

**Planning and Development Committee  
Wednesday July 20, 2016**

**6:00 PM**

**Conference Room**

**AGENDA**

1. Approval of July 6, 2016 Minutes
2. Committee Applications:
3. Updates:
4. Old Business:
  - A. Business Park Development Agreement – Town Manager Update
  - B. Update on MRC/Fiberight local and DEP permitting status
5. New Business:
  - A. Discussion of request for zoning amendment for 17 Dewey Street – James Kiser, P.E., LSE
6. Zoning Considerations/Discussion
  - A. Update on ordinance amendments referred to Planning Board for recommendation:
    - a. Off-Premises Signage (referred 5/2/16)
    - b. Accessory Apartment Ordinance (referred 5/2/16)
    - c. Threshold for Building Permits, Zoning Ordinance (referred 5/16/16)
    - d. Shoreland Zoning Ordinance (referred 5/16/16)
7. Citizens Initiatives:
8. Public Comments:
9. Committee Member Comments:
10. Adjourn

**Planning and Development Committee**  
**Wednesday July 6, 2016**  
**6:00 PM**  
**Conference Room**  
**MINUTES – DRAFT**

Attendees:

Committee/Council

Ivan McPike-Chair  
Greg Sirois  
Dennis Marble  
Terry McAvoy  
David Ryder  
Mark Cormier  
Stephen Wilde (arr. 6:09)

Staff

Angus Jennings, Town Manager  
Myles Block, CEO  
Kelly Karter, Assessor  
Chip Laite, Sargent Corporation  
David Hughes, Epstein Commercial R. E.  
Miles Greenacre, Resident  
Bill Shakespeare, Resident

Chairman McPike called the meeting to order at 6:00 PM.

1. Approval of June 15, 2016 Minutes – Motion by Councilor Marble seconded by Councilor Wilde to approve the June 15 minutes. Approved 5-0 (Cormier abstained).
2. Committee Applications: None.
3. Updates: None.
4. Old Business:
  - A. Discussion of Business Park Development Agreement – continued from June 15

Manager Jennings summarized the Committee's discussion from its June 15 meeting at which it had been agreed that a follow-up meeting to include a representative from Sargent Corp. would be helpful in order to mutually agree on how to proceed. He introduced Chip Laite from Sargent and David Hughes from Epstein Commercial Real Estate, who is under agreement with the Town to market the business park lots. Mr. Laite reported that he had scheduled a meeting for next week to include both Manager Jennings and the TIF Consultant Noreen Norton in order to review what work is needed, how this will get done and on what timeline.

Mr. Hughes spoke about the challenges he has experienced in selling the lots. He noted that a great deal of industrial development in the past 15 years has gone to Hermon, which has executed many TIF agreements. Mr. Hughes suggested that a TIF agreement including the front town-owned lots could help to move

the front lots, which he feels would generate some momentum for the park which could improve sales of the remaining lots. He said that the average list price of the Hampden lots is \$40-50,000 per usable acre, but industrial lots in Hermon are in the \$35-37,000 range.

Councilor McPike acknowledged that the Development Agreement from 2014 indicates that the Town will proceed with a TIF for the back lots. Mr. Laite agreed that, under the terms of the agreement, Sargent would pay for the consultant costs to assist the Town in preparing a TIF for state and local approval.

Councilor McPike said that the TIF structure in the agreement provides for Credit Enhancement Agreement funds to be paid to Sargent, and Councilor Wilde said this structure doesn't provide an enticement to a new developer. Mr. Hughes said it is in everyone's interest for the lots to sell and development to go forward. Councilor McAvoy noted that the proceeds from the lot sales also go to Sargent.

Mr. Hughes said that the Development Agreement provides for TIFs of 10-year duration but that the useful life of the infrastructure Sargent is constructing is fifty plus years. He said the Town is investing in order to receive future tax revenue. Councilor McAvoy said that the Town has spent a lot of money on the business park that he doesn't think it will recoup.

Manager Jennings said that the goal of tonight's meeting was not to arrive at a decision regarding the structure of a TIF but rather to get the parties together, and that the TIF process in the months ahead would allow for detailed discussion. Councilor Wilde said that getting the lots sold and built upon would be a win-win.

5. New Business:

A. Overview of BETE and BETR policies – Kelly Karter, Assessor

Assessor Karter presented her memorandum detailing how the State BETE and BETR programs work. Councilor McAvoy asked which program Fiberight was expected to participate in, and Assessor Karter said most likely BETE. There was continued discussion regarding TIF and the trade-offs between stimulating development that might not otherwise occur and foregoing full taxation revenue. Councilor McPike said in his experience Hermon has been very proactive about issuing TIFs, and that the threshold for value of new development is only \$200,000. Councilor McAvoy said that TIFs redistribute the tax burden to residents. Councilor Cormier said that any reference to government money should clarify that the government has no money: it's the people's money. Councilors Marble and Wilde said that they'd like to see more businesses in town. Bill Shakespeare

said that a TIF agreement had led to the current grocery store. Councilor Wilde said we need to get more proactive about new business development and to offset tax rate increases with new taxable growth. He said TIFs are the game we're in.

Manager Jennings said that it would be recommended to establish a "TIF Team" which could be an informal group, but would be assembled early in the consideration of a potential TIF or a request for TIF. Councilor Wilde said that the Town needs to be able to move quickly since once businesses decide to move they move quickly.

B. Discussion of work plan and priorities for FY17

Manager Jennings presented his memo included in the meeting packet and the Committee members discussed their priorities for work to get done in FY17. Three items were identified as top priorities, including:

- a Town Center plan and zoning amendments;
- completing the TIF work for the Business Park that was agreed to in 2014, and establishing a dedicated TIF working group to improve the Town's approach to weighing the pros and cons of specific proposals; and
- completing the Codification process that began in 2014.

Other items that were discussed as being important, but somewhat less time-sensitive than the three priority items, included establishing a vision and plan to optimize use of the riverfront, and looking more closely at what would be involved with serving the Town Center with natural gas. Regarding the waterfront, it was noted that a developer is looking for a place in the region to build a new venue.

6. Zoning Considerations/Discussion

- A. Update on Codification process
- B. Ordinance amendments referred to Planning Board for recommendation:
  - a. Off-Premises Signage (referred 5/2/16)
  - b. Accessory Apartment Ordinance (referred 5/2/16)
  - c. Threshold for Building Permits, Zoning Ordinance (referred 5/16/16)
  - d. Shoreland Zoning Ordinance (referred 5/16/16)
- C. Other amendments on Committee work plan
  - a. Harbor Ordinance
  - b. Mineral Extraction
  - c. Flag Lots
  - d. Home Occupation

e. Fees Ordinance

7. Citizens Initiatives: None.
8. Public Comments: None.
9. Committee Member Comments: None.
10. Adjourned: 8:10 PM.



4-b

STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

MUNICIPAL REVIEW COMMITTEE, INC. AND	)	SOLID WASTE
FIBERIGHT, LLC	)	LICENSE
HAMPDEN, PENOBSCOT COUNTY, MAINE	)	
SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
(APPROVAL WITH CONDITIONS)	)	NEW LICENSE

Pursuant to the provisions of the *Maine Hazardous Waste, Septage and Solid Waste Management Act*, 38 M.R.S. §§ 1301 to 1319-Y; the *Rule Concerning the Processing of Applications and Other Administrative Matters*, 06-096 C.M.R. ch. 2 (last amended October 19, 2015); and the *Solid Waste Management Rules: General Provisions*, 06-096 C.M.R. ch. 400 (last amended April 6, 2015); *Water Quality Monitoring, Leachate Monitoring, and Waste Characterization*, 06-096 C.M.R. ch. 405 (last amended April 12, 2015) and *Processing Facilities*, 06-096 C.M.R. ch. 409 (last amended July 27, 2014), the Department of Environmental Protection ("Department") has considered the application of the MUNICIPAL REVIEW COMMITTEE, INC. and FIBERIGHT, LLC, with its supportive data, agency review comments, staff summary, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

- A. Application: The Municipal Review Committee, Inc. ("MRC") and Fiberight, LLC, ("Fiberight") have jointly applied to construct and operate a regional solid waste processing facility in Hampden, Maine.
- B. History:
  - (1) The MRC is a non-profit organization comprised of 187 municipalities and inter-municipal entities in central, eastern and northern Maine that currently send their municipal solid waste ("MSW") to a waste-to-energy plant located in Orrington, Maine.
  - (2) The MRC was formed in 1991 to work with the waste-to-energy plant partnership to improve facility operations and economic performance. The MRC is governed by 9 directors elected by the membership.
  - (3) The MRC Board of Directors has the authority to manage investments and authorize the disbursement of funds as deemed appropriate under the terms and conditions of their bylaws and agreement(s) with each charter municipality.

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- (4) Fiberight is a privately held company founded in 2007 with current demonstration facility operations in Lawrenceville, Virginia. The company focuses on transforming post-recycled MSW and other organic feedstocks into next generation renewable biofuels.
- (5) Fiberight is recognized by Maine’s Bureau of Corporations, Elections and Commissions as a Foreign Limited Liability Company and it filed a Statement of Foreign Qualifications to Conduct Activities (Charter #20150853FC) with a nature of the business described as the solid waste processing of trash into biofuels.

C. Summary of Proposal: The MRC and Fiberight have established a contractual agreement to construct and operate a regional solid waste processing facility in Hampden, Maine. The Application for a Solid Waste Processing Facility (hereinafter “Application”) was prepared by CES, Inc. and is dated June 2015. The Application was subsequently revised with supplemental submittals with various dates. The proposed processing facility will accept and process MSW from numerous MRC member communities in central, eastern and northern Maine. The MRC and Fiberight also have an interest in accepting and processing MSW from in-state non-MRC communities that may decide to contract with the MRC and Fiberight. Pursuant to the provisions of 06-096 C.M.R. ch. 2, § 10, a pre-application meeting was held on March 19, 2015. On July 15, 2015, the Application was considered complete for processing.

2. PUBLIC PARTICIPATION

Written public comments were received by the Department including 5 requests for a public hearing pursuant to the provisions of 06-096 C.M.R. ch. 2, § 7(A). The written public comments and public hearing requests were made available to the public via the Department’s website.

- A. Written Public Comments: Written comments were received from local residents, several municipalities, the Maine Resource Recovery Association, and the Natural Resources Council of Maine.
- B. Public Hearing Requests: The Department received 5 requests for a public hearing. The requests included concerns regarding several components of the Application including but not limited to vernal pools, wetlands, a nearby stream, traffic, property values, air emissions, and the waste hierarchy. The Department determined that there was insufficient credible conflicting technical information regarding relevant licensing criteria to necessitate a public hearing. Based on the Commissioner’s discretion, a public meeting was held on November 19, 2015 in

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accordance with the provisions of 06-096 C.M.R. ch. 2, § 8. The purpose of the meeting was to provide an overview and opportunity to comment on the joint applications filed with the Department.

C. Draft License Decision: The Department released a draft Department License Decision (Draft License) on June 13, 2016. The Draft License was made available to the public via the Department’s website. The MRC and Fiberight and interested persons were notified of the availability of the Draft License. The comment period on the Draft License closed on July 5, 2016. The Department received several comments regarding the Draft License. All of the comments were reviewed and given consideration in relation to the relevant review criteria in the Maine Hazardous Waste, Septage and Solid Waste Management Act and associated rule. The comments received included concerns regarding several components of the Application including but not limited to title, right or interest, financial ability, technical ability, process design and the solid waste management hierarchy. Included with the comments were additional requests for the Department to hold a public hearing.

(1) Title, Right or Interest: Commenters noted that the MRC does not have the authority to take on joint liability and to expend member funds. The Department notes that the Joinder Agreements executed between each charter municipality and the MRC delegates authority to the MRC to act on behalf of the municipality, consistent with the MRC bylaws. As part of the Joinder Agreement, amended and restated bylaws of the MRC are provided that outline MRC’s authority in regards to the proposed processing facility. The Department notes that the MRC has provided an option to purchase the property associated with the proposed processing facility pursuant to the applicable rule. Additionally, the Department notes that the MRC’s authority is governed by state law, the MRC bylaws and associated terms and conditions of their respective agreements. Based on this information, the Department finds that the MRC has submitted adequate evidence of title, right or interest.

(2) Financial Ability: Commenters noted that the Application does not demonstrate that the MRC and Fiberight have the financial ability to design, construct, operate, maintain and close the proposed processing facility. The Department notes that Fiberight has provided a letter of “Intent to Fund” in accordance with the applicable rule and that finalized financial documentation will be submitted once the necessary regulatory and local approvals are received. Submittal of the finalized financial documentation is a condition of the license. The Department reviewed and considered the concerns relating to financial ability and determined

MUNICIPAL REVIEW COMMITTEE, INC. AND	4	SOLID WASTE
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that the condition to the Department’s license that requires the MRC and Fiberight to demonstrate final financial capacity will provide the Department with adequate assurance that the MRC and Fiberight have the financial ability to design, construct, operate, maintain and close the proposed processing facility in a manner consistent with state environmental regulations.

- (3) Technical Ability: Commenters noted that the MRC and Fiberight do not have the technical expertise to design, construct, operate, maintain and close the proposed processing facility. The Department notes that while Fiberight will be responsible for daily operations of the proposed processing facility and Fiberight has experience operating a demonstration scale processing facility, Covanta will be the operator for the proposed processing facility. Covanta has more than 30 years of experience converting MSW into clean renewable energy, recycling metals and other commodities, and helping communities meet their goals for environmental stewardship and sustainability. The Department reviewed and considered the concerns relating to technical ability and determined that the condition to the Department’s license that requires the MRC and Fiberight to submit specific professional qualifications for personnel who will be responsible for operations, in addition to the technical ability information provided with the Application, provides the Department with adequate assurance that the MRC and Fiberight have the technical ability to design, construct, operate, maintain and close the proposed processing facility in a manner consistent with state environmental regulations.
  
- (4) Process Design: Commenters noted that there was inconsistent information and terminology regarding the proposed process design. Based on the comments, the Department has revised the relevant sections of the license that pertain to the proposed process. The Department has clarified the proposed use of a reactor, instead of a digester, in the renewable fuel production process, removed the reference to the installation of an evaporator which is not being proposed as part of the Application, and clarified the proposed renewable energy production process design.
  
- (5) Solid Waste Management Hierarchy: Commenters noted that the proposed processing facility project is not consistent with the State’s solid waste management hierarchy which establishes that it is the policy of the State to actively promote and encourage waste reduction measures and the maximization of waste diversion efforts, and which sets forth an integrated approach to the management of solid waste. The Department notes that

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the MRC and Fiberight will continue to support and encourage local waste reduction, reuse and recycling programs. The Department also notes that the Joinder Agreements entered into by the municipalities include a provision granting the municipality the sole option to establish, continue, expand or discontinue existing or future programs intended to encourage reduction, reuse, or recycling of MSW generated within its borders. Further, the proposed processing facility design will facilitate the removal of recyclables at the proposed processing facility that are not captured by programs implemented at the local level and will convert the remaining organics into renewable products. Based on the comments, the Department has added clarifying language in the relevant sections of the license relating to the solid waste management hierarchy including requiring Department reporting when MSW is brought for land disposal prior to the Commercial Operations Date being achieved and the submittal of a schedule outlining proposed measures that will be implemented in order to reach Commercial Operations.

- (6) Public Hearing: Commenters noted that a public hearing is now warranted based on inconsistent and conflicting technical information within the Application. These requests are in addition to the public hearing requests received at the time of Application acceptance. The Department is unable to act on these new requests since they were not received within 20 days of the Application being accepted for processing as required by 06-096 C.M.R. ch. 2. The Department notes that while a series of supplemental submittals were provided after the Application was submitted and accepted for processing, a public hearing will not further the Department's understanding or technical knowledge of the proposed processing facility project. Additionally, the Department notes that the MRC and Fiberight have met the relevant review criteria in the Maine Hazardous Waste, Septage and Solid Waste Management Act and associated rule.

### 3. PROJECT DESCRIPTION AND SITE DESIGN

The proposed project site is located within an approximate 90-acre parcel located east of the Coldbrook Road in Hampden, Maine. The construction of a new 4,460-foot long road to provide access to the proposed project site from the Coldbrook Road is proposed on an additional 5-acre parcel of property. Department License #L-2647-NJ-A-N and #L-26497-TG-B-N, dated July, 2016, approved the construction of the proposed access road and utility corridor. Existing MRC member communities generate an average of 410 to 550 tons of MSW per day. The proposed processing facility is being designed to process 650 tons per day of MSW. Peak MSW delivery is estimated to be up to 950 tons per day to account for seasonal fluctuations.

MUNICIPAL REVIEW COMMITTEE, INC. AND	6	SOLID WASTE
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The proposed processing facility will consist of a 144,000 square foot building that will provide for the receiving, storage and handling of MSW for processing and/or converting into recyclables, renewable fuels and residues for potential recycling and/or disposal off-site. The proposed processing building will contain a tipping floor designed to accommodate 2 days of inside storage capacity for raw MSW and 2 days of inside storage capacity for first sort material from which unsuitable waste such as textiles and large bulky items have been removed. Two-inch minus fines will also be removed at this stage for further processing. A second sort system will separate curbside-type recyclables from the first sort material that has been processed through a continuous pulper which has pulped and removed the majority of the organic material in the waste stream as a biomass pulp. The separated biomass pulp will be further processed to remove the entrained soluble organics and food waste leaving a clean biomass pulp. The clean biomass pulp will be prepared for enzymatic hydrolysis where the cellulosic fraction will be converted to sugars. The MRC and Fiberight state that the food wastes, other soluble organics and sugars produced from the clean biomass pulp will all initially be converted to bio-methane, via an anaerobic digester, which is proposed to be piped into an existing natural gas pipeline owned by Bangor Natural Gas located adjacent to the project site. In the future, the sugars may be sold directly as industrial sugars subject to prevailing market conditions.

Fiberight anticipates between 70 percent (%) and 80% by weight of all incoming MSW will be converted to renewable fuels or recycled, and the remaining 20% to 30% by weight will be process residues to be disposed off-site. In addition to residues and other unsuitable materials that will require off-site disposal, the MRC and Fiberight have planned for the disposal of MSW bypass waste expected to be generated during scheduled and unscheduled facility downtimes or for other unforeseen circumstances when the facility cannot accept and process MSW.

The Department finds that the MRC and Fiberight have adequately planned for site design; provided that, at least 30 days prior to commencing construction of the proposed access road and associated utility corridor and 60 days prior to commencing construction of the processing facility, the MRC and Fiberight submit a complete set of construction-ready plans and documents for each component of the proposed project to the Department for review and approval.

4. TITLE, RIGHT OR INTEREST

The MRC and Fiberight estimate that approximately 95 acres will be acquired, which includes a 90-acre parcel where the proposed processing facility will be constructed and a 5-acre parcel for the construction of a new 4,460-foot long access road. Pursuant to 06-096 C.M.R. ch. 2, § 11(D)(3), the MRC has provided an *Option to Purchase*, dated December 1, 2014, for the property necessary for the development of the proposed

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processing facility and access road from the properties current owners, H.O. Bouchard, Inc. and Hickory Development, LLC. The MRC Board of Directors has the authority to manage investments and authorize the disbursement of funds as deemed appropriate under the MRC’s bylaws and associated terms and conditions of their agreement(s) with each charter municipality. As outlined in the *Development Agreement*, dated February 4, 2015, between the MRC and Fiberight, the MRC will purchase and own, and/or otherwise secure long-term control of, the properties necessary for the proposed processing facility. Fiberight will retain ownership of the processing facility and will lease the property owned by the MRC as outlined in the *Development Agreement*. The expiration date for the *Option to Purchase* is March 31, 2017.

The Department finds that the MRC and Fiberight have demonstrated adequate evidence of title, right or interest in the properties for the proposed project site; provided that, the MRC and Fiberight submit a copy of the deed(s) or executed long-term lease agreement(s) for the properties purchased and/or leased for the development of the proposed project within 30 days after the closure of sale and/or execution of the long-term lease agreement(s).

5. NOTICE OF INTENT

The MRC and Fiberight have provided documentation of the publication of a “Notice of Intent to File” and have documented notification of abutters and other interested parties as required in 06-096 C.M.R. ch. 2. The Notice of Intent to File was made during June 2015. The application was accepted as complete for processing on July 15, 2015.

The Department finds that the MRC and Fiberight have complied with all of the public notice requirements of 06-096 C.M.R. ch. 2.

6. FINANCIAL ABILITY

The MRC and Fiberight have made shared financial commitments to ensure necessary funding is available for the design, construction, operations, maintenance and closure of the proposed project. The *Development Agreement*, mentioned in Findings of Fact (“FOF”) #4 above, outlines the specific financial obligations for each party.

A. MRC: In general, the MRC will be responsible for securing fee ownership or long-term control of the project site appropriate for the development of the proposed project. Additionally, the MRC shall lease or sublease the project site to Fiberight under a long-term agreement having terms and conditions that support the development, financing, construction and operation of the processing facility, with appropriate oversight by the MRC.

MUNICIPAL REVIEW COMMITTEE, INC. AND	8	SOLID WASTE
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#S-022458-WK-A-N	)	
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Current cost estimates for portions of the development project for which the MRC has conditionally committed funding to have been provided including land acquisition, road and stormwater facilities, water and sewer utilities, natural gas utilities, and electric and telecom utilities. The total project cost estimate which the MRC has committed to funding is \$4,230,000. The MRC will self-finance its share of the funding for the proposed project. The source of funds will be via a *Tip Fee Stabilization Fund* (“Fund”), which maintained a balance as of March 31, 2015 of \$22,220,628. The MRC submitted a copy of a bank statement showing the Fund balance and a copy of its latest available audited financial statements. The MRC has committed to set aside up to \$5,000,000 from the Fund to finance the land acquisition and infrastructure activities. No bonding or borrowing capacity is needed for the MRC to meet its financial commitment to the proposed project.

- B. Fiberight: Current cost estimates for portions of the development project for which Fiberight will be responsible for include site development, foundations, concrete and building construction, machinery and equipment, steel, mechanical and electrical installation, and engineering, permits and project management. Total estimated capital costs for which Fiberight is responsible for is \$66,976,786. Fiberight will also be responsible for the following estimated expenditures: annual operational costs, annual maintenance costs, and facility closure costs for a total cost of \$12,700,000.

Pursuant to 06-096 C.M.R. ch. 400, § 4(B)(2)(b)(i)(b), Fiberight has provided a letter of “Intent to Fund”, dated December 18, 2015, from Covanta Energy, LLC (“Covanta”) stating that Covanta is engaged with Fiberight to support the development, financing, construction and operation of the proposed processing facility. Covanta conducted a review of financial projections relating to the project and executed a term sheet for a long-term strategic partnership with Fiberight. Covanta has reviewed the estimated budget for the proposed project, totaling approximately \$67 million, and confirmed their interest in supporting Fiberight with project finance in the form of an equity investment in the proposed processing facility.

Covanta’s letter is not intended to be a binding commitment to provide financing. A binding financial commitment is subject to successful completion of due diligence activities; including, but not limited to, the proposed project receiving relevant Federal, State and local permits, and Fiberight entering into acceptable waste supply agreements with the MRC and its charter municipalities. Covanta’s role in the proposed processing facility will be as an investor and operator. Covanta has supplied adequate evidence of its ability to fund the construction and operation of the proposed processing facility; however, the ultimate level of

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investment is still under consideration by Covanta. The intent is for Fiberight and Covanta to be joint investors in the proposed project.

- C. Other: Letters of “Intent to Fund” were also provided by DTE Energy (dated June 11, 2015) and Argonaut Private Equity (dated June 17, 2015). In the event that either DTE Energy or Argonaut Private Equity is utilized for funding, their involvement with the proposed project will be in the form of project financing only, acting as a financial institution.

