

**Final Environmental Assessment and Notice of Wetland
Involvement for the Construction and Operation of a Proposed
Cellulosic Biorefinery, Mascoma Corporation, Kinross Charter
Township, Michigan**

DOE/EA 1705

Appendix A - Scoping Letters and Scoping Letter

Distribution List

Tribal Contacts

Sault Ste. Marie Tribe of Chippewa Indians
Attn: Tribal Chairman
523 Ashmun Street
Sault Ste. Marie, MI 49783
Phone: 906.635.6050

Inter-Tribal Council of Michigan, Inc.
Att: Dwight Sargent
2956 Ashmun Street
Sault Ste. Marie, MI 49783
DwightS@ITCMI.org
Phone: 906.635.4208

State of Michigan

Michigan Department of Natural Resources
Attn: Lori Sargent
Nongame Wildlife Biologist
Wildlife Division
PO Box 30180
Lansing, MI 48909
SargentL@michigan.gov
Phone: 517.373.9418

Michigan Department of Environmental Quality
Attn: Steve Casey
District Supervisor – Water Bureau
Upper Peninsula District Office
420 5th Street
Gwinn, MI 49841
caseys@michigan.gov
Phone: 906.346.8535

Michigan Department of Transportation
Attn: Dan Hamlin
Superior Region and Escanaba TSC
1818 3rd Avenue North
Escanaba, MI 49829
hamlinda@michigan.gov
Phone: 906.786.1830 ext. 314

State Historic Preservation Office
Attn: Environmental Review Coordinator
Michigan Historical Center
P.O. Box 30740
702 W. Kalamazoo St.
Lansing, MI 48909-8240

Local Government

Kinross Township
Attn: Larry Palma
4884 W. Curtis Street

P.O. Box 175
Kincheloe, MI 49788

Chippewa County Economic Development Corporation
Attn: Kathy Noel
5019 W. Airport Drive
Kincheloe, MI 49788
Phone: 906.495.5631

Federal Agencies

Hiawatha National Forest
Attn: Sue Alexander
2727 N. Lincoln Road
Escanaba, MI 49829
Phone: 906.789.3327

U.S. Fish & Wildlife Service
Attn: Craig Czarnecki, Field Supervisor
East Lansing Field Office
2651 Coolidge Rd., Suite 101
East Lansing, MI 48823
Phone: 517.351.6236

Local Library

Bayliss Public Library
541 Library Drive
Sault St. Marie, MI 49783
Phone: 906.632.9331

Summary of DOE Scoping Letter Responses and Comments/Location Where Questions are Addressed

Environmental

Water

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| How much water will be used to produce ethanol? | Addressed in Section 2.2.5.1 |
| From where would the water come throughout the anticipated period of biorefinery operation? | Addressed in Section 2.2.3.13, and 3.8.3 |
| Is the water source able to supply the biorefinery's average and maximum demand over the anticipated period of biorefinery operation, in addition to the current water uses? | Addressed in Section 3.8.1 and 3.8.3 |
| At the biorefinery's average and minimum water demand, and over the anticipated period of biorefinery operation, what would be the effects on the water table, local wells, ground water (including the interaction between bedrock and glacial drift aquifers), and surface water? | Addressed in Section 3.8 |
| EA should evaluate the potential for the increased water system demand and well withdrawal to accelerate any plume movement toward the township wells. | Addressed in Section 3.8.1 and 3.8.3 |

Wastewater

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| What water emissions will come from building and expanding the biorefinery and Kinross Township utilities? | Addressed in Section 3.8.1.4 and 3.8.3.3 |
| What specific pollutants will be in the biorefinery wastewater? | Addressed in Section 3.8.3.3 |
| How will the wastewater be handled? | Addressed in Section 3.8.3.3 |
| Is the Kinross Township wastewater treatment plant currently able to handle the added volume of wastewater? If not, what environmental impacts will result from the WWTP expansion? | Addressed in Section 3.8.1.4 and 3.8.3.3 |
| EA should evaluate impacts on the wastewater treatment system, including a Maximum Allowable Headwork Loading analysis for contaminants of concern. | Addressed in Section 3.8.3.3 |
| What processes will the wastewater treatment plant follow in filtering each pollutant from the biorefinery wastewater? | Addressed in Section 3.8.1.4 and 3.8.3.3 |
| What water quality standards will the treated water be required to meet before being discharged by the wastewater treatment plant? Who will oversee monitoring and enforcement of these standards? | Addressed in Section 3.8.1.4 and 3.8.3.3 |
| Given this cellulosic process is new and has not been used on large scale, how can it be assured that this large amount of water can be made clean enough to release into the Little Munuscong River watershed? | Addressed in Section 3.8.3.3 |
| Where will treated water be discharged and what will be the impacts on ground water, surface water (including level/temp of Little Munuscong River), well water, and the human, fish, and wildlife populations that rely on those waters? | Addressed in Section 3.8.3 |

Air

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| What air emissions will come from building and expanding the biorefinery and Kinross Township utilities? | Addressed in Section 3.6.3 |
| What will be the annual air emissions and pollution from hardwood harvest, transportation, and biorefinery processes (including everything down to the wearing of brake pads on hauling trucks at the furthest extent of the 150-mile radius)? | Addressed in Section 3.6.3 |
| What effect would the emissions (primarily CO2 and odors) have on air quality? | Addressed in Section 3.6.3 |
| Transportation in (supplies) and out (finished product) will diminish the air quality. | Numerous EPA and other studies have concluded that production and use of biofuels, including ethanol reduce overall emissions from vehicles. |
| If 200 gallons/day of water will be used and 100 gallons/day will be discharged to the wastewater treatment plant, it must mean 100 gallons will be discharged into the air via evaporation. What will this do to air quality and will there be an odor? | Addressed in Section 3.6.3 |
| What will removing the large number of required trees within the 150-mile radius do to air quality? | Addressed in Section 3.1 |
| Does the project assess irreparable harm should bacteria become airborne? | Addressed in Section 3.9.3.3 |

Solid Waste / Hazardous Materials

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| If hazardous and/or solid wastes are generated at the facility, they must be handled, transported and disposed of in compliance with Part 111, Part 121 and Part 115 of PA 451 and rules administered there under. | Solid, hazardous and universal waste from construction and operation would be disposed in accordance with Federal, State and Local laws and regulations. |
| What will happen to the solid waste produced? | Addressed in Section 3.9.1 |
| Can the solid waste be economically used for making pellets for stoves or have some other use? | No |
| Will there be any hazardous waste materials? | Addressed in Section 3.9.1 |

Tribal Considerations

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| What will be the impacts on the survival and availability of fish, wildlife, and plants used by the Anishinaabek people for medicines, food, and products? | Addressed in Section 3.1.1, 3.1.1.1, 3.1.1.2, 3.16.1.1, and 3.16.3 |
| How many Anishinaabek archeological sites will be impacted by resource acquisition? | The cultural resources of all Tribes will continue to be protected by existing Federal, State and Industry programs (including the Forest Stewardship Council Certification Programs Certification Programs and Sustainable Forestry Initiative, Addressed in Section 3.4 |

