RRPP I-D.33

Weyerhaeuser

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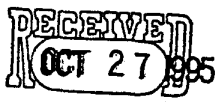

Regulatory Reinvention Pilot Projects
FRL-5197-9
Water Docket
Mail Code 4101
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington D.C. 20460

RE: Weyerhaeuser Project XL Proposal (Supplemental Information)

Dear Sir or Madame:

As per the request from Julie Frieder, I am providing you with further details regarding the initial minimum impact mill (MIM) projects that Weyerhaeuser, Flint River Operations is considering under the Project XL Program. As you review these projects I am sure you will find that each do go well beyond what regulations today would require for compliance.

Specifically these MIM projects will reduce TRS gases, BOD, COD, TSS, color, AOX, solid waste, mill water usage, and energy usage.

Also you had requested the name of a member of the Lake Blackshear Watershed Association. Dr. Hap Tietjen, the Georgia Southwestern Representative, would be happy to discuss the Association as well as Flint River Operations. You may reach Dr. Tietjen at the following address and phone number:

Dr. Hap Tietjen
Head, Biology Dept.
Georgia Southwestern College
Americus, GA
912-931-2253

Should you have questions regarding any of the project details or our Project XL Proposal, please call me at 770-668-1210. Thank you for your interest and support.

Sincerely,

Gary Risner

Gary Risner
Area Environmental Manager

Enclosure

CC. Russell Stevenson, Flint River
Julie Frieder, US EPA (via FAX)

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ODOR CONTROL SYSTEM UPGRADE

The objective of this project is to improve the NCG system reliability, gas collection capability and removal of TRS gases from additional foul condensates. Implementation of this project will result in a projected decrease of 67.3 tons/year of TRS. With a cost of $6.75 million, this project represents a significant financial commitment by Weyerhaeuser Company for continued minimization of our plant's environmental impact.

The major improvements to be made by the Odor Control System Upgrade are the following:

- improve the weak TRS gas collection system reliability by replacing the blower fan with a liquid ring vacuum pump thus eliminating venting incidents associated with blower fan malfunctions;

- increase the weak TRS gas collection system volumetric capacity for additional source collection (new NaSH tank, new VOC tank, and reconnection of the salt cake mix tank vent);

- reduce in plant fugitive TRS emissions from the process sewer system by collecting & stripping the existing turpentine decanter underflow discharge;

- improve the existing NCG TRS stripper reliability and capacity by installing a stripper feed tank to reduce feedstock variability, new automatic backflush strainer to prevent stripper pluggage, pH control capability and a new spiral heat exchanger to provide constant feedstock temperature;

- improve the existing strong TRS gas system reliability by eliminating system flooding and fouling of the strong gas burners in the calciner and power boiler by installing new inlet and outlet liquid separators on the existing strong gas compressor;

- improve process safety of the digester blow tanks by increasing the dilution air to maintain the tank atmosphere well below the Lower Explosive Limit.

STEAM REDUCTION PROJECTS

FLINT RIVER OPERATIONS

These steam reduction projects are in addition to the steam condensate return project in the Brownside Optimization project. The Brownside Optimization steam condensate return will provide a 29,000 lb/hr steaming reduction on the power boiler.

The steam reduction projects will be used to offset the steam demand increase on the power boiler. These additional projects will be implemented on an as required basis to maintain projected emission increases from exceeding PSD permitting triggers. At this time the total steam reduction offset required to remain below PSD triggers is 95,000 lb/hr. The projects are listed in order of implementation priority:

Bleach Plant Filtrate Heat Exchange

This project will increase the heat recovery capability of the existing system. Plant warm water is heated through heat exchange with bleach plant Eo stage filtrate. Project scope definition is aimed at preventing tube side exchanger pluggage and increase the volume of warm water through the exchanger shell side. Increasing the volume of warm water through the exchanger eliminates the use of steam injection into the warm water tank. Estimated steam savings are 45,000 lbs/hr on the power boiler.