Once permits are issued, and prior to project construction, final evidence of the specified and sufficient amount of funds for each party will be provided to the Department in accordance with 06-096 C.M.R. ch. 400, § 4(B)(2)(b)(i)(a).

The Department finds that the MRC and Fiberight have submitted adequate evidence of financial capacity to design, construct, operate, maintain and close the proposed processing facility in a manner consistent with state environmental regulations; provided that, the MRC and Fiberight submit, within 30 days of receipt and prior to beginning construction of the proposed processing facility, exclusive of the access road that is funded solely by the MRC, to the Department for review and approval the finalized financial documents for the construction and operation of the proposed processing facility.

7. TECHNICAL ABILITY

The MRC and Fiberight have retained several consultants to support the design, construction, operation, maintenance and closure of the proposed processing facility.

- A. MRC: The MRC manages the affairs and concerns of their current 187 municipal members. The member-led MRC has successfully managed the current 30-year contract with the Penobscot Energy Recovery Corporation (“PERC”) waste-to-energy facility, located in Orrington, Maine, since 1991. The MRC, on behalf of the Equity Charter Municipalities, purchased and manages a 23% ownership interest in the PERC facility. As part of this function, the MRC conducts the following: monitors the PERC facility’s performance, reviews and votes on the facility’s annual operating budget and decisions to invest in capital and major maintenance projects, and oversees actions taken and investments made to the PERC facility to ensure that potential environmental impacts are avoided and mitigated appropriately.
- B. Fiberight: Fiberight will be responsible for daily operations of the proposed processing facility. Fiberight has demonstrated the technical ability to operate a similar, smaller scale MSW processing demonstration facility located in

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Lawrenceville, Virginia. The Fiberight team associated with the proposed processing facility is the same team responsible for the design and operation of Fiberight’s demonstration facility in Virginia. Fiberight has submitted the résumés of those individuals responsible for the demonstration facility’s design, construction and operation.

- C. CES, Inc: CES, Inc. (CES) is an environmental consulting firm, with its headquarters located in Brewer, Maine, with experience in preparing applications for submittal to the Department. CES provided personnel to assist with permit application preparation, site investigation and site design for the proposed project. CES has also been retained by the MRC and Fiberight to provide on-going environmental compliance assistance when needed.
  
- D. S.W. Cole Engineering, Inc: S.W. Cole Engineering, Inc. (“SW Cole”) is an engineering firm with offices in Maine, New Hampshire and Vermont that provides construction materials testing and geotechnical services. SW Cole conducted sub-surface explorations to address soil suitability of the proposed project site and provided geotechnical engineering services pertaining to the construction of the foundation for the proposed processing facility building and associated structures.
  
- E. Amec Foster Wheeler: Amec Foster Wheeler (“AMECFW”) is a British multinational consulting, engineering and product management company with its global headquarters in London, England and branch offices worldwide and in the United States, including Portland, Maine. AMECFW has been retained to provide construction management services including contract scoping and preparation of contract packages, construction scheduling, project cost control, risk identification and management, quality assurance, contractor and construction site monitoring and on-site safety monitoring.
  
- F. CommonWealth Resource Management Corporation: Commonwealth Resource Management Corporation (CRMC) is a management and environmental consulting firm focusing on issues and opportunities related to resource conservation, recovery and utilization. CRMC has been retained for general assistance relating to the design, construction, operation and maintenance of the proposed processing facility.
  
- G. University of Maine: The University of Maine (UMaine) is a public research university with a focus on undergraduate and graduate research throughout Maine and around the world. UMaine Chemical Engineering professors have been retained to perform a peer review of the technological processes associated with the proposed processing facility.

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SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
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H. Covanta: Covanta has their corporate headquarters in Morristown, New Jersey and places of business in West Enfield and Jonesboro, Maine. Covanta has more than 30 years of experience converting MSW into clean renewable energy, recycling metals and other commodities, and helping communities meet their goals for environmental stewardship and sustainability. Covanta will support the development, financing, construction, operation, and maintenance of the proposed processing facility. Covanta’s role in the proposed processing facility will be investor and operator.

The Department finds that the MRC and Fiberight and their retained consultants have provided adequate evidence of technical ability to design, construct, operate, maintain and close the proposed processing facility in a manner consistent with state environmental regulations; provided that, the MRC and Fiberight submit to the Department for review and approval specific professional qualifications for personnel who will be responsible for operations at least 30 days prior to commencing pre-commissioning operations of the proposed processing facility.

8. DISCLOSURE OF CRIMINAL OR CIVIL RECORD

The MRC, Fiberight and Covanta have filed complete civil and criminal disclosure statements in accordance with 06-096 C.M.R. ch. 400, § 12(A).

A. MRC: The MRC is a non-profit corporation formed in 1991 pursuant to State of Maine law whose managerial and executive authority rests with the MRC officers and directors. No officer or director holds any equity or debt in the business entity. The MRC will not have managerial or executive authority over the proposed processing facility. The MRC’s officers and directors do not hold more than a 5% equity interest in any company that collects, transports, treats, stores, or disposes of solid or hazardous wastes and do not have any criminal convictions (except for one director who had a misdemeanor criminal conviction in 1991) or civil violations of environmental laws or rules administered by the State, other states, the United States, or another country in the last 5 years. Additionally, the MRC officers and directors have not entered into any administrative agreements or consent decrees or had administrative orders directed at them for violations of environmental laws administered by the Department, the State, other states, the United States, or another country in the last 5 years.

B. Fiberight: Fiberight is a Delaware limited liability company with a main office in Baltimore, Maryland. Managerial and executive authority rests with the Fiberight officers and directors. No officer or director holds any equity or debt in the business entity. Fiberight’s officers and directors do not hold more than a 5% equity interest in any company that collects, transports, treats, stores, or disposes

MUNICIPAL REVIEW COMMITTEE, INC. AND	12	SOLID WASTE
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SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
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of solid or hazardous wastes and do not have any criminal convictions or civil violations of environmental laws or rules administered by the State, other states, the United States, or another country in the last 5 years.

In 2014, Fiberight’s Chief Executive Officer entered into a Complaint and Consent Agreement/Final Order (Agreement) with the United States Environmental Protection Agency for alleged violations to Sections 301, 311 and 402 of the *Clean Water Act*, 33 U.S. Code §§ 1311, 1321 and 1342, and regulations promulgated thereunder. Under the terms of the Agreement, Fiberight paid a monetary penalty, updated their facility Storm Water Pollution Prevention Plan (SWPPP), conducted employee training regarding the SWPPP and utilized qualified personnel to conduct inspections, developed and implemented a Spill Prevention Control & Countermeasure (SPCC) Plan, conducted employee training regarding the SPCC Plan and disconnected a pipe that had once been the source of an uncontrolled discharge. No additional Fiberight officers and directors have entered into any administrative agreements or consent decrees or had administrative orders directed at them for violations of environmental laws administered by the Department, the State, other states, the United States, or another country in the last 5 years.

- C. Covanta: The MRC and Fiberight have submitted the disclosure information for Covanta’s senior officers. Covanta’s senior officers do not hold more than a 5% equity interest in any company that collects, transports, treats, stores, or disposes of solid or hazardous wastes and do not have any criminal convictions or civil violations of environmental laws or rules administered by the State, other states, the United States, or another country in the last 5 years. Additionally, senior officers have not entered into any administrative agreements or consent decrees or had administrative orders directed at them for violations of environmental laws administered by the Department, the State, other states, the United States, or another country in the last 5 years.

The Department finds that the MRC, Fiberight and Covanta have filed complete disclosure statements in accordance with 06-096 C.M.R. ch. 400, § 12(A). Based on the disclosure statements submitted and the evaluation criteria contained in 06-096 C.M.R. ch. 400, § 12(B), the Department finds no basis for denying the license.

9. TRAFFIC MOVEMENT

Traffic for the proposed processing facility will enter and exit at a single point of access located at the northeast corner of the project site. The processing facility entrance will be located at the end of a proposed 4,460-foot long access road which will enter onto the Coldbrook Road directly across from an existing truck facility access road. The proposed

MUNICIPAL REVIEW COMMITTEE, INC. AND	13	SOLID WASTE
FIBERIGHT, LLC	)	LICENSE
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SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
(APPROVAL WITH CONDITIONS)	)	NEW LICENSE

access road will be paved, approximately 30 feet in width (consisting of 2, 12-foot travel lanes with 3-foot shoulders), and end at a cul-de-sac at the proposed processing facility entrance. An Entrance Permit Application for the access road entrance onto the Coldbrook Road was submitted to, and a permit issued by, the Maine Department of Transportation (“MDOT”) (Permit # 15947 – Entrance ID: 1, dated May 22, 2015). Sight distances for the proposed access road exceed the requirements of the MDOT Entrance Permit.

The main traffic associated with the proposed processing facility will be from incoming MSW deliveries and employees. Additional traffic components will include general deliveries, outgoing process residues and recyclables generated by the proposed processing facility, material deliveries related to the proposed processing facility and outgoing product deliveries from the proposed processing facility. Incoming MSW deliveries will enter and exit the proposed processing facility in trucks ranging from packer trucks to trailer trucks. The highest expected total of MSW deliveries to the proposed processing facility on any given day is 89, comprised of 53 packer trucks, 26 roll-off trucks and 10 trailers. A delivery will equate to 2 vehicle trips (1 entering and 1 exiting the facility). Employee, visitor and delivery traffic is expected to generate 168 total vehicle trips per day. Traffic from the shipment of outgoing process residues and recyclables and incoming material deliveries will vary.

A MDOT Traffic Movement Permit is not required because the proposed project’s estimated overall traffic volume is less than 100 passenger car equivalents during the peak hour. The MRC and Fiberight estimate a peak traffic volume of 356 vehicle trips per day, spread throughout the entire day. The interior processing facility road network consists of employee and visitor parking lots and site roads varying from 2 to 3 lanes and various lengths. All interior roads will be paved. The speed limit of the interior roads will be 15 miles per hour. The MRC and Fiberight have provided information regarding haul routes, road characteristics and information regarding traffic accidents in the vicinity of the proposed project site in the last 3 years. No high crash locations were identified.

The Department finds that the MRC and Fiberight have made adequate provisions for safe and uncongested traffic movement of all types into, out of, and within the proposed project area.

10. FITTING HARMONIOUSLY INTO THE NATURAL ENVIRONMENT

A. General: The MRC and Fiberight have designed the proposed processing facility to fit harmoniously into the natural environment. CES has provided information related to any protected significant wildlife habitat, unusual natural areas, rare, threatened or endangered plant species, and protected natural resources. CES, on behalf of the MRC and Fiberight contacted the Maine Department of Inland

MUNICIPAL REVIEW COMMITTEE, INC. AND	14	SOLID WASTE
FIBERIGHT, LLC	)	LICENSE
HAMPDEN, PENOBSCOT COUNTY, MAINE	)	
SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
(APPROVAL WITH CONDITIONS)	)	NEW LICENSE

Fisheries and Wildlife (“MDIFW”) and the Maine Natural Areas Program to identify any of the above features.

- B. Setbacks and Buffers: The MRC and Fiberight have stated that the areas to the north, east and south of the proposed processing facility will be maintained in their natural wooded condition. The proposed building site will be 4 to 5 feet lower than the surrounding grade to the west. The waste handling area at the proposed processing facility meets all the setbacks required by the Rules.
  
- C. Wildlife and Fisheries: In March 2015, CES sent a letter to MDIFW requesting information for known locations of Endangered, Threatened, and Special Concern Species, designated Essential and Significant Wildlife Habitats, and fisheries habitat concerns within the vicinity of the proposed project site. The MDIFW responded to CES in letters dated March 16, 2015 and March 18, 2015.
  - (1) Bats: With regard to information for known locations of Endangered, Threatened, and Special Concern Species, MDIFW stated that 7 out of 8 species of bats in Maine are currently listed as Species of Special Concern; however, 3 species of bats are currently being considered through the legislative process for protection under Maine’s list of Threatened and Endangered Species. At the time of Application submittal, the Northern Long-eared Bat was listed as Endangered under the Federal Endangered Species Act (listed April 2, 2015). Subsequent to the Application submittal, the Little Brown Bat and Northern Long-eared Bat were listed as Endangered in Maine and the Eastern Small-footed Bat was listed as Threatened in Maine.

In consultation with the U.S. Fish and Wildlife Service (“USFWS”), an acoustical bat survey was developed in order to assess bat activity and to determine the presence, if any, of Northern Long-eared Bats within the proposed processing facility site. The acoustical bat survey was conducted during the summer of 2015. The acoustical bat survey did not identify any federally protected bat species within the proposed processing facility site. The MRC and Fiberight have agreed to follow conservation guidelines for tree cutting, as outlined by USFWS in the interim Federal 4(d) Rule, effective May 4, 2015, to minimize potential impacts to listed bat species. An acoustical bat survey was not completed on the utility corridor; however, an acoustical survey of the utility corridor is planned for July 2016. The submittal to the Department of a forest management plan that contains provisions which will maintain the wildlife habitat functions and values is a condition of Department License #L-26497-NJ-A-N and #L-26497-TG-B-N. Construction activities will follow

MUNICIPAL REVIEW COMMITTEE, INC. AND	15	SOLID WASTE
FIBERIGHT, LLC	)	LICENSE
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SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
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recommended management guidelines provided by the USFWS to minimize potential impacts to bat species.

- (2) Vernal Pools: A comprehensive inventory of vernal pools was completed during spring 2015 and identified 44 vernal pools within the proposed processing facility site. Nine pools met the Department’s definition of significant vernal pool. Construction of the proposed access road will occur within 250 feet of one significant vernal pool. This significant vernal pool is designated as Pool #2632 according to the Department’s Geographic Information System and VP 1-10 within the Application. Alteration of this vernal pool habitat was authorized under the Natural Resources Protection Act Permit by Rule Notification Form (PBR #59983) pursuant to *Natural Resources Protection Act Permit by Rule* standards, 06-096 C.M.R. ch. 305 (last amended June 8, 2012).
  
- (3) Fisheries: With regards to fisheries habitat, the MDIFW made the following recommendations: a 100-foot undisturbed vegetated buffer be maintained along any mapped or unmapped streams; stream crossings should be avoided, but if necessary, the crossing should be designed to provide adequate fish passage; and Construction Best Management Practices (“BMPs”) should be closely followed and that any necessary instream work or work within 100 feet of streams occur between July 15 and October 1. Consideration of MDIFW’s recommendations was included in Department License #L-26497-NJ-A-N and #L-26497-TG-B-N.
  
- (4) Deer Wintering Area: MDIFW stated that there is a large mapped Deer Wintering Area (“DWA”) within the project search area. MDIFW staff walked the proposed processing facility site with CES staff and commented that a portion of the DWA has been selectively harvested within the last decade and a large amount of softwood cover that characterizes a DWA was removed. MDIFW staff comments that while the specific location to be developed lacks suitable winter shelter habitat, areas located to the east of the proposed processing facility building site do provide appropriate winter shelter for deer. MDIFW recommends that the remaining undeveloped portions of the proposed processing facility site be protected and managed for winter shelter. MDIFW staff comments that a timber management plan that details the management actions necessary to maintain deer winter shelter areas should be drafted and become part of this longer term protection effort.

MUNICIPAL REVIEW COMMITTEE, INC. AND	16	SOLID WASTE
FIBERIGHT, LLC	)	LICENSE
HAMPDEN, PENOBSCOT COUNTY, MAINE	)	
SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
(APPROVAL WITH CONDITIONS)	)	NEW LICENSE

D. Unusual Natural Areas: The Natural Areas Program within the MDIFW did not find evidence of any rare or unique botanical features on, or adjacent to, the proposed project site. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities.

E. Protected Natural Resources: Natural resource work has been completed at the proposed project site. The MRC and Fiberight are proposing to impact a total of 105,000 square feet of forested wetland to construct the proposed processing facility, access road, and the utility corridor. The development of the proposed access road and processing facility building will require alterations to freshwater wetlands, significant wildlife habitat and other protected natural resources. Impacts to protected natural resources will be addressed by obtaining a permit pursuant to *Natural Resources Protection Act*, 38 M.R.S. § 480-A *et seq.*, as required. The MRC and Fiberight have submitted Natural Resources Protection Act permit applications to both the Department and U.S. Army Corps of Engineers.

In July 2016, the Department issued Department License #L-26497-NJ-A-N and #L-26497-TG-B-N approving the construction of an access road, utility corridor and alterations to freshwater wetlands, significant wildlife habitat and other protected natural resources on the proposed project site.

The Department finds that the proposed project will fit harmoniously into the surrounding environment; provided that, the MRC and Fiberight: (1) submit the results of the acoustical bat survey to be completed within the utility corridor; and (2) develop a timber management plan that details the management actions necessary to maintain deer winter shelter areas. The Department further finds that at least 14 days prior to commencing construction of the proposed processing facility, the MRC and Fiberight must submit the acoustical bat survey to be completed within the utility corridor and a timber management plan to maintain deer winter shelter areas.

## 11. AIR QUALITY

The proposed project site is buffered by existing forested areas and is approximately 3,400 feet away from the nearest existing residential building. The proposed processing facility is designed with multiple systems and procedures to minimize the generation of, and provide control of, objectionable and nuisance odors at any occupied building. All unloading of MSW will occur inside the proposed processing facility building. In order to minimize the number of waste delivery trucks in the parking lot at one time, the tipping floor is designed to accommodate 1 transfer trailer and 3 packer trucks simultaneously. The primary operational control for nuisance odors is minimizing the

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FIBERIGHT, LLC	)	LICENSE
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SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
(APPROVAL WITH CONDITIONS)	)	NEW LICENSE

quantity, and the duration, of time that MSW sits on the tipping floor. The tipping floor is designed with storage capacity for 2 days of MSW receipts and 2 days of primary processed material. The MRC and Fiberight will utilize the principle of “First-in-First-Out” operation to the maximum extent possible to minimize the residence time of waste on the tipping floor. The tipping floor and processing portion of the building will be maintained under constant negative pressure by using a multiple hood/intake register air handling system. The air handling system will draw air from inside the building and treat it in either of 2 scrubber systems. One of the scrubbers will be operated at all times when MSW is present on the tipping floor. Both scrubbers will be operated when the high-speed fabric overhead doors used for truck entry or exit are open.

A Start-Up, Shutdown and Malfunction Plan has been developed that includes provisions for odor control during times when processing operations must be limited or suspended to perform equipment maintenance. The MRC and Fiberight have also established an Odor Complaint Response Plan that outlines procedures for odor complaint reporting, should they occur, and subsequent response actions including the use of an odor neutralization agent. As part of the operations of the proposed processing facility, regular odor inspections will be performed. Inspections will include, at a minimum, visual observation of the operations for obvious signs of damage or abnormal conditions within the proposed processing building that will affect collection efficiency of the odor control system and a visual inspection and odor survey around the exterior of the proposed processing facility.

The MRC and Fiberight have stated that during the first month of, and for a total of 6 months during, the first year of operation, a daily inspection and odor survey will be conducted around the proposed processing facility. The daily inspection period will include the summer months when waste odors are expected to be strongest. If operations commence in the winter months and no odor issues are identified during the first month, inspections will be reduced to weekly until the onset of warmer weather. If after 6 months, including summer months, no odor issues are identified then inspections will be reduced to weekly. Inspection results will be submitted to the Department weekly unless an odor incident is noted in which case the Department will be notified within the day. A summary of the odor survey reports will be submitted to the Department with the facility’s annual report.

The MRC and Fiberight have submitted an application to the Department for a Minor Source Air License to address potential fugitive emissions from the proposed 2 biomass boilers, other fuel burning equipment and process equipment. The other fuel burning equipment includes a thermal oxidizer and flare. The details of this license can be found in Department License #A-1111-71-A-N, dated July, 2016.

MUNICIPAL REVIEW COMMITTEE, INC. AND	18	SOLID WASTE
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SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
(APPROVAL WITH CONDITIONS)	)	NEW LICENSE

Fugitive dust is not expected to be an issue. All travel ways and parking areas will be paved and no bulk material handling operations will occur outside the proposed processing building. Should fugitive dust emissions occur beyond the property boundary, the processing facility operator will assess the source of the dust and clean the travel ways and, if necessary, spray water to control dust.

The MRC and Fiberight propose to use 2 cooling towers to promote evaporative cooling of waste heat. The MRC and Fiberight have proposed the installation of drift eliminators to minimize any emissions of particulate that may occur. This is not expected to be a sufficient quantity to cause localized fog banks or icing beyond the property boundaries and should not unreasonably alter climate in the area of the processing facility.

The Department finds that there will be no unreasonable adverse effects on air quality and/or climate due to the proposed project.

12. SOIL SUITABILITY AND EROSION CONTROL

A subsurface investigation was completed by SW Cole to evaluate whether soil bearing capacity is sufficient to support the proposed processing facility and associated outdoor storage components. SW Cole concluded that based on the subsurface findings, the construction of the processing building appears feasible from a geotechnical standpoint. SW Cole provided geotechnical recommendations pertaining to the building's footings and on-grade floor slab and perimeter footings and the need for underdrains near footing grade and adjacent to paved areas. The recommendations have been incorporated into the building design. SW Cole also recommended that a contingency be made for the possible removal of bedrock via drilling or blasting.

The MRC and Fiberight have submitted an Erosion and Sedimentation Control Plan including an inspection and maintenance plan. Any proposed work will be carried out in conformance with the approved erosion and sedimentation control plan, the construction contract documents, and the Maine Erosion and Sediment Control Field Guide for Contractors, March 2015 or its equivalent.

The Department finds that the proposed processing facility will be constructed on soils suitable for the proposed use and will not cause unreasonable sedimentation or erosion of soil. The Department also finds that the MRC and Fiberight have adequately addressed erosion and sediment control for the proposed project, and have demonstrated that the proposed project will be carried out in conformance with the approved erosion and sediment control plan, the construction contract documents, and the Maine Erosion and Sediment Control Field Guide for Contractors, March 2015 or its equivalent.

MUNICIPAL REVIEW COMMITTEE, INC. AND	19	SOLID WASTE
FIBERIGHT, LLC	)	LICENSE
HAMPDEN, PENOBSBOT COUNTY, MAINE	)	
SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
(APPROVAL WITH CONDITIONS)	)	NEW LICENSE

13. SURFACE WATER QUALITY AND FLOODING

The proposed project site is not located within a 100-year flood plain and is not located within a direct watershed of a waterbody most at risk from new development. A 25-year, 24-hour storm event was modeled to determine the necessary detention and outlet sizing requirements for the proposed project site. The proposed building site will be located on an undeveloped and mainly wooded parcel of land approximately 90 acres in size in the Town of Hampden. Shaw Brook is classified as an Urban Impaired Stream and is located approximately 3,000 feet to the west of the parcel. Runoff from the site generally drains to a large forested wetland area to the south of the parcel before eventually draining to the Penobscot River. Runoff does not drain to Shaw Brook.

The proposed project will be built over a portion of previously undeveloped land and will add approximately 9.7 acres of developed area to the site. The project area will be treated with a combination of 3 vegetated under-drained soil filters and a roofline drip edge filter. All of these treatment measures discharge toward the south and west ends of the project site before re-joining the pre-development flow paths. The results of the post development analysis for the project site indicate that there is a reduction in runoff from the summation points, and that all of the stormwater treatment measures are sized adequately to handle stormwater runoff from 2, 10 and 25-year storm events. There are no anticipated adverse impacts to the downgradient areas, and as a result the development will have no unreasonable effect on run-on, run-off, and/or infiltration relationships on-site or on adjacent properties.