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| Will the Michigan Anishinaabek Cultural Preservation and Repatriation Alliance be consulted? | The DOE has initiated consultation with all Federally Recognized Tribes in Michigan, as well as, many federally recognized tribes in Wisconsin and Minnesota. Addressed in Section 3.4 |
| How will the Tribal signatories of the 1836 Treaty of Washington be consulted throughout the EA, permitting, construction, monitoring, enforcement, and shut-down processes? | The DOE has initiated consultation with all Federally Recognized Tribes in Michigan, as well as, many federally recognized tribes in Wisconsin and Minnesota. Addressed in Section 3.4 |
| <i>Wildlife</i> | |
| If all this hardwood is cut, what happens to our wildlife? | Addressed in Section 3.1, Forest resource harvest requirements for the proposed Frontier Project would result in harvest of less than 1% of the commercially available forest land and substantially less than 1% the total forest land within 150 miles of the project site annually. Wildlife habitat and diversity will continue to be protected by existing Federal, State and Industry programs (including the Forest Stewardship Council Certification Programs and Sustainable Forestry Initiative) |
| What would be the effect on local fish and wildlife dependent on ground and surface water? | Addressed in Section 3.1, Wildlife habitat and diversity will continue to be protected by existing Federal, State and Industry programs (including the Forest Stewardship Council Certification Programs and Sustainable Forestry Initiative) |
| How will fish and wildlife populations be impacted by the process of changing local infrastructure? | Addressed in Section 3.1 |
| How will the proposed project impact the wildlife in the area? | Addressed in Section 3.1 |
| Electrical transmission line may adversely impact the federally endangered Hine's emerald dragonfly (more detail to be provided by 2/26/2010) | The proposed Frontier Project will generate its own power and not cause a need to upgrade or rebuild the existing ATC transmission line. |
| <i>Organisms</i> | |
| What are the consequences of using "experimental", GMO organisms? | Addressed in Section 3.9.1.3 and 3.9.3.3 |
| Describe how the engineered bacteria and yeast used in the CBP process will be guaranteed to not survive the wood-to-ethanol process. | Addressed in Section 3.9.3.3 |
| Will the bacteria likely mutate over time? If not, why not. | The proposed Frontier Project would use a modified brewer's yeast, not a bacteria. Addressed in Section 3.9.3.3 |
| If the bacteria or enzymes used in the process do mutate, is there an adequate monitoring system to detect mutations? | Addressed in Section 3.9.3.3 |
| If the bacteria or enzymes survive the CBP process and are introduced to the surrounding environment, is there a contingency plan, including short-term and long-term mitigation for the land and water table? Please describe. | Addressed in Section 3.9.3.3 |
| If the bacteria survives and is introduced into nature, what affects will it have? | Addressed in Section 3.9.3.3 |
| Does the wastewater treatment facility planned for the project include a contingency plan for dealing with bio-engineered bacteria or enzymes? | No wastewater treatment system is planned for the proposed project. Addressed in Section 3.8.1.4 and 3.8.3.3. |
| What is the possibility of an accidental release of bio-engineered enzymes? | Addressed in Section 3.9.3.3 |
| <i>Land Use</i> | |
| The existence of heavy industry where a wooded area owned by the State of Michigan once existed represents environmental injustice. It is unjustifiable for this corporation to acquire a piece of state forest when there is privately owned, cleared land in Kinross, adjacent to I-75 and railroad. This represents an irreversible and irretrievable commitment of public land for private use. | The proposed Frontier site was acquired through a trade of land where in the State of Michigan received land that they determined was of sufficient value to warrant the transaction. |
| <i>Other Environmental</i> | |
| How much noise/dust would result from project (day and night)? (M-80 has residential and small business areas) | Address in Section 3.6.3 and 3.13.3 |
| What permits will be required for changes in local infrastructure? | Addressed in Section 2.2.4.3 and 2.2.5.3 |
| Regarding the statement: "Lignin residue would be pumped to the solids handling area for dewatering" -- what is dewatering? Where will the removed liquid go (i.e., will it leach into the ground)? What will it contain? | Water is removed from the lignin using a centrifuge, filter press or similar device. The water would be reused in the process or discharged to the Kinross waste water treatment plant for treatment. Addressed in Section 2.2.3 |
| The size and scope of the potential effects of this project warrant a full EIS, rather than simply an EA | In accordance with NEPA regulations an environmental assessment is completed to determine whether an EIS is warranted. |
| If the "No Action" alternative is chosen, will this project continue to move forward? | Addressed in Section 2.1 |

Feedstock*Sustainability / Availability*

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| With all the uses for wood (current and proposed), is the process of using large quantities of wood sustainable? Describe process/method of determining sustainability. | Addressed in Section 3.1 |
| Describe the affects of this project on the existing wood supply. | Addressed in Section 3.1 |
| What is the planned radius for the procurement circle? (would help in the sustainability question) | Addressed in Section 3.1 |
| Is there 1,800 cords per day of excess hardwood capacity available locally? If not, what impact will consuming 1,800 cords of hardwood per day have on wood prices? | Addressed in Section 3.1 |
| Within the 150-mile radius, exactly where will the hardwood pulpwood logs come from? If available, provide data to show location and adequacy of supply. | Addressed in Section 2.2.5.2 and 3.1 |
| How many cords of the targeted hardwood species are the working forests within the 150-mile radius capable of producing without creating new measurable impacts? | Addressed in Section 3.1 |
| How will the increased demand for hardwood resources impact forest management practices within the 150-mile radius? | Addressed in Section 3.1 |
| Will the increased demand from the biorefinery increase the use of forest management practices with short harvest rotation times? | Addressed in Section 3.1 |
| How will the acreage of late succession northern hardwood and northern mesic hardwood forest stands change in response to biorefinery demand within the 150-mile radius? | Addressed in Section 3.1 |
| What happens to the project if it cannot get adequate supply within 150 miles? | Addressed in Section 3.1 |
| Will forest resources beyond the 150-mile radius be used? If so, all questions directed toward the 150-mile radius resources should address forest resources and impacts beyond that area. | Frontier has determined the economic resource area to be 150 miles from the proposed Frontier Project site as sufficient resources exist within that harvest radius to support the project. Addressed in Section 3.1 |
| Prior to DOE funding and project permitting, will a guidance document for handling biomass uses of State Forest Lands be created? If so, who, when, and with what public input and Tribal consultation will it be created? | Addressed in Section 3.1 |
| Concerns about an age class gap being created from the use of hardwood pulpwood logs and the impact from reducing the number of sawlogs available for furniture, etc. | Addressed in Section 3.1.1 and 3.1.3 |
| Public statements from developers of the project have used "growth over harvest" figures in their attempts to demonstrate sufficient availability of wood. This assumes harvesting all growth annually is sustainable. Please address in response to sustainability. | Addressed in Section 3.1.1 and 3.1.3 |
| Address how this project, as well as other projects using large amounts of wood (i.e., cumulative effects), will affect forests recovering from massive cutting a century ago and their current move towards more natural age class and seral stage distribution. | Addressed in Section 3.1.1 and 3.1.3 |
| How many other biomass projects are proposed for the wood gathering area of this project? What will the cumulative effects be on wood prices, sustainability, etc.? | Addressed in Section 4.0 |
| How will this project be affected by the state of Michigan taking significant areas of state forest out of timber production through its Biodiversity Stewardship Area program? How will the ability of the state to designate and manage these areas for biodiversity conservation be affected by the increased demand? | The MDNRE would continue to evaluate State owned land through their existing BSA programs. Participation by private land owners is strictly voluntary. Private land owners would still be able to submit their property for participation in the BSA process. Candidate areas would be assessed by regional teams of DNRE staff and stakeholders. These teams would make a formal recommendation to the DNRE for a set of areas that should be included in the BSA network for their region. DNRE leadership (the DNRE's Statewide Council Certification Programs) would make the final decision after internal and public review. This process would not be affected by the proposed Frontier Project. Addressed in Section 3.1.1 |
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| <i>Type</i> | |
| How is "hardwood pulpwood" defined? | Addressed in Section 2.2.5.2 |
| What species are included and at what percentage in the mix? (i.e., if it is 90% hard maple, then different sustainability exercise than any percentage of hardwood) | Addressed in Section 2.2.5.2 and 3.1.1 |
| What are the quality specifications for the wood? (i.e., min/max diameter, % rot, etc. - would help define the % of the resources the mill can use) | The forest resource assessment completed by Michigan Technological University for the Frontier Project specifically addressed the amount of available timber that was compatible with this project. |
| What is the final furnish quality specification? (would help determine the % of delivered volume for consumption). Would the furnish specifications remain the same with any expansion in plant capacity? | DOE has determined that this question is outside the scope of the analysis of this Environmental Assessment. |
| What is the age class distribution of the wood? | The age distribution of wood is dependent on the species. Harvest would come from existing resources and historically typical age ranges. Addressed in Section 3.1.1 |

