

US EPA ARCHIVE DOCUMENT

# GEORGIA-PACIFIC BIG ISLAND PROJECT XL PROPOSAL

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# BIG ISLAND DRAFT PROJECT XL PROPOSAL

## I. Introduction

### A. Description of the Facility/Community/Geographic Area

The Georgia-Pacific Corporation owns and operates a non-sulfur, non-bleaching pulp and paper mill at Big Island, Virginia. The facility produces corrugating medium from semi-chemical (sodium carbonate/sodium hydroxide) hardwood pulp and secondary fiber, and linerboard from fiber recycled from old corrugated containers, clippings and rejects from corrugated container manufacturing plants, and some mixed office waste paper. The production capacity of the semi-chemical pulp mill is about 860 tons per day and supplies only the medium machines. The Secondary Fiber or OCC mill produces an average of 950 tons per day and supplies 100% of the furnish for the linerboard mill and about 20% of the furnish for the medium mill. The paper mills produce an average 870 tons per day of corrugating medium and 730 tons per day of linerboard. Corrugating medium is used to form the inner flute and linerboard to form the two flat outer surfaces of the board used to manufacture containers or cardboard boxes.

The mill is located in Bedford County, adjacent to the James River, which is the dividing line between Bedford and Amherst Counties. Big Island is approximately 12 miles (15 km) northwest of Lynchburg, Virginia. The main operating area of the mill is located along, and just east of, U. S. Highway 501 in Bedford County. About 2 miles north of the mill, U.S. Highway 501 intersects with the Blue Ridge Parkway, which runs in a southwest to northeast direction. The main operating area of the mill is bordered on the east by the James River. The mill owns additional land, and operates a landfill, east of the river, in Amherst County. Figure 1 on the following page shows the mill property line and the town of Big Island, Virginia. Figure 2 shows the mill with respect to some of the major cities in Virginia.

The main environmental concern for this area is air quality. The George Washington National Forest is located to the north and east of the James River while to the west is the Jefferson National Forest. The James River Face National Wilderness Area is about 3 miles to the northwest of the mill. The Forest Service is the designated Federal Land Manager for assuring that the air quality criteria for this designated Class I wilderness area are maintained.

To the west of the Mill lies the unincorporated village of Big Island. The population of the village is approximately 400 and about 2,100 within a five-mile radius. Within a fifteen-mile radius, which includes the city of Lynchburg, there is a population of approximately 111,500.

The base elevation of the mill is 620 feet above mean sea level (msl). Terrain in the immediate vicinity is depicted by a sharp inclination to greater than 900 feet above msl within 1600 feet (500 meters) to the east of the river and within 3200 feet (1 kilometer) to the west of the river. Within a 6-mile radius of the mill, the highest elevations are to the west and northwest with the highest point being approximately 3,600 feet above msl. The James River flows from the northwest to southeast and elevations along the river valley are stable with little variation. Terrain elevations exceed 1,800 feet above msl in the George Washington National Forest to the north. Rolling hills mostly between 800 and a 1,000 feet above msl depicts terrain to the east of the mill. Terrain elevations increase again to the south with several points in excess of 2,700 feet above msl.

Precipitation throughout the year is fairly evenly distributed. Minimum precipitation of about 2.5 inches falls in November and maximum of about 4.0 inches falls during July and August each. Snowfall occasionally occurs between the months of October and April with maximum expected amounts of 5.5 inches during January and February. Average annual precipitation is about 40 inches.

The James River drainage shed immediately upstream from the mill is unimpounded except for two low head run of the river hydro dams. Because the mill sits immediately adjacent to the west bank of the

river any overflow results in flooding of the mill basements, entrance roads, and parking areas. Within the past 5 years the mill has experienced two flooding incidents. On both occasions operation of the mill had to be ceased.

The average climate of the area is generally described as mild. Summer month average high temperatures vary between 80 and 90 F. The average low temperature during the summer is 65 F. Temperatures begin to drop rapidly by October with average winter maximums near 45 F and minimums varying between 20 and 30 F.