The Department finds that the proposed processing facility will not have an unreasonable adverse effect on surface water quality and will not unreasonably cause or increase flooding on the proposed facility site or on adjacent properties nor create an unreasonable flood hazard to any structure.

14. EXISTING USES AND SCENIC CHARACTER

The proposed building site includes an approximate 90-acre wooded parcel of land established as an industrial zone by the Town of Hampden. The proposed processing facility will be located approximately 0.25 miles from I-95 to the north, 0.8 miles from the Coldbrook Road to the west, 0.7 miles from the Ammo Industrial Park to the east and 1 mile from Route 202 to the south. The project site will be 4 to 5 feet lower than the surrounding grade to the west of the facility. The remainder of the project site is surrounded by a natural wooded buffer to the north, east and south. This buffer will be retained and will provide a visual screen to the north, east and south. There are no airport runways located within 10,000 feet of the existing site, no historic properties, and the existing site is located greater than 2,000 feet from the nearest established public viewing area. A portion of a neighboring property from the southwest to southeast is currently

MUNICIPAL REVIEW COMMITTEE, INC. AND	20	SOLID WASTE
FIBERIGHT, LLC	)	LICENSE
HAMPDEN, PENOBSBOT COUNTY, MAINE	)	
SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
(APPROVAL WITH CONDITIONS)	)	NEW LICENSE

zoned as rural by the Town of Hampden. There are 2 residential subdivisions located approximately 3,400 feet to the south of, but not abutting, the proposed site.

The noise generated from the routine operation of the proposed processing facility must be less than or equal to 70 A-weighted decibel (dBA) for daytime and 60 dBA for nighttime hours at the facility property boundary. There are no protected locations within or in the vicinity of the project site’s property boundary. As it relates to this Application, the applicable noises in the thresholds are limited to routine operations of the proposed processing facility. As a result, all applicable noise generating equipment will be located inside the proposed processing building and at no time will processing activities take place outside.

The Department finds that the proposed project will not have an unreasonable adverse effect on existing uses or scenic character. The Department also finds that the proposed project will not result in increased noise levels beyond the proposed project site’s property boundary.

15. ADEQUATE PROVISIONS FOR UTILITIES

A. Water: The proposed processing facility will be served by the Town of Hampden Water District (“Hampden WD”), which is a municipal water supply and supplies potable water to the surrounding community. During steady state operation, the proposed processing facility will require an average water demand of 360,000 gallons per day (“gpd”) with a peak flowrate of 300 gallons per minute (“gpm”). During maintenance periods, which could occur 3 to 4 times per year, the processing facility will require a maximum water demand of 132,000 gpd with a peak flowrate of 275 gpm, to fill various components in the processing system. The initial fill of the processing system will require approximately 3,500,000 gallons of water, completed over a 30-day period. The Hampden WD provided a letter, dated May 13, 2015, which states that it has the capacity and capability to meet the proposed flow requirements.

B. Wastewater: The MRC and Fiberight estimate that the processing facility will discharge an average daily flow of 150,000 gallons of domestic and process wastewater into the Town of Hampden’s (Hampden) municipal sanitary sewer collection system, which is sent for treatment to the City of Bangor’s Wastewater Treatment Plant (“Bangor WWTP”). The Bangor WWTP provided an updated letter, dated February 17, 2016, related to the estimated 150,000 gpd of wastewater to be generated by the proposed processing facility. Bangor WWTP states that it has capacity, at this time, to accept this additional flow during non-combined sewer overflow conditions. Further, the Bangor WWTP states that

MUNICIPAL REVIEW COMMITTEE, INC. AND	21	SOLID WASTE
FIBERIGHT, LLC	)	LICENSE
HAMPDEN, PENOBSCOT COUNTY, MAINE	)	
SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
(APPROVAL WITH CONDITIONS)	)	NEW LICENSE

“alternative arrangements such as on-site storage or trucking to alternative sites” needs to be made during combined sewer overflow conditions.

In a March 30, 2016 Memo, CES assumed the need to provide on-site storage of 300,000 gallons or two times the estimated average daily flow. The MRC and Fiberight have proposed the installation of a 150,000 gallon aboveground tank and 100,000 gallon belowground tank and the utilization of 50,000 gallon buffer storage in an already designed process water storage tank. CES notes that the tank construction materials are still being evaluated and will be determined during final design.

Bangor WWTP also requires the user to provide the treatment plant with an Industrial User Permit Application and a Pretreatment Survey and Disclosure Form prior to discharging any effluent to their treatment system. Should it be determined that, for any reason whatsoever, adverse effects are noted or anticipated at the Bangor WWTP, the user shall be required to pre-treat wastewater discharge to acceptable levels. If the Pre-Treatment Survey shows that the proposed processing facility requires a pre-treatment system for its wastewater, the Bangor WWTP must approve the pre-treatment system prior to installation.

- C. Solid Waste: The MRC has entered into a Solid Waste Disposal Agreement, dated August 15, 2015, with the Waste Management Disposal Services of Maine Crossroads Landfill in Norridgewock, Maine, to accept “MSW Bridge Capacity” waste (defined as MSW, brought to the facility between April 1, 2018 and the start of commercial operations, that cannot be fully processed), solid waste process residue, and MSW bypass waste for disposal. The MRC and Fiberight estimate a range between 30,000 to 40,000 tons per year of process residue waste and biomass boiler ash will require disposal. In addition, for planning purposes the MRC and Fiberight have made provisions for the disposal of an estimated 37,500 to 50,000 tons per year of MSW bypass waste to address any bypass events that may be necessary. The Master Waste Supply Agreement (MWSA), effective date January 1, 2016, between the MRC and Fiberight requires Fiberight to avoid or minimize bypass events, and only allows bypass events due to Force Majeure, limits on capacity resulting from an outage, a full tip floor, the need to avoid nuisance impacts, permit limits, or other factors beyond its reasonable control. The MWSA specifies procedures for the handling of MSW Bridge Capacity waste. Specifically, the MWSA requires Fiberight to use commercially reasonable efforts to (1) advance the occurrence of the Commercial Operation Date in order to be able to accept and process acceptable waste as soon as possible; (2) allow the facility to be used to accept and process acceptable waste to the extent practical, with the specific sources of acceptable waste being

MUNICIPAL REVIEW COMMITTEE, INC. AND	22	SOLID WASTE
FIBERIGHT, LLC	)	LICENSE
HAMPDEN, PENOBSCOT COUNTY, MAINE	)	
SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
(APPROVAL WITH CONDITIONS)	)	NEW LICENSE

accepted to be determined in consultation with the MRC; and (3) allow the facility to be used to receive acceptable waste, and transfer amounts that are accepted but cannot be processed to the back-up facility, with the specific sources of acceptable waste being accepted to be determined in consultation with the MRC. The Department notes that the MRC and Fiberight need to minimize the amount of time, if any is needed, that MSW Bridge Capacity diversion is utilized, and that monthly reporting to the Department of MSW Bridge Capacity tonnage utilized and an updated schedule outlining the measures needed to reach Commercial Operation is necessary until such time as Commercial Operation is achieved.

The Department finds that the MRC and Fiberight have provided for adequate utilities and will have no unreasonable adverse effect on existing or proposed utilities in the municipality or area served by utilities; provided that: (1) the MRC and Fiberight submit copies of the Bangor WWTP Industrial User Permit and letter approving the operation of a wastewater pre-treatment system, if necessary, to the Department within 30 days of their receipt; (2) the MRC and Fiberight submit, for review and approval, the final design for the on-site wastewater storage tanks at least 60 days prior to construction of the proposed processing facility; and (3) the MRC and Fiberight submit monthly reports to the Department listing the tonnage of MSW Bridge Capacity utilized, if any is needed, and an updated schedule outlining the measures needed to reach Commercial Operation until such time as Commercial Operation is achieved.

16. GROUNDWATER QUALITY

The proposed project site does not overlie a significant sand and gravel aquifer. The closest mapped aquifer is approximately 4,000 feet to the northwest of the proposed project site. Unprocessed and processed MSW will be stored inside the proposed processing building. Residue materials, bypass waste and biomass boiler ash will be stored in trailers and transported off-site to a licensed, secure landfill for disposal. Recyclable materials will be stored on-site in either 100 cubic yard transport trailers or 40 cubic yard dump trailers. No unprocessed or processed materials will be stored outside on the ground.

The Department finds that the proposed processing facility will not pose an unreasonable threat to the quality of a significant sand and gravel aquifer and will not result in unreasonable adverse effects on groundwater quality.

17. PROCESS DESIGN

A. General: The proposed processing facility consists of 4 different processing stages which will process the MSW received into several different categories.

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The 4 different processing stages are: materials recovery, renewable fuel production, renewable energy production, and industrial co-products. A series of process benchmarks has been established that will be used to evaluate the proposed process during various stages of project implementation as described below.

- B. Materials Recovery Facility (MRF): The first stage in the process (primary MRF) is to remove large bulky items prior to the MSW being loaded into the primary trommel. Unwanted large bulky items will be removed on the tipping floor and on a pre-sort line and loaded on a trailer and transferred for disposal at a licensed landfill facility. The MSW is then fed to the primary trommel which opens and empties the bags of trash and size separates the material into over 20 inch and 20 inch and under. The 20 inch and under material is then further size separated by a fines screen to 2 inches or less in size which fraction continues through to the fines processing area for further processing. The over 2 inch to 20 inch material is stockpiled and subsequently conveyed to a drum pulper that breaks the organic material down to form a biomass, which facilitates separation of the recyclable materials from organic wastes, and prepares the biomass for further cleaning.

Materials exiting the drum pulper pass across a screen to separate recyclables, such as metals and plastics from the biomass pulp. These recyclable materials are then conveyed to the MRF to be further processed. The remaining biomass pulp is conveyed to a two-stage washing system to remove fine contaminants (mostly plastics) and soluble organic material. The first-stage wash removes soluble organic material and pumps high chemical oxygen demand wastewater to a pre-acidification tank prior to entering the high-rate anaerobic digester for biogas production. The second-stage wash dilutes the remaining material, where filters are used to separate out the fine cellulose from the remaining contaminants. The washed cellulose is then pumped into a stock tank. From the stock tank, the cellulose pulp is pumped as slurry into a screw press where it is de-watered to approximately a 50% solids press cake which is then pre-treated prior to being introduced to the hydrolysis system.

- C. Renewable Fuel Production: The enzymatic hydrolysis stage starts when the dewatered pulp is conveyed to the pretreatment system whereby water and acid is added into a pretreatment mixer so the appropriate solids concentration and pH is obtained. Slurry from the pretreatment mixer is then pumped to the pretreatment reactor. Fiber exiting the pretreatment reactor is pumped to a medium consistency refiner and then to a screw press to be dewatered, and filtrate is returned to the mix tank. Pretreated fiber press cake is conveyed to the hydrolysis system. The pretreatment reactor, pumps, filtrate tank and screw press are connected to a Clean-in-Place (“CIP”) system for regular cleaning and

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sterilization. The hydrolysis process is carried out within a high viscosity reactor paired with a set of mixing tanks. The pretreated fibers enter the mixing tanks along with water and enzymes, and wetted fibers circulate through the hydrolysis tank where cellulose within the fiber is converted to sugars on a batch basis.

Temperature and pH are controlled to achieve an optimum mixture which is left in the reactor where the low-temperature biological process is completed. Each reactor, pump, heat exchanger and mixing vessel is connected to a CIP system for regular cleaning and sterilization. A filter press is utilized to separate the undigested post hydrolysis solids (“PHS”) from the liquid sugar solution. The sugar solution will be fed directly to the anaerobic digester for conversion into biogas.

- D. Renewable Energy Production: The renewable energy production stage begins when the high organically loaded liquid is cooled and sent to an anaerobic digestion system. This system uses microorganisms to digest suspended and dissolved solids contained in the water to reduce the chemical oxygen demand of the water. Clean water and a methane-rich biogas are the byproducts of the stage. The clean water is reused in the washing process. The biogas will be used as supplementary fuel for internal energy production via a boiler and/or injected into a natural gas pipeline. Bangor Natural Gas has provided a February 10, 2016 letter stating that a section of pipe between Bangor and Hampden needs to be upgraded and that upgrades including testing will be completed prior to facility start-up.

Process water recovered from the water treatment system is used to dilute solids in the pulp and wash systems to maintain desired moisture content. A portion of the recovered water is sent to the CIP storage tank. The PHS exiting the hydrolysis filter presses, which is essentially spent fiber with a high lignin content, is processed in a specially designed combustion unit. The heat (steam) from the combustion process is recovered and sent to a steam turbine. The exhaust heat from the turbine is then used to provide process heat. The amount of electrical and heat energy generated by the biomass combustion is sufficient to provide the bulk of the energy demand for the proposed processing facility. The proposal to produce fuel grade ethanol is no longer part of the proposed processing facility project.

Plant water management is conducted via a recycling and reuse system. Purge water from the washing system and from the cook filtrate tank are blended together. Any residual fine suspended material is removed using a dissolved air flotation (“DAF”) system with the highly organic liquid created sent to the anaerobic digester and the solids exiting the DAF removed using a belt press.

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The solids extracted with the belt press, in the form of cake, are routed via conveyor to be disposed of offsite.

- E. Industrial Co-products: The resultant products generated at the proposed processing facility will include recyclables which will be sold on the open commodities market; PHS which will be used to fuel the on-site biomass boilers; and bio-methane which will be piped to the adjacent Bangor Natural Gas Loring Pipeline. The resultant residue waste products generated at the processing facility will include materials typically 2 inches or less in size (glass and grit), large bulky items, dissolved air filtration system residues and combined boiler ash.
  
- F. Process Benchmarks: The MRC and Fiberight have proposed operational benchmarks in a submittal dated June 2, 2016 that include evaluating the proposed process during pre-commissioning, commissioning, start-up and ramp-up. The completion of each benchmark stage will be documented with process improvements proposed as necessary.
  - (1) The pre-commissioning phase will include verification that systems have been installed in accordance with the applicable specifications, calibration of electrical and instrument controls, equipment alignment and energizing the electrical systems.
  - (2) The commissioning phase will include verification that each system can run independently and for increasing time periods.
  - (3) The start-up phase includes start-up of all plant systems to ensure that the systems perform in an integrated fashion. During this phase, initial volumes of MSW will be processed. Once successfully processed, MSW volumes will be increased in a stepwise fashion.
  - (4) The ramp-up stage includes increasing the volumes of MSW to full-scale loading. This phase is projected to occur for approximately 4 months.

The Department finds that the MRC and Fiberight have submitted adequate information regarding the proposed processing facility and process design; provided that, confirmation of natural gas pipe upgrades and testing and a finalized agreement with Bangor Natural Gas is provided to the Department at least 30 days prior to conveying bio-methane into the pipe.

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18. OPERATIONS MANUAL

The MRC and Fiberight have submitted a draft operations manual for the proposed processing facility. Department staff issued final comments on April 28, 2016 regarding the draft operations manual. CES proposes to finalize the operations manual and provide it as a stand-alone document to the MRC and Fiberight after Department review and approval of the document has been completed.

The Department finds that the MRC and Fiberight have submitted an operations manual that addresses the operating requirements of 06-096 C.M.R. ch. 409, § 4; provided that, an updated operations manual is prepared and submitted for Department review and approval at least 60 days prior to full-scale operations which incorporates Department comments from an April 28, 2016 memorandum and process or equipment changes resulting from pre-commissioning, commissioning, start-up and ramp-up activities.

19. WASTE CHARACTERIZATION

Waste residues that will require initial and on-going characterization prior to final disposal include biomass boiler ash and miscellaneous process residues resulting from the DAF water treatment system. With respect to the ash characterization, the Department has requested that the MRC and Fiberight evaluate 4 roll-off containers of ash as part of the initial characterization. The MRC and Fiberight will collect composite ash samples for each of the 4 roll-off containers as part of the characterization process. Samples will be collected from the fly ash and bottom ash conveyors at specific intervals while each roll-off is being filled. The MRC and Fiberight expect the turnaround time for the analytical tests will be approximately 7 days. The MRC and Fiberight estimate that it may need to store up to 9, 30-yard roll-off containers during the initial ash characterization phase. Full roll-off containers will be stored within the proposed processing building as space allows. If the number of roll-offs exceeds the proposed processing building's capacity for inside storage, the excess roll-offs will be stored outside on the paved parking lot while waiting for receipt of laboratory analytical results. Roll-off containers that are stored outside while awaiting laboratory analytical results will be tarped to prevent infiltration of rainwater. After the initial characterization period, the MRC and Fiberight anticipate being able to store the ash roll-offs indoors.

With respect to the DAF process residues, during normal operating conditions the MRC and Fiberight expect to generate process residues at a rate of approximately 1 to 2 roll-offs daily. During initial characterization, these residues will be stored in 30-yard roll-off containers inside the proposed processing building as space allows. If the generation rate of the process residues exceeds the ability of the MRC and Fiberight to store the containerized waste indoors, the excess roll-offs will be tarped and stored outside on the paved parking surface until the MRC and Fiberight receive analytical results from the

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laboratory. After the initial characterization period, the MRC and Fiberight anticipate being able to store the waste roll-offs indoors.

The Department finds that the MRC and Fiberight have adequately addressed the waste characterization requirements of 06-096 C.M.R. ch. 405, § 6(C) in Section E of its draft operations manual submitted with the Application.

20. SOLID WASTE MANAGEMENT HIERARCHY

- A. General: *Solid Waste Management Hierarchy*, 38 M.R.S. § 2101 establishes that it is the policy of the State to “plan for and implement an integrated approach to solid waste management” through an order of priority that places waste reduction, reuse, recycling, composting, and processing before land disposal as a “guiding principle in making decisions relating to solid waste management”. Further, 06-096 C.M.R. ch. 409, § 2(C) requires the recycling or processing of all waste accepted at the facility to the maximum extent practicable, but in no case at a rate less than 50%.
- B. Reduction: The MRC and Fiberight have supported and will continue to support the existence and incorporation of programs to encourage waste reduction at the source. MRC and Fiberight have demonstrated support for further waste reduction, reuse and recycling through the establishment of an express right, in the municipal contracts for MSW delivery to Fiberight, for municipalities to have the option to expand existing or future programs intending to encourage further reduction, reuse and recycling of MSW generated within its borders. Waste reduction programs are implemented at the local level by municipalities in order to reduce the quantity of waste being generated that requires municipal collection, transfer, transportation and disposal costs. The MRC and Fiberight are committed to ensure that any further arrangements supporting the development of the proposed processing facility will avoid business arrangements, such as minimum tonnage delivery guarantees set at levels that are too high or with insufficient flexibility, that might undermine or conflict with municipal efforts to reduce the amount of waste generated within their borders.
- C. Reuse: MRC communities currently sponsor programs to encourage waste reuse that are implemented at the local level by municipalities with an emphasis on education, outreach, swap shops, and technical assistance to residents and the incorporation of local waste reuse programs. The MRC and Fiberight are committed to ensuring these existing programs remain in place.
- D. Recycling: MRC municipalities currently sponsor a wide variety of local programs to collect, process, and market recyclables through the operation of

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curbside collection programs, and drop-off programs, often in connection with the operation of transfer stations and other facilities. The measures described above to support waste reduction and reuse programs will also serve to support the incorporation of local recycling. Recyclables that are not captured at the local level will subsequently be captured at the proposed processing facility. The proposed processing facility will serve to remove recyclables currently not being removed from the waste stream and will convert remaining organics into renewable products. To that end, the MRC's and Fiberight's planned system is expected to divert additional materials from the waste stream and will overall reduce the volume of MSW residues requiring land disposal. This is the first of two step increases in materials management offered by the Fiberight system compared to the existing system that strengthens conformity to the waste management hierarchy. Capturing recyclables on a regional level at a central processing facility increases the quantity of recyclable materials collected, processed and marketed and provides a new level of recycling service beyond that of existing local level programs.

- E. Composting/Organics Management: Composting and other methods of processing biodegradable materials are currently being accomplished on the local level through backyard, local and/or regional composting or anaerobic digestion programs. Despite the success of a significant number of local organics composting and diversion programs, the quantities of organics remaining in the waste stream remains a significant fraction of the waste stream. This large fraction of the incoming MSW waste stream will be converted into renewable fuel products and/or biogas. This additional recycling of organics represents a second step increase in improved conformity with the waste management hierarchy compared to the existing system. Due to the proposed processing facility's expected capability to convert biodegradable waste into high value fuel products, the MRC and Fiberight are expecting some local programs may voluntarily select to transition their organics management activities to the proposed processing facility. The MWSA, described in FOF #15 above, contains provisions prohibiting, without the prior consent of Fiberight, joining member communities from initiating new or significantly and materially expanding existing programs to divert organic components from the MSW generated within its borders that otherwise would have been delivered to the proposed processing facility. The Department notes that Fiberight should annually report any such requests from joining member communities and the disposition of such requests, inclusive of the reasons for each determination. The Department further notes that Fiberight should not unreasonably withhold approval of these requests and should make reasonable efforts to replace, if needed, the quantity of removed organics with other acceptable waste.

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- F. Waste Processing: The MRC and Fiberight have calculated that between 70% and 80% by weight of all incoming MSW will be recycled and processed at the proposed processing facility. As part of each year’s annual report, the MRC and Fiberight will need to demonstrate that all wastes accepted at the proposed processing facility have been recycled or processed into fuel for combustion to the maximum extent practicable, but in no case at a rate of less than 50%.
- G. Land Disposal: The MRC and Fiberight noted that the availability of secure landfill disposal capacity is an integral part of the development of an integrated system for solid waste management in accordance with the hierarchy of management methods described above. The MRC and Fiberight estimate that between 20% and 30% by weight of all incoming waste will result in process residue that will require landfilling. The process residue includes bulky waste, textiles, DAF system residues and combined boiler ash. In addition, landfill disposal capacity will also be necessary for scheduled and unexpected shutdowns of the processing facility. As described in FOF #15 above, the MRC and Fiberight have entered into a Solid Waste Disposal Agreement with the Waste Management Disposal Services of Maine Crossroads Landfill in Norridgewock, Maine, to accept MSW Bridge Capacity waste, solid waste process residue, and MSW bypass waste for disposal.

The Department finds that the MRC and Fiberight have adequately addressed solid waste management consistent with the State’s Solid Waste Management Hierarchy pursuant to 38 M.R.S. § 2101; provided that, the MRC and Fiberight: (1) annually report any requests from joining member communities to initiate new, or significantly and materially expand existing, organic diversion programs and the disposition of such requests, inclusive of the reasons for each determination; (2) do not unreasonably withhold approval to initiate new, or significantly and materially expand existing, organic diversion programs and make reasonable efforts to replace, if needed, the quantity of removed organics with other acceptable waste; and (3) submit monthly reports to the Department listing the tonnage of MSW Bridge Capacity utilized, if any is needed, and an updated schedule outlining the measures needed to reach Commercial Operation until such time as Commercial Operation is achieved.

BASED on the above Findings of Fact, and subject to the Conditions listed below, the Department makes the following CONCLUSIONS:

1. The MRC and Fiberight have planned for site design; provided that, the MRC and Fiberight submit, for Department review and approval, a complete set of construction-ready plans and documents for the proposed access road and associated utility corridor at least 30 days prior to commencing construction and a complete set of construction-ready

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plans and documents for the proposed processing facility at least 60 days prior to commencing construction.