| <i>Usage/Quantity</i> | |
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| What is the volume in cord equivalents? 571,000 cords? | Addressed in Section 3.1.3 |
| Is waste/residual material included in the use estimate? | Addressed in Section 3.1.3 |
| Will the biomass boiler use additional wood or only the non-usable portion of the roundwood feedstock? (would help determine the total wood consumption impact as well as indicate impact to residual markets) | Addressed in Section 2.2.3.11 |
| To meet the demands of this project, how many acres will need to be harvested annually in addition to current hardwood forest uses within the 150-mile radius? What percentage of total forest growth in the area will be consumed by the project? | Addressed in Section 3.1.3 |
| <i>Industry/Market Impact</i> | |
| What is impact on wood pellet industry starting up at Kincheloe Air Force Base? | Addressed in Section 4.1. |
| What effect will the plant have on the price and availability of fuel wood for heating homes? | Firewood typically comes from small private operations rather than commercial harvesters. Also, the resource base for firewood can include forest residue such as tree limbs and culls that would not be suitable for use at the proposed Frontier Project. The Frontier Project should have either no impact or a small beneficial impact on the availability and cost of firewood. |
| How will the increased demand for hardwood socially and economically impact Michigan businesses and communities that currently rely on those same hardwood resources, including but not limited to sawmills, timber producers, furniture businesses, biomass electric generating units, maple syrup producers, hunters and trappers? Include impact on wood prices. | Addressed in Section 3.1.1 and 3.1.3. |
| This project will likely drive up the price of pulpwood and negatively impact the Newberry OSB factory and several UP paper plants. Will these plants close, resulting in job loss? | Addressed in Section 3.1.1 and 3.1.3. |
| <i>Environmental Impact</i> | |
| What effect will the use of large quantities of pulpwood have on the forest ecosystem? | Addressed in Section 3.1.3 |
| How will the wood usage affect wildlife, old growth forests, and other ecosystem components? | Wildlife habitat and diversity will continue to be protected by existing Federal, State and Industry programs (including the Forest Stewardship Council Certification Programs and Sustainable Forestry Initiative). Addressed in Section 3.1.3 |
| How will increased demand for hardwoods impact sensitive vegetation that grows in the northern and mesic northern hardwood communities within the 150-mile radius? | Addressed in Section 3.1.3 |
| What will be the cumulative effects from current and proposed hardwood resource uses, including this biorefinery and other proposed biomass facilities? | Addressed in Section 4.0 |
| What will be the effect on species (e.g., Northern Goshawk) that require older, later successional, closed canopy habitat? | Wildlife habitat and diversity will continue to be protected by existing Federal, State and Industry programs (including the Forest Stewardship Council Certification Programs and Sustainable Forestry Initiative). Addressed in Section 3.1.3 |
| <i>Carbon</i> | |
| Will the project be required to be carbon-positive? | The proposed Frontier Project would substantially reduce generation of anthropogenic CO ₂ on a short terms and life cycle basis. The resulting biofuels would meet the strict standards for advanced biofuels established by the USEPA in the Renewable Fuels Standard. Addressed in Section 3.6.1.3 and 3.6.3.2 |
| Will the project be allowed to be carbon-negative at any point? | See above. Addressed in Section 3.6.1.3 and 3.6.3.2 |
| How will the ability of the forests to act as carbon sinks be impacted by biorefinery forest resource demand and use? | Addressed in Section 3.6.1.3 and 3.6.3.2 |
| How much carbon is captured per year currently by resources within the 150-mile radius (and beyond, if applicable) and how will that annual rate change through the anticipated operation of the biorefinery? | Addressed in Section 3.6.1.3 and 3.6.3.2 |
| <i>Alternative Feedstock</i> | |
| Why can't canary grass, sawdust, old hay, willows, sedges, or other plant material be used instead of pulpwood? These don't have much current market use. | The listed biomass are not available in sufficient quantities in the project area to sustain a commercial scale facility. Additionally, each different biomass requires different pre-treatment and processing techniques making use economically infeasible. |

Local Area Impact

Community Cost/Benefit

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| Would our area receive any revenue from the project? | Addressed in Section 3.16.3. |
| How would the biomass generation affect our current cost of electricity? | Electric rates are set by the Michigan Public Service Commission. Rate hearings are open to the public. The proposed Frontier project would generate enough electricity to meet its own needs. Frontier might sell excess electricity to the grid. Therefore, the proposed Frontier Project is expected to have no impact on local electricity costs. |
| The overall cost to the community will be greater than the gains. | The project would contribute both direct and indirect economic benefits to the community. |
| Will the treated water discharged into Little Munuscong River affect the wildlife and the sport hunting and fishing activities, which are an important part of local economy? | Existing MDNRE regulations prohibit the discharge of water from municipal waste water treatment plants (WWTPs) that would adversely impact the local surface water. The Kinross Charter Township has a permit for their WWTP that has limits on the pollutants that may be discharged. The Proposed Frontier Project would discharge water to the Kinross WWTP for treatment. The Kinross WWTP has the capacity to treat the Frontier discharge and maintain compliance with their permit limits. Addressed in Section 3.8.3.3 |
| Will there be any irreparable harm to the people of Kinross Township if rate-payers are required to issue a bond for expansion of the township wastewater treatment project? | An expansion of the Kinross WWTP is not required to support the proposed Frontier Project. |
| In the event of a project failure, will the Kinross Township rate-payers be responsible for paying off any bonds or loans? | No bonds are required for the proposed Frontier Project. |
| Who will pay for increased road and other infrastructure maintenance costs throughout the anticipated operation of the biorefinery, and what will those costs be? | Frontier would pay for connection fees to the Kinross water and sewer systems. Frontier would also pay normal rates for the water and sewer services, thus adding to the Kinross Township budget. |
| How will the additional infrastructure be maintained after the life of the biorefinery? | This question is outside the scope of an Environmental Assessment |
| What is the expected project life cycle? | Project life expectancy is 40 years or greater |

Job Creation

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| How many people will be working at the plant? (i.e., direct, non-construction jobs created) | Addressed in Section 2.2.5.4 |
| Socio-economic questions should be addressed before jeopardizing hundreds of existing jobs for 30-40 new jobs. | Per the NEPA regulations, DOE includes a socio-economic analysis in this environmental assessment. Addressed in Section 3.16. |
| How many cords of wood will be required for each job created (not counting construction jobs)? | DOE has determined that this is not a standard way to measure socio-economic or environmental impacts and is not addressed in the EA. |
| How many more jobs could be created using the same amount of wood for value-added products (e.g., furniture, etc.)? | DOE is required to evaluate the biofuels project being proposed and the cumulative effects of other projects in the same area. DOE cannot evaluate cumulative effect of non-existent projects or facilities or projects for which no proposal has been developed. |

Traffic

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| How will the increased traffic and heavy trucks impact the conditions and maintenance of Chippewa County and other road networks within the 150-mile radius? | Addressed in Section 3.12.3 |
| There will be increased traffic and noise in the nearby residential community of Woodside. | Addressed in Section 3.13.3 and 3.15.3 |

Plant Specifications and Operations*Plant Capacity*

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| Are there expansion plans? If so, to what total consumption level? How will expansion affect economic, feedstock, etc. cumulative effects on the region? | Capacity expansion beyond 42.5 mgal/yr is not a reasonably foreseeable action and is not addressed in this EA. |
| Is a capacity expansion considered necessary for economic viability? | No |
| What does "up to 40MMGY per year" realistically mean? How optimistic is this figure? | Addressed in Executive Summary and Section 1.2 |
| What percentage of Michigan's gasoline usage will be produced by this plant (i.e., gallons undenatured ethanol divided by Michigan total gasoline usage)? | Projected gasoline sales for 2009 are 4,265.0 mgal, down from 4,352.9 mgal gallons in 2008. The last year in which gasoline use increased was 2004. The proposed Frontier Project would provide approximately 1% of the fuel used in Michigan. |

Electricity Usage

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| How much energy will be used to produce each gallon of ethanol (including the entire process - i.e., feedstock to fuel pump)? | Addressed in Section 2.2.5.1 |
| Where will the extra electricity supply come from? | Addressed in Section 2.2.3.11 |
| Can burning fossil fuel to generate electricity to produce ethanol be rationally justified based on efficiency and cost? | Natural gas would be used for cold boiler pre-heat and during plant start up. Thereafter, the biomass boiler would provide steam to generate electricity. |
| Is the energy used to construct and operate the biorefinery a wise use? | In its NEPA review, DOE will consider the impacts of the energy used to construct and operate the proposed Frontier facility. |

Process

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| How efficient is the process of producing ethanol from wood? | Addressed in Section 2.2.5.1 |
| What will be done with the bark after it's removed from the logs? | Addressed in Section 2.2.3.11 |