For most of the year the prevailing wind direction is from the southwest. During August and September the prevailing winds are from the north.

B. Contact Information

Georgia-Pacific Corporation

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## II. Project Description

### A. Overview of Project

The Big Island mill is subject to the air emission control requirements of the Cluster Rule, which requires the installation of Maximum Achievable Control Technology (MACT). The first phase, MACT I, which controls the emissions from the pulp production area was promulgated April 15, 1998 and requires compliance within 3 years. The Big Island mill has submitted and received approval from the VA DEQ for its MACT I compliance plan. The next phase, MACT II, addresses emissions from the combustion sources associated with power production and pulping chemical recovery. The MACT II regulations were proposed in April 1998. The original target date for final promulgation was April 1999. Several states and an association of environmental equipment manufacturers have submitted comments to EPA challenging the Kraft recovery furnace portion of the regulation as too lenient. They are not challenging the portion of MACT II related to the semi-chemical process. The Sierra Club has sued EPA due to delays in implementing the MACT rules. EPA currently plans final promulgation of the MACT II regulation by December, 2000. Compliance will be required by December, 2003.

The Big Island mill currently takes the spent liquor from the pulp, evaporates it using a conventional multiple effect evaporation train, and combusts the resultant concentrated (about 60% solids) liquor in two existing smelters, a type of recovery furnace. The molten smelt is discharged and dissolved in water to recover the sodium carbonate. This solution is used to make-up the cooking liquor added to the hardwood chips going to the digesters (cooking vessels) to produce the pulp. The MACT II regulation will require a substantial upgrade to the current smelter emission control system. The age and physical condition of the smelters themselves would require they be rebuilt with additional emission control devices or replaced with a conventional technology recovery boiler. Georgia-Pacific has been investigating, as a third alternative for chemical recovery, a liquor gasification system.

The recovery process is an essential component of a pulp and paper mill operation from both an economic and an environmental aspect. Chemicals used in the pulping process are recovered and spent liquor organic solids are converted to energy (typically process steam). The Tomlinson recovery boiler has been the predominant technology; however, fluidized bed combustors have also been used successfully in some segments of the industry. Both technologies have inherent deficiencies including low thermal efficiencies, high capital and maintenance costs, and various operational problems. The Tomlinson unit has the additional potential for smelt-water explosions.

Gasification of black liquor represents a new and better approach for the chemical recovery process and eliminates many of the deficiencies of the Tomlinson and fluid bed combustion technologies. Gasification benefits include increased efficiency in energy conversion and chemical recovery, elimination of the smelt-water explosion hazard, reduced maintenance costs, and significantly lower environmental emissions including particulate, SO<sub>2</sub>, TRS, NO<sub>x</sub>, VOC, and greenhouse gases. The benefits are particularly attractive to semi-chemical non-sulfur processes that require higher cost auxiliary fossil fuel to sustain combustion of the black liquor.

Georgia-Pacific has been working with StoneChem, Inc. to evaluate the PulseEnhanced<sup>J</sup> Steam Reforming liquor recovery system. The technology was developed and patented by Manufacturing and Technology Conversion, International (MTCI) and is currently licensed to StoneChem, Inc. for use in North America. The process employs indirect PulseEnhanced<sup>J</sup> heating of a steam-fluidized bed of sodium carbonate solids. (Please refer to Figures 3 & 4 for gasifier flows) This process produces an endothermic reaction converting black liquor organics to a gas in the absence of air or oxygen at temperatures below those required for smelt formation. This approach avoids the shortcomings of exothermic reactions found in other gasification processes that utilize combustion at higher temperatures and produce smelt. MTCI has carried out studies of spent liquor reforming in a 0.5 ton per day black liquor solids pilot unit since 1990. Two successful pilot trials have also been conducted on Big Island black liquor. Tests on the product gas

from the pilot trials have confirmed the potential energy and environmental benefits. A nominal 50-ton per day black liquor solids pilot demonstration plant began operation at Weyerhaeuser's New Bern, North Carolina, Kraft mill in the spring of 1994. A 500-hour continuous test was successfully completed at New Bern in August 1995. The results from this trial identified improvements that will be incorporated into the design of a full-scale unit. A full scale steam reformer and associated equipment to process the current Big Island operation liquor generation would be sized at 200 tons per day black liquor solids.

