20.00
Power Boiler Steaming Rate (M#/hr)	274	267	234	205	201	199	175