

US EPA ARCHIVE DOCUMENT

WEYERHAEUSER NR COMPANY
FLINT RIVER OPERATIONS

PROJECT XL

FINAL PROJECT AGREEMENT (FPA)

2011 ANNUAL PROGRESS REPORT
15th Year (FINAL YEAR)

**FLINT RIVER OPERATIONS
PROJECT XL**

2011 ANNUAL PROGRESS REPORT

OUTLINE

I. Overview

- Summary

II. Environmental Performance Update

- FPA Table One
- FPA Table Two
- FPA Table Three

III. Minimum Impact Manufacturing

- MIM Phase IV Implementation
- MIM Phase V Implementation

IV. Stakeholder Involvement

- Meetings
- Presentations
- Information Requests
- FPA Project Contacts Listing

V. Final Project Agreement Implementation

- Regulatory Actions
- FPA Section IX: Implementation Schedule

VI. Schedule

- Next Twelve Months
- Long Term Schedule
- Weyerhaeuser Contact Listing
- Glossary of Terms

FLINT RIVER OPERATIONS PROJECT XL

2011 ANNUAL PROGRESS REPORT

I. OVERVIEW:

Note: The 2011 Annual FPA Tables One, Two and Three summarize the facility's actual environmental performance results versus the FPA superior environmental goals. The 2011 Annual 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.

SUMMARY

This is the 15th (and final) year that Weyerhaeuser has continued to follow the Project XL Final Project Agreement (FPA). This completes the commitment to EPA's Voluntary Project XL program which meets the one of the objectives of the Weyerhaeuser's Environmental Policy.

In 2011, an ISO 14001 reassessment audit was conducted by a third party registrar (i.e., QMI-SAI Global) and certification has been maintained.

We have continued to achieve our solid waste reduction goals and continue to be well below the target reduction in 2011.

The plant had a good production year but did incur some unexpected operational problems in the beginning of the year. The plant consumed 19.21 Milbs. steam/ADMT which was below our MIM goal. Operating personnel continue to monitor steam usage on an ongoing basis.

II. ENVIRONMENTAL PERFORMANCE UPDATE:

One of the primary objectives of the FPA was to evaluate environmental performance that the Flint River Operations would achieve under its MIM evolution strategy. These environmental performance targets are specified in Tables One, Two and Three of the FPA. Water usage in the plant was below the MIM goal. BOD was lower than the previous year and below the FPA Phase IV Goal.