As stated above, the MACT II rules will require compliance within three years of the promulgation date. Assuming 2000 promulgation, this would mean compliance must be achieved by 2003. Under our current project schedule, the gasifier should begin operation in mid-2002. If no problems occur, compliance with the MACT II regulations would be achieved at that time. However, there is no provision in the rule as written that would allow returning the smelters to interim use should additional time be required to demonstrate the new technology at full scale. Additionally, there is no provision to allow the smelters to operate during an interim period for the construction of conventional technology, should the gasifier technology fail. Operation of either the gasifier or the existing smelters is required to allow the mill to continue to operate. Discussions with EPA to date indicate that Project XL may be the only viable means to give the relief needed for Georgia-Pacific to take the risk on installing a production size unit utilizing this innovative technology. This is the crux of the regulatory flexibility sought with this Project XL proposal.

III. Project XL Criteria:

A. Superior Environmental Performance

1. Tier 1: Environmental Performance without Project XL

Without Project XL a conventional recovery furnace would be installed with control equipment designed to operate with emissions at or below the MACT II limits as established by the environmental permit.

2. Tier 2: Environmental Performance if Project XL is Implemented

Based on the limited data available from the gasifier pilot trials to date, emissions were estimated and compared to those estimated from a conventional recovery furnace with current Best Available Control Technology (BACT) type controls. The predicted environmental benefits to the industry of the steam reformer technology compared to conventional recovery boiler technology are listed below:

Emissions (tons/year)	Recovery Boiler	Gasifier
NO <sub>x</sub>	106	26
SO <sub>2</sub>	99*	1
CO	108	16
CO <sub>2</sub>	101,600	90,030
VOC	15	0.4
Particulate	13	0.12

\* Predicted value is without SO<sub>2</sub> emission control.

Note: The gasifier emissions are best available predictions but not vendor guaranteed emissions. Since this will be the first full scale unit, it is not possible to predict precisely the level of emissions that will ultimately be achieved.

Additionally, the energy efficiency of this technology, once demonstrated, will produce steam over and above conventional recovery technology, which can offset steam generated by fossil fuels. The subsequent reduction in fossil fuel use will dramatically decrease production of greenhouse gases. When this technology can be successfully demonstrated and is available for transfer to other pulp facilities, current studies show that the energy savings could result in the Pulp and Paper Industry being a net exporter of electrical power instead of importing 6 gigawatts. The studies also indicate that as an industry, succesful development of gasification technology would result in the potential to decrease greenhouse gas emissions by 18 million metric tons per year.

B. Cost Savings and Other Benefits

The installation of the first commercial steam reformer poses considerable financial risk and will not generate any significant cost savings compared to installation of a conventional recovery boiler. The Aorder of magnitude@estimates of investment capital for a steam reformer versus recovery boiler are \$27 million versus \$29 million. The comparison on estimated annual operating costs are \$2.1 million versus \$2.5 million. As part of its evaluation of proceeding with the steam reformer Georgia-Pacific has been discussing with the Department of Energy their willingness to provide some cost sharing to mitigate the risk of constructing a full scale demonstration unit. While they have expressed considerable support and willingness to participate, funding for a project can only be guaranteed for one year at a time. Additionally, the percentage

of DOE participation is uncertain and their involvement might also require engaging in a competitive, open solicitation process, for funds. Georgia-Pacific intends to continue its solicitation of DOE funds for this project. However, due to the uncertainty of the percentage of DOE participation, it is expected that as the MACT II regulations are finalized, Georgia-Pacific Corporation will have to make a decision on whether to take upon itself the entire financial risk of installing the steam reformer versus a recovery boiler. Commercial demonstration of the technology could result in future installations producing economic benefits though improved capital effectiveness.