Safety

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| Given that the local fire and hazmat protection is volunteer-based, will there be adequate training and staffing to attend to any fire or chemical accident associated with the biorefinery and related developments? | Addressed in Section 3.10.3 and 3.11.3 |
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Transportation

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| How many rail cars and trucks will be required to transport the ethanol produced? | Addressed in Section 3.15 |
| What will be the fuel needs for transportation of hardwood products and supplies to the proposed project site and ethanol from the proposed site (i.e., total fuel usage)? | Addressed in Section 2.2.5.1 |

Project Financing*Government Support*

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| Is the viability of the project dependent on the current proposed subsidy and any expected future government market interference? | DOE has determined that this question is outside the scope of the analysis of this Environmental Assessment. |
| Will this grant analysis include the efficacy of previous federal grants to this project? If so, please include analysis. | DOE's involvement in the proposed Frontier Project prior to this Assessment is addressed in the Proposed Action description. Overall economics of the proposed Frontier Project are part of DOE's evaluation process. |
| Have previous grants to the project fulfilled obligations and assumptions made by grantees? | DOE has determined that this question is outside the scope of the analysis of this Environmental Assessment. |
| Will there be public disclosure obligations in the grant to allow the public to identify uses of the grant? | While this question is outside the scope of the EA, the public may request such information through the Freedom of Information Act which is applicable to financial assistance awards, subject to certain exemptions. |
| Will the grant include requirements for analysis of the use of the grant and steps in the granting process to allow public analysis? | DOE has determined that this question is outside the scope of the analysis of this Environmental Assessment. |
| If grantees do not perform, are there personal guarantees for grant repayment from Frontier ownership group? What are non-performance descriptions? | DOE has determined that this question is outside the scope of the analysis of this Environmental Assessment. |
| Will any part of the grant be used for personal salaries? If yes, by whom? Describe. | DOE has determined that this question is outside the scope of the analysis of this Environmental Assessment. |
| What will be the minimum amount produced that will make it economically feasible to keep the plant in operation? (i.e., will more government assistance be needed?) | While this question is outside the scope of the EA, overall economics of the proposed Frontier Project are part of DOE's evaluation process. |
| If the project will continue to move forward in the event of a "No Action" alternative, how can there be any "need" for the DOE funding? | Although this project could proceed if DOE decided not to provide financial assistance, the Department has assumed, for the purposes of comparison in this EA, that the project would not proceed without its assistance. |

Other Funding Sources

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| Who is paying for this project? Provide public and private sources and amounts. | The overall project cost has been estimated to be \$409MM. The State of Michigan Economic Development Corporation has provided a grant of \$20MM, plus a Community Development Block Grant of \$3.5MM. The DOE grant would be up to \$58.5MM on a 50% cost matching basis. Debt and private equity would make up the remaining \$327MM. |
| Is this grant being matched by private equity? If so, describe. | See above. |
| If this project is a great idea, why aren't private investors putting more into it relative to the local financial assistance? | See above. |
| <i>Structure</i> | |
| How does present grant request of \$32 million link to other financial assets of the ownership-partnership? (i.e., how will it be used on their balance sheet?) | See above. |
| Is the \$32 million grant being leveraged by the owners for private financing? If so, describe. | See above. |
| Are the owners of the partnership personally securing debt, including bonds for the project? | DOE has determined that this question is outside the scope of the analysis of this Environmental Assessment. |
| Markets | |
| <i>Ethanol</i> | |
| Is there a market for ethanol and will there continue to be demand when the plant becomes operational? | There is an existing market for fuel ethanol. Demand for advanced biofuels, such as would be produced by Frontier, is greater than the demand for corn based ethanol due to the Climate Action Registry regulations in California. |
| How many plants (similar to the proposed) exist? How are they doing? | DOE has determined that this question is outside the scope of the analysis of this Environmental Assessment. |
| Is hardwood-based cellulosic ethanol a viable long-term option for fuel production in Michigan? | Yes, resource and economic analysis have continued to support development. |
| If we continue to produce more fuel efficient vehicles and vehicles that run on electricity or other innovative forms of power, the demand for ethanol will drop. | DOE has determined that this statement is outside the scope of the analysis of this Environmental Assessment. |
| <i>Lignin</i> | |
| What is the present market for lignin? | A stable market exists for the lignin as fuel. |
| What are the realistic possibilities of selling the lignin and spent cellulose as fuel? | A stable market exists for the lignin as fuel. |

-----Original Message-----

From: Casey, Steve (DEQ) [<mailto:CASEYS@michigan.gov>]

Sent: Friday, January 08, 2010 12:46 PM

To: Kerwin, Kristin

Cc: Clark, Clif (DEQ); Brady, Brian (DEQ); Schmeling, Rob (DEQ); DeGrand, Don (DEQ); North, Deana (DEQ); Gustafson, Cary (DEQ)

Subject: FW: Scanned Document

Ms. Kerwin;

This is in response to the attached December 22, 2009 "Notice of Scoping" for the Frontier Renewable Resources Biorefinery Project in Kinross, MI.

The MDEQ Gwinn District Office has the following comments:

1. The EA should evaluate the potential for the increased water system demand and well withdrawal to accelerate any plume movement toward the township wells.
2. The EA should evaluate impacts on the wastewater treatment system, including a Maximum Allowable Headwork Loading analysis for contaminants of concern.
3. If hazardous and/or solid wastes are generated at the facility they must be handled, transported and disposed of in compliance with Part 111, Part 121 and Part 115 of PA 451 and rules administered there under.
4. Is there 1,800 cords per day of excess hardwood capacity available locally? If not, what impact will consuming 1,800 cords of hardwood per day will have on wood prices? Will this impact existing lumber and paper mills? These socio economic questions should be addressed before jeopardizing hundreds of existing jobs for 30-40 new ones.

Steve



January 19, 2010

Kristin Kerwin
NEPA Compliance Officer
Department of Energy
1617 Cole Boulevard
Golden, Colorado 80401

**Office of the
Tribal Chairman**

523 Ashmun Street

Sault Ste. Marie
Michigan

49783

Phone

906.635.6050

Fax

906-632.6289

E-mail

jmccoy@saulttribe.net

**Government
Services**

**Membership
Services**

RE: Notice of Scoping - Frontier Renewable Resources Cellulose-to-Ethanol
Biorefinery Project, Kinross, Michigan (DOE/EA 1705)

The Sault Ste. Marie Tribe of Chippewa Indians (Sault Tribe) received a Notice of Scoping document from the Department of Energy on December 30, 2009. Please accept this letter as the Sault Tribe's indication of interest in the Department of Energy funding and Environmental Assessment of Frontier Renewable Resources cellulose-to-ethanol biorefinery project in Kinross, Michigan. The Sault Tribe has identified the following issues and potential impacts of the biorefinery for inclusion in the DOE's EA.

The Notice of Scoping estimated that 1,440 bone dry tons of hardwood pulpwood would be used per day, from a 150-mile radius area within Michigan. The 150-mile radius includes over 82% of the public lands in the 1836 Treaty of Washington Ceded Territory, which are subject to the 2007 Inland Consent Decree between the U.S. Government, five Tribes in Michigan, and the State of Michigan.

What are the targeted species of hardwood trees for the process?
How many cords of the targeted hardwood species are the working forests within the 150-mile radius capable of producing without creating new measurable impacts?

To meet the demands of this project, how many acres will need to be harvested annually in addition to current hardwood forest uses within the 150 mile radius?

Will forest resources beyond the 150 mile radius be used? If so, all questions directed toward the 150 mile radius resources should address forest resources and impacts beyond that area.

How will the ability of the forests to act as carbon sinks be impacted by biorefinery forest resource demand and use? How much carbon is captured per year currently by resources within the 150 mile radius (and beyond of those forest resources are used) and how will that annual rate change through the anticipated operation of the biorefinery?

What will the annual air emissions be from hardwood harvest, transportation, and biorefinery processes?

What will the pollution be from hardwood harvest, transportation, and biorefinery processes? This would include everything down to the wearing of brake pads on hauling trucks at the furthest extent of the 150-mile radius.

What will the gasoline needs for transportation of hardwood products to the proposed project site?

What will be the impacts on the survival and availability of fish, wildlife, and plants used by Anishinaabek people for medicines, food, and products?

How many Anishinaabek archeological sites will be impacted by resource acquisition?