2. The MRC and Fiberight have provided adequate evidence of title, right or interest in the properties for the proposed project site; provided that, the MRC and Fiberight submit a copy of the deed(s) or executed long-term lease agreement(s) for the properties purchased and/or leased for the development of the proposed project within 30 days after the closure of sale and/or execution of the executed long-term lease agreement(s).
3. The MRC and Fiberight have complied with all of the public notice requirements of 06-096 C.M.R. ch. 2.
4. The MRC and Fiberight have provided adequate evidence of financial capacity to design, construct, operate, maintain and close the proposed processing facility in a manner consistent with state environmental regulations; provided that, the MRC and Fiberight submit for review and approval, within 30 days of receipt and prior to beginning construction of the processing facility, exclusive of the access road that is funded solely by the MRC, finalized financial documents to fund design, construction, operation, maintenance and closure of the proposed processing facility.
5. The MRC and Fiberight, and their retained consultants, have provided adequate evidence of technical ability to design, construct, operate, maintain and close the proposed processing facility in a manner consistent with state environmental regulations; provided that, the MRC and Fiberight submit to the Department for review and approval adequate evidence of the technical abilities for any additional personnel who will be responsible for operations at least 30 days prior to commencing pre-commissioning operations of the proposed processing facility.
6. The MRC and Fiberight have made adequate provisions for safe and uncongested traffic movement of all types into, out of, and within the proposed project area.
7. The MRC and Fiberight have made adequate provisions for fitting the development harmoniously into the existing natural environment; provided that, the MRC and Fiberight: (1) submit the results of the acoustical bat survey to be completed within the utility corridor; and (2) develop a timber management plan that details the management actions necessary to maintain deer winter shelter areas. The acoustical bat survey and timber management plan will be submitted at least 14 days prior to commencing construction of the proposed processing facility
8. There will be no unreasonable adverse effects on air quality and/or climate due to the proposed project.

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9. The proposed processing facility will be constructed on soils suitable for the proposed use and will not cause unreasonable sedimentation or erosion of soil. The MRC and Fiberight have adequately addressed erosion and sediment control for the proposed project, and have demonstrated that the proposed project will be carried out in conformance with the approved erosion and sediment control plan, the construction contract documents, and the Maine Erosion and Sediment Control Field Guide for Contractors, March 2015 or its equivalent.
10. The proposed processing facility will not have an unreasonable adverse effect on surface water quality and will not unreasonably cause or increase flooding on the proposed facility site or on adjacent properties nor create an unreasonable flood hazard to any structure.
11. The proposed processing facility will not have an unreasonable adverse effect on existing uses or scenic character and will not result in increased noise.
12. The MRC and Fiberight have provided for adequate utilities and will have no unreasonable adverse effect on existing or proposed utilities in the municipality or area served by utilities; provided that: (1) the MRC and Fiberight submit copies of the Bangor WWTP Industrial User Permit and letter approving the operation of a wastewater pre-treatment system, if necessary, to the Department within 30 days of receipt and (2) the MRC and Fiberight submit, for review and approval, the final design for the on-site wastewater storage tanks at least 60 days prior to construction of the proposed processing facility.
13. The proposed processing facility will not pose an unreasonable threat to the quality of a significant sand and gravel aquifer and will not result in unreasonable adverse effects on groundwater.
14. The MRC and Fiberight have submitted adequate information regarding the proposed processing facility and process design; provided that, confirmation of natural gas pipe upgrades and testing and the finalized agreement with Bangor Natural Gas is provided to the Department at least 30 days prior to conveying bio-methane into the pipe.
15. The MRC and Fiberight have submitted an operations manual that addresses the operating requirements of 06-096 C.M.R. ch. 409, § 4; provided that, an updated operations manual is prepared and submitted at least 60 days prior to full-scale operations to incorporate Department comments from an April 28, 2016 memorandum and process or equipment changes resulting from pre-commissioning, commissioning, start-up and ramp-up activities.

MUNICIPAL REVIEW COMMITTEE, INC. AND	32	SOLID WASTE
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16. The MRC and Fiberight have adequately addressed the waste characterization requirements of 06-096 C.M.R. ch. 405, § 6(C) in their operations manual.
17. The MRC and Fiberight have adequately addressed solid waste management consistent with the State’s Solid Waste Management Hierarchy pursuant to 38 M.R.S. § 2101; provided that, the MRC and Fiberight: (1) annually report any requests from joining member communities to initiate new, or significantly and materially expand existing, organic diversion programs and the disposition of such requests, inclusive of the reasons for each determination; (2) do not unreasonably withhold approval to initiate new, or significantly and materially expand existing, organic diversion programs and make reasonable efforts to replace, if needed, the quantity of removed organics with other acceptable waste; and (3) submit monthly reports to the Department listing the tonnage of MSW Bridge Capacity utilized, if any is needed, and an updated schedule outlining the measures needed to reach Commercial Operation until such time as Commercial Operation is achieved.

THEREFORE, the Department APPROVES the noted application of the Municipal Review Committee and Fiberight, LLC SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

1. The applicable Standard Conditions of Approval, a copy attached as Appendix A.
2. The invalidity or unenforceability of any provision, or part thereof, of this license shall not affect the remainder of the provision or any other provisions. This license shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.
3. At least 30 days prior to commencing construction of the access road and associated utility corridor and at least 60 days prior to commencing construction of the proposed processing facility, the MRC and Fiberight shall submit a complete set of construction-ready plans and documents for each component of the proposed project to the Department for review and approval.
4. Within 30 days after the closure of sale and/or the execution of the long-term lease agreement(s) has occurred, the MRC and Fiberight shall submit a copy of the deed(s) or executed long-term lease agreement(s) for the properties purchased and/or leased for the development of the proposed project.
5. Within 30 days of receipt and prior to beginning construction of the proposed processing facility, the MRC and Fiberight shall submit to the Department for review and approval the finalized financial documents to fund design, construction, operation, maintenance and closure of the proposed processing facility.

MUNICIPAL REVIEW COMMITTEE, INC. AND	33	SOLID WASTE
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HAMPDEN, PENOBSCOT COUNTY, MAINE	)	
SOLID WASTE PROCESSING FACILITY	)	
#S-022458-WK-A-N	)	
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6. At least 30 days prior to commencing pre-commissioning operations of the proposed processing facility, the MRC and Fiberight shall submit to the Department for review and approval adequate evidence of the technical abilities for personnel who will be responsible for operations of the proposed processing facility.
7. At least 30 days prior to conveying bio-methane into the natural gas pipe, the MRC and Fiberight shall submit to the Department confirmation of pipe upgrades and testing and the finalized agreement with Bangor Natural Gas.
8. At least 14 days prior to commencing construction of the proposed processing facility, the MRC and Fiberight shall submit the acoustical bat survey of the utility corridor and a timber management plan to maintain deer winter shelter areas.
9. Within 30 days of receipt, the MRC and Fiberight shall submit the Bangor WWTP Industrial User Permit and letter approving the operation of a wastewater pre-treatment system, if necessary, and within 60 days prior to construction of the proposed processing facility, the MRC and Fiberight shall submit, for Department review and approval, the final design for the on-site wastewater storage tanks.
10. At least 60 days prior to commencing full-scale operations, an updated operations manual which incorporates Department comments from an April 28, 2016 memorandum and process or equipment changes resulting from pre-commissioning, commissioning, start-up and ramp-up activities shall be submitted to the Department for review and approval.
11. As part of the Annual Report, the MRC and Fiberight shall report any requests from joining member communities to initiate new, or significantly and materially expand existing, organic diversion programs and the disposition of such requests, inclusive of the reasons for each determination. The MRC and Fiberight shall not unreasonably withhold approval to initiate new, or significantly and materially expand existing, organic diversion programs and make reasonable efforts to replace, if needed, the quantity of removed organics with other acceptable waste.
12. The MRC and Fiberight shall submit monthly reports to the Department listing the tonnage of MSW Bridge Capacity utilized, if any is needed, and an updated schedule outlining the measures needed to reach Commercial Operation until such time as Commercial Operation is achieved.

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DONE AND DATED AT AUGUSTA, MAINE, THIS 14<sup>th</sup> DAY OF July, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY:   
PAUL MERCER, COMMISSIONER

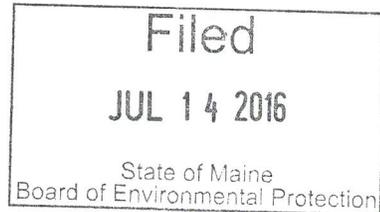
PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

Date of initial receipt of application: June 24, 2015

Date of application acceptance: July 15, 2015

Date filed with Board of Environmental Protection:

XLP79433/





## STANDARD CONDITIONS TO ALL SOLID WASTE FACILITY LICENSES

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL. VIOLATIONS OF THE CONDITIONS UNDER WHICH A LICENSE IS ISSUED SHALL CONSTITUTE A VIOLATION OF THAT LICENSE AGAINST WHICH ENFORCEMENT ACTION MAY BE TAKEN, INCLUDING REVOCATION.

1. **Approval of Variations from Plans.** The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed by the licensee. Any consequential variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.
2. **Compliance with All Applicable Laws.** The licensee shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.
3. **Compliance with All Terms and Conditions of Approval.** The licensee shall submit all reports and information requested by the Department demonstrating that the licensee has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.
4. **Transfer of License.** The licensee may not transfer the solid waste facility license or any portion thereof without approval of the Department.
5. **Initiation of Construction or Development Within Two Years.** If the construction or operation of the solid waste facility is not begun within two years of issuance or within 2 years after any administrative and judicial appeals have been resolved, the license lapses and the licensee must reapply to the Department for a new license unless otherwise approved by the Department.
6. **Approval Included in Contract Bids.** A copy of the approval must be included in or attached to all contract bid specifications for the solid waste facility.
7. **Approval Shown to Contractors.** Contractors must be shown the license by the licensee before commencing work on the solid waste facility.
8. **Background of key individuals.** A licensee may not knowingly hire as an officer, director or key solid waste facility employee, or knowingly acquire an equity interest or



## Appendix A

### STANDARD CONDITIONS TO ALL SOLID WASTE FACILITY LICENSES

debt interest in, any person convicted of a felony or found to have violated a State or federal environmental law or rule without first obtaining the approval of the Department.

9. **Fees.** The licensee must comply with annual license and annual reporting fee requirements of the Department's rules.
10. **Recycling and Source Reduction Determination for Solid Waste Disposal Facilities.** This condition does not apply to the expansion of a commercial solid waste disposal facility that accepts only special waste for landfilling.

The solid waste disposal facility shall only accept solid waste that is subject to recycling and source reduction programs, voluntary or otherwise, at least as effective as those imposed by 38 M.R.S. ch. 13.

11. **Deed Requirements for Solid Waste Disposal Facilities.** Whenever any lot of land on which an active, inactive, or closed solid waste disposal facility is located is being transferred by deed, the following must be expressly stated in the deed:
  - A. The type of facility located on the lot and the dates of its establishment and closure.
  - B. A description of the location and the composition, extent, and depth of the waste deposited.
  - C. The disposal location coordinates of asbestos wastes must be identified.



# DEP INFORMATION SHEET

## Appealing a Department Licensing Decision

**Dated: March 2012**

**Contact: (207) 287-2811**

### **SUMMARY**

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

### **I. ADMINISTRATIVE APPEALS TO THE BOARD**

#### **LEGAL REFERENCES**

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

#### **HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD**

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

#### **HOW TO SUBMIT AN APPEAL TO THE BOARD**

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

#### **WHAT YOUR APPEAL PAPERWORK MUST CONTAIN**

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status.* The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

#### **OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD**

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

#### **WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD**

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

## II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

### ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

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**Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.**

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STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE  
GOVERNOR

PAUL MERCER  
COMMISSIONER

**Fiberight LLC and  
Municipal Review Committee, Inc.  
Penobscot County  
Hampden, Maine  
A-1111-71-A-N (SM)**

**Departmental  
Findings of Fact and Order  
Air Emission License**

**FINDINGS OF FACT**

After review of the air emission license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 Maine Revised Statutes Annotated (M.R.S.A.), §344 and §590, the Maine Department of Environmental Protection (Department) finds the following facts:

**I. REGISTRATION**

**A. Introduction**

Fiberight LLC (Fiberight) has applied for an Air Emission License permitting the operation of emission sources associated with a Municipal Solid Waste (MSW) processing facility. Municipal Review Committee, Inc. has applied as a co-applicant. Sufficient documentation has been provided to the Department to demonstrate Title, Right, or Interest for both companies. Therefore, wherever "Fiberight" is used throughout this document, it is intended to refer to both entities equally and jointly. The equipment addressed in this license will be located off Coldbrook Road in Hampden, Maine.

**B. Emission Equipment**

The following equipment is addressed in this air emission license:

**Boilers**

<b>Equipment</b>	<b>Maximum Capacity (MMBtu/hr)</b>	<b>Maximum Firing Rate</b>	<b>Fuel Type</b>	<b>Date of Manuf.</b>	<b>Stack #</b>
Boiler #1	48	5.1 ton/hr* 47,000 scf/hr	Post-Hydrolysis Solids Natural Gas	2016	1
Boiler #2	48	5.1 ton/hr* 47,000 scf/hr	Post-Hydrolysis Solids Natural Gas	2016	2

\*Assumes a moisture content of 41.5% and HHV of 8100 Btu/lb on a dry basis.

AUGUSTA  
17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688 FAX: (207) 287-7826  
RAY BLDG., HOSPITAL ST.

BANGOR  
106 HOGAN ROAD, SUITE 6  
BANGOR, MAINE 04401  
(207) 941-4570 FAX: (207) 941-4584

PORTLAND  
312 CANCO ROAD  
PORTLAND, MAINE 04103  
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE  
1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, MAINE 04769  
(207) 764-0477 FAX: (207) 760-3143

**Other Fuel Burning Equipment**

<b>Equipment</b>	<b>Maximum Firing Rate</b>	<b>Fuel Type, sulfur content</b>	<b>Date of Manuf.</b>
Thermal Oxidizer	386 scfm	Tail Gas, 1600 ppmv H <sub>2</sub> S	2016
	209 scfm	Digester Gas, 500 ppmv H <sub>2</sub> S	
Flare	1200 scfm	Digester Gas, 500 ppmv H <sub>2</sub> S	2016

**Process Equipment**

<b><u>Equipment</u></b>	<b><u>Pollution Control Equipment</u></b>
Tipping Floor	(2) scrubber trains
Pulpers	(2) scrubber trains
Wash Tunnels	(2) scrubber trains
Hydrolysis Reactors	N/A
PHS Dryers	multiclone & baghouse
Anaerobic Digesters	thermal oxidizer & flare
Ash Handling	N/A
Cooling Towers*	drift eliminators

\*The Cooling Towers are considered insignificant activities, but are included in this license for completeness purposes.

**C. Application Classification**

A new source is considered a major source based on whether or not total licensed annual emissions exceed the "Significant Emission" levels as defined in the Department's *Definition Regulation*, 06-096 CMR 100 (as amended).

<u>Pollutant</u>	<u>Total Licensed Annual Emissions (TPY)</u>	<u>Significant Emission Levels</u>
PM	13.7	100
PM <sub>10</sub>	13.7	100
PM <sub>2.5</sub>	13.7	100
SO <sub>2</sub>	49.9	100
NO <sub>x</sub>	41.0	100
CO	93.3	100
VOC	12.9	50
CO <sub>2e</sub>	91,910	100,000
Single HAP	9.9	10
Total HAP	24.9	25

The Department has determined the facility is a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (as amended). With the annual fuel limits on the boilers, thermal oxidizer, and flare, the facility is licensed below the major source thresholds for criteria pollutants and is considered a synthetic minor. The same limits restrict the facility below the major source thresholds for hazardous air pollutants (HAP) and it is considered an area source of HAP.

## II. BEST PRACTICAL TREATMENT (BPT)

### A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). Separate control requirement categories exist for new and existing equipment.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (as amended). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Process Description

Fiberight proposes to construct and operate a facility for the processing of MSW.

MSW will be delivered to the facility and deposited on the tipping floor. The tipping floor is contained within the main building. Trucks enter the tipping area through entrances equipped with high-speed fabric doors.

First, unprocessable items such as masonry, furniture, domestic appliances, carpet, etc. are removed by hand and disposed of off-site. This includes wooden items such as household furniture, pieces of lumber, tree limbs, etc.

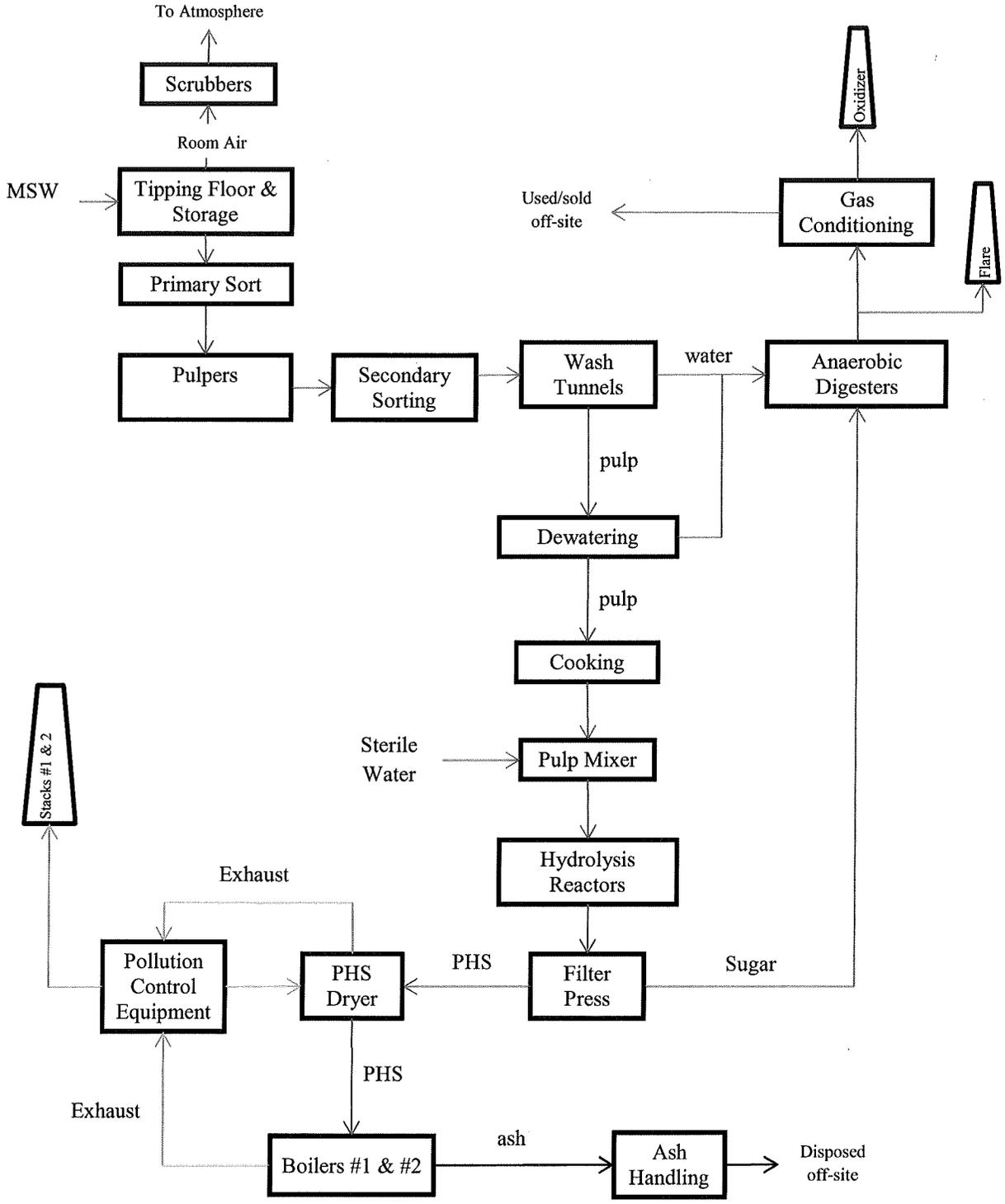
Then the MSW is conveyed to a series of sort tromeels and screening operations. Fines, such as glass and grit, are removed and disposed of off-site. Materials such as plastic containers, film plastic, aluminum, and other metals are removed and sent off-site for recycling.

The remaining organic material is mechanically pulped by tumbling and mixing with water and the pulp is washed. The organic-laden wash water is sent to one of two anaerobic digesters. The anaerobic digesters produce methane which is either conditioned and piped into the Bangor Gas natural gas pipeline for sale and use off-site, conditioned to pipeline natural gas standards and fired in the boiler, or combusted in a flare. Reject or "Tail Gas" from the gas conditioning system is destroyed using a thermal oxidizer. The facility's flare is primarily intended for destruction of excess or off-specification digester gas produced during startup, shutdown, or upset conditions.

The de-watered pulp is "cooked" (heated with steam) to sterilize it. Heat for the cooking process is provided by the facility's boilers. Sterile water is added back to the cooked pulp, which is then sent to one of two hydrolysis reactors. The hydrolysis reactors convert portions of the pulp to sugars through the use of enzymes. The sugar is introduced into the anaerobic digesters for additional production of methane.

The pulp exiting the hydrolysis reactors is called post-hydrolysis solids (PHS). The PHS is dewatered and then dried to a maximum moisture content of 41.5%. The PHS is then gasified and combusted in the facility's boilers. Steam from the boilers will be used to power steam turbines which will provide power for the facility. Cooling towers will be used to transfer waste heat to the atmosphere.

On the next page is a simplified process diagram of the proposed facility.



C. Boilers #1 & #2 and PHS Dryers

Fiberight proposes to install two new close-coupled gasifier/boilers manufactured by Hurst Boilers, Inc. Close-coupled gasifier/boilers are designed to gasify the fuel in the lower portion of the furnace (gasification region) in close proximity (i.e. within the same process unit) to the boiler region where combustion occurs. Due to combustion taking place within the process unit and steam or hot water being produced, a close-coupled gasifier/boiler meets EPA's definitions of "steam generating unit" and "boiler." Therefore, these pieces of equipment will be referred to as boilers throughout this license.

Boilers #1 & #2 are each rated for a maximum heat input of 48 MMBtu/hr. Their primary fuel is the post-hydrolysis solids (PHS) produced at the facility. Natural gas, or digester gas which has been conditioned to pipeline quality, may also be fired, primarily to aid in boiler startup.

The boilers will be used to produce steam for the process, to dry the PHS prior to combustion, to provide building heat, and to power steam turbines which will provide power to the facility.

A portion of the exhaust from each boiler will be used to help dry the PHS prior to combustion. A PHS dryer is essentially a box that contains multiple screws. The wet PHS is introduced at the top and is moved sideways by the first screw, then reversed to the other side by the next screw, and back and forth by subsequent screws until it exits the bottom of the box. Boiler exhaust gas is introduced at the bottom of one of the two PHS Dryers and flows vertically upwards, physically passing by the PHS and causing it to dry. The boiler exhaust exits the top of the PHS Dryer and is then routed to a bank of multiclones and a baghouse before being discharged to the atmosphere.

Each boiler/dryer train will exhaust through its own stack (Stacks #1 and #2) at approximately 65 feet above ground level.

1. BACT (Best Available Control Technology) Findings

The data obtained from the Reasonably Available Control Technology (RACT)/BACT/ Lowest Achievable Emission Rate (LAER) Clearinghouse (RBLC) and the review of licenses from similar sources, along with information on the economic impact, technical feasibility, and environmental impact of various control options was used to determine the available control technologies and corresponding levels of control for emissions from Boilers #1 and #2 and the PHS Dryers.

The following summarizes the BACT findings for Boilers #1 & #2 and PHS Dryers:

a. PM/PM<sub>10</sub>/PM<sub>2.5</sub>

Particulate matter emissions in the exhaust from Boilers #1 & #2 will be generated primarily from the combustion of PHS and entrainment of larger particles in the PHS dryers.