Besides the environmental and energy benefits described above and in the section on innovation, the steam reformer would have a safety benefit over a recovery boiler. In the steam reformer the concentrated liquor is pyrolyzed by heat applied indirectly through the heater units liberating the gas, which is burned as part of the energy source for the heaters. The sodium carbonate pellets are drawn from the fluidized bed into a conventional dissolving tank. Other gasification and recovery technologies utilize flame combustion within a reactor vessel or an intermediate smelt phase. The steam reformer thus eliminates the potential for smelt water explosions, which are a major safety concern in the operation of recovery boilers.

#### Stakeholder Involvement

Georgia-Pacific will strive to nurture an open, active, well-defined process in an effort to secure widespread community understanding and support of the objectives and value of the project. We recognize EPA's interest in assuring transparency, open communication, support and involvement in any XL project. See Appendix A for the draft of the stakeholder work plan.

#### Innovation or Pollution Prevention

Since about the mid 70s the pulp and paper industry around the world has been searching for ways to make its energy conversion systems more efficient and less capital intensive, while improving safety and environmental standards. One of the technologies that has been evaluated is gasification. Gasification can be defined as the conversion of low cost organic solids or liquids into clean burning gases for replacement of expensive fossil fuels. The pilot studies and conditions within the industry are converging to create a window of opportunity to commercialize this technology. Three situations creating this window are:

The scientific community and suppliers have brought the technologies to the point where a first large-scale demonstration is the next step;

2) The capital replacement cycle and pending Cluster Rule requirements will result in the industry focusing on significant rebuilds or replacements of its powerhouse infrastructure;

3) The current world emphasis on global climate change may provide significant additional incentive to utilize this technology because of the reduced fossil fuel usage and subsequent reduction in greenhouse emissions.

Specifically for Big Island the predicted total thermal efficiency of the steam reformer technology is over 70% compared to approximately 65% for conventional recovery boilers. The improvement in thermal efficiency will provide over 120 million BTU per day of additional process steam. This is equivalent to 4,600 pounds of high-pressure steam per hour at Big Island, which is currently produced by the combustion of fossil fuel. Reducing the mill's consumption of fossil fuels while maintaining the same level of production is a clear demonstration of pollution prevention and innovation.

#### E. Transferability

Successful completion of this project will demonstrate this technology to be capable of providing the full chemical recovery capacity for a mill. The project will demonstrate the reliability and operational flexibility of the technology and all of the associated equipment. Once the technology is demonstrated, the industry can apply this at other facilities to obtain better energy conversion, improved safety, and environmental performance. The Big Island semi-chemical mill is similar in characteristics to 12 other mills in the U. S. producing virgin medium for containers. Success and demonstration of this technology at Big Island would also contribute significantly to its implementation in a much larger number of Kraft mills.

#### Feasibility

The PulseEnhanced™ Steam-Reforming Gasification technology, developed with research funding from the U.S. Department of Energy, is currently at the point in its development to be instituted in a full-scale operation. Pilot scale studies have proven its capabilities and superior attributes over current recovery technology. The following is a list of the Steam-Reforming Gasification pilot studies performed by the technology developers, ThermoChem Recovery International (TRI):

- Pilot plant in Zaragoza, Spain, processing 240 kg/day silica-laden straw pulping liquor.
- Pilot testing of silica-laden rice straw spent liquor from RAKTA mill in Alexandria, Egypt.
- 25-ton per day demonstration plant for spent liquor from bagasse and straw pulp, Erode, India, sponsored by the U.S. Agency for International Development.
- 50-ton per day demonstration at the Weyerhaeuser Company Kraft pulp mill in North Carolina, USA.
- 12-ton per day test of sludge containing short fiber rejects and plastics at the Inland Container plant in California.