III. MINIMUM IMPACT MANUFACTURING:

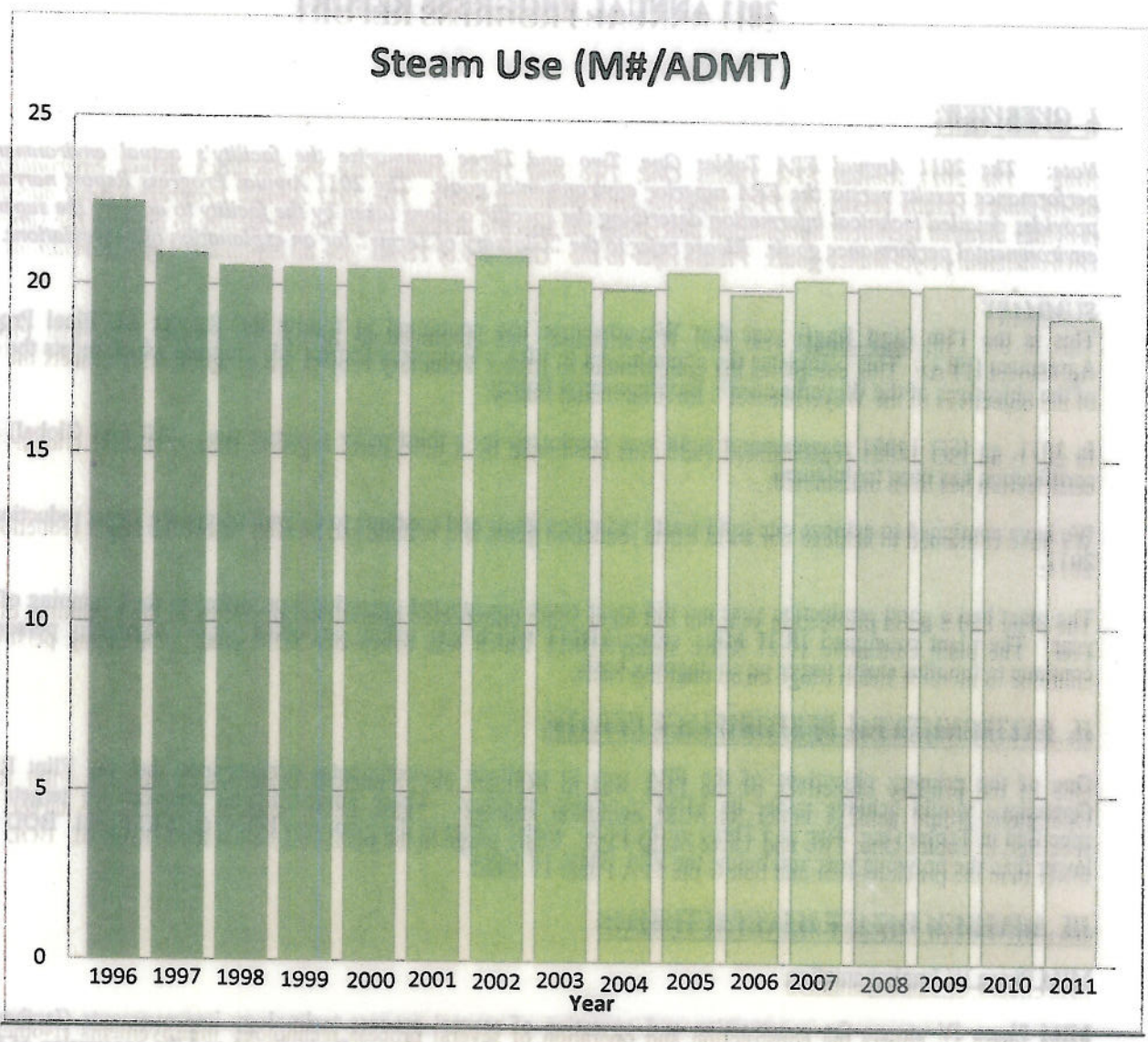
MIM Phase IV Implementation

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.

