

US EPA ARCHIVE DOCUMENT

WEYERHAEUSER COMPANY
FLINT RIVER OPERATIONS

PROJECT XL

FINAL PROJECT AGREEMENT (FPA)

2001 MID YEAR PROGRESS REPORT

(JANUARY 01 - JUNE 01)

FLINT RIVER OPERATIONS PROJECT XL

2001 MID YEAR PROGRESS REPORT

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FLINT RIVER OPERATIONS PROJECT XL

2001 MID YEAR PROGRESS REPORT

(JANUARY 01 - JUNE 01)

I. OVERVIEW:

Note: The 2001 Mid Year FPA Tables Two and Three summarize the facility's actual environmental performance results versus the FPA superior environmental goals. The 2001 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

The Flint River facility continues to evolve and strengthen the Environmental Management System that was implemented and audited during 2000. Minor non-conformances that resulted from the first audit in November have been corrected and a second audit is planned for the end of July 2001. A registration audit to ISO 14001 is anticipated at the end of the year. The Lands & Timber organization received confirmation in early 2001 that their registration audit was successful and that organization is now certified to ISO 14001. This achievement is an enhancement to the completed Phase V project titled "Timberlands Resource Strategies".

Another energy conservation project was completed during the first half of 2001 which places the total steaming rate of the plant within reach of the Project XL energy goal. On June 27, 2001 the site specific MACT rule was published in the Federal Register. Operation of the plant continues under this rule which ensures that fewer HAPs are released than if the plant operated under the standard MACT rule. Water reduction throughout the facility continues to be a focus area.

II. ENVIRONMENTAL PERFORMANCE UPDATE

Table Two of this report presents the water related parameters. Although water usage went up slightly during the first six months, the total is less than the Phase IV goal. No new projects were installed during this period, however, one significant project is progressing through the capital funding process and installation is anticipated for late this year. Both BOD and TSS were higher than the Phase IV goals during these six months as they usually are for the first half of the year. During the late summer and fall of the year, the Holding Pond is steadily filled to remain within the NPDES permit for effluent color while the river flow is extremely low. In January the Holding Pond begins to be emptied over several months when river volume returns. This causes the effluent volume to increase, which causes an increase in the BOD and TSS. Even though the results for these parameters are higher than the Phase IV goal on a pounds per ADMT basis, the NPDES permit limits have not been exceeded (which are in pounds per day units). AOX results continued at a low rate.

Table Three reports other MIM parameters. Solid Waste generation increased as explained in this report under MIM Phase V Implementation. Hazardous Waste generation continued at a very low rate which maintains the facility's designation as Conditionally Exempt Small Quantity Generator. Bleach Plant Effluent Flow is unchanged and the Environmental Management System continues to conform with ISO 14001. The Total Plant Steam Usage under the MIM project Energy Conservation decreased and that result is very close to the Phase V goal.

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 implemented.

MIM Phase V Implementation

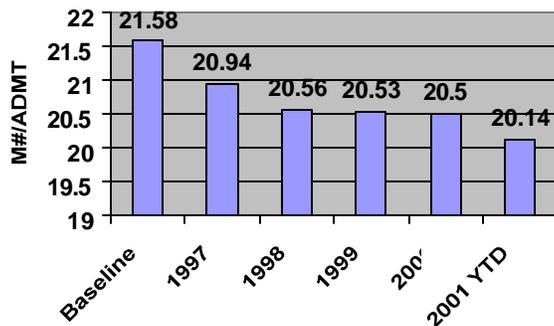
In 2001, MIM Phase V Feasibility Studies continued in the following areas: Solid Waste Reductions, Energy Conservation, HAPs Emission Reductions and Water Use Reduction.

Solid Waste Reduction: Solid waste generation for the first half of 2000 was 564 lbs/ADMT. This is an increase over previous year's results. Solid wastes consist of lime mud, sludge, fly ash, knots, woodyard debris, trash and secondary sludge. All waste streams were at historical levels except for lime mud. The Calciner continues to run unreliably. Descaling of the Calciner has occurred much more often than the desired 90 days interval. During descaling and other periods of unreliable operation, more lime mud is generated as a waste product. During the first six months of 2001, lime mud sent to the landfill was approximately 33% higher than normal. Replacing the Calciner with a different piece of equipment would greatly reduce lime mud solid waste, but this option is extremely expensive at a time when the Pulp & Paper industry is struggling with reduced profits and foreign competition. The company is considering the replacement of the Calciner in long term capital planning.

Composting of several of the solid waste materials has been evaluated and successfully tested in recent years. This was an excellent project to make a beneficial use of a waste stream and significantly reduce solid waste that would otherwise be sent to the landfill. Early in 2001, a new company policy on land-application of residuals and solid wastes with the potential to contain detectable concentrations of dioxins or furans was implemented. The solid wastes from Weyerhaeuser's Flint River Mill have always tested non-detectable for dioxin on a total equivalent basis, but this cannot be guaranteed in the future as laboratory technology continues to improve and reduce detectable limits even further. The company policy discourages new endeavors in land application of process residuals where the company does not retain control of the use of the residuals or the land where the residuals are applied. The company will, however, continue to explore beneficial uses of this material in more controlled settings.

Energy Conservation: For the past seven or eight months the Recovery Boiler has been running with a new sootblower strategy. Only two sootblowers are operated at any one time instead of the previous three. Also the timing of when sootblowers start and stop has been adjusted to level the steam loading on the boiler. These changes have further reduced the total steam demand and consequently have lowered the steaming rate of the Power Boiler. The graph below depicts the total plant steam usage of the past several years and the first six months of 2001. A decrease in steam usage was achieved in the first half of 2001 which places total steam usage very close to the Project XL goal of 20.0 M#/ADMT.