Will the Michigan Anishinaabek Cultural Preservation and Repatriation Alliance be consulted?

How will the Tribal signatories of the 1836 Treaty of Washington be consulted throughout the EA, permitting, construction, monitoring, enforcement, and shut-down processes?

Forest biodiversity is essential to Tribal natural resource users within the 150-mile radius.

How will the increased demand for hardwood resources impact forest management practices within the 150 mile radius?

Will the increased demand from the biorefinery increase the use of forest management practices with short harvest rotation times?

How will the acreage of late succession northern hardwood and northern mesic hardwood forest stands change in response to biorefinery demand within the 150 mile radius?

How will increased demand for hardwoods impact sensitive vegetation that grows in the northern and mesic northern hardwood communities within the 150 mile radius?

According to the 2008 Michigan Forest Certification Audit on State Forest Lands, there is no guidance document for handling biomass uses of State Forest Lands. This guidance document is necessary for adequate planning, funding, and permitting biomass uses of State lands.

Prior to DOE funding and project permitting, will a guidance document for handling biomass uses of State Forest Lands be created? Who will accomplish this, when, and with what public input and Tribal consultation?

What will the cumulative effects be from current and proposed hardwood resource uses, including this biorefinery and other proposed biomass facilities?

How will the increased demand for hardwood socially and economically impact businesses and communities in Michigan that currently rely on those same hardwood resources, including but not limited to furniture businesses, biomass electric generating units, maple syrup producers, hunters and trappers?

The Notice of Scoping estimated that 200 gallons of water would be required per minute for biorefinery operations.

From where would the water come throughout the anticipated period of biorefinery operation?

Is the water source able to supply the biorefinery's average and maximum demand over the anticipated period of biorefinery operation, in addition to current water uses?

At the biorefinery's average and maximum water demand, and over the anticipated period of biorefinery operation, what would the effects be on local wells, ground water (including the interaction between bedrock and glacial drift aquifers), and surface water? What would the effects be on local fish and wildlife dependant on those ground and surface waters?

The Notice of Scoping estimated that 100 gallons per minute of wastewater would be discharged from the facility to the Kinross Township waste water treatment plant.

Is the Kinross Township WWTP currently able to handle the added volume of wastewater? If not, what environmental impacts will result from the WWTP expansion?

What specific pollutants will be in the biorefinery waste water?

What processes will the WWTP follow in filtering each pollutant from the biorefinery waste water?

What water quality standards will the treated water be required to meet before being discharged by the WWTP? Who will oversee monitoring and enforcement of these standards?

Where will treated waters be discharged and what will the impacts be on ground water, surface water, well water, and the human, fish, and wildlife populations that rely on those waters?

The Notice of Scoping includes substantial changes in infrastructure.

What air and water emissions will come from building and expanding the biorefinery and Kinross Township utilities?

What permits will be required for changes in local infrastructure?

How will fish and wildlife populations be impacted by the process of changing local infrastructure?

How will the increased traffic and heavy trucks impact the conditions and maintenance of Chippewa County and other road networks within the 150-mile radius?

Who will pay for increased road and other infrastructure maintenance costs throughout the anticipated operation of the biorefinery, and what will those costs be?

How will the additional infrastructure be maintained after the life of the biorefinery?

The current local fire and hazardous materials protection is volunteer-based.

Will there be adequate training and staffing to attend to any fire or chemical accident associated with the biorefinery and related developments?

Perhaps the most relevant questions are:

Is hardwood-based cellulosic ethanol a viable long-term option for fuel production in Michigan?

Is 40 million gallons of ethanol worth the annual costs of 1,440 dry tons of Michigan hardwoods and related long term social, cultural, economic, and natural resource impacts of the biorefinery?

Should this project proceed, many of the adverse environmental effects discussed in this letter may not be avoided. Short-term and long-term impacts should be researched, quantified, and considered prior to project funding and permitting. Because Michigan's hardwood resources would require over fifty years to replace once harvested, the commitment of these resources may indeed be irreversible and irretrievable.

Sault Tribe would encourage a public meeting to discuss these and other important matters.

Miigwech.

Darwin (Joe) McCoy
Tribal Chairman

Jh/

CC: J. Holt
C. Kachur
C. Pavlat
E. Clark
C. Bole
R. Clark
A. Bosak

Frontier/mascoma

DOE will make this letter available to all interested federal, state and local agencies to provide input on issues to be addressed in the EA. Agencies are invited to identify the issues, within their statutory responsibilities that should be considered in the EA. The general public is also invited to submit comments on the scope of the EA.

No formal public scoping meeting is currently planned for this project. The proposed project is described in detail in the attachment to this letter. This letter as well as the draft EA, when it is available, will be posted in the DOE Golden Field Office online reading room: <http://www.eere.energy.gov/golden/reading room.aspx>.

The DOE Golden Field Office welcomes your input throughout our NEPA process. Please provide any comments on this scoping letter on or before **January 26, 2010** to:

Kristin Kerwin
NEPA Compliance Officer
Department of Energy
1617 Cole Boulevard
Golden, Colorado 80401
kristin.kerwin@go.doe.gov

We look forward to hearing from you.

Sincerely,



Kristin Kerwin
NEPA Compliance Officer

Shraddha Radtke
2178 W 1180 Kinross

Enclosure

* Here are a few questions I have as a homeowner in the area.
Who is paying for all this? Is there a market for the product?
How many plants like this are there, how are they doing?
How many people will be working at the plant? Do we have
enough hardwood in our area? Could water use be a problem?
~~Being close on M-50, how much noise/dust would result?~~
~~Would our area receive any revenue from this? (day+night)~~
By the time it gets built will there be the need for ethanol?
Would the bio gas generation help or hurt our present cost of
electricity?
What would this do to the wood pellet industry now
starting up at K.A.F.B.?
If all this hardwood is cut, what happens to all the wild life
up here?

Patrick K. Egan
(pegan@up.net)

23806 Lakeshore Dr.

Brimley, MI 49715

January 20, 2010

Kristin Kerwin
NEPA Compliance Officer
Department of Energy
1617 Cole Blvd.
Golden, CO 80401

Ms. Kerwin;

Subject: Notice of Scoping- Frontier Renewable Resources Cellulose-to-Ethanol Bio-refinery Project, Kinross Michigan (DOE/EA

I am listing my concerns in three areas: Process, Finance and Supply

Process:

- 1) Describe how the engineered bacteria and yeast used in the CBP process will be guaranteed to not survive the wood-to-ethanol process.
- 2) Will the bacteria likely mutate over time? If not, why not.
- 3) If the bacteria or enzymes used in the process do mutate, is there an adequate monitoring system to detect mutations?
- 4) If the bacteria or enzymes survive the CBP process and are introduced to the surrounding environment is there a contingency plan. Please describe.
- 5) Does the wastewater treatment facility planned for the project include a contingency plan for dealing with bio-engineered bacteria or enzymes?
- 6) If the bacteria survives and is introduced into nature, what affects will it have? Describe.
- 7) Are there contingency plans for both short term and long term mitigation, should engineered bacteria or enzymes accrete to both the water table and land?
- 8) Does the project assess irreparable harm should bacteria become airborne?

Financial:

- 1) Will this grant analysis include the efficacy of previous federal grants to this project? If so, please include analysis.
- 2) Have previous grants to project fulfilled obligations and assumptions made by grantees.
- 3) How does present grant request of \$32 million link to other financial assets of the ownership-partnership? (i.e. how will it be used on their balance-sheet? Secondly, is this grant being leveraged by the owners for private financing? If so describe.

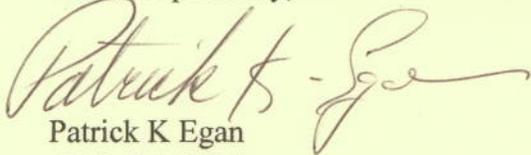
- 4) Is the viability of the project contingent on this grant
- 5) Is this grant being matched by private equity. If so, please describe.
- 6) Will there be public disclosure obligations in the grant to allow the public to identify uses of the grant?
- 7) Will the grant include requirements for analysis of the use of the grant and steps in the granting process to allow public analysis?
- 8) If grantees do not perform are there personal guarantees for grant repayment from Frontier ownership group? What are non-performance descriptions?
- 9) Will any part of the grant be used for personal salaries. If yes, by whom? Describe.
- 10) Will there be any irreparable harm to the people of Kinross Township if rate-payers are required to issue a bond for expansion of the township waste-water treatment project. In the event of a project failure will the Kinross Township ratepayers be responsible for paying off any bonds or loans?
- 2) Are the owners of the partnership personally securing debt, including bonds for the project?