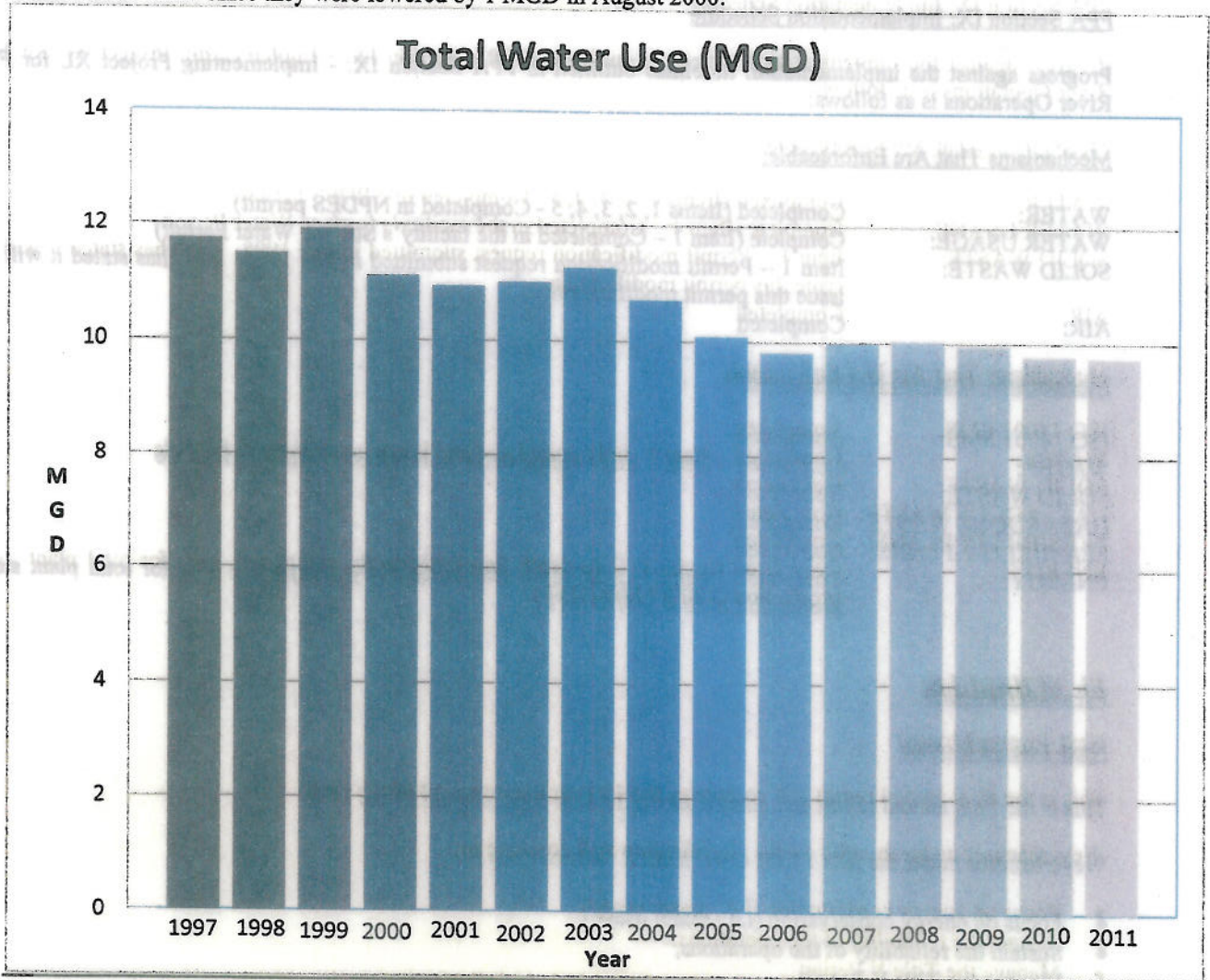
MIM Phase V Implementation

Solid Waste Reductions: Solid waste generation during the year averaged ~ 68 lbs/ADMT of production.

Energy Conservation: In 2011, the energy needed to produce one ton of finished product at the facility was 19.21M lb/ADMT and we continue to focus on minimizing energy use. The graph below shows the historical energy use for the mill over the life of the XL Project.



Water Use Reductions: Water usage in for the reporting period averaged ~9.74 MGD. This usage rate is below the FPA Phase IV Goal of 11.5 MGD. The facility has maintained water usage below the revised Surface Water Permit limits since they were lowered by 1 MGD in August 2000.



In addition, the long-term goal of the XL agreement of reaching a total water usage (surface water plus groundwater) level of 10.18 MGD was achieved in 2011.

IV. STAKEHOLDER INVOLVEMENT:

Weyerhaeuser communicates concerning the status of operation under the FPA, answering questions and inquiries. In February 23 2011, the Project XL Annual Stakeholders meeting was held at the facility in Oglethorpe, Georgia. Representatives from numerous organizations were invited, including the Mayor of Oglethorpe, US EPA, Lake Blackshear Watershed Association, USDA Natural Resources Conservation Service, Georgia EPD, Natural Resources Defense Council, Georgia Environmental Organization, Macon County Commissioners, DNR Game & Fish, Crisp County Power Commission, Macon County Prison, and many others., This meeting was also 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 a Project XL Internet page at <http://www.epa.gov/ProjectXL/weyer/>, which contains a copy of the approved FPA document and other associated information.