Potential PM controls for the boilers consist of add-on controls, good combustion and operating practices, or a combination of options. The evaluation of add-on controls for this project included baghouses, electrostatic precipitators (ESPs), wet electrostatic precipitators (WESPs), and a multiclone system.

Baghouses consist of a number of fabric bags placed in parallel that collect particulate matter on the surface of the filter bags as the exhaust stream passes through the fabric membrane. The collected particulate is periodically dislodged from the bags' surface to collection hoppers via short blasts of high-pressure air, physical agitation of the bags, or by reversing the gas flow. Baghouse systems are capable of PM collection efficiencies greater than 98%. Operation of these units is relatively simple and a large number of fabrics and configurations are available to allow the unit to be customized to the specific process. The use of a baghouse on the exhaust from each boiler has been determined to be feasible and has been selected as part of the BACT strategy for Boilers #1 & #2 and PHS Dryers.

ESPs work by charging particles in the exhaust stream with a high voltage, oppositely charging a collection surface where the particles accumulate, removing the collected dust by a rapping process, and collecting the dust in hoppers. ESPs function optimally in steady state conditions. The proposed boilers will be prone to load and flow fluctuations that would make efficient operation of an ESP difficult or impractical. Therefore, the installation of ESPs for control of particulate matter emissions from the boilers has been determined not to be technically feasible.

WESPs utilize a pre-quench to cool and saturate the gases prior to entering the ESP. WESPs collect only particles and droplets that can be electrostatically charged and consume significant water quantities during operation. The resulting effluent requires treatment and must be discharged to a solids-removing clarifying system prior to final disposal. The effluent may require additional sludge removal, pH adjustment, and/or additional treatment to remove dissolved solids. There are significant environmental impacts from the wastewater production. In addition, a WESP is subject to the same limitations as a dry ESP in regards to load and flow fluctuations. Therefore, the installation of WESPs for control of particulate matter emissions from the boilers and PHS Dryers has been determined not to be technically or environmentally feasible.

Cyclones are a very common particulate control device used in many applications. Cyclones utilize centrifugal force to separate particles from gas streams, especially where relatively large particles need to be collected. Cyclones are commonly constructed of sheet metal, have relatively low capital cost, low operating costs, and no moving parts. Multiclones are smaller diameter cyclone units operating in parallel or in series and designed to achieve high efficiency PM collection using the same operational principle as the single cyclone. The use of multiclones on each boiler (after the PHS Dryer and prior to the boiler's baghouse) has been determined to be feasible and has been selected as part of the BACT strategy for Boilers #1 & #2 and PHS Dryers.

BACT for PM/PM<sub>10</sub>/PM<sub>2.5</sub> emissions from Boilers #1 & #2 and the PHS Dryers is the use of a multiclone and baghouse on each boiler after the PHS Dryer, an annual fuel limit of 80,000 ton/year of PHS at 41.5% moisture (or equivalent on a dry solids basis) and 2 million scf/year of natural gas for both boilers combined, and emission limits of 0.030 lb/MMBtu and 1.44 lb/hr from each boiler stack.

The exhausts from Stacks #1 and #2 are a combination of PM/PM<sub>10</sub>/PM<sub>2.5</sub> emissions from both fuel burning and process emissions. The BACT PM/PM<sub>10</sub> limits above are determined to be more stringent than the combination of the particulate matter limits found in *Fuel Burning Equipment Particulate Emission Standard* 06-096 CMR 103 and *General Process Source Particulate Emission Standard* 06-096 CMR 105 and are therefore the only PM/PM<sub>10</sub>/PM<sub>2.5</sub> limits contained in this license.

b. SO<sub>2</sub> and Acid Gases

Sulfur dioxide (SO<sub>2</sub>) is formed from the combustion of sulfur present in the fuel. Acid gases (including HCl and H<sub>2</sub>SO<sub>3</sub> and H<sub>2</sub>SO<sub>4</sub>) are also formed from the combustion of fuel containing sulfur and chlorine. Control options for SO<sub>2</sub> and acid gases include scrubbing the sulfur and chlorine from the flue gas by contact with an alkaline material or restricting the sulfur and chlorine content of the fuel.

Dry sorbent injection involves the addition of an alkaline material, such as hydrated lime or soda ash, into the gas stream to react with the SO<sub>2</sub> and acid gases to form salts that are then removed with a particulate control device.

The sulfur and chlorine content of the PHS is difficult to predict until it has been produced at the facility and a significant number of samples has been collected. However, data from PHS produced at Fiberight's Virginia facility indicates that, without additional controls, there is a potential for annual SO<sub>2</sub> and HCl emissions to exceed major source thresholds. Therefore, Fiberight has proposed the installation of a dry sorbent injection system using hydrated lime for the control of SO<sub>2</sub> and acid gases. The manufacturer of the hydrated lime injection system indicates a minimum control efficiency of 85% for SO<sub>2</sub> and 95% for HCl.

BACT for emissions of SO<sub>2</sub> and acid gases (including HCl) from Boilers #1 & #2 and the PHS Dryers is the use of hydrated lime injection and a baghouse on each boiler, SO<sub>2</sub> emission limits of 14.22 lb/hr from each boiler stack and 1.81 tons per 30 day rolling total for both boilers combined, an HCl emission limit of 1.13 lb/hr from each boiler stack, and the use of a SO<sub>2</sub> Continuous Emissions Monitoring System (CEMS). BACT for the boilers shall also include ongoing testing of the PHS fuel as well as emissions from combustion/drying of the PHS to develop a more substantial data set on the contaminants found in the PHS and emitted in the boiler/PHS dryer exhaust.

c. NO<sub>x</sub>

Nitrogen oxide (NO<sub>x</sub>) is a product of combustion and generated from fuel NO<sub>x</sub>, thermal NO<sub>x</sub>, and prompt NO<sub>x</sub>. Oxidation radicals near the combustion flame form prompt NO<sub>x</sub> in insignificant amounts. Reducing NO<sub>x</sub> formation from the two other NO<sub>x</sub> generating mechanisms includes firing a low nitrogen content fuel to minimize fuel NO<sub>x</sub> and maintaining combustion temperatures below 2000°F to minimize thermal NO<sub>x</sub>. Potential add-on control technologies for NO<sub>x</sub> include selective catalytic reduction (SCR), selective non-catalytic reduction (SNCR), and water/steam injection.

SCR reduces NO<sub>x</sub> emissions through the injection of ammonia in the gas exhaust stream in the presence of a catalyst to produce nitrogen and water. The reduction is considered “selective” because the catalyst selectively targets NO<sub>x</sub> reduction in the presence of ammonia. The presence of high concentrations of particulate matter may have a masking effect on the catalyst surface causing a reduction or cessation of catalyst activity. Use of an SCR system would also require reheating of the exhaust stream in order for the exhaust to be at the correct temperature while also in the presence of the catalyst. The technical limitations as well as the energy and environmental impacts associated with an SCR system make it infeasible for this project.

SNCR reduces NO<sub>x</sub> to nitrogen and water by reacting the exhaust gas with a reagent such as ammonia or urea, similar to SCR. However, the use of a catalyst is negated when the chemical reaction takes place at temperatures ranging between 1600°F and 2100°F and enough residence time is provided for the reaction to occur. Boilers #1 & #2 have been designed with an injection point following the afterburner (i.e. the combustion chamber) in order to allow for SNCR. The use of SNCR on each boiler has been determined to be feasible and has been selected as part of the BACT strategy for Boilers #1 & #2 and PHS Dryer.

Water/steam injection is the process of injecting water or steam into the combustion chamber to act as a thermal ballast in the combustion process. This

lowers the combustion temperature, minimizing the formation of thermal NO<sub>x</sub>. However, introducing additional moisture into a process designed to dry material would be counterproductive to the purpose of the PHS Dryer. Therefore, water/steam injection has been determined to be technically infeasible for Boilers #1 & #2.

BACT for NO<sub>x</sub> emissions from Boilers #1 & #2 and the PHS Dryers is the use of SNCR on each boiler, an annual fuel limit of 80,000 ton/year of PHS at 41.5% moisture (or equivalent on a dry solids basis) and 2 million scf/year of natural gas for both boilers combined, NO<sub>x</sub> emission limits of 0.10 lb/MMBtu and 4.80 lb/hr from each boiler stack, an NH<sub>3</sub> emission limit 20 ppmdv at 15% O<sub>2</sub> on a one-hour average, and the use of a NO<sub>x</sub> Continuous Emissions Monitoring System (CEMS).

The lb/MMBtu limits apply at all times except for periods of startup and shutdown. During periods of startup and shutdown only the lb/hr limits apply.

A startup period is defined as a period of time commencing when fuel is first fired into the boiler and ending when both solid fuel has been introduced into the unit and the combustion chamber temperature exceeds 1,600°F. The total duration of this period shall not exceed four (4) hours.

A shutdown period is defined as a period of time commencing when solid fuel is no longer being fed into the boiler and ending when ash is no longer exiting the ash handling system. The total duration of this period shall not exceed four (4) hours.

d. CO

Carbon monoxide (CO) emissions are a result of incomplete combustion, caused by conditions such as insufficient residence time or limited oxygen availability. Potential control strategies for CO emissions from units with burners are typically minimization by good combustion, although oxidation catalyst systems have been used on larger units. Thermal oxidation is also an option for add-on CO control.

An oxidation catalyst lowers the activation energy needed for CO to react with available oxygen in the exhaust to produce CO<sub>2</sub>. In order to prevent the occurrence of particulate contamination in a biomass system, the oxidation catalyst would need to be located downstream of the baghouse. However, the process exhaust gas would then need to be reheated prior to contact with the catalyst bed. The cost of the oxidation catalyst, the associated need for a reheat burner, and the PHS plugging potential does not result in an oxidation catalyst as a feasible option for this project.

Thermal oxidation reduces CO emissions in the flue gas with high temperature post combustion. The application of a thermal oxidizer would require additional fuel usage, would result in additional secondary emissions, and would have a large economic impact on the project. Therefore, thermal oxidation for CO control is not a feasible option for this project.

Good combustion efficiency and proper equipment operation and maintenance incorporate various techniques to minimize CO emissions. Proper combustion techniques include maintaining optimum combustion conditions within the system via optimization of residence time, temperature, and mixing. The use of an oxygen trim control system to maintain adequate and optimum combustion air-to-fuel ratios is considered part of good combustion techniques.

BACT for CO emissions from Boilers #1 & #2 and the PHS Dryers is the use of good combustion techniques, including an oxygen trim control system, proper equipment maintenance, an annual fuel limit of 80,000 ton/year of PHS at 41.5% moisture (or equivalent on a dry solids basis) and 2 million scf/year of natural gas for both boilers combined, an emission limit of 10.56 lb/hr from each boiler stack, and the use of a CO Continuous Emissions Monitoring System (CEMS).

e. VOC

Volatile Organic Compounds (VOCs) in the exhaust from Boilers #1 & #2 will be generated primarily from the incomplete combustion of PHS and from the evaporation of VOCs in the PHS Dryer. VOC emissions from the PHS Dryers are expected to be insignificant as the PHS has already been exposed to elevated temperatures several times in the process previous to the PHS Dryers.

Good combustion efficiency, including an oxygen trim control system, and proper equipment operation and maintenance incorporate various techniques to minimize VOC emissions from combustion in Boilers #1 & #2. Proper combustion techniques include maintaining optimum combustion conditions within the system via optimization of residence time, temperature, and mixing. The use of an oxygen trim control system to maintain adequate and optimum combustion air-to-fuel ratios is considered part of good combustion techniques.

BACT for VOC emissions from Boilers #1 & #2 and the PHS Dryers is the use of good combustion techniques, proper equipment maintenance, an annual fuel limit of 80,000 ton/year of PHS at 41.5% moisture (or equivalent on a dry solids basis) and 2 million scf/year of natural gas for both boilers combined, and an emission limit of 0.82 lb/hr from each boiler stack.

f. Mercury

Mercury is a Hazardous Air Pollutant (HAP). Mercury emissions in the exhaust from Boilers #1 & #2 may be generated from combustion of the PHS fuel. A potential control strategy for mercury emissions from boilers is activated carbon injection (ACI).

ACI reduces mercury emissions through the injection of powdered activated carbon (PAC) into the gas exhaust stream where it adsorbs mercury. The PAC is then collected in the facility's particulate collection system.

The mercury content of the PHS is difficult to predict until it has been produced at the facility and a significant number of samples have been collected. However, in order to comply with 38 Maine Revised Statutes Annotated (M.R.S.A.) §585-B, the facility cannot emit more than 25 lb/year of mercury. Data from PHS produced at Fiberight's Virginia facility indicates that, without additional controls, there is a potential for annual mercury emissions to exceed this level. Therefore, Fiberight has proposed the installation of an ACI system for the control of mercury. The manufacturer of the ACI system indicates a minimum control efficiency of 95%.

Therefore, BACT for mercury emissions from Boilers #1 & #2 and the PHS Dryers is the use of ACI, an emission limit of  $1.427E-3$  lb/hr from each boiler stack, and a facility-wide emission limit of 25 lb/year of mercury. BACT for the boilers shall also include ongoing testing of the PHS fuel as well as emissions from combustion/drying of the PHS to develop a more substantial data set on the contaminants found in the PHS and emitted in the boiler/PHS dryer exhaust.

g. Heavy Metals

Many heavy metals are considered Hazardous Air Pollutants (HAPs). Although a significant portion of any heavy metals found in the PHS will likely remain with the boiler bottom ash, emissions of this type may be generated from combustion/drying of the PHS fuel. Control strategies for control of heavy metals typically include the same controls applicable to the control of particulate matter.

BACT for emissions of heavy metals from Boilers #1 & #2 and the PHS Dryers is the use of a multiclone and baghouse on each boiler after the PHS Dryer and facility-wide emission limits of 9.9 ton/year of any single HAP and 24.9 ton/year for all HAP emissions combined. BACT for the boilers and PHS dryers shall also include ongoing testing of the PHS fuel as well as emissions from combustion/drying of the PHS to develop a more substantial data set on the contaminants found in the PHS and emitted in the boiler/PHS dryer exhaust.

h. Opacity

Boilers #1 & #2 are subject to an opacity standard per New Source Performance Standards (NSPS) found in 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*. Per Subpart Dc, visible emissions from each boiler shall not exceed 20% opacity on a six (6)-minute block average basis except for no more than one (1) six (6)-minute block average per hour of not more than 27% opacity.

The exhaust from Stacks #1 & #2 is a combination of emissions from both fuel burning and process emissions, and reference to emission limits for each individual boiler below includes emissions from both the boiler and dryer associated with each boiler train (i.e. references to "Boiler #1 include emissions from Boiler #1 and the PHS dryer associated with Boiler #1). There are additional opacity requirements for Boilers #1 & #2 and the PHS Dryers contained in *Visible Emissions* rule 06-096 CMR 101. However, the NSPS standards above are determined to be more stringent. Therefore, emissions from Stacks #1 & #2 shall each be limited to the opacity requirements of 40 CFR Part 60, Subpart Dc.

i. BACT Emission Limit Summary

The BACT emission limits for Boilers #1 and #2 were based on the following:

PM/PM <sub>10</sub> /PM <sub>2.5</sub>	– 0.030 lb/MMBtu based on 40 CFR Part 60, Subpart Dc and 40 CFR Part 63, Subpart JJJJJ
SO <sub>2</sub>	– - lb/hr limits based on PHS sulfur content of 0.8% and 85% control – 30-day rolling total based on total boiler SO <sub>2</sub> emissions not to exceed 22 ton/year
NO <sub>x</sub>	– 0.10 lb/MMBtu based on proposed controls
CO	– 0.22 lb/MMBtu based on good combustion practices and vendor supplied data
VOC	– 0.017 lb/MMBtu based on AP-42 Table 1.6-3 dated 9/03
Opacity	– 40 CFR Part 60, Subpart Dc
HCl	– 9.9 ton/year facility-wide limit assuming each boiler can operate 8,760 hour/year
Mercury	– 25 lb/year facility-wide limit assuming each boiler can operate 8,760 hour/year

The BACT emission limits for Boilers #1 and #2 are the following:

<u>Unit</u>	<u>Pollutant</u>	<u>lb/MMBtu</u>
Boiler #1	PM	0.030
Boiler #1	NO <sub>x</sub>	0.10
Boiler #2	PM	0.030
Boiler #2	NO <sub>x</sub>	0.10

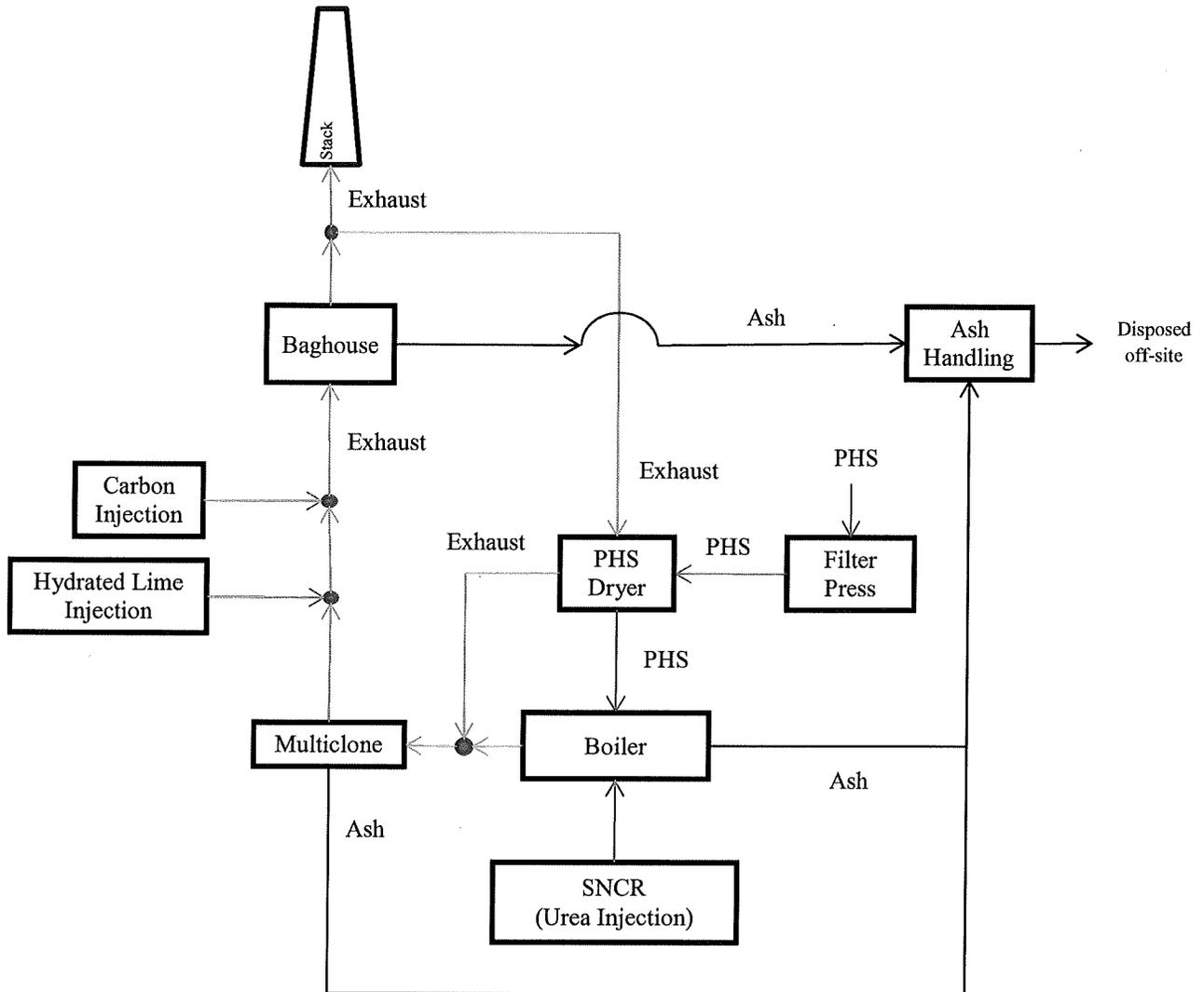
<u>Unit</u>	<u>PM (lb/hr)</u>	<u>PM<sub>10</sub> (lb/hr)</u>	<u>PM<sub>2.5</sub> (lb/hr)</u>	<u>SO<sub>2</sub> (lb/hr)</u>	<u>NO<sub>x</sub> (lb/hr)</u>	<u>CO (lb/hr)</u>	<u>VOC (lb/hr)</u>
Boiler #1	1.44	1.44	1.44	14.22	4.80	10.56	0.82
Boiler #2	1.44	1.44	1.44	14.22	4.80	10.56	0.82

<u>Unit</u>	<u>HCl (lb/hr)</u>	<u>Mercury (lb/hr)</u>
Boiler #1	1.13	1.427E-3
Boiler #2	1.13	1.427E-3

BACT emission limits for the boilers also includes a limit of 1.81 tons of SO<sub>2</sub> per 30-day rolling total for both boilers combined.

j. Control Equipment Arrangement

On the next page is a diagram of the arrangement of the proposed control equipment on Boilers #1 and #2. Each boiler will have its own independent set of control equipment.



## 2. Federal Rule Applicability Determination

Several Federal rules were investigated for potential applicability to Boilers #1 and #2. Determining which rule(s) apply is dependent upon several factors, including the equipment's size, age, and fuel(s) fired. The size and age of the units are defined above.

The primary fuel for these units is the PHS produced by the process. To determine which rules may apply to the combustion of PHS, it must first be determined whether the PHS is considered a waste or non-waste.

All definitions referenced in the following paragraph come from 40 CFR Part 60, Subpart AAAA, *Standards of Performance for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for which Modification or Reconstruction is Commenced After June 6, 2001*. If PHS were to be considered a waste, it would be considered "Refuse Derived Fuel" as defined in §60.1465. Refuse Derived Fuel is included in the definition of Municipal Solid Waste (MSW), meaning Refuse Derived Fuel is considered MSW. Therefore, if PHS is considered a waste, it would be MSW and the boilers would be subject to 40 CFR Part 60, Subpart AAAA.

However, Fiberight maintains that PHS should not be considered a waste, asserting it meets the legitimacy criteria for non-hazardous secondary materials set forth in 40 CFR Part 241.3, *Standards and procedures for identification of non-hazardous secondary materials that are solid wastes when used as fuels or ingredients in combustion units*. The qualification of fuels as non-waste per this section is intended to be a self-certification, meaning no response from EPA is required. However, in 2013 Fiberight submitted their self-certification to EPA and requested a determination on whether EPA is in concurrence that the PHS should be classified as a non-waste. Although there have been several exchanges between Fiberight and EPA and requests for additional information, to date EPA has not issued any decision.

Fiberight has requested that their license be processed based on their self-certification that the PHS is a non-waste. Fiberight acknowledges and understands that relying on their self-certification puts them at significant risk of not being able to operate in compliance with Federal rules should EPA make a determination that PHS does not meet the requirements to be considered a non-waste.

By considering PHS to be a non-waste, it is treated like a "traditional" fuel similar to biomass. As such, Boilers #1 and #2 are being licensed assuming they are new biomass-fired boilers.

3. 40 CFR Part 60, Subpart Dc

Boilers #1 and #2 are subject to the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989. However, Subpart Dc contains only limited requirements for new boilers which fire only biomass and natural gas.

Fiberight shall submit notification to EPA and the Department of the date of construction, anticipated start-up, and actual start-up of Boilers #1 and #2. This notification shall include the design heat input capacity of the boilers and the type(s) of fuel to be combusted. [40 CFR Part 60.48c(a)]

Fiberight shall keep records of the amount of each fuel combusted in Boilers #1 and #2 during each calendar month. [40 CFR Part 60.48c(g)(2)]

4. 40 CFR Part 63, Subpart JJJJJ

Boilers #1 and #2 are subject to the *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* (40 CFR Part 63 Subpart JJJJJ). The units are considered new biomass-fired boilers rated greater than 10 MMBtu/hr.