Additionally, TRI has a test facility in Baltimore, Maryland, where over 5,000 hours of testing have been conducted. Part of those hours consisted of two pilot trials on Georgia-Pacific Big Island spent pulping liquor.

The first pilot test for Georgia-Pacific occurred in January of 1998 and consisted of 86 continuous hours of operation on the 20-lb/day unit. The 86 hours included 73 hours of pre-conditioning for the unit and fluidized bed and 13 hours of actual test period to generate the required performance data. Results of this initial test conclusively demonstrated the feasibility of this technology for the Big Island liquor. The test achieved a 91.6% carbon conversion rate, generating a product gas with a higher heating value (HHV) of 254 Btu per dscf. The product gas yield was 7,564 Btu per pound of Black Liquor Solids (BLS).

The second pilot test, conducted in January of 1999, consisted of a total of four weeks of steam-reforming tests. Two tests were conducted over this time, including a low bed temperature (~1080 degrees F) and a higher temperature (~ 1124 degrees F). The tests processed a total of 5,094 pounds of BLS. The pilot plant operated well over the four-week period, with steady temperature profiles and no evidence of agglomeration, de-fluidization, channeling or heater fouling. The tests achieved carbon conversion rates of 81.3% and 99% for the low temperature and higher temperature runs, respectively. Product gas heating value ranged from 279 to 253 Btu per dscf and product gas yields were 5,081 Btu per pound BLS at the low temperature and 7,191 at the high temperature. Results of this trial confirm the results of the 1998 trial and the additional information will aid the engineers in finalizing the design for the full-scale plant proposed for the Big Island facility.

Currently, an independent technology risk analysis is being performed on the technology as it applies to the Big Island facility. Results of this analysis will be available in July of 1999.

#### G. Evaluation, Monitoring, and Accountability

Evaluation and monitoring of the gasifier units will be a major effort as the equipment is brought on-line. Frequencies and parameters for emission monitoring will be established by the Project XL Stakeholder and Sponsor Group, and submitted with the Final Project Agreement (FPA). Other evaluations of interest that will be monitored are thermal efficiencies and carbon conversion rates. All information generated during the start-up phase and all subsequent data will be made available as agreed upon in the FPA.

Other evaluations and monitoring may be required by the Department of Energy, such as trials on other spent liquor types. This information would become a part of any DOE reports and as such available for public review.

## Shifting of Risk Burden

The emission reductions anticipated from this innovative process are believed to be true pollution reductions and not merely moving it to another medium. As indicated in the comparative emissions data above, the greatest reductions are in NO<sub>x</sub>, SO<sub>2</sub>, VOCs, and Particulates. The reduced NO<sub>x</sub> is a function of NO<sub>x</sub> control technology in the Gas Boiler. VOCs are converted to energy and the particulates are captured and added to the bed solids as additional sodium carbonate. Some of the sulfur compounds could be purged to the mill wastewater treatment system for assimilation. No significant impact to water quality is anticipated.

## Requested Flexibility

As indicated above, there are no current full-scale commercial applications of this technology. As such, there is some risk in attempting to construct and operate a full-scale Steam-Reforming Gasifier. There are two main risks that Georgia-Pacific has identified. The first is that once constructed, the unit may require an extended period of unforeseen problem resolution and operational deciphering that could possibly extend beyond the promulgated compliance date. The second risk is that the technology will simply not work in full-scale or for this particular operation, in which case a standard recovery boiler would have to be constructed. Again, this will require construction possibly well past the MACT II compliance date.

Georgia-Pacific will propose that under either condition stated above, that the existing recovery technology (Smelters) be allowed to operate until either the Gasifier is made functional or the replacement Recovery Boiler is constructed and made operational.

Georgia-Pacific also will request that the initial permit reflect emission limits expected from the conventional Tomlinson Recovery Boiler. Future limits for the Gasifier would be set based on actual performance data generated after start up. The future limits are anticipated to be lower.