V. FINAL PROJECT AGREEMENT IMPLEMENTATION:

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: Completed (Items 1, 2, 3, 4, 5 - Completed in NPDES permit)
WATER USAGE: Complete (Item 1 - Completed in the facility's Surface Water Permit)
SOLID WASTE: Item 1 - Permit modification request submitted in late 1998. EPD has stated it will not issue this permit modification.
AIR: Completed

Mechanisms That Are Not Enforceable:

ISO 14001 EMS: Completed.
WATER: Completed - Item 1 study completed and is not economically feasible
SOLID WASTE: Completed.
HAZARDOUS WASTE: Completed.
FEASIBILITY PLANS: Completed
ENERGY: Completed (Items 1, 2 In-depth feasibility study completed, goal for total plant steam production is 20.0 M#/ADMT)

VI. SCHEDULE:

Next Twelve Months

This is the final annual report and completes the 15 year commitment of the FPA.

Weyerhaeuser under the ISO 14001 Certification will continue to:

- Focus on energy conservation (i.e., steam usage),
- Sustain the reliability of the operations,
- Manage the Title V Permit.

Long Term Schedule

In the 1st Quarter 2012, we will hold the final Project XL stakeholder meeting. However, we plan to continue our on-going dialogue with stakeholders seeking their input on our facility's long-term environmental performance through the following organizations 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:

Mr. Jay Sum
 Environmental Manager
 Weyerhaeuser NR Company - Flint River Operations
 2449 Stagecoach Road
 Oglethorpe, Georgia 31068

Phone: (478) 472 5301
 Fax: (478) 472 5508

Mr. Mike Wood
 Environmental Team Leader
 Weyerhaeuser NR Company
 810 Whittington Avenue
 Hot Springs, AR 71901

Phone: (501) 624-8569
 Fax: (253) 928-2428

GLOSSARY OF TERMS

ADMT	Air Dry Metric Ton - measure of the facility's finished product = 2,206 lbs
AOX	Adsorbable Organic Halide - measurement of the amount of chlorinated organic compounds.
BOD ₅	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 Leadership

2011 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	2002 ACTUAL	2003 ACTUAL	2004 ACTUAL	2005 ACTUAL	2006 ACTUAL ⁽¹⁴⁾	2007 ACTUAL ⁽¹⁴⁾	2008 ACTUAL ⁽¹⁴⁾	2009 ACTUAL ⁽¹⁴⁾	2010 ACTUAL ⁽¹⁴⁾	2011 ACTUAL ⁽¹⁴⁾
WATER										
Water Usage (MMGD)	11.00	11.25	10.70	10.08	9.81	9.98	10.02	9.94	9.76	9.74
Bleach Plant Effluent Volume (m3/ADMT)	20	20	20	20	20	20	20	20	20	20
Final Effluent Volume (gal/ADMT)	10,418	9,737	9,099	9,403	8,186	7,106	9,046	10,477	9,214	7,601
BOD (lbs/ADMT)	4.38	3.80	3.48	3.95	3.30	3.72	3.16	2.46	2.44	1.93
COD (lbs/ADMT)	40.1	47.1	45.2	51.1	42.8	41.4	54.4	53.3	49.1	43.5
TSS (lbs/ADMT)	4.74	3.78	3.96	3.61	3.48	4.07	4.83 ¹⁷	3.68	3.36	2.64
AOX (kg/ADMT)	0.10	0.07	0.07	0.08	0.06	0.06	0.06	0.08	0.095	0.095
Dioxin - 2,3,7,8 TCDD	non detect	non detect	non detect	non detect	non detect	non detect	non detect	non detect	non detect	non detect
Color (lbs/ADMT)	77	77	82	91	75	65	106	113	96	84
Nutrients: NH3-N & Total P (lbs/ADMT)	NH3-N 0.29 Tot P 0.15	NH3-N .32 Tot P 0.13	NH3-N 0.34 Tot P 0.13	NH3-N 0.38 Tot P 0.14	NH3-N 0.40 Tot P 0.14	NH3-N 0.31 Tot P 0.15	NH3-N 0.39 Tot P 0.17	NH3-N 0.42 Tot P 0.18	NH3-N 0.40 Tot P 0.17	NH3-N 0.39 Tot P 0.15
Chronic Toxicity - Ceriodaphnia (IC25 Annual Average)	44	66	48	42	48	52	58	54	69	47