A summary of the currently applicable federal 40 CFR Part 63 Subpart JJJJJ requirements is listed below. The rule may contain additional requirements and/or clarifications not outlined below. At this time, the Department has not taken delegation of this area source MACT (Maximum Achievable Control Technology) rule promulgated by EPA. However, Fiberight is still subject to all applicable requirements contained in the rule. Notification forms and additional rule information can be found on the following website: <http://www.epa.gov/ttn/atw/boiler/boilerpg.html>.

a. General Requirements

Fiberight shall operate and maintain Boilers #1 and #2, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR §63.11205(a)]

b. Emission Limits and Work Practice Requirements

(1) Boilers #1 and #2 are each subject to the following limits:

- i. Limit emissions of PM (filterable) to less than or equal to 0.030 lb/MMBtu except for periods of startup and shutdown. [40 CFR Part 63, Subpart JJJJJ, Table 1]
- ii. Minimize the boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. [40 CFR Part §63.11214(d) and Table 2]
- iii. Install and operate a bag leak detection system according to §63.11224 and operate the fabric filter such that the bag leak detection system alarm does not sound more than 5% of the unit operating time during each 6-month period. [40 CFR Part 63, Subpart JJJJJ, Table 3]
- iv. Maintain the 30-day rolling average operating load of the boiler such that it does not exceed 110 percent of the average operating load recorded during the most recent performance stack test. [40 CFR Part 63, Subpart JJJJJ, Table 3]
- v. These standards apply at all times the boiler is operating, except during periods of startup and shutdown as defined in 40 CFR §63.11237 during which time Fiberight must comply only with work practice standards. [40 CFR §63.11201(d)]

(2) Boiler Tune-Up Program

- i. A boiler tune-up program shall be implemented. The first tune-up is due no later than 61 months after the initial startup of each boiler. [40 CFR Part 63.11223]
- ii. Tune-ups for Boilers #1 and #2 shall be conducted every five years with no more than 61 months between tune-ups. [40 CFR Part 63.11223(c) and 40 CFR Part 63, Subpart JJJJJ, Table 2]
- iii. The boiler tune-up program shall be performed as specified below:
  1. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted; not to exceed 72 months from the previous inspection. [40 CFR Part 63.11223(b)(1) & (c)]
  2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
  3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted; not to exceed 72 months from the previous inspection. [40 CFR Part 63.11223(b)(3) & (c)]

4. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]
5. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 CFR Part 63.11223(b)(5)]
6. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up.  
[40 CFR Part 63.11223(b)(7)]

iv. Tune-Up Report: A tune-up report shall be maintained onsite and, if requested, submitted to EPA and the Department. The report shall contain the following information:

1. The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
2. A description of any corrective actions taken as part of the tune-up of the boiler; and
3. The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

[40 CFR §63.11223(b)(6)]

c. Continuous Monitoring System (CMS) and Continuous Parameter Monitoring System (CPMS)

- (1) Fiberight shall install, operate, and maintain a CPMS for Boilers #1 and #2. The CPMS for Boilers #1 and #2 includes operating load data (fuel feed rate or steam generation data for each boiler) and a bag leak detection system for each baghouse. [40 CFR §63.11222(a)]
- (2) Fiberight shall install a bag leak detection system on each baghouse that meets the requirements of §63.11224(f) per 40 CFR Part 63, Subpart JJJJJ, Table 6.
- (3) Fiberight shall initiate corrective action within 1 hour of a bag leak detection system alarm and operate and maintain the fabric filter system such that the alarm does not sound more than 5% of the operating time during a 6-month period. In calculating the operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm is counted as a minimum of 1 hour. If more than 1 hour is taken to initiate corrective action, the alarm

time is counted as the actual amount of time taken to initiate corrective action.  
[40 CFR §63.11222(a)(4)]

- (4) Fiberight shall establish a unit-specific limit for maximum operating load (fuel feed rate or steam generation data) per 40 CFR Part 63, Subpart JJJJJ, Table 6.
- (5) Fiberight shall continuously monitor the boiler operating load and reduce this data to 30-day rolling averages to demonstrate compliance with the limitations on the maximum operating load per 40 CFR Part 63, Subpart JJJJJ, Table 7.
- (6) Fiberight shall not operate either boiler above 110% of the operating load (30-day rolling average) established at the most recent successful performance stack test, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests. Operation above 110% of the established operating load constitutes a deviation from operating limits. [40 CFR §63.11222(a)(1)]
- (7) Fiberight shall prepare a site-specific monitoring plan that addresses the requirements outlined in 40 CFR §63.11224(c).
- (8) The CPMS shall be continuously operated in accordance with the site-specific monitoring plan at all times that the boiler is operating except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in the site-specific monitoring plan. Failure to collect required data, except for the periods described above, is a deviation of the monitoring requirements. [40 CFR §63.11221(b)&(d)]
- (9) The CPMS shall complete a minimum of one cycle of operation every 15 minutes. Fiberight shall have data values from a minimum of four successive cycles of operation representing each of the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed, to have a valid hour of data. [40 CFR §63.11224(d)(1)]
- (10) Fiberight shall calculate hourly arithmetic averages from each hour of CPMS data and determine the 30-day rolling average of all recorded readings. [40 CFR §63.11224(d)(2)]

**d. Performance Tests (for Subpart JJJJJ only)**

- (1) Fiberight shall conduct an initial performance test for PM on each boiler in accordance with 40 CFR Part 63, Subpart JJJJJ, Table 4 within 180 days of startup. [40 CFR §63.11210(a) & (d)]
- (2) Fiberight shall conduct performance stack tests at the representative operating load conditions while burning the type of fuel (or mixture of fuels) that have the highest emissions potential. [40 CFR §63.11212(c)]

- (3) Fiberight shall conduct a minimum of three separate test runs for each performance stack test. [40 CFR §63.11212(d)]
- (4) Fiberight shall establish operating load limits for each boiler during the performance test. Fiberight shall collect operating load data (fuel feed rate or steam generation data) every 15 minutes during the entire period of the performance test. Fiberight shall determine the average operating load for each run using all of the 15-minute readings taken during that run. The three runs shall be averaged together and multiplied by 1.1 (110%) to determine the operating load limit. [40 CFR §63.11211(a) and Table 6]
- (5) If the results of the performance stack test demonstrate emissions equal to or less than half of the PM emission limit (i.e.  $\leq 0.015$  lb/MMBtu), no further PM performance stack tests are required. [40 CFR §63.11220(b)]
- (6) If the results of the performance stack test demonstrate emissions greater than half of the PM emission limit (i.e.  $> 0.015$  lb/MMBtu), Fiberight shall conduct triennial performance tests with no more than 37 months between tests. [40 CFR §63.11220(a)]

e. Notifications and Reports

Fiberight shall submit to EPA and the Department all reports required by 40 CFR Part 63, Subpart JJJJJ including, but not limited to, the following:

- (1) An Initial Notification submittal is due within 120 days after the source becomes subject to the standard. [40 CFR Part 63.11225(a)(2)]
- (2) A Notification of Intent to conduct a performance test shall be submitted to EPA at least 60 days before the performance stack test is scheduled to begin. [40 CFR §63.11225(a)(3)] Fiberight shall also notify the Department of their intent to conduct a performance test at the same time notification is given to EPA.
- (3) Within 60 days after the date of completing each performance test, Fiberight shall submit the results of the performance test to EPA's WebFIRE database. [40 CFR §63.11225(e)(1)] Fiberight shall also submit results to the Department in accordance with Standard Condition (11)(C) of this air emission license.
- (4) A Notification of Compliance Status shall be submitted to EPA no later than 60 days following the completion of the performance stack test. [40 CFR Part 63.11225(a)(4)] EPA requires submission of Notification of Compliance Status reports for tune-ups through their electronic reporting system. [63.11225(a)(4)(vi)]

(5) Compliance

Reports

A compliance report shall be prepared by March 1<sup>st</sup> of each year. The report shall be maintained by the source and submitted to the Department and to the EPA upon request, unless the source experiences any deviations from the applicable requirements of this Subpart during the previous calendar year,

then the report must be submitted to the Department and to the EPA by March 15<sup>th</sup>. The report must include the items contained in §63.11225(b)(1) through (4), including the following: [40 CFR §63.11225(b)]

- i. Company name and address;
- ii. A statement of whether the source has complied with all the relevant requirements of this Subpart;
- iii. A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
- iv. The following certifications, as applicable:
  1. "This facility complies with the requirements in 40 CFR §63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
  2. "No secondary materials that are solid waste were combusted in any affected unit."
  3. "This facility complies with the requirement in 40 CFR §§63.11214(d) to conduct a tune-up of each applicable boiler according to 40 CFR §63.11223(b)."
- v. If the source experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken; and
- vi. The total fuel use by each boiler for each calendar month within the reporting period, including a description of the fuel, whether the fuel has received a non-waste determination by Fiberight or EPA through a petition process to be a non-waste under 40 CFR §241.3(c), whether the fuel(s) were processed from discarded non-hazardous secondary materials within the meaning of 40 CFR §241.3, and the total fuel usage amount with units of measure.

f. Recordkeeping

Records shall be maintained consistent with the requirements of 40 CFR Part 63, Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]:

- (1) Copies of notifications and reports with supporting compliance documentation;
- (2) Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
- (3) Records which document how the non-hazardous secondary material combusted in the boilers meets each of the legitimacy criteria under 40 CFR §241.3(d)(1) and how the operations that produced the fuel satisfies the definition of processing in 40 CFR §241.2. If Fiberight receives a non-waste

- determination from EPA pursuant to the petition process, records must be kept that document how the fuel satisfies the requirements of the petition process.;
- (4) Records of monthly fuel use including the type(s) of fuel and amount(s) used;
  - (5) Records of the occurrence and duration of each malfunction of each applicable boiler;
  - (6) Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler;
  - (7) Records of all inspection and monitoring data; and
  - (8) Records associated with each bag leak detection system including:
    - i. Records of bag leak detection system output;
    - ii. Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and
    - iii. The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.
  - (9) Records shall be in a form suitable and readily available for expeditious review.

D. Anaerobic Digesters, Thermal Oxidizer, and Flare

Fiberight proposes to install two Anaerobic Digesters (ADs). The ADs produce biogas heavily laden with methane from digestion of the organic material in the wash water from the pulping operation. Industrial sugars produced by the hydrolysis reactors are also sent to the ADs to increase biogas output.

The ADs will produce up to 1200 scfm of biogas (Digester Gas). The Digester Gas is assumed to contain approximately 70% methane and have a maximum hydrogen sulfide (H<sub>2</sub>S) concentration of 500 ppmv.

The Digester Gas will be sent to a conditioning system which will convert it to "Sales Gas" as described below. Sales Gas will be sold for use off-site. It is expected this will occur through injection into the Bangor Gas natural gas pipeline. As such, Sales Gas must meet the requirements of pipeline quality natural gas including a composition of greater than 98% methane and removal of the H<sub>2</sub>S to pipeline quality natural gas specifications.

The conditioning system proposed consists of two Molecular Gate<sup>TM</sup> Pressure Swing Adsorption (PSA) units provided by Guild Associates, Inc. The PSA units remove impurities (mostly carbon dioxide and H<sub>2</sub>S) from the Digester Gas resulting in two gas streams, the Sales Gas and Tail Gas. Tail Gas is assumed to have a methane content of approximately 10% and a maximum H<sub>2</sub>S concentration of 1600 ppmv.

Under normal operating conditions, all Digester Gas will be conditioned and the Sales Gas portion sent off-site. The remaining Tail Gas will be controlled by a thermal oxidizer.

The thermal oxidizer proposed is an Enclosed ZBRID System for Low BTU Gases (ZBRID TO) manufactured by John Zink Company LLC. This type of thermal oxidizer is often referred to as an enclosed flare. Since the Tail Gas has such low methane content, the ZBRID TO requires supplemental fuel to maintain ignition. Fiberight plans to use Digester Gas for this purpose. The ZBRID TO fires up to 209 scfm of Digester Gas during startup and up to 26 scfm during normal operation. The maximum Tail Gas destruction rate is 386 scfm.

The ZBRID TO is designed only to handle the Tail Gas from the PSA and not the full load of the ADs. Therefore, during startup, shutdown, or under upset conditions the ZBRID TO may not be adequate to handle the gas being produced. Fiberight does not have the ability to store gas. Therefore, under conditions where Digester Gas, Sales Gas, Tail Gas, or any combination of the three cannot be either sent off-site or controlled using the ZBRID TO, emissions shall be controlled by an Elevated ZEF<sup>®</sup> Flare (Flare #1) manufactured by John Zink Company LLC. Flare #1 is sized to control up to 1200 scfm of Digester Gas, the maximum amount expected to be produced by the facility. Since Flare #1 is intended for destruction of gases with a relatively high methane content, a continuous assist burner is not required.

#### BACT Findings

1. The BACT emission limits for the ZBRID TO were based on the following:

- a. Firing 386 scfm of Tail Gas and 26 scfm of Digester Gas.
- b. The following emission factors:

PM/PM <sub>10</sub> /PM <sub>2.5</sub>	– 17 lb/MMscf based on AP-42 Table 2.4-5 dated 11/98
SO <sub>2</sub>	– mass balance based on 1600 ppmv of H <sub>2</sub> S in Tail Gas and 500 ppmv of H <sub>2</sub> S in Digester Gas
NO <sub>x</sub>	– 0.10 lb/MMBtu based on manufacturer supplied data
CO	– 0.20 lb/MMBtu based on manufacturer supplied data
VOC	– 5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
Opacity	– 06-096 CMR 115, BACT

2. The BACT emission limits for Flare #1 were based on the following:
  - a. Firing 1200 scfm of Digester Gas.
  - b. The following emission factors:

- PM/PM<sub>10</sub>/PM<sub>2.5</sub> – 17 lb/MMscf based on AP-42 Table 2.4-5 dated 11/98
- SO<sub>2</sub> – mass balance based on 500 ppmv of H<sub>2</sub>S in Digester Gas
- NO<sub>x</sub> – 0.068 lb/MMBtu based on manufacturer supplied data
- CO – 0.31 lb/MMBtu based on manufacturer supplied data
- VOC – 5.5 lb/MMscf based on AP-42 Table 1.4-2 dated 7/98
- Opacity – 06-096 CMR 115, BACT

3. The BACT emission limits for the ZBRID TO and Flare #1 are the following:

Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
ZBRID TO	0.42	0.42	0.42	6.40	0.37	0.73	0.14
Flare #1	1.22	1.22	1.22	6.09	3.46	15.78	0.40

Visible emissions from the ZBRID TO and Flare #1 shall each not exceed 20% opacity on a 6-minute block average.

Fiberight shall be limited to firing 182.6 million scf of Tail Gas and 12.3 million scf of Digester gas per year in the ZBRID TO. Fiberight shall be limited to firing 63.07 million scf of Digester gas per year in Flare #1. Fiberight shall keep records of each type of gas combusted in the ZBRID TO and Flare #1 on a monthly and 12-month rolling total basis.

E. Fugitive VOCs and HAPs

The receiving, sorting, pulping, cooking, and other operations performed inside the building have the potential to emit fugitive VOCs and HAPs. It is difficult to quantify expected actual amounts, but estimates have been made based on the similarity to other industries and best practices looked at for the minimization of these emissions. Although odor is not regulated by this air emissions license, the reduction of VOCs and HAPs emitted from the facility should have the added benefit of reducing odors.

Fiberight has proposed an air handling system that will draw air from inside the building and treat it in either of two scrubber trains. Each scrubber train will consist of two packed bed wet scrubbers in series, a Duall Model F105-202s Cross Flow Scrubber followed by a Duall Model PT510-132 Packed Tower Scrubber. Contaminant removal is achieved by absorption of gases, condensation of condensable vapors, and impaction of aerosols. The flow through each scrubber train is controlled by a fan rated for 50,000 acfm.

One of the scrubber trains shall be operated at all times MSW is present on the tipping floor. Both scrubber trains shall be operated whenever the overhead doors used for truck entry or exit is open.

Based on VOC emissions from similar tipping floor operations, an assumed capture efficiency of 90%, and an assumed control efficiency of 95%, VOC emissions from each scrubber train are expected to be less than 2.9 ton/year. The scrubber trains are also expected to reduce fugitive emissions of any HAPs present in the air stream. The scrubber trains shall be maintained in good working order. Fiberight shall perform monthly inspections of the scrubbers and maintain records of all inspections and maintenance activities performed.

**F. Cooling Towers**

Fiberight will be using cooling towers to dispose of waste heat. Cooling towers function by spraying cool water over a column of packing while a fan draws air up through the packing to promote evaporative cooling. During the process, water mist droplets can become entrained in the circulating air and get discharged to the atmosphere. The "drift" droplets can be a source of particulate matter emissions as the water evaporates and the dissolved salts in the water solidify.

Although the cooling towers are considered insignificant activities per 06-096 CMR 115, Appendix B, Section A.99, Fiberight has proposed the installation of drift eliminators to minimize any emissions of particulate that may occur.

**G. Ash Handling**

Boilers #1 and #2 will produce ash that will be disposed of off-site. In order to minimize fugitive emissions, Fiberight shall develop and follow an established Best Management Practice (BMP) Plan as described in Standard Condition (4). The BMP Plan shall include a plan for how to minimize fugitive emissions from ash handling.

Visible emissions from ash handling shall not exceed an opacity of 10% on a six (6) minute block average basis.

**H. Hydrated Lime and Carbon Silos**

The boiler pollution control equipment will require silos for storage of hydrated lime and carbon. Typically, hydrated lime and carbon are delivered by truck or bags. Each silo shall be equipped with a vent filter to minimize particulate emissions and visible emissions when the silos are filled. Visible emissions from either the hydrated lime silo or the carbon silo shall not exceed an opacity of 10% on a six (6) minute block average basis.

I. Fugitive Emissions

Visible emissions from a fugitive emission source (including roadways) shall not exceed an opacity of 20%.

J. General Process Emissions

Visible emissions from any general process source not already specifically addressed in this license shall not exceed an opacity of 20% on a six (6) minute block average basis.

K. Annual Emissions

1. Total Annual Emissions

Fiberight shall be restricted to the following annual emissions, based on a 12-month rolling total. The tons per year limits were calculated based on the following:

- Firing 80,000 ton/year of PHS at 41.5% moisture (or equivalent on a dry solids basis) in the boilers;
- Firing 2.0 MMscf/year of natural gas in the boilers;
- A 30-day rolling total limit for SO<sub>2</sub> of 1.81 tons;
- Firing 182.6 MMscf/year of Tail Gas and 12.3 MMscf/year of Digester Gas in the ZBRID TO;
- Firing 63.07 MMscf/year of Digester Gas in Flare #1;
- Maximum VOC emissions of 2.9 ton/year from each scrubber train.

**Total Licensed Annual Emissions for the Facility**  
**Tons/year**  
(used to calculate the annual license fee)

	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Boilers #1 & #2 (PHS)	11.4	11.4	11.4	22.0	37.9	83.4	6.4
Boilers #1 & #2 (NG)	0.1	0.1	0.1	–	0.1	0.1	–
ZBRID TO	1.7	1.7	1.7	25.2	1.5	2.9	0.5
Flare #1	0.5	0.5	0.5	2.7	1.5	6.9	0.2
Scrubber Trains (2)	–	–	–	–	–	–	5.8
<b>Total TPY</b>	<b>13.7</b>	<b>13.7</b>	<b>13.7</b>	<b>49.9</b>	<b>41.0</b>	<b>93.3</b>	<b>12.9</b>

Pollutant	Tons/year
Single HAP	9.9
Total HAP	24.9

Pollutant	lb/year
Mercury	25.0

2. Greenhouse Gases

Greenhouse gases are considered regulated pollutants as of January 2, 2011, through 'Tailoring' revisions made to EPA's *Approval and Promulgation of Implementation Plans*, 40 CFR Part 52, Subpart A, §52.21, *Prevention of Significant Deterioration of Air Quality* rule. Greenhouse gases, as defined in 06-096 CMR 100 (as amended), are the aggregate group of the following gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. For licensing purposes, greenhouse gases (GHG) are calculated and reported as carbon dioxide equivalents (CO<sub>2</sub>e).

The quantity of CO<sub>2</sub>e emissions from this facility is less than 100,000 tons per year, based on the following:

- the facility's fuel use limits;
- worst case emission factors from the following sources: U.S. EPA's AP-42, the Intergovernmental Panel on Climate Change (IPCC), and 40 CFR Part 98, *Mandatory Greenhouse Gas Reporting*; and
- global warming potentials contained in 40 CFR Part 98.

No additional licensing actions to address GHG emissions are required at this time.

III. AMBIENT AIR QUALITY ANALYSIS

The level of ambient air quality impact modeling required for a minor source shall be determined by the Department on a case-by case basis. In accordance with 06-096 CMR 115, an ambient air quality impact analysis is not required for a minor source if the total licensed annual emissions of any pollutant released do not exceed the following levels and there are no extenuating circumstances:

<u>Pollutant</u>	<u>Tons/Year</u>
PM <sub>10</sub>	25
PM <sub>2.5</sub>	15
SO <sub>2</sub>	50
NO <sub>x</sub>	50
CO	250

The total licensed annual emissions for the facility are below the emission levels contained in the table above and there are no extenuating circumstances; therefore, an ambient air quality impact analysis is not required as part of this license.