Georgia-Pacific will also request that the new steam to be generated by the new gasifier system be utilized in any area of the Big Island facility. In other words, the gasifier-generated steam will be used to offset steam generated by a higher cost fossil fuel.

Additionally, some flexibility in emission limits will be required during the anticipated DOE requested trials on other types of pulp mill liquors.

Tentative Schedule Information

This assumes the MACT II regulations are promulgated December 2000. This schedule integrates our best estimate for the XL process as well as the design and construction schedule.

**START**

**COMPLETE**

Liquor Pilot Tests	1/11/99	03/01/99
Preliminary Meeting w/EPA	1/18/99	
Project XL Process	02/01/99	?????
Meeting w/Big Island Community Relations	2/9/99	
Meeting w/Southern Environmental Law Center and Sierra Club	2/18/99	
Meeting w/Virginia Department of Env. Quality and the National Forest Service	2/19/99	
Meeting with Big Island Community	2/25/99	
Third Party Risk Assessment	03/01/99	07/15/99
Preliminary Engineering	03/01/99	12/31/99
Meeting w/Local Union (PACE*) Exec. Board	3/11/99	
Meeting w/Local and State Govt Officials	3/18/99	
Meeting w/Georgia-Pacific Salaried Personnel	3/23/99	
Meeting w/Lynchburg Chamber of Commerce Vision Council	4/09/99	
Project XL Application submittal	6/18/99	
XL Project Agreement generation	8/01/99	10/01/99
XL Final Project Agreement submittal	10/15/99	
Technology decision & Funding Approval	10/15/99	12/31/99
Detailed Engineering	01/01/00	10/30/00
Installation	08/30/00	06/30/01
Commissioning & Startup	04/30/01	08/30/01
Demonstration & Compliance	08/30/01	06/30/02
MACT II Compliance Date (Best Estimate)		12/01/03

If a steam reformer is used and must be replaced, the compliance date for the replacement recovery boiler would be 3 years from decision to change technology.

\* - Paper, Allied-Industry, Chemical and Energy Workers International Union

# Appendix A

## *DRAFT STAKEHOLDER WORK PLAN*

### *Outreach Prior to Application for XL Project*

Georgia-Pacific has begun to meet with some of the wide spectrum of interest groups to be contacted. Discussions have occurred with local citizens, elected officials, the Virginia Department of Environmental Quality (DEQ), the US Forest Service, the Southern Environmental Law Center and the Sierra Club. To date, these discussions have been met with considerable enthusiasm and support as well as an outpouring of suggested additional names and organizations to be contacted.

### *Organizations/groups contacted to date*

Paper, Allied-Industry, Chemical and Energy Workers  
International Union Local 1013  
Salaried employees at Georgia-Pacific  
Community Relations Committee of Big Island  
Big Island Fire Department  
Big Island Rescue Crew  
Business leaders in Big Island community  
Community of Big Island (Community Meeting)  
Bedford County Board of Supervisors  
Bedford County Government  
Bedford Area Chamber of Commerce

Bedford County Recreation Commission  
Lynchburg Chamber of Commerce Vision Council  
Bedford/Lynchburg area members of the Virginia House of Delegates  
Senate of Virginia (local senators)  
Virginia Department of Environmental Quality  
Southern Environmental Law Center  
Sierra Club  
U.S. Forest Service  
U.S. Department of Energy  
U.S. Environmental Protection Agency

### *People who have committed to participate*

Preston Bryant  
Virginia House of Delegates, 23<sup>rd</sup> District  
P.O. Box 3589  
Lynchburg, VA 24503

Kathy J. Byron  
Virginia House of Delegates, 22<sup>nd</sup> District  
P.O. Box 4409  
Lynchburg, VA 24502

Lacey Putney  
Virginia House of Delegates, 19<sup>th</sup> District  
P.O. Box 127  
Bedford, VA 24523

Vance Wilkins

Virginia House of Delegates  
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Amherst, VA 24521

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Department of Environmental Quality  
629 E. Main Street, 8<sup>th</sup> Floor  
Richmond, VA 23219