ENVIRONMENTAL PARAMETER	2002 ACTUAL	2003 ACTUAL	2004 ACTUAL	2005 ACTUAL	2006 ACTUAL ⁽¹⁴⁾	2007 ACTUAL ⁽¹⁴⁾	2008 ACTUAL ⁽¹⁴⁾	2009 ACTUAL ⁽¹⁴⁾	2010 ACTUAL ⁽¹⁴⁾	2011 ACTUAL ⁽¹⁴⁾
AIR										
Particulate (tons/year) ⁽¹⁾	410	472	454	367	360	435	448	437	328	327
Total Reduced Sulfur (tons/year) ⁽²⁾	33.2	12	14	17.5	13.8	16	15	12	12	14
Chloroform (tons/year) ⁽³⁾	1.00	1.00	1.03	0.99	0.95	1.10	1.09	0.97	1.02	1.07
Chlorine (tons/year) ⁽³⁾	0.19	0.19	0.20	0.19	0.18	0.20	0.20	0.18	0.19	0.20
Chlorine Dioxide (tons/year) ⁽³⁾	0.69	0.69	0.71	0.68	0.66	0.73	0.74	0.67	0.70	0.74
CO (tons/year) ⁽⁶⁾	1440	1562	1441	966	662 ⁽¹⁵⁾	741	1014 ⁽¹⁸⁾	1127	1375	1129
NOx (tons/year) ⁽⁴⁾	851	933	897	851	878	985	1094	1012	955.6	976
SO2 (tons/year) ⁽⁴⁾	413	300	470	322	221	281	264	296	262.6	246
VOC's as C (tons/year) ⁽⁵⁾	649	642	657	650	627	720	703	551	533	621
Opacity - Recovery furnace (% Excess Opacity Emissions/year)	1.21%	0.89%	1.04%	0.54%	0.39%	0.15%	0.01%	0.03%	0.02%	0.05%
HAP's (tons/year) ⁽⁵⁾	430	409	416	387	379	415	420	385	400	418
SOLID WASTE										
Solid Waste Generation (lbs/ADMT)	381	404	223	117	89 ⁽¹⁶⁾	136	125	97	72	68
Solid Waste Disposition	on-site landfill	on-site landfill	on-site landfill	on-site landfill	on-site landfill	on-site landfill	on-site landfill	on-site landfill	on-site landfill	on-site landfill