**ORDER**

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards, and
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-111-71-A-N subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

**STANDARD CONDITIONS**

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353-A. [06-096 CMR 115]

- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
  - A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    2. pursuant to any other requirement of this license to perform stack testing.
  - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - C. submit a written report to the Department within thirty (30) days from date of test completion.[06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
- B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
- C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

[06-096 CMR 115]

**SPECIFIC CONDITIONS**

**(16) Boilers #1 & #2 and PHS Dryers**

**A. Fuel**

1. Fiberight shall only combust PHS and pipeline quality natural gas in Boilers #1 & #2. [06-096 CMR 115, BACT]
2. Fiberight shall not exceed a total annual fuel limit of 80,000 ton/year at 41.5% moisture (or equivalent) of PHS for Boilers #1 & #2 combined based on a 12-month rolling total. [06-096 CMR 115, BACT]
3. Fiberight shall not exceed a total annual fuel limit of 2.0 MMscf/year of pipeline quality natural gas for Boilers #1 & #2 combined based on a 12-month rolling total. [06-096 CMR 115, BACT]
4. Fiberight shall keep records of the amount (tons of PHS and MMscf of gas) of fuel combusted in Boilers #1 & #2 during each calendar month as well as on a 12-month rolling total basis. Tons of PHS will be corrected to 41.5% moisture. [40 CFR §60.48c(g)(2)]
5. Fiberight shall sample and test the PHS at least twice per year with no more than eight (8) months between tests. Sampling and testing shall be performed using methods approved by the Department. A test report of the results shall be submitted to the Department no later than 60 days from the date of sampling. At a minimum, the PHS shall be tested for the following:
  - a. Heat Content (Btu/lb on a dry basis)
  - b. Moisture Content
  - c. Levels of the following compounds. Report levels in units of pounds of each compound per MMBtu of heat content.
    - Total Chlorine
    - Total Sulfur
    - Mercury
    - Total Select Metals (Arsenic, Beryllium, Cadmium, Chromium, Lead, Manganese, Nickel, Selenium)

**B. Air Pollution Control Equipment**

1. Fiberight shall use multiclones and baghouses to control PM emissions from each boiler (Boilers #1 & #2) when firing PHS. [06-096 CMR 115, BACT]
2. Fiberight shall install a hydrated lime injection system in the exhaust stream of each boiler (Boilers #1 & #2) and operate as necessary to meet an HCl emission limit of 1.13 lb/hr from each boiler and the SO<sub>2</sub> emission limits required by this license. [06-096 CMR 115, BACT]
3. Fiberight shall maintain records of the hydrated lime injection operations, including amount of hydrated lime used on an hourly, monthly, and 12-month rolling total basis. [06-096 CMR 115, BACT]

4. Fiberight shall maintain the hydrated lime injection rate into each boiler exhaust stream at or above the injection rate measured during the most recent performance stack test demonstrating compliance with the HCl lb/hr emission limit.  
[06-096 CMR 115, BACT]
5. Fiberight shall install an activated carbon injection (ACI) system in the exhaust stream of each boiler (Boilers #1 & #2) and operate as necessary to meet a mercury emission limit of 1.427E-3 lb/hr for each boiler. [06-096 CMR 115, BACT]
6. Fiberight shall maintain records of the ACI operations, including amount of activated carbon used on an hourly, monthly, and 12-month rolling total basis.  
[06-096 CMR 115, BACT]
7. Fiberight shall maintain the activated carbon rate into each boiler exhaust stream at or above the injection rate measured during the most recent performance stack test demonstrating compliance with the mercury lb/hr emission limit.  
[06-096 CMR 115, BACT]
8. Fiberight shall install an SNCR system on each boiler (Boilers #1 & #2) and operate it as necessary to meet a NO<sub>x</sub> emission limit of 0.10 lb/MMBtu for each boiler. [06-096 CMR 115, BACT]
9. Fiberight shall maintain records of the SNCR injection operations, including amounts of reagent used on an hourly, monthly, and 12-month rolling total basis.  
[06-096 CMR 115, BACT]

C. Emissions shall not exceed the following:

<b>Emission Unit</b>	<b>Pollutant</b>	<b>lb/MMBtu</b>	<b>Origin and Authority</b>
Boiler #1	PM	0.030	40 CFR §60.43c(e)(1) 40 CFR §63 §§JJJJJ, Table 1 06-096 CMR 115, BACT
	NO <sub>x</sub>	0.10 (See Notes 1 & 2)	06-096 CMR 115, BACT
Boiler #2	PM	0.030	40 CFR §60.43c(e)(1) 40 CFR §63 §§JJJJJ, Table 1 06-096 CMR 115, BACT
	NO <sub>x</sub>	0.10 (See Notes 1 & 2)	06-096 CMR 115, BACT

Note 1: Based on a 1-hour average

Note 2: The NO<sub>x</sub> lb/MMBtu limits do not apply during periods of startup or shutdown as defined in this license.

D. Fiberight shall install, operate, and maintain a NO<sub>x</sub> CEMS (in accordance with 40 CFR Part 60, Appendix B and 06-096 CMR 117) on each boiler (Boilers #1 & #2) to demonstrate compliance with the NO<sub>x</sub> lb/MMBtu emission limits.  
[06-096 CMR 115, BACT]

E. Emissions shall not exceed the following [06-096 CMR 115, BACT]:

<b>Emission Unit</b>	<b>PM (lb/hr)</b>	<b>PM<sub>10</sub> (lb/hr)</b>	<b>PM<sub>2.5</sub> (lb/hr)</b>	<b>SO<sub>2</sub> (lb/hr)</b>	<b>NO<sub>x</sub> (lb/hr)</b>	<b>CO (lb/hr)</b>	<b>VOC (lb/hr)</b>
Boiler #1	1.44	1.44	1.44	14.22	4.80	10.56	0.82
Boiler #2	1.44	1.44	1.44	14.22	4.80	10.56	0.82

F. Emissions shall not exceed the following [06-096 CMR 115, BACT]:

<b>Emission Unit</b>	<b>HCl (lb/hr)</b>	<b>Mercury (lb/hr)</b>
Boiler #1	1.13	1.427E-3
Boiler #2	1.13	1.427E-3

G. Combined SO<sub>2</sub> emissions from Boilers #1 and #2 shall not exceed an emission limit of 1.81 tons on a 30-day rolling total basis. To calculate the 30-day rolling total, Fiberight shall sum each day's 1-hour data for each boiler and sum the previous 30 calendar days for both boilers combined. [06-096 CMR 115, BACT]

H. Fiberight shall install, operate, and maintain a SO<sub>2</sub> CEMS (in accordance with 40 CFR Part 60, Appendix B and 06-096 CMR 117) on each boiler (Boilers #1 & #2) to demonstrate compliance with the SO<sub>2</sub> lb/hr and tons per 30-day rolling total emission limits. [06-096 CMR 115, BACT]

I. Fiberight shall install, operate, and maintain a CO CEMS (in accordance with 40 CFR Part 60, Appendix B and 06-096 CMR 117) on each boiler (Boilers #1 & #2) to demonstrate compliance with the CO lb/hr emission limits.  
[06-096 CMR 115, BACT]

J. Fiberight shall be limited to an NH<sub>3</sub> emission limit of 20 ppmdv at 15% O<sub>2</sub> on a 1-hour average basis. [06-096 CMR 115, BACT]

K. Visible emissions from Boilers #1 & #2 shall each not exceed 20% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average per hour of not more than 27% opacity. [40 CFR §60.43c(c)]

**L. Performance Tests**

In addition to the performance tests required by 40 CFR Part 63, Subpart JJJJJ, Fiberight is subject to the following:

1. Fiberight shall demonstrate compliance with the VOC lb/hr emission limits for each boiler through stack testing within 180 days of initial startup. The associated PHS Dryer must be operating during compliance testing. Additional compliance testing shall be performed upon the request of the Department.  
[06-096 CMR 115, BACT]
2. Fiberight shall demonstrate compliance with the HCl and mercury lb/hr emission limits for each boiler through stack testing within 180 days of initial startup. The associated PHS Dryer must be operating during compliance testing. Additional compliance testing shall be performed once per calendar year with no more than 14 months between tests. [06-096 CMR 115, BACT]
3. The performance stack tests for VOC, HCl, and mercury shall be conducted at representative operating load conditions and while firing and drying PHS.  
[06-096 CMR 115, BACT]
4. Fiberight shall perform stack testing on the combustion of PHS in each boiler for the following:
  - Total Select Metals (Arsenic, Beryllium, Cadmium, Chromium, Lead, Manganese, Nickel, Selenium)
  - Dioxins/Furans

Tests shall be performed within 180 days of initial startup using test methods approved by the Department. The associated PHS dryer must be operating during testing. Results shall be reported in units of lb/MMBtu. Additional testing shall be performed once per calendar year with no more than 14 months between tests.  
[06-096 CMR 115, BACT]

5. Fiberight shall demonstrate compliance with the NH<sub>3</sub> ppm<sub>dv</sub> emission limit for each boiler within 180 days of initial startup and every other calendar year thereafter with no more than 14 months between tests. [06-096 CMR 115, BACT]

**M. Requirements of 40 CFR Part 60, Subpart Dc for Boilers #1 & #2 Not Covered Elsewhere in this Order Section**

1. Fiberight shall comply with all requirements of 40 CFR Part 60, Subpart Dc applicable to Boilers #1 & #2.

2. Fiberight shall submit notification to EPA and the Department of the date of construction, anticipated start-up, and actual start-up of Boilers #1 and #2. This notification shall include the design heat input capacity of the boiler and the type of fuel(s) to be combusted. [40 CFR Part 60.48c(a)]

N. Requirements of 40 CFR Part 63, Subpart JJJJJ for Boilers #1 & #2 Not Covered Elsewhere in this Order Section [incorporated under 06-096 CMR 115, BACT]

1. Fiberight shall operate and maintain Boilers #1 and #2, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. [40 CFR §63.11205(a)]

2. Emission Limits and Work Practice Standards

a. Boilers #1 & #2 are each subject to the following limits:

- (1) Limit emissions of PM (filterable) to less than or equal to 0.030 lb/MMBtu except for periods of startup and shutdown. [40 CFR Part 63, Subpart JJJJJ, Table 1]
- (2) Minimize the boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. [40 CFR Part §63.11214(d) and Table 2]
- (3) Install and operate a bag leak detection system according to §63.11224 and operate the fabric filter such that the bag leak detection system alarm does not sound more than 5% of the unit operating time during each 6-month period (as defined by the subpart). [40 CFR Part 63, Subpart JJJJJ, Table 3]
- (4) Maintain the 30-day rolling average operating load of the boiler such that it does not exceed 110 percent of the average operating load recorded during the most recent performance stack test. [40 CFR Part 63, Subpart JJJJJ, Table 3]
- (5) These standards apply at all times the boiler is operating, except during periods of startup and shutdown as defined in 40 CFR §63.11237 during which time Fiberight must comply only with work practice standards. [40 CFR §63.11201(d)]

b. Boiler Tune-Up Program

- (1) A boiler tune-up program shall be implemented. The first tune-up is due no later than 61 months after the initial startup of each boiler. [40 CFR Part 63.11223]

- (2) Tune-ups for Boilers #1 and #2 shall be conducted every five years with no more than 61 months between tune-ups. [40 CFR Part 63.11223(c) and 40 CFR Part 63, Subpart JJJJJ, Table 2]
- (3) The boiler tune-up program shall be performed as specified below:
- i. As applicable, inspect the burner, and clean or replace any component of the burner as necessary. Delay of the burner inspection until the next scheduled shutdown is permitted; not to exceed 72 months from the previous inspection. [40 CFR Part 63.11223(b)(1) & (c)]
  - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern, consistent with the manufacturer's specifications. [40 CFR Part 63.11223(b)(2)]
  - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure it is correctly calibrated and functioning properly. Delay of the inspection until the next scheduled shutdown is permitted; not to exceed 72 months from the previous inspection.  
[40 CFR Part 63.11223(b)(3) & (c)]
  - iv. Optimize total emissions of CO, consistent with manufacturer's specifications. [40 CFR Part 63.11223(b)(4)]
  - v. Measure the concentration in the effluent stream of CO in parts per million by volume (ppmv), and oxygen in volume percent, before and after adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. [40 CFR Part 63.11223(b)(5)]
  - vi. If a unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of start-up.  
[40 CFR Part 63.11223(b)(7)]
- (4) Tune-Up Report: A tune-up report shall be maintained onsite and, if requested, submitted to EPA and the Department. The report shall contain the following information:
- i. The concentration of CO in the effluent stream (ppmv) and oxygen (volume percent) measured at high fire or typical operating load both **before** and **after** the boiler tune-up;
  - ii. A description of any corrective actions taken as part of the tune-up of the boiler; and
  - iii. The types and amounts of fuels used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.  
[40 CFR §63.11223(b)(6)]

3. Continuous Monitoring System (CMS) and Continuous Parameter Monitoring System (CPMS)
  - a. Fiberight shall install, operate, and maintain a CPMS for Boilers #1 and #2. The CPMS for Boilers #1 and #2 includes operating load data (fuel feed rate or steam generation data for each boiler) and a bag leak detection system for each baghouse. [40 CFR §63.11222(a)]
  - b. Fiberight shall install a bag leak detection system on each baghouse that meets the requirements of §63.11224(f) per 40 CFR Part 63, Subpart JJJJJ, Table 6.
  - c. Fiberight shall initiate corrective action within 1 hour of a bag leak detection system alarm and operate and maintain the fabric filter system such that the alarm does not sound more than 5% of the operating time during a 6-month period. In calculating the operating time percentage, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm is counted as a minimum of 1 hour. If more than 1 hour is taken to initiate corrective action, the alarm time is counted as the actual amount of time taken to initiate corrective action. [40 CFR §63.11222(a)(4)]
  - d. Fiberight shall establish a unit-specific limit for maximum operating load (fuel feed rate or steam generation data) per 40 CFR Part 63, Subpart JJJJJ, Table 6.
  - e. Fiberight shall continuously monitor the boiler operating load and reduce this data to 30-day rolling averages to demonstrate compliance with the limitations on the maximum operating load per 40 CFR Part 63, Subpart JJJJJ, Table 7.
  - f. Fiberight shall not operate either boiler above 110% of the operating load (30-day rolling average) established at the most recent successful performance stack test, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests. Operation above 110% of the established operating load constitutes a deviation from operating limits. [40 CFR §63.11222(a)(1)]
  - g. Fiberight shall prepare a site-specific monitoring plan that addresses the requirements outlined in 40 CFR §63.11224(c).
  - h. The CPMS shall be continuously operated in accordance with the site-specific monitoring plan at all times that the boiler is operating except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks, required zero and span adjustments, and scheduled CMS maintenance as defined in the site-specific monitoring plan. Failure to collect required data, except for the periods described above, is a deviation of the monitoring requirements. [40 CFR §63.11221(b)&(d)]
  - i. The CPMS shall complete a minimum of one cycle of operation every 15 minutes. Fiberight shall have data values from a minimum of four successive

cycles of operation representing each of the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed, to have a valid hour of data. [40 CFR §63.11224(d)(1)]

- j. Fiberight shall calculate hourly arithmetic averages from each hour of CPMS data and determine the 30-day rolling average of all recorded readings. [40 CFR §63.11224(d)(2)]

#### 4. Performance Tests

- a. Fiberight shall conduct an initial performance test for PM on each boiler in accordance with 40 CFR Part 63, Subpart JJJJJ, Table 4 within 180 days of startup. [40 CFR §63.11210(a) & (d)]
- b. Fiberight shall conduct performance stack tests at the representative operating load conditions while burning the type of fuel (or mixture of fuels) that have the highest emissions potential. [40 CFR §63.11212(c)]
- c. Fiberight shall conduct a minimum of three separate test runs for each performance stack test. [40 CFR §63.11212(d)]
- d. Fiberight shall establish operating load limits for each boiler during the performance test. Fiberight shall collect operating load data (fuel feed rate or steam generation data) every 15 minutes during the entire period of the performance test. Fiberight shall determine the average operating load for each run using all of the 15-minute readings taken during that run. The three runs shall be averaged together and multiplied by 1.1 (110%) to determine the operating load limit. [40 CFR §63.11211(a) and Table 6]
- e. If the results of the performance stack test demonstrate emissions equal to or less than half of the PM emission limit (i.e.  $\leq 0.015$  lb/MMBtu), no further performance stack tests are required. [40 CFR §63.11220(b)]
- f. If the results of the performance stack test demonstrate emissions greater than half of the PM emission limit (i.e.  $> 0.015$  lb/MMBtu), Fiberight shall conduct triennial performance tests with no more than 37 months between tests. [40 CFR §63.11220(a)]

#### 5. Notifications and Reports

Fiberight shall submit to EPA and the Department all reports required by 40 CFR Part 63, Subpart JJJJJ including, but not limited to, the following:

- a. An Initial Notification submittal to EPA is due within 120 days after the source becomes subject to the standard. [40 CFR Part 63.11225(a)(2)]
- b. A Notification of Intent to conduct a performance test shall be submitted to EPA at least 60 days before the performance stack test is scheduled to begin. [40 CFR §63.11225(a)(3)] Fiberight shall also notify the Department of their

intent to conduct a performance test at the same time notification is given to EPA.

- c. Within 60 days after the date of completing each performance test, Fiberight shall submit the results of the performance test to EPA's WebFIRE database. [40 CFR §63.11225(e)(1)] Fiberight shall also submit results to the Department in accordance with Standard Condition (11)(C) of this air emission license.
- d. A Notification of Compliance Status shall be submitted to EPA no later than 60 days following the completion of the performance stack test. [40 CFR Part 63.11225(a)(4)] EPA requires submission of Notification of Compliance Status reports for tune-ups through their electronic reporting system. [63.11225(a)(4)(vi)]
- e. **Compliance Reports**

A compliance report shall be prepared by March 1<sup>st</sup> of each year. The report shall be maintained by the source and submitted to the Department and to the EPA upon request, unless the source experiences any deviations from the applicable requirements of this Subpart during the previous calendar year, then the report must be submitted to the Department and to the EPA by March 15<sup>th</sup>. The report must include the items contained in §63.11225(b)(1) through (4), including the following: [40 CFR §63.11225(b)]

  - (1) Company name and address;
  - (2) A statement of whether the source has complied with all the relevant requirements of this Subpart;
  - (3) A statement certifying truth, accuracy, and completeness of the notification and signed by a responsible official and containing the official's name, title, phone number, email address, and signature;
  - (4) The following certifications, as applicable:
    - i. "This facility complies with the requirements in 40 CFR §63.11223 to conduct tune-ups of each boiler in accordance with the frequency specified in this Subpart."
    - ii. "No secondary materials that are solid waste were combusted in any affected unit."
    - iii. "This facility complies with the requirement in 40 CFR §§63.11214(d) to conduct a tune-up of each applicable boiler according to 40 CFR §63.11223(b)."
  - (5) If the source experiences any deviations from the applicable requirements during the reporting period, include a description of deviations, the time periods during which the deviations occurred, and the corrective actions taken; and
  - (6) The total fuel use by each boiler for each calendar month within the reporting period, including a description of the fuel, whether the fuel has received a non-waste determination by Fiberight or EPA through a petition process to be a non-waste under 40 CFR §241.3(c), whether the fuel(s)

were processed from discarded non-hazardous secondary materials within the meaning of 40 CFR §241.3, and the total fuel usage amount with units of measure.

6. Recordkeeping

Records shall be maintained consistent with the requirements of 40 CFR Part 63, Subpart JJJJJ including the following [40 CFR Part 63.11225(c)]:

- a. Copies of notifications and reports with supporting compliance documentation;
- b. Identification of each boiler, the date of tune-up, procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned;
- c. Records which document how the non-hazardous secondary material combusted in the boilers meets each of the legitimacy criteria under 40 CFR §241.3(d)(1) and how the operations that produced the fuel satisfies the definition of processing in 40 CFR §241.2. If Fiberight receives a non-waste determination from EPA pursuant to the petition process, records must be kept that document how the fuel satisfies the requirements of the petition process.;
- d. Records of monthly fuel use including the type(s) of fuel and amount(s) used;
- e. Records of the occurrence and duration of each malfunction of each applicable boiler;
- f. Records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore the malfunctioning boiler;
- g. Records of all inspection and monitoring data; and
- h. Records associated with each bag leak detection system including:
  - (1) Records of bag leak detection system output;
  - (2) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and
  - (3) The date and time of all bag leak detection system alarms, and for each valid alarm, the time you initiated corrective action, the corrective action taken, and the date on which corrective action was completed.
- i. Records shall be in a form suitable and readily available for expeditious review.

**(17) Facility Wide HAP Limits**

- A. Fiberight shall not exceed facility-wide total annual emissions of 9.9 ton per year of any single HAP or 24.9 ton per year of any combination of HAPs based on a 12-month rolling total. [06-096 CMR 115, BACT]
- B. Fiberight shall not exceed a facility-wide total annual emission limit of 25.0 pounds per year of mercury based on a 12-month rolling total. [06-096 CMR 115, BACT and 38 M.R.S.A. §585-B]

**(18) Anaerobic Digesters, ZBRID TO, and Flare #1**

**A. Combustion Limits**

1. Fiberight shall not exceed the combustion of 182.6 MMscf/year of Tail Gas in the ZBRID TO based on a 12-month rolling total. [06-096 CMR 115, BACT]
2. Fiberight shall not exceed the combustion of 12.3 MMscf/year of Digester Gas in the ZBRID TO based on a 12-month rolling total. [06-096 CMR 115, BACT]
3. Fiberight shall not exceed the combustion of 63.07 MMscf/year of Digester Gas in Flare #1 based on a 12-month rolling total. [06-096 CMR 115, BACT]
4. Fiberight shall use flow meters to measure the amount (scf) of each type of gas (Digester Gas, Tail Gas, and Sales Gas) fired in the ZBRID TO and Flare #1. Records of the amount of each gas combusted in each unit shall be kept on a monthly and 12-month rolling total basis. [06-096 CMR 115, BACT]

**B. H<sub>2</sub>S Limits and Sampling**

1. Fiberight shall sample and record the H<sub>2</sub>S concentration of the Digester Gas monthly using a test method approved by the Department. The frequency of H<sub>2</sub>S sampling shall be reduced to once quarterly if the results of the monthly sampling are less than 400 ppmv for 12 consecutive monthly monitoring events, and to once annually if the results of quarterly sampling are less than 250 ppmv for four (4) consecutive quarterly monitoring events. [06-096 CMR 115, BACT]
2. If the frequency of sampling the Digester Gas for H<sub>2</sub>S is reduced to annually and the results of two (2) consecutive sampling events exceed 250 ppmv, Fiberight shall increase the sampling frequency to quarterly. If the frequency of sampling the Digester Gas for H<sub>2</sub>S is reduced to less than monthly (quarterly or annually) and the results of two (2) consecutive sampling events exceeds 400 ppmv, Fiberight shall increase the sampling frequency to monthly. [06-096 CMR 115, BACT]
3. If the frequency of sampling the Digester Gas for H<sub>2</sub>S is increased, it may be subsequently decreased according to the schedule established above. [06-096 CMR 115, BACT]

4. If the concentration of the H<sub>2</sub>S in the Digester Gas exceeds 500 ppmv for two or more consecutive months, Fiberight shall apply to amend their license to more accurately represent SO<sub>2</sub> emissions from the combustion of Digester Gas and Tail Gas. [06-096 CMR 115, BACT]

C. Emissions shall not exceed the following [06-096 CMR 115, BACT]:

Emission Unit	PM (lb/hr)	PM <sub>10</sub> (lb/hr)	PM <sub>2.5</sub> (lb/hr)	SO <sub>2</sub> (lb/hr)	NO <sub>x</sub> (lb/hr)	CO (lb/hr)	VOC (lb/hr)
ZBRID TO	0.42	0.42	0.42	6.40	0.37	0.73	0.14
Flare #1	1.22	1.22	1.22	6.09	3.49	15.78	0.40

- D. Visible emissions from the ZBRID TO and Flare #1 shall each not exceed 20% opacity on a 6-minute block average basis. [06-096 CMR 115, BACT]

(19) **Scrubber Trains**

- A. At least one scrubber train shall be operated at all times MSW is present on the tipping floor. Both scrubber trains shall be operated whenever an overhead door is open. [06-096 CMR 115, BACT]
- B. All components of the scrubber trains shall be maintained in good working order. Fiberight shall perform monthly inspections of each scrubber and maintain records of all inspection and maintenance activities performed on the scrubbers. [06-096 CMR 115, BACT]

(20) **Cooling Towers**

- A. Fiberight shall use drift eliminators in the cooling towers to reduce drift and resulting PM/PM<sub>10</sub>/PM<sub>2.5</sub> emissions. [06-096 CMR 115, BACT]
- B. Fiberight shall maintain proper operation and maintenance of the cooling towers, including drift eliminators. [06-096 CMR 115, BACT]

(21) **Ash Handling**

- A. Fiberight shall include ash handling activities in the BMP Plan required by Standard Condition (4). [06-096 CMR 115, BACT]
- B. Visible emissions from ash handling shall not exceed an opacity of 10% on a six (6) minute block average basis. [06-096 CMR 115, BACT]

**(22) Hydrated Lime and Carbon Silos**

- A. Visible emissions from either the hydrated lime silo or the carbon silo shall not exceed an opacity of 10% on a six (6) minute block average basis. [06-096 CMR 115, BACT]
- B. Fiberight shall maintain and operate fabric filters to control emissions during filling operations for the hydrated lime silo and the carbon silo. [06-096 CMR 115, BACT]

**(23) Fugitive Emissions**

Visible emissions from a fugitive emission source (including roadways) shall not exceed an opacity of 20%. [06-096 CMR 115, BACT]

**(24) General Process Sources**

Visible emissions from any general process source not already specifically addressed in this license shall not exceed an opacity of 20% on a six (6) minute block average basis. [06-096 CMR 115, BACT]

**(25) Parameter Monitors**

Each parameter monitor must record accurate and reliable data. If the parameter monitor is recording accurate and reliable data less than 98% of the source operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the parameter monitor was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions. [06-096 CMR 115, BACT]

The following are considered parameter monitors for the purposes of this license:

1. Flow meters and other devices used to monitor the amount of fuel combusted in the boilers and the amount of gas destroyed in the ZBRID TO and Flare #1;
2. Monitoring of hourly reagent injection rates for the SNCR, hydrated lime injection, and ACI systems; and
3. The CPMS for Boilers #1 and #2.