Patricia Egan  
U.S. Forest Service  
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Natural Bridge Station, VA 24579

Jeffrey M. Gleason  
Southern Environmental Law Center

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Charlottesville, VA 22902

Donna Shell  
Sierra Club  
[RDShell@erols.com](mailto:RDShell@erols.com)

*People we will contact in the future*

Community members will be contacted through a community meeting and a community publication, *Our Hometown*.  
Invitations to the meeting will be sent to:

Mr. J.D. Newman  
Hunting Creek Baptist Church  
15455 Big Island Highway  
Big Island, VA 24526

Tabernacle Church of God  
R.R. 1, Box 506  
Big Island, VA 24526

Mr. Paul Greer  
Big Island United Methodist Church  
Coleman Falls, VA 24536

Mr. Eric Gatton  
Chestnut Hill Freewill Baptist Church  
17195 Big Island Highway  
Big Island, VA 24526

Mr. James Reynolds  
Sharon Baptist Church  
P.O. Box 87  
Big Island, VA 24526

Jeff Fitzgerald  
Big Island Rescue Crew  
Lee-Jackson Highway  
Big Island, VA 24526

Mr. Charles Edmonds  
Big Island Baptist Church  
P.O. Box 348  
Big Island, VA 24526

Danny Coleman  
Big Island Volunteer Fire Department  
Lee-Jackson Highway  
Big Island, VA 24526

Mr. Michael Jones  
Sedalia Baptist Church  
R.R. 1, Box 748  
Big Island, VA 24526

Eddie Goff  
Big Island Sportsmen's Club  
1224 Bonnyview Drive  
Big Island, VA 24526

Mr. Rufus Jennings  
Reed Creek Baptist Church  
R.R. 1, Box 627  
Big Island, VA 24526

Big Island Hunt Club

Mr. Sam Jones

Dr. George Wortley  
Big Island Medical Center  
Highway 501 North  
Big Island, VA 24526

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Other contacts/meetings will be made with:

**Bedford City**

Michael Shelton, Bedford mayor  
City council (5)  
William Scudder, Director of Economic Development  
Jack Gross, City manager

**Lynchburg**

City council (7)  
Rex Hammond, Chamber of Commerce director  
Chamber Board President  
President, Central Virginia Community College  
President, Lynchburg College  
President, Liberty Univ.  
President, Randolph Macon Woman's College  
Charles Church, City manager  
Lee Cobb, Economic development

**Amherst County**

Board of Supervisors (5)  
Gary Taylor, Chamber director  
Chamber Board President  
Stewart Shaner, Administrator  
Grant Massie, Economic Development

**Media**

News & Advance  
Bedford Bulletin  
Region 2000 Business  
Blue Ridge Business Journal  
WSET-TV  
WDBJ-TV  
WJPR-TV

**Others**

Barry DuVal, Secretary of Commerce and Trade  
Kendra Schefflett, VA Department of Mines, Minerals and Energy

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Dave Dickson, VA Dept. of Business Assistance  
Cathleen Surface, VA Small Business Financing Authority  
Mack McElroy, Virginia Manufacturing Association  
Carol Wampler, Virginia Manufacturing Association, General Counsel  
Hugh Keogh, VA Chamber of Commerce  
Sandy Bowen, VA Chamber of Commerce (government affairs)  
David Hawkins, National Resources Defense Council, Washington, DC

### **Stakeholder Participation During Negotiation of the Formal Project Agreement (FPA)**

#### *Community meeting with EPA and Virginia DEQ Representatives*

Big Island wishes to establish an ongoing dialogue with a wide spectrum of the communities in the western Shenandoah region of Virginia for the duration of Project XL. Two public meetings were held in February and March to begin to discuss the possibility of the project with the local community. As indicated, a number of individuals already have agreed to commit to a long-term involvement so that the Project can be evaluated at regular intervals for measuring progress toward milestones and for suggestions on any adjustments that may be appropriate.