Supply

- 1) Describe the complete affect of this project on the existing water table.
- 2) Describe the affects of this project on the existing wood supply.
- 3) Will the project be required to be carbon-positive?
- 4) If the project requires supply from a 150 mile radius, will existing supply last long enough for new supply, such as tree farms and new planting?
- 5) What happens to the project if it cannot get adequate supply within 150 miles? Will the project be allowed to be carbon-negative at any point?
- 6) Assess irreparable harm to existing sawmills and timber producers who depend on supply from the same 150 mile radius.

Thank you for your consideration.

Yours respectfully,



Patrick K Egan
(906-437-5526)

-----Original Message-----

From: Kurt Chamberlain [mailto:Kurt.Chamberlain@lpcorp.com]

Sent: Thursday, January 21, 2010 10:11 AM

To: Kerwin, Kristin

Subject:

Kristin,

I'm forwarding the following questions in response to the DOE request for same as it pertains to a grant request by Frontier Renewable Resources Cellulose-to-Ethanol Biorefinery Project and it's potentially locating this operation to Kinross, Michigan. These questions likely fall under the "Biological Resources" or "Socioeconomics" section of the EA request

1. Definition of "Hardwood Pulpwood"

-What species are included and at what %'age in the mix? i.e. if it is 90% Hard Maple, that's a different sustainability exercise than any %'age of any hardwood.

-Quality specifications for the wood? i.e. min & max diameter, % rot, etc would help define the % of the resource the mill can use.

-What volume in cord equivalents, looks like 571,000 cords to me.

-What is the final furnish quality specification? would help determine the % of delivered volume for consumption. Are they including waste/residual mat'l in the use estimate.

2. Planned radius for the procurement circle?

- Would help in the sustainability question.

3. Consumption of the "bio-mass" boiler.

- Mentioned in paragraph 1 of the attachment. Will it use additional wood or only the non-usable portion of the roundwood they buy.

would help determine the total wood consumption impact as well as indicate what it will do to residual markets.

4. Are there plans to expand?

- If so to what total consumption level?

- Is the expansion considered necessary for economic viability?

- Would the furnish specifications remain the same with any expansion?

5. Is the viability of the project dependant on the current proposed subsidy and any expected future government market interference?

6. How many jobs does the project create, less the construction phase?

Thank you for considering these questions as part of the Frontier Renewable Resources Cellulose-to-Ethanol Biorefinery Project grant request decision making process.

Kurt Chamberlain Plant Manager

SmartSide Siding

Louisiana-Pacific Corporation

Newberry, Michigan 49868

Telephone (906) 293.4512

Carol E. Ward
23632 Olson/Ward ROW
Brimley, MI 49715
January 25, 2010

Kristin Kerwin
NEPA Compliance Officer
Department of Energy
1617 Cole Boulevard
Golden, CO 80401

Dear Ms Kerwin:

Please accept the following comments regarding the proposed Frontier Cellulose- to -- Ethanol Biorefinery Project.

I am familiar with the area which will be affected by this project. I formerly lived in Kinross and taught in an elementary school in that community. I then lived in the nearby town of Rudyard for a few years before moving to my present home which is about 35 miles from Kinross. This proposed project will not only affect Kinross, nearby towns such as Rudyard, and the immediately surrounding area, but the Upper Peninsula of Michigan, and all parts of the lower peninsula and Canada which are within a 150 mile radius..

The proposed project site is now forested and used by local residents for recreational purposes. Until acquired through a land swap by Longyear Corporation, a 1/4 partner in this project, and the State of Michigan, it was part of the Lake Superior State Forest. To accommodate the proposed facility the zoning was changed from Forested/ Recreational to Heavy Industry. How will the proposed project impact the wildlife in the area? Not only will the area be fenced off but it will be drastically changed with the earth moving, site clearing, and construction of the plant. There will be constant noise, a change in the air quality and disruption of the continuity of the area. If a railroad spur is constructed additional forested areas will have to be cleared and the area will be further fragmented. For this corporation to acquire a piece of a state forest when there is privately owned, cleared land in Kinross, adjacent to both I-75 and the railroad is unjustifiable. This represents an irreversible and irretrievable commitment of public land for private use.

Within the 150 mile radius, exactly where will the hardwood pulpwood logs come from? Is there any data to show specifically how much will come from where? When this project was first proposed, all I heard from the proponents was "Don't worry, there's plenty there". There must be some exact accounting of this.

What will removing the large number of required trees within the 150 mile radius do to air quality? Can the harvesting be done in a sustainable manner if the hardwood pulpwood is constantly being removed year after year?

?

If hardwood pulpwood logs are to be used in this cellulose to ethanol process, an age class gap will be created. In the future there will be many fewer sawlog size hardwoods available to meet the demand for that product, Hardwood sawlogs are valuable to our economy because they can be used to make furniture and other items that will create more jobs in the future. Any probable short term gain will be minimal when compared to the great loss of long term productivity of the forested areas used.

. How much energy will be used to produce each gallon of ethanol? This figure must include every step of the process from cutting the tree to putting the ethanol produced into the tank of a vehicle. The construction of the cellulose-to-ethanol plant will consume a huge amount of energy. If all this is considered is this a wise use of energy?

What does "up to 40 million gallons per year" realistically mean? How optimistic is this figure? What will be the minimum amount produced that will make it economically feasible to keep the plant in operation? More government assistance may be needed in the form of subsidies.

Fuel prices and demand fluctuate. If we continue to produce more fuel efficient vehicles and vehicles that run on electricity or other innovative forms of power the demand for ethanol will drop.

What are the realistic possibilities of selling the lignin and spent cellulose as fuel? Where is the present market for it?

Will there be any hazardous waste materials?

What will happen to the bark removed from the logs? What will be done with it?

If 200 gallons per day of water will be used and 100 gallons discharged into the wastewater treatment plant it must mean that 100 gallons will be discharged into the air via evaporation. What will this do to air quality? It will probably have an odor, how much of an odor?

What is the possibility of an accidental release of bioengineered enzymes/

Is there any assurance that the wastewater facility will remove all residues from the discharged water? If this cellulose to ethanol process is new, has not been tried on any large scale, how can it be assured that this large amount of water can be made clean enough to release into the Little Munuscong River watershed into which it will go? What will happen to the level and temperature of the river? The Little Munuscong River and its watershed is important to wildlife and the sport hunting and fishing activities dependent upon it. A large part of our economy is based on these activities.

The description of the proposed project states "Lignin residue would be pumped to the solids handling area for dewatering". If this area is on the soil there will be liquid

leaching into the ground. What is meant by “dewatering”? Where will this removed liquid go and what will it contain besides water?

The Proposed Project Description states M80 and South Gaines Highway have exits from I-75 and would likely serve as traffic routes to the proposed Frontier site. If M-80 is used as a route between I- 75 and the facility, traffic will go through a residential area and a small business area.

How much noise will be produced by the constant, 24 hours a day 7 days a week activity in the plant ? The trucks coming and going will also produce noise around the clock. This is noise pollution.

If the ethanol is to be trucked out, how many trucks will be required? If removed by rail, how many rail cars will be needed to move each day’s production of ethanol? The exhaust from the 68 trucks per day or diesel train engines bringing in supplies and the unknown number taking out the ethanol will diminish the air quality resulting in air pollution.

The demand for pulpwood created by this project will probably negatively affect the oriented strand board factory in nearby Newberry and several paper plants in the Upper Peninsula by raising the pulpwood price. These businesses have been here for some time and have provided steady employment for many more workers than the proposed project plans to employ. Will they stay if the price of pulpwood goes up? In 2008 I spoke with a manager at the oriented strand board plant and he expressed some concern regarding an escalation in the price of pulpwood if this proposed ethanol plant is built. It is not right for this proposed cellulose to ethanol project, using public funds, to endanger the existence of businesses that did not require government money to get started.