2011 YAZDAN YACI QVYRZ EBY - IYVRE OYE
 2011 YAZDAN YACI QVYRZ EBY - IYVRE OYE

ENVIRONMENTAL PARAMETER	2002 ACTUAL	2003 ACTUAL	2004 ACTUAL	2005 ACTUAL	2006 ACTUAL ⁽¹⁴⁾	2007 ACTUAL ⁽¹⁴⁾	2008 ACTUAL ⁽¹⁴⁾	2009 ACTUAL ⁽¹⁴⁾	2010 ACTUAL ⁽¹⁴⁾	2011 ACTUAL ⁽¹⁴⁾
Hazardous Waste Generation Status ⁽⁷⁾	CESQG	CESQG	CESQG	CESQG	CESQG	CESQG	CESQG	CESQG	CESQG	CESQG
OTHER										
Accidental Releases/Spills (#/year)	10 9 (Venting NCG Gas due to Malfunction s) (1) Leaking effluent discharge pipe	5 Total ⁽¹³⁾ 4 (Venting NCG Gas due to Malfunction s) (1) VOC pipe spill to Goose Creek	7 ⁽¹³⁾ Total 7 (Venting NCG gas due to malfunction)	5 ⁽¹³⁾ 5 (Venting NCG gas due to malfunction)	0 ⁽¹³⁾	0 ⁽¹³⁾	0 ⁽¹³⁾	0 ⁽¹³⁾	0 ⁽¹³⁾	0 ⁽¹³⁾
Reportable Permit Incidents (#/year)	21 0	15 ⁽¹²⁾ 0	21 ⁽¹²⁾ 1 (NPDES)	17 ⁽¹²⁾ 0	3 ⁽¹²⁾ 0	0 0	0 0	8 ⁽¹²⁾ 0	5 ⁽¹²⁾ 0	3 ⁽¹²⁾ 0
- Air Permit Incidents ⁽⁸⁾										
- All Other Permits (NPDES, Landfill, Potable Water, Water Withdrawal)										
Sara 313 (# Reportable Chemicals/year) ⁽¹⁰⁾	20	22	22	20	17	19	19	18	18	18
Energy Steam Usage (MlbsSteam/ADMT) ⁽¹¹⁾	20.93	20.23	19.94	20.48	19.84	20.28	20.11	20.14	19.47 ¹⁹	19.21

ENVIRONMENTAL PARAMETER	2002 ACTUAL	2003 ACTUAL	2004 ACTUAL	2005 ACTUAL	2006 ACTUAL ⁽¹⁴⁾	2007 ACTUAL ⁽¹⁴⁾	2008 ACTUAL ⁽¹⁴⁾	2009 ACTUAL ⁽¹⁴⁾	2010 ACTUAL ⁽¹⁴⁾	2011 ACTUAL ⁽¹⁴⁾
Community Complaints										
* Site Appearance	None	None	None	None	None	None	None	None	None	None
* Odor (#/year)	5	2	1	0	1	5	1	3	0	4
* Noise (#/year)	1	0	0	2	0	0	0	0	0	0

1 Emissions calculated from Recovery furnace, Smelt Dissolving Tank, Power boiler, Calciner (no longer in use), Lime Kiln, and Fugitives. Particulate emissions for 2003 (revised) and 2004 calculated with updated emission factor based on stack testing.

2 Emissions calculated from Recovery furnace, Smelt Dissolving Tank, Calciner (no longer in use), Lime Kiln, and Process Vents. Emissions for 2003 (revised) and 2004 calculated based on continuous emission monitor data and emission factors.

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 or baseline emission factors

4 Emissions calculated from Smelt Dissolving Tank, Power boiler, Calciner and Lime Kiln. Emissions for 2003 (revised) and 2004 calculated based on continuous emission monitor data and emission factors.

5 Emissions calculated from Recovery furnace, Smelt Dissolving Tank, Power boiler, Calciner, Lime Kiln, Process Vents (using 1994 emission factors) and Fugitives.

6 Emissions calculated from Recovery furnace, Smelt Dissolving Tank, Power boiler, Calciner, Lime Kiln and Process Vents. Emissions for 2003 (revised) and 2004 calculated based on continuous emission monitor data and emission factors.

7 Small quantity generator status is < 2,200 lbs/month hazardous waste generation; Conditionally Exempt Small Quantity Generator (CESQG) < 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.

9 As a result of receiving a Title V permit in 2002 the number of surrogate parameter incidents have increased and are not comparable with previous years.

10 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, chloramine dioxide, cresols, hydrochloric acid, methanol, phenol, sulfuric acid. Reported 1997: acetaldehyde, ammonia, catechol, chlorine, chloramine dioxide, cresols, methanol, phenol, sulfuric acid, nitrate, formic acid. The facility's SARA 313 calculations are primarily based on industry emissions factors.

11 Energy steam usage is the quantity of on-site steam generation from the Recovery Furnace and Power Boilers required to produce an air dry metric ton of finished fluff pulp.

12 The number of air permit incidents corresponds to the number of incidents required to be reported under the mill's CAA Title V permit condition 6.1.2 during the year.