Post Oxygen Washer (POW) Filtrate Heat Exchange

This project will transfer heat from the POW filtrate to a process stream currently being heated with plant steam. Scope will require a heat exchanger, piping, pumps and appropriate valving and process controls. The estimated steam savings are 25,000 lbs/hr on the power boiler.

Recovery Boiler Exit Gas Heat Exchange

This project is aimed at transferring heat from the Recovery Boiler exhaust gas stream to the boiler feedwater system thus reducing the amount of plant steam in the deareator process. Scope will require a heat exchanger, piping, soot blowing, valving and controls. The estimated steam saving are 30,000 lb/hr.

If necessary, additional information on the projects will be available as design engineering is completed.

BROWNSIDE OPTIMIZATION

:imization project will modernize the present brownstock
ıt the Flint River Plant. Project scope provides for a
e existing Kamyr continuous vapor phase Digester to a modern
fication "state of the art" unit. To support and enhance the
unbleached pulp characteristics, changes will be made in the
.ing, and oxygen stage systems. These modifications will reduce
washing organic load, reduce operating costs, improve pulp
position the plant for further movement towards a Minimum
.ronmental strategy. The anticipated finished pulp production
ıe optimization project is approximately 19 air dried metric

ification of the wood chips will be by Isothermal Cooking (ITC).
omplished by installing a 61 foot addition to the top of the
er, replacing the existing Digester wash screens and wash
tem, adding new heat exchangers, process pumps, new chip level
tem, black liquor filter, new instruments control system, and a
Variable speed drives will also be installed on the outlet
ı the Impregnation Vessel and the Digester. Emissions of HAP's
ıe Digesting system changes should be slightly less than previous
removal of black liquor solids from the pulp by improved washing.
will continue to be collected by the non-condensible gas
tems and burned in the Calciner and Recovery Boiler.

creen Room requirements are necessary to process the lower Kappa
econdary knotter system and conveyor will be install to return
delignified wood chips back to the Chip Bin for reinsertion into
This will increase production by approximately 7 air dried
ɜr day out of the total of 19 and eliminate a solid waste
ng to the on-site landfill. New style wave plate baskets will be
the existing secondary and tertiary screens to provide extra
capacity for the lower Kappa pulp. No changes in atmospheric
expected from the Knotting and Screening process changes.

lignification system will be modified by replacing the existing
ɔarator with a new higher capacity unit. The existing air/water
ll be reused in the Post Oxygen Washer Filtrate Tank. This adds
capability which increases process reliability and minimizes any
osition on the pulp. This reduces the additional kappa or lignin
rformed by the existing Oxygen Reactor. To further protect the
ies, a white liquor oxidation system consisting of a reaction tower
ill be installed next to the white liquor surge tank. Atmospheric
:om the oxygen delignification air emission sources are expected to
proportion to the increase in production. Air emissions expected
.te Liquor Oxidation system are included in the emissions

energy, and chemical cost savings, a new condensate system will be
o collect Digesting heater condensate and return it to the
This new system consists of a new pressurized condensate tank,
ıew heat exchangers on the Warm Water Tank, and associated controls
ıentation.

BROWNSIDE OPTIMIZATION

In addition to the production and quality improvements to the pulp produced. environmental benefits expected from this project include:

1. Bleach Plant color is expected to be reduced by 31 lbs/ADMT
2. Biochemical Oxygen Demand (BOD5) in the Bleaching wastewater should be reduced by 0.7 lbs/ADMT
3. AOX in the final effluent to the Flint River should be reduced by 24% since Bleaching chemicals should be reduced a like amount
4. The on-site landfill life should be extended by 12%
5. Total Suspended Solids in influent wastewater should be reduced by 0.8 lbs/ADMT
6. Chemical Oxygen Demand of influent wastewater to the treatment system should be reduced by 8.7 lbs/ADMT.
7. Condensate return should reduce total water usage by 0.5 million gallons per day.
8. Condensate return should reduce Power Boiler steaming rate by 35,000 lbs/hour.