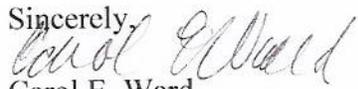
The Frontier Project is seeking township help, in the form of a citizen backed bond, to create a wastewater treatment system. It has received a 12 year property tax waiver from Chippewa County and is pressing regional planners to apply for additional grants for infrastructure and construction of what is described as a \$200-\$300 million project.. The project is also seeking government help to build a transmission line from the Central Upper Peninsula, described as a \$40 to \$80 million project. Taxpayers are being asked for too much. If this project is such a great idea, why aren’t private investors putting more into it?

There will be ongoing costs to taxpayers. One of these will be the funds required to maintain and repair I-75 and Gaines Highway. There will be increased traffic and noise in the nearby residential community of Woodside caused by truck and train traffic. The existence of heavy industry where a wooded area owned by the State of Michigan once existed represents environmental injustice. The area may gain at the most 75 jobs in the

plant and additional ones for the transporting of materials to the plant and ethanol out of the plant .

The costs will be greater than the gains.

Sincerely,



Carol E. Ward

January 26, 2010

Kristin Kerwin
NEPA Compliance Officer
Department of Energy
1617 Cole Boulevard
Golden, CO 80401
kristin.kerwin.doe.gov

Dear Ms. Kerwin:

The following are some questions regarding the proposed Mascoma Corp. ethanol producing plant for Kinross, Michigan.

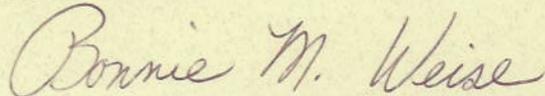
We attended a meeting in Sault Ste. Marie last December. Questions could not and were not adequately addressed. It seems like the project is one for producing jobs and obtaining federal money for the State of Michigan rather than a carefully planned and thought out process.

1. How efficient is the process of producing ethanol from wood? Can burning fossil fuel to generate electricity to produce ethanol be rationally justified based on efficiency and cost?
2. How much electricity will be needed to produce ethanol; where will the extra demand come from?
3. How much water will be used to produce ethanol? What effect will extensive water use have on the water table?
4. How will the waste water be handled? What effect will wastewater disposal have on surroundings wetlands and water quality?
5. What effect would the emissions (primarily carbon dioxide producing and odors) have on air quality.
6. What effect will the use large quantities of pulpwood have on the forest ecosystem? With all of the uses for wood (current and proposed), is the process of using large quantities of wood sustainable? How will it affect wildlife, old growth forests, and other ecosystem components?
7. Lots of people burn wood to heat their homes. What effect will the plant have on the price and availability of fuel wood?
8. Why can't canary grass, sawdust, old hay, willows, sedges, or other plant material be used instead of pulpwood? These don't have much of a current market use.

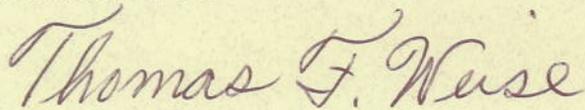
9. What will happen to all of the solid waste produced? Can the waste be economically used for making pellets for stoves or have some other use?
10. One presenter spoke of genetically engineered enzymes used as part of the process. What are the consequences of using GMO organisms? He referred to their use as "experimental".

Sincerely,

Bonnie M. Weise

A handwritten signature in cursive script that reads "Bonnie M. Weise".

Thomas F. Weise

A handwritten signature in cursive script that reads "Thomas F. Weise".

12751 S. Shunk Road
Dafer, MI 49724

January 26, 2010

Kristen Kerwin
NEPA Compliance Officer
Department of Energy
1617 Cole Boulevard
Golden, CO 80401
kristin.kerwin@go.doe.gov

From:
Marvin Roberson
Sierra Club
1094 Ortman Rd.
Marquette, MI 49855
marvin.roberson@sierraclub.org
(906) 360-0288
(907)
Submitted by email

Re: Frontier Renewable Resources Cellulose-to-Ethanol Biorefinery Project, Kinross, Michigan (DOE/EA 1705)

Please accept the following comments regarding the Scoping Notice for the above referenced project.

- 1) We believe that the size and scope of the potential effects of this project warrant a full EIS, rather than simply an EA.
- 2) If the "No Action" Alternative is chosen, will this project continue to move forward?
- 3) If the project will continue to move forward in the event of a "No Action" alternative, how can there be any "need" for the DOE funding?
- 4) How many cords of wood will this project use?
- 5) What will be the species and age class distribution of this wood?
- 6) How will the analysis determine whether there is sufficient available wood which can be harvested in a sustained manner?
- 7) Public statements from the developers of the project have used "growth over harvest" figures in their attempts to demonstrate sufficient availability of wood. This assumes that harvesting all growth annually is sustainable. Please provide information that this is true in answering question #6.

- 8) In the absence of such information, please provide the methods for determining sustainability which will be used.
- 9) Michigan's forests in this region are largely artificially skewed towards younger age class and seral stage components, as a result of the massive cutting a century ago. Please address how this project, as well as other projects using large amounts of wood (cumulative effects) will affect these recovering forests and their current move towards more natural age class and seral stage distribution.
- 10) How will this large new demand for wood affect wood prices in the area?
- 11) How many other biomass using projects are proposed for the wood gathering area of this project? What will the cumulative effects of these projects be on questions 6-10?
- 12) How much private funding (not Federal, not State, not Michigan Economic Development Corp. funding) is proposed for this project?
- 13) How will this increased demand for wood affect other industrial wood users in the area?
- 14) The state of Michigan is in the process of designating Biodiversity Stewardship Areas through the state's Biodiversity Conservation Planning Process. This will take significant areas of State Forest in the area out of timber production. How will this project be affected by that process?
- 15) Conversely, how will the ability of the state to designate and manage these areas for Biodiversity Conservation in the face of this increased demand?
- 16) What will the effect of this and related projects be on species (such as Northern Goshawk) which require older, later successional, closed canopy habitat?
- 17) What percentage of total forest growth in the area will be consumed by this project?
- 18) What percentage of Michigan's gasoline usage will be produced by this plant. Please note - this is not a question about how much blended fuel will be produced when this project's product is blended with gasoline. The question is - how many gallons will this project *produce*, and how many gallons of fuel does Michigan use annually.
- 19) How many gallons of fuel will be used in total by this project, for wood procurement, shipping, etc?
- 20) In determining Cumulative Effects for all questions, please address possible expansion plans or related new projects should this project prove financially successful.

- 21) How many cords of wood will be required for each job created (not counting construction jobs)?
- 22) How many jobs at other wood users in the area will potentially be lost if this project moves forward?
- 23) What is the expected life cycle of this project?
- 24) How many more jobs could be created using the same amount of wood for value-added products such as furniture, etc?

Thank You. If you have any questions, please feel free to contact me at the above information.

Marvin Roberson
Sierra Club Forest Ecologist.

-----Original Message-----

From: Christie_Deloria@fws.gov [mailto:Christie_Deloria@fws.gov]

Sent: Monday, February 01, 2010 2:35 PM

To: Kerwin, Kristin

Subject: U.S. FWS intending to comment on DOE/EA 1705

Hi Kristin -

The U.S. Fish and Wildlife Service is intending to provide comment on the Scoping Notice for Frontier Renewable Resources Cellulose-to-Ethanol Biorefinery Project, Kinross, Michigan (DOE/EA 1705). Unfortunately, due to workload issues, we were not able to provide comments prior to your January 26th deadline. We respectfully ask for an extension of time to February 26th.

We have been working with American Transmission Company over the past 6+ months and were made aware that an upgrade to their electrical transmission line (St. Ignace to Rudyard) is necessary to provide enough energy for the above referenced project. The line upgrade may have the potential to adversely impact the federally endangered Hine's emerald dragonfly. Under section 7 of the Endangered Species Act, the upgrade may be considered an interdependent activity. As such, it may make sense to incorporate the line upgrade into your proposed action.

We need further time to review the proposed action and articulate our comments. Please let me know if the above time extension is acceptable to you or if you have any questions.

Thanks.