Total Plant Steam Usage

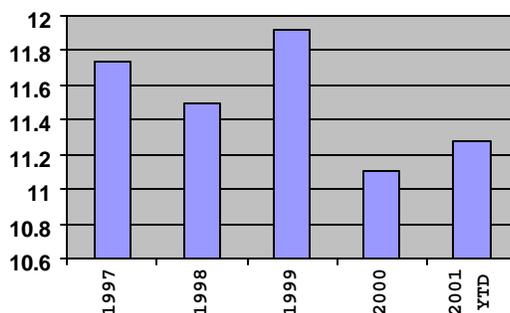


Work is continuing on the previously reported Power Boiler Advanced Controls project. The long term capital forecast of the mill includes a project in 2002 that will replace the steam driven chiller in the Pulping Unit with a more efficient electric unit. This will easily reduce steam demand below the Project XL energy goal if the project successfully passes through the capital funding process and is implemented.

HAPs Emissions Reduction: During the first half of 2001 the Site-Specific MACT Rule was edited and circulated within the USEPA. On June 27, 2001 the final rule was published in the Federal Register. This completes the implementation of this project in the FPA. Weyerhaeuser continues to operate the vent collection system as described in previous annual and mid year Project XL reports. This ensures that the facility is collecting and destroying more HAPs than would be collected if the plant were strictly following the normal MACT Rule.

Water Use Reduction: Water usage in the plant has remained approximately steady since the implementation of several water reduction projects last year. The facility has maintained water usage below the revised Surface Water Permit limits since they were lowered by 1 MGD last August. No permit violations have occurred. In the second half of 2001, a project will be evaluated through the company's capital funding process that may lower water usage by another 0.75 MGD. This project would recycle treated effluent from the waste water treatment system for use in the woodyard log flume. Makeup water for the flume is currently taken from the river. Water conservation is a priority on the facility's business plan and within the Environmental Management System (EMS).

Total Water Usage (MGD)



Bleach Plant Effluent Reductions: The feasibility study as outlined in the FPA was completed several 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 proposed approach 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, some 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 five 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 1, 2001 the fourth annual stakeholders meeting was held at the facility near Oglethorpe, Georgia. This meeting was open to the public and was advertised in area newspapers. 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 2001 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 2001:

- Project XL Annual Stakeholders Meeting
 - Presented Project XL Progress Report
- Environmental and Project XL Briefing
 - Spoke to representatives of a potential new customer of Flint River pulp
- Environmental and Project XL Briefing
 - Spoke to representatives of a current customer of Flint River pulp
- Project XL Presentation
 - Given to approximately 40 members of Southwest Georgia Water Resource Task Force, Inc.

V. FINAL PROJECT AGREEMENT IMPLEMENTATION:

Regulatory Actions

On June 27, 2001 the final Site-Specific MACT rule was published in the Federal Register for Weyerhaeuser's Flint River facility.

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 – Completed in the facility's Surface Water Permit
- 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 – Complete. The site-specific MACT Rule has been published in the Federal Register.

Mechanisms That Are Not Enforceable:

- ISO 14001 EMS: Item 1 – Complete. External audit found EMS conforms with ISO 14001.

WATER: Item 1 - Following timelines per the original FPA.
SOLID WASTE: Item 1 - Completed. Item 2 –Land application of process solid wastes no longer appears to be an option due to new corporate policy regarding residuals that may have the potential to contain dioxins or furans. Flint River is non-detect for these compounds, but the potential is there as technological advances reduce the limit at which they can be detected. Other options will be explored, including equipment changes that may significantly reduce solid waste generation. 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 – Complete, 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 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 to reach the goal of 20.0 M#/ADMT total steam usage;
- Continue to operate the Environmental Management System and schedule a certification audit;
- Focus on continued reduction of Solid Waste resulting from increased reliability of the Calciner.

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. Improved Calciner reliability must be achieved to reduce the major process residual, lime mud. In the long term, replacement of the Calciner with a Lime Kiln will be studied to determine if this is economically justifiable. 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 LLeadership

2001 MIDYEAR ACTUALS FPA - TABLE TWO

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

ENVIRONMENTAL PARAMETER ¹	BASELINE ²	1997 ACTUAL	1998 ACTUAL	1999 ACTUAL	2000 ACTUAL	2001 ACTUAL YTD	FPA AGREEMENT MIM PHASE IV GOAL
Raw Water Usage (million gallons/day)	11.18	11.74	11.49	11.92	11.11	11.28	11.50
Effluent Discharged to Flint River							
BOD (lbs./ADMT)	4.32	3.01	2.13	2.83	3.49	3.97	3.80
TSS (lbs./ADMT)	4.65	3.13	2.80	3.87	3.92	5.21	4.09
AOX (kg./ADMT)	0.11	0.10	0.10	0.10	0.09	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.

2001 MIDYEAR ACTUALS FPA - TABLE THREE

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

ENVIRONMENTAL PARAMETER	BASELINE	1997 ACTUAL	1998 ACTUAL	1999 ACTUAL	2000 ACTUAL	2001 ACTUAL YTD	FPA AGREEMENT MIM PHASE V GOAL
Solid Waste Generation (lbs/ADMT)	690	409	461	498	489	564	310
Hazardous Waste Generation	Small Qnty.Gen.	Conditionally Exempt SQG	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	ISO 14001 (Conforms)	ISO 14001 (Conforms)	ISO 14001 (Conforms)
Energy Conservation			Feasibility Study in Progress	Feasibility Study Completed			
Total Plant Steam Usage (M#/ADMT) (Power Boiler + Recovery Boiler)	21.58	20.94	20.56	20.53	20.50	20.14	20.00
Power Boiler Steaming Rate (M#/hr)	274	234	205	201	203	201	175