(26) **CEMS Recordkeeping**

- A. Fiberight shall maintain records documenting that all CEMS are continuously accurate, reliable and operated in accordance with 06-096 CMR 117, 40 CFR Part 51, Appendix P, and 40 CFR Part 60, Appendices B and F as applicable.
- B. Fiberight shall maintain records of all measurements, performance evaluations, calibration checks, and maintenance or adjustments for each CEMS as required by 40 CFR Part 51 Appendix P.
- C. Fiberight shall maintain records of other data indicative of compliance with the applicable emission standards for those periods when the CEMS were not in operation or produced invalid data. In the event the Department does not concur with the licensee's compliance determination, the licensee shall, upon the Department's request, provide additional data, and shall have the burden of demonstrating that the data is indicative of compliance with the applicable standard.  
[06-096 CMR 115, BACT]

(27) **Quarterly Reporting**

Fiberight shall submit a Quarterly Report to the Bureau of Air Quality within 30 days after the end of each calendar quarter, detailing the following for the control equipment, parameter monitors, and Continuous Emission Monitoring Systems (CEMS) required by this license. [06-096 CMR 117]

- A. All control equipment downtimes and malfunctions;
- B. All CEMS downtimes and malfunctions;
- C. All parameter monitor downtimes and malfunctions;
- D. All excess events of emission and operational limitations set by this Order, Statute, state or federal regulations, as appropriate. The following information shall be reported for each excess event;
  - 1. Standard exceeded;
  - 2. Date, time, and duration of excess event;
  - 3. Amount of air contaminant emitted in excess of the applicable emission standard expressed in the units of the standard;
  - 4. A description of what caused the excess event;
  - 5. The strategy employed to minimize the excess event; and
  - 6. The strategy employed to prevent reoccurrence.
- E. A report certifying there were no excess emissions, if that is the case.

(28) **Annual Emission Statement**

In accordance with *Emission Statements*, 06-096 CMR 137 (as amended), the licensee shall annually report to the Department, in a format prescribed by the Department, the information necessary to accurately update the State's emission inventory. The emission statement shall be submitted as specified by the date in 06-096 CMR 137.

Fiberight LLC and  
Municipal Review Committee, Inc.  
Penobscot County  
Hampden, Maine  
A-1111-71-A-N (SM)

46

Departmental  
Findings of Fact and Order  
Air Emission License

- (29) Fiberight shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 14 DAY OF July, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Marie Allen Robert Core for  
PAUL MERCER, COMMISSIONER

**The term of this license shall be ten (10) years from the signature date above.**

[Note: If a complete renewal application, as determined by the Department, is submitted prior to expiration of this license, then pursuant to Title 5 M.R.S.A. §10002, all terms and conditions of the license shall remain in effect until the Department takes final action on the renewal of the license.]

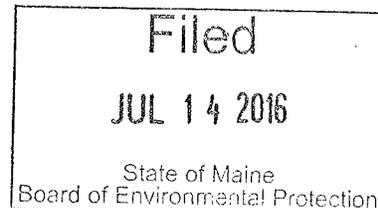
PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 6/25/15

Date of application acceptance: 6/25/15

Date filed with the Board of Environmental Protection:

This Order prepared by Lynn Muzzey, Bureau of Air Quality.





STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE  
GOVERNOR

PAUL MERCER  
COMMISSIONER

July 2016

Municipal Review Committee, Inc.  
395 State Street  
Ellsworth, ME 04605

Fiberight, LLC  
1450 Rolling Road  
Baltimore, MD 21227

RE: Stormwater Management Law and Natural Resources Protection Act Applications, Hampden  
DEP #L-26497-NJ-A-N/L-26497-TG-B-N

Dear Applicants:

Please find enclosed a signed copy of your Department of Environmental Protection land use permit. You will note that the permit includes a description of your project, findings of fact that relate to the approval criteria the Department used in evaluating your project, and conditions that are based on those findings and the particulars of your project. Please take several moments to read your permit carefully, paying particular attention to the conditions of the approval. The Department reviews every application thoroughly and strives to formulate reasonable conditions of approval within the context of the Department's environmental laws. You will also find attached some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit, please contact me directly. I can be reached at (207) 215-7346 or at [tiffany.laclair@maine.gov](mailto:tiffany.laclair@maine.gov).

Sincerely,

Tiffany LaClair, Project Manager  
Bureau of Land Resources

pc: File

AUGUSTA  
17 STATE HOUSE STATION  
AUGUSTA, MAINE 04333-0017  
(207) 287-7688 FAX: (207) 287-7826

BANGOR  
106 HOGAN ROAD, SUITE 6  
BANGOR, MAINE 04401  
(207) 941-4570 FAX: (207) 941-4584

PORTLAND  
312 CANCO ROAD  
PORTLAND, MAINE 04103  
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE  
1235 CENTRAL DRIVE, SKYWAY PARK  
PRESQUE ISLE, MAINE 04769  
(207) 764-0477 FAX: (207) 760-3143



DEPARTMENT ORDER

IN THE MATTER OF

MUNICIPAL REVIEW COMMITTEE, INC. ) STORMWATER MANAGEMENT LAW  
AND FIBERIGHT, LLC ) NATURAL RESOURCES PROTECTION ACT  
Hampden, Penobscot County ) FRESHWATER WETLAND ALTERATION  
ACCESS ROAD AND SOLID ) WATER QUALITY CERTIFICATION  
WASTE FACILITY )  
L-26497-NJ-A-N (approval) )  
L-26497-TG-B-N (approval) ) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. Section 480-A et seq. and Section 420-D, Section 401 of the Federal Water Pollution Control Act, and Chapters 500, 501, and 502 of the Department's Regulations, the Department of Environmental Protection has considered the application of MUNICIPAL REVIEW COMMITTEE, INC. AND FIBERIGHT, LLC with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. Summary: The applicants propose to construct a stormwater management system for a 30-foot wide by 4,460-linear foot long road and utility corridor to access a proposed solid waste and recycling facility (see Department Order #S-022458-WK-A-N) and other potential development in the future on an approximately 90-acre parcel of land. The proposed access road utilizes a field area and an existing gravel road which will result in 2.40 acres of new impervious area and 1.91 acres of new developed area for the proposed project. The project is as shown on a set of plans the first of which is entitled "MRC ACCESS ROAD," prepared by CES, Inc. and dated February 20, 2015. The project site is located off Coldbrook Road in the Town of Hampden.

The applicants are also seeking approval to impact approximately 105,000 square feet of forested wetlands under the Natural Resources Protection Act (NRPA).

The applicants also submitted a NRPA Permit by Rule Notification Form (PBR #59982) pursuant to Chapter 305 Section 10 Stream Crossing for the access road stream crossing and a NRPA Permit by Rule Notification Form (PBR #59983) pursuant to Chapter 305 Section 19 Activities In, On, or Over Significant Vernal Pool Habitat for the alteration of a significant vernal pool (SVP) habitat to construct the road. Both PBR Notification Forms were accepted by the Department on July 7, 2015.

B. Current Use of the Site: The site of the proposed project is a mix of sports fields, agricultural fields, and forestland with an existing gravel road. There are no structures on

the property. The parcel is identified as Lots 35, 36, 37, 38, 39 on Map 9 and Lot 07 on Map 14 of the Town of Hampden's tax maps.

2. STORMWATER STANDARDS:

For the proposed solid waste facility, the stormwater runoff must meet the standards contained in Chapter 400 Solid Waste Management Rules: General Provisions (see #S-022458-WK-A-N). For the proposed road, the project includes approximately 1.91 acres of new developed area and 2.40 acres of impervious area. It lies within the watersheds of Shaw Brook and Souadabscook Stream. The applicants submitted a stormwater management plan for the proposed road based on the Basic and General Standards contained in Department Rules, Chapter 500. The proposed stormwater management system consists of six tree box filters.

A. Basic Standards:

(1) Erosion and Sedimentation Control: The applicants submitted an Erosion and Sedimentation Control Plan that is based on the performance standards contained in Appendix A of Chapter 500 and the Best Management Practices outlined in the Maine Erosion and Sediment Control BMPs, which were developed by the Department. This plan and plan sheets containing erosion control details were reviewed by, and revised in response to the comments of, the Bureau of Land Resources (BLR).

Erosion control details will be included on the final construction plans and the erosion control narrative will be included in the project specifications to be provided to the construction contractor

(2) Inspection and Maintenance: The applicants submitted a maintenance plan that addresses both short and long-term maintenance requirements. The maintenance plan is based on the standards contained in Appendix B of Chapter 500. This plan was reviewed by, and revised in response to the comments of, BLR. The applicants will be responsible for the maintenance of all common facilities including the stormwater management system. The applicants will provide an executed 5-year inspection and maintenance contract for the tree box filters to the BLR prior to construction for review.

(3) Housekeeping: The proposed project will comply with the performance standards outlined in Appendix C of Chapter 500.

Based on BLR's review of the erosion and sedimentation control plan and the maintenance plan, the Department finds that the proposed project meets the Basic Standards contained in Chapter 500(4)(A) provided an inspection and maintenance contract is submitted as described above.

B. General Standards:

The applicants' stormwater management plan includes general treatment measures that will mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. The proposed access road meets the definition of "a linear portion of a project" in Chapter 500 and the applicants are proposing to provide quality treatment to no less than 78.5% of the volume from the impervious area and no less than 98% of the developed area.

The stormwater management system proposed by the applicants was reviewed by, and revised in response to comments from, BLR. After a final review, BLR commented that the proposed stormwater management system is designed in accordance with the Chapter 500 General Standards, and recommended that the applicants' design engineer or other qualified professional oversee the construction of the tree box filters to insure that they are installed in accordance with the details and notes specified on the approved plans. Within 30 days from completion of the filters, the applicants must submit a log of inspection reports to the BLR that contains a list of the items inspected, photographs taken, and other relevant information. As-built plans must be submitted within 30 days of the completion of the project.

BLR stated that the proposed stormwater management system complies with the General Standards contained in Chapter 500(4)(B) provided construction of the filters is overseen and documented as described above.

Based on the stormwater system's design and BLR's review, the Department finds that the applicants have made adequate provision to ensure that the proposed project will meet the Basic and General Standards contained in Chapter 500.

3. EXISTING SCENIC, AESTHETIC, RECREATIONAL OR NAVIGATIONAL USES:

In accordance with Chapter 315, Assessing and Mitigating Impacts to Scenic and Aesthetic Uses, the applicants submitted a copy of the Department's Visual Evaluation Field Survey Checklist as Appendix A to the application along with a description of the property and the proposed project. The applicants also submitted several photographs of the proposed project. Department staff visited the project site on April 6, 2016.

The proposed project is located within a freshwater wetland which is not a scenic resource visited by the general public, in part, for the use, observation, enjoyment and appreciation of its natural and cultural visual qualities.

The Department did not identify any issues involving existing recreational and navigational uses.

The Department finds that the proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses of the protected natural resource.

4. SOIL EROSION:

The applicants submitted an erosion control plan for the project that will provide temporary and permanent stabilization of the project site in accordance with the Maine Erosion and Sediment Control Best Management Practices manual. The applicants have proposed to only disturb areas necessary to build the road, utilities, and provide necessary drainage. All disturbed areas, with the exception of the paved roadway will be stabilized with vegetation or riprap. Silt fence or additional control devices if necessary during construction will be installed in all downgradient areas. The applicants proposed the use of permanent mulch with erosion control mix to stabilize disturbed soil. The applicants stated that all open stormwater channels associated with the project have been designed to handle anticipated flows and stone check dams will be utilized as necessary until permanently stabilized.

The Department finds that the activity will not cause unreasonable erosion of soil or sediment nor unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

5. HABITAT CONSIDERATIONS:

According to the Department's Geographic Information System (GIS) database there are no mapped Essential or Significant Wildlife Habitats located at the site, with the exception of one SVP (Pool #2632). The impacts to the Critical Terrestrial Habitat of the SVP were authorized using the Permit by Rule Notification Form as discussed in Finding 1.

The Department finds that the activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life.

6. WATER QUALITY CONSIDERATIONS:

As discussed in Finding 4, the applicants propose to use erosion and sediment control during construction to minimize impacts to water quality from siltation.

The Department does not anticipate that the proposed project will violate any state water quality law, including those governing the classification of the State's waters.

7. WETLANDS AND WATERBODIES PROTECTION RULES:

The applicants propose to directly impact 105,000 square feet of forested wetland to construct the proposed solid waste facility, access road, and utility corridor. The proposed project includes 75,500 square feet of wetland impact associated with the solid waste facility and utility corridor and 29,500 square feet of freshwater wetland impact is associated with the road.

The Wetlands and Waterbodies Protection Rules, 06-096 CMR 310 (effective January 26, 2009), interpret and elaborate on the NRPA criteria for obtaining a permit. The rules guide the Department in its determination of whether a project's impacts would be unreasonable. A proposed project would generally be found to be unreasonable if it would cause a loss in wetland area, functions and values and there is a practicable alternative to the project that would be less damaging to the environment. Each application for a NRPA permit that involves a freshwater wetland alteration must provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist.

A. Avoidance. No activity may be permitted if there is a practicable alternative to the project that would be less damaging to the environment. The applicants submitted an alternative analysis for the proposed project completed by CES, Inc. and dated June 24, 2015. The purpose of the project is to construct a solid waste and recycling facility to handle municipal solid waste from 187 towns and cities. The applicants determined that the no action alternative is not feasible as it does not achieve the stated project purpose. The applicants reviewed options to utilize a number of industrial sites in other towns such as the former Verso Paper Mill in Bucksport, former HoltraChem facility located in Orrington, along with other sites. These alternative locations for the proposed solid waste facility were deemed by the applicants to not be economically viable or would result in increased trucking of the solid waste from the 187 communities which will utilize the facility. Based on this search, the applicants determined that Hampden was the most centrally located town for the proposed solid waste facility and the proposed facility site was the most economically viable.

The applicants determined that in order to meet the waste handling needs of the communities, the facility needs to be approximately 45,713 square feet in size. The applicants looked at several alternative layouts for the facility and chose the one that best met their functional needs while avoiding the wetlands on the parcel to the greatest practical extent. In addition, they situated the facility to maximize the use of the upland areas on this parcel. The proposed location of the road was selected by the applicants because it utilized portions of an existing road on the property, minimized the length of the road, and avoided further wetland impacts. In order to meet the stated project purpose, some impacts to the freshwater wetland are unavoidable.

B. Minimal Alteration. The amount freshwater wetland to be altered must be kept to the minimum amount necessary for meeting the overall purpose of the project. The

proposed site location was chosen by the applicants for the solid waste facility and utility corridor to utilize an already-altered parcel with an existing access road. The applicants stated the utility corridor was initially planned to extend to the Coldbrook Road but was determined to be not feasible because the utility infrastructure along the Coldbrook Road was not adequate to supply the facility with ample water and sewer. The applicants stated that to construct the processing facility, the proposed site location would cause the least amount of impact to freshwater wetlands and significant wildlife habitat versus other proposed locations on the parcel. The applicants have proposed utilizing the existing gravel road to gain access to the proposed facility versus constructing a new road which minimizes the amount of additional wetland impacts. The applicants determined that the proposed project minimizes impacts to the freshwater wetland to the greatest practicable extent while still meeting the project purpose.

C. Compensation. In accordance with Chapter 310 Section 5(C) compensation is required to achieve the goal of no net loss of freshwater wetland functions and values. The primary functions of the wetland areas are wildlife habitat, including deer wintering habitat, and floodflow alteration. To compensate for the loss of these functions, the applicants proposed a compensation plan of preserving an 80-acre parcel with a deed restriction. The preservation area contains SVPs as well as softwood shelter which functions as deer wintering habitat. The Department finds this is acceptable as the functions and values of the preservation area are similar to or greater than the impacted area.

The Maine Department of Inland Fisheries and Wildlife (MDIFW) reviewed the proposed project and stated the proposed 80-acre on-site preservation area is appropriate. In order for the preservation area to continue to function as wildlife habitat and deer wintering habitat, MDIFW recommended that the applicants submit a forest management plan, prepared by a licensed professional forester, to the Department for review and approval prior to any forest management activity in the preservation area. The forest management plan must contain provisions which will maintain the wildlife habitat functions and values.

The preservation area will be protected from alteration through the execution of a deed restriction. The applicants submitted a draft deed restriction that meets Department standards. The applicants must execute and record the deed restriction prior to construction or within 60 days of the date of this Order, whichever comes first. The applicants must submit a copy of the recorded deed restriction to the BLR within 60 days of its recording.

Because the compensation proposal exceeds the Department's ratio for preservation, the Department finds that the excess area may be used as a credit for future wetland impacts on-site, at the Department's discretion, and subject to Department standards in effect at the time.

The Department finds that the applicants have avoided and minimized freshwater wetland impacts to the greatest extent practicable, and that the proposed project represents the

least environmentally damaging alternative that meets the overall purpose of the project provided that the applicants record the deed restriction and submit a copy of the recorded deed restriction to BLR and provided that the applicants submit a forest management plan for the preservation area for review and approval as described above.

8. OTHER CONSIDERATIONS:

The Department did not identify any other issues involving existing scenic, aesthetic, or navigational uses, soil erosion, habitat or fisheries, the natural transfer of soil, natural flow of water, water quality, or flooding.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Section 420-D, and Chapters 500, 501 and 502 of the Department's Regulations:

- A. The applicants have made adequate provision to ensure that the proposed project will meet the Chapter 500 Basic Standards for: (1) erosion and sediment control; (2) inspection and maintenance; (3) housekeeping; and (4) grading and construction activity provided that an inspection and maintenance contract is submitted as described in Finding 2A.
- B. The applicants have made adequate provision to ensure that the proposed project will meet the Chapter 500 General Standards provided construction of the filters is overseen and documented as described in Finding 2B.

BASED on the above Findings of Fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S.A. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

- A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses.
- B. The proposed activity will not cause unreasonable erosion of soil or sediment.
- C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.
- D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic or adjacent upland habitat, travel corridor, freshwater, estuarine or marine fisheries or other aquatic life provided the deed restriction is recorded and a copy is submitted and a forest management plan is submitted for review and approval as described in Finding 7.
- E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

- F. The proposed activity will not violate any state water quality law including those governing the classification of the State's waters.
- G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.
- H. The proposed activity will not unreasonably interfere with the natural supply of movement of sand within or to the sand dune system, or unreasonably increase the erosion hazard to the sand dune system.
- I. The proposed activity is not on an outstanding river segment as noted in 38 M.R.S.A. Section 480-P.

THEREFORE, the Department APPROVES the above noted application of MUNICIPAL REVIEW COMMITTEE, INC. AND FIBERIGHT, LLC to construct a stormwater management system and alter freshwater wetlands for an access road, utility corridor, and solid waste facility as described in Finding 1, in Hampden, Maine, SUBJECT TO THE FOLLOWING CONDITIONS, and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy attached.
2. In addition to any specific erosion control measures described in this or previous orders, the applicants shall take all necessary actions to ensure that their activities or those of their agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.
3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.
4. The applicants shall provide an executed 5-year inspection and maintenance contract for the tree box filters to the BLR prior to construction for review.
5. The applicants shall ensure that the design engineer or other qualified professional oversees the construction of the tree box filters to insure that they are installed in accordance with the details and notes specified on the approved plans. Within 30 days from completion of the filters, the applicants shall submit a log of inspection reports that contains a list of the items inspected, photographs taken, and other relevant information to the BLR for review.
6. As-built plans shall be submitted within 30 days of the completion of the project.

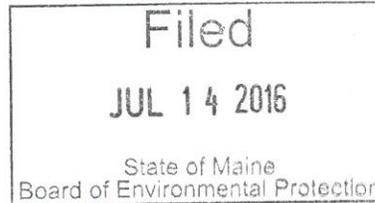
- 7. The applicants shall submit a forest management plan, prepared by a licensed professional forester, to the Department for review and approval prior to any forest management activity in the preservation area. The plan shall contain provisions which will maintain the wildlife habitat functions and values.
- 8. Prior to construction or within 60 days of the date of this Order, whichever comes first, the applicants shall record the deed restriction for the preservation parcel. The applicants shall submit a copy of the recorded deed restriction to the BLR within 60 days of its recording.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 14<sup>TH</sup> DAY OF JULY, 2016.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Mah Bevan  
 For: Paul Mercer, Commissioner



PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

TL/L26497ANBN/ATS#79409, 79410

## STORMWATER STANDARD CONDITIONS

### STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL

- (1) Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S.A. §420-D(8) and is subject to penalties under 38 M.R.S.A. §349.
- (2) Compliance with all terms and conditions of approval. The applicant shall submit all reports and information requested by the department demonstrating that the applicant has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.
- (3) Advertising. Advertising relating to matters included in this application may not refer to this approval unless it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.
- (4) Transfer of project. Unless otherwise provided in this approval, the applicant may not sell, lease, assign, or otherwise transfer the project or any portion thereof without written approval by the department where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval may only be granted if the applicant or transferee demonstrates to the department that the transferee agrees to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant. Approval of a transfer of the permit must be applied for no later than two weeks after any transfer of property subject to the license.
- (5) Time frame for approvals. If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the department for a new approval. The applicant may not begin construction or operation of the project until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.
- (6) Certification. Contracts must specify that "all work is to comply with the conditions of the Stormwater Permit." Work done by a contractor or subcontractor pursuant to this approval may not begin before the contractor and any subcontractors have been shown a copy of this approval with the conditions by the developer, and the owner and each contractor and subcontractor has certified, on a form provided by the department, that the approval and conditions have been received and read, and that the work will be carried out in accordance with the approval and conditions. Completed certification forms must be forwarded to the department.

- (7) Maintenance. The components of the stormwater management system must be adequately maintained to ensure that the system operates as designed, and as approved by the department.
- (8) Recertification requirement. Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the department.
  - (a) All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.
  - (b) All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the facilities.
  - (c) The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.
- (9) Severability. The invalidity or unenforceability of any provision, or part thereof, of this permit shall not affect the remainder of the provision or any other provisions. This permit shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

November 16, 2005 (revised December 27, 2011)



## Natural Resources Protection Act (NRPA) Standard Conditions

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THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCES PROTECTION ACT, 38 M.R.S.A. § 480-A ET SEQ., UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

- A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.
- B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.
- C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.
- D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.
- E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.
- F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.
- G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.
- H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

14 July 2016

Angus Jennings  
Town Manager  
106 Western Ave  
Hampden, ME 04444

**17 Dewey Street, Site Development Zoning**

Dear Angus,

On behalf of Michael Levesque, we are submitting a request to review and evaluate zoning options with the Economic Development Committee of the Hampden Town Council. Michael owns 17 Dewey Street and is considering options to further develop this property. The property is currently in the Residential A zone which is very limited with development options. However, this property abuts the Business B zone and is near the Village Commercial zone.