13 The number of accidental releases corresponds to the mil's determination of incidents required to be reported under CERCLA or EPCRA.

14 To meet the 12/15 XL report deadline, the figures include data collected from December 1st of the previous calendar year thru November 30th of the current reporting year (starting with 2006).

15 Recovery furnace modifications in 2005 enabled Flint River to improve the combustion conditions for black liquor reduction in the Recovery furnace yielding improved CO emissions.

16 Increased reliability of the lime kiln operations in 2011 which enabled a further reduction of solid waste

17 Some of this number is attributed to maintenance activities on the system that occurred in early 2011. Additionally, the number is well below permit limits.

18 Updated 2008 data to include process vent data for CO.

19 Corrected from 2010 Project XL Report

2011 ANNUAL ACTUALS FPA - TABLE TWO

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

ENVIRONMENTAL PARAMETER ¹	BASELINE ²	2002 ACTUAL	2003 ACTUAL	2004 ACTUAL	2005 ACTUAL	2006 ACTUAL ⁽⁴⁾	2007 ACTUAL ⁽⁴⁾	2008 ACTUAL ⁽⁴⁾	2009 ACTUAL ⁽⁴⁾	2010 ACTUAL ⁽⁴⁾	2011 ACTUAL ⁽⁴⁾	FPA AGREEMENT MIM PHASE IV GOAL
Raw Water Usage (million gallons/day)	11.18	11.00	11.25	10.70	10.70	9.81	9.98	10.02	9.94	9.76	9.74	11.50
Effluent Discharged to Flint River												
BOD (lbs./ADMT)	4.32	4.38	3.80	3.48	3.48	3.30	3.72	3.16	2.46	2.44	1.93	3.80
TSS (lbs./ADMT)	4.65	4.74	3.78	3.96	3.96	3.48	4.07	4.83	3.68	3.36	2.64	4.09
AOX (kg./ADMT)	0.11	0.10	0.07	0.07	0.09	0.06	0.06	0.06	0.08	0.095	0.095	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.

³ Effluent discharge performance is well within current NPDES permit limits.

2011 ANNUAL ACTUALS FPA - TABLE THREE

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

ENVIRONMENTAL PARAMETER	BASELINE	2002 ACTUAL	2003 ACTUAL	2004 ACTUAL	2005 ACTUAL	2006 ACTUAL ⁽⁶⁾	2007 ACTUAL ⁽⁶⁾	2008 ACTUAL ⁽⁶⁾	2009 ACTUAL ⁽⁶⁾	2010 ACTUAL ⁽⁶⁾	2011 ACTUAL ⁽⁶⁾	FPA AGREEMENT MIM PHASE V GOAL
Solid Waste Generation (lbs/ADMT)	690	381	404	223	117	89	136	125	97	72	68	310
Hazardous Waste Generation	Small Quantity Generator	Conditionally Exempt SQG	Conditionally Exempt SQG	Conditionally Exempt SQG	Conditionally Exempt SQG	Conditionally Exempt SQG	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	20	20	20	20	20	10
Environmental Management System	Flint River EMS	ISO 14001 (Certified)	ISO 14001 (Certified)	ISO 14001 (Certified)	ISO 14001 (Certified)	ISO 14001 (Certified)	ISO 14001 (Certified)	ISO 14001 (Certified)	ISO 14001 (Certified)	ISO 14001 (Certified)	ISO 14001 (Certified)	ISO 14001 (Certifiable)
Energy Conservation												
Total Plant Steam Usage (m ³ /ADMT)	21.58	20.93	20.23	19.94	20.48	19.84	20.28	20.11	20.14	19.47 ¹⁹	19.21	20.00
Power Boiler Steaming Rate (m ³ /hr)	274	220	193	192	200	186	178	183	195	165	166	175

EMPLOYEE SITE PERMITS

2011 ANNUAL ACTUALS FPA - TABLE THREE

2011 ANNUAL ACTUALS FPA - TABLE THREE