Christie

Christie Deloria-Sheffield
Fish & Wildlife Biologist

U.S. Fish & Wildlife Service
Upper Peninsula Sub-Office
Ecological Services
3090 Wright Street
Marquette, MI 49855
(906) 226-1240 Telephone
(906) 226-3632 FAX
(906) 360-1811 Mobile

LITTLE TRAVERSE BAY BANDS OF ODAWA INDIANS

7500 ODAWA CIRCLE
HARBOR SPRINGS, MI 49740

DECLARATION 082210-002

Statement in Opposition to the Frontier Energy Project Because of the Devastating Impact on Tribe's Culture

A Declaration is a formal written public statement in support or opposition of an issue or matter. One or more Tribal Councilors may sign onto a Declaration as individual Councilors. A Declaration shall not obligate or commit the Tribal Council in any manner. Declarations do not require formal action by the Tribal Council.

The Waganakising Odawak is a nation of citizens with inherent sovereignty and right to self-governance; and

The Little Traverse Bay Bands of Odawa Indians is a federally recognized Indian Tribe under Public Law 103-324, and is a party to numerous Treaties with the United States the most recent of which being the Treaty of Washington of March 28, 1836 (7 Stat. 491) and the Treaty of Detroit of 1855 (11 Stat. 621); and

In accordance with the Little Traverse Bay Bands of Odawa Indians Constitution:

" IN THE WAYS OF OUR ANCESTORS, to perpetuate our way of life for future generations, we the Little Traverse Bay Bands of Odawa Indians, called in our own language the WAGANAKISING ODAWAK, a sovereign, self-governing people who follow the Anishinaabe Traditions, Heritage, and Cultural Values, set forth within this Constitution the foundation of our governance.

We will work together in a constructive, cooperative spirit to preserve and protect our lands resources and Treaty Rights, ... In keeping faith with our Ancestors, we shall preserve our Heritage while adapting to the present world around us..." and

The Little Traverse Bay Bands of Odawa Indians Tribal Government and staff have been active in work to protect the environment for both our present citizens and coming generations through approval and implementation of a body of tribal laws and regulations; and

The Tribe has concerns about the potential impact that Frontier energy project will have on land, air and water impacting the culture of the Tribe; and

This project will take wood from approximately a 150 mile radius. This radius would encompass 80 percent of the public lands with in the 1836 Ceded Territory Treaty area which the Tribe uses for hunting for subsistence and gathering of medicines; and

The Tribe has a concern as to whether the use of hard woods to sustain the Frontier energy project will impact the wildlife and plant medicines found within the forests; and

The Tribe has concerns about the amount of water that will be used to sustain the Frontier energy project along with the potential discharge of water into the Munuscong Watershed that may contain containments; and

The Tribe is concerned about the potential toxics that might be emitted into the air by the Frontier energy project including such contaminants as NOx, CO, VOC, PM, SO2, and other Toxic Air Contaminants already in the area; and.

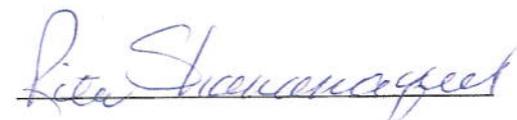
The undersigned Tribal Councilors declare that they understand the sacred relationship between the Tribes the lands and waters of their Ancestors and declare that the Frontier energy project will have an impact on the cultural traditions of the Tribe and without further information we are unable to support this project.


Tribal Councilor Regina Gasco Bentley

Date: 8-22-10


Tribal Councilor Aaron Otto

Date: 8-22-10

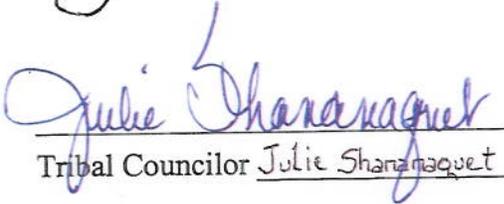

Tribal Councilor Rita Stenman

Date: 08.22.10

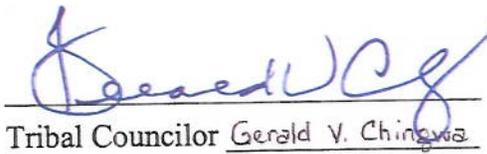
Tribal Councilor Rita Shananaquet


Tribal Councilor John Bott

Date: 8-22-10


Tribal Councilor Julie Shananaquet

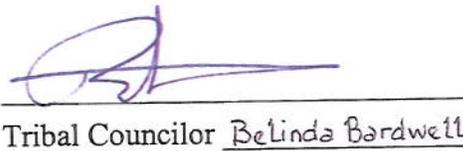
Date: 8-22-10


Tribal Councilor Gerald V. Chingwa

Date: 8/22/10


Tribal Councilor Melvin L. Kioqima

Date: 8/22/10


Tribal Councilor Belinda Bardwell

Date: 8-22-10


Tribal Councilor Marvin P. Mulholland

Date: 8-22-10

A copy of this Declaration is on file at the Tribal Council Legislative Office.



Department of Energy

Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

July 22, 2010



Mr. Ken Harrington, Chairman
Little Traverse Bay Band of Odawa Indians
7500 Odawa Circle
Harbor Springs, MI 49740-9692

Dear Mr. Harrington,

The U. S. Department of Energy is proposing to provide Federal funding to Mascoma Corporation for the final design, construction, and operation of a cellulose-to-ethanol biorefinery near the City of Kinross, Michigan in Chippewa County. Frontier Renewable Resources, LLC, a joint venture between Mascoma Corporation and J.M. Longyear, LLC, would develop and operate the proposed facility. The proposed facility is intended to further the government's goal of rendering cellulosic ethanol cost-competitive with corn ethanol by 2012.

The proposed biorefinery would utilize approximately 1,440 bone dry tons per day of hardwood pulpwood to eventually produce up to 40 million gallons per year of anhydrous ethanol. Co-products, such as the lignin and spent cullose from the process, would either be sold or used to produce steam and electricity in a biomass boiler. Feedstock would consist of hardwood pulpwood within the Michigan counties with a 150-mile radius of the site.

The proposed project site comprises a 355 acre plot of land in Kinross Township of Chippewa County, Michigan, Township 45 North, Range 01 West, Sections 21 and 28. It lies approximately one-half mile northeast of Kinross. The attached Site Location Map (Figure 1) provides an overview of the general property and access to area roads. Frontier plans to construct the plant on approximately 50 acres located within the southern 160 acres.

The proposed site is adjacent to the former Kincheloe U.S. Air Force base in Kinross. The site is predominantly wooded with no existing structures and limited unpaved trails. A snowmobile trail runs along the west boundary of the property and cross a small portion of the northwest corner. Figure 2 presents the Site Location Map with a 2005 Aerial Photo.

An environmental assessment (EA) is currently being prepared for the proposed Project by the Department's Golden Field Office to meet the requirements of the *National Environmental Policy Act*. DOE will include correspondence with your tribe in an appendix to the EA. This letter as well as the draft EA, when it is available, will be posted in the DOE Golden Field Office online reading room: http://www.eere.energy.gov/golden/reading_room.aspx. At this time we anticipate a 15-day public comment period for this proposed project. You will receive a notice of the availability of the draft EA. Please contact DOE if you would like to receive a hardcopy of the draft EA.

DOE is initiating consultation and requesting information your tribe may have on properties of traditional religious and cultural significance within the vicinity of the proposed facility and any comments or concerns you have on the potential for this proposed project to affect those properties. This information is being requested to aid in the preparation of that Environmental Assessment and to meet our obligations under Section 106 of the National Historic Preservation Act and the Native American Graves Protection



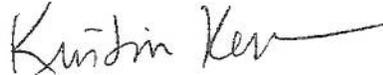
Frontier Declaration:

and Repatriation Act of 1990. If you have any such information, require additional information, or have any questions or comments about that project, please contact me at the following address:

Ms. Kristin Kerwin
U.S. Department of Energy
1617 Cole Boulevard
Golden, Colorado
Email: kristin.kerwin@go.doe.gov
Phone: 303-275-4968

Please provide your comments within 30-days of receipt of this letter. Thank you in advance for your consideration.

Sincerely,



Kristin Kerwin
NEPA Compliance Officer

Attachments

Figure 1. Site Location Map

Figure 2. Site Location Map with a 2005 Aerial Photo.

CC: Ms. Winnay Wernigwase, Director
Cultural Preservation and Archives
Little Traverse Bay Band of Odawa Indians
7500 Odawa Circle
Harbor Springs, MI 49740-9692

cc: Tribal Chair