Representatives reflecting the views of the variety of local and regional organizations, interest groups and interested parties will be asked to take part in a community meeting with representatives of EPA and the Virginia DEQ, as well as Georgia-Pacific management and staff. Following these presentations, participants will break into small discussion groups in order to address questions, comments and suggestions for the FPA.

All such comments will be recorded, compiled and provided to US EPA and Virginia DEQ as a complete, unedited record of the questions, suggestions and concerns expressed at future meetings. Georgia-Pacific will commit to finding answers for any questions remaining unanswered at the end of the meeting. A record of such questions and answers will be attached to the final FPA. Georgia-Pacific will provide copies of later drafts of the FPA to each participant at the meeting who requests them on a sign-up sheet at the exit from the meeting. The record of the meeting will be made available to any participant who requests it.

#### *Stakeholder Group*

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After the public meeting with EPA, the Virginia DEQ and Georgia-Pacific, those individuals interested in becoming stakeholders will be invited to participate in the development of the FPA.

These representatives will be asked to agree to attend two events:

A tour of the Big Island facility so they can see the facility, learn about the manufacturing process and environmental safeguards and begin to formulate questions and

A half-day workshop on the gasifier.

Along with the invitation, information packets will be provided, explaining vocabulary and concepts necessary to understand the air quality improvements associated with the proposed new equipment.

Those individuals participating in the stakeholder group will receive copies of the first draft of the FPA and will be asked to provide feedback on the elements to be included in the FPA as well as during other critical times in the negotiation for the FPA. Further, a final negotiated FPA will be sent to all entities prior to proposal in the Federal Register.

Notification and education of the broader public

Georgia-Pacific Corporation will place ads in the newspapers and will supply local TV and radio stations with information in order to notify the public of its intent to develop the FPA with US EPA and the Virginia DEQ. The public will be invited to request inclusion on a mailing list for information on the project.

This notice and any news releases and articles on the Big Island project will be provided to US EPA and VA DEQ for their review prior to release.

A presentation/questions-answer session with the media will be held to acquaint the media with the gasifier project. Georgia-Pacific will notify the media in advance of all public meetings at which the Project will be an agenda item, the public meeting with invited community representatives, and other meetings that the public may wish to attend relating to the Project.

The media will be provided with background on the project description, the intended stakeholder involvement process and contact information for Georgia-Pacific, US EPA and

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Virginia DEQ, and other relevant regulatory agencies.

The previously listed community entities as well as the listed individuals will receive notice of meetings scheduled with the US EPA and Virginia DEQ so the public may attend. Georgia-Pacific will be available at any time as requests arise to draft articles understandable to the public. In addition, Georgia-Pacific will contact local radio and television stations and offer to appear on talk programs quarterly to explain the Project and what it will mean to the community.

### **Stakeholder Participation During Implementation of Project**

#### Stakeholder participation in plan for tracking progress

As part of the public meeting, representatives from a broad spectrum of community organizations will be asked for suggestions on tracking and insuring progress toward milestones to be drafted into the FPA. These suggestions not only will be recorded and distributed to the agencies, but the agencies will have an opportunity to discuss this topic in their presentations at the beginning of the meeting.

#### Additional opportunity for public comment prior to EPA approval

When US EPA provides a 30-day public period after negotiation of the FPA, stakeholders will have further opportunity for review and comment. Those organizations, entities and individuals that have made a request will receive copies of the draft FPA. Specific suggestions for tracking and insuring progress toward milestones will be incorporated into the implementation phase of the XL Project.

#### After final project agreement signed

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Data tracking the progress of the project will be made available to stakeholders for independent analysis and evaluation. Regular meetings will be held with the stakeholder group to track progress and verify such progress with data summaries. At these meetings there will be opportunity to reevaluate and to make suggestions for formulating any necessary adjustments in milestones, time lines and technologies for achieving the emission reduction goals or methodologies for verification of these emission reductions.

**Contact Persons on Big Islands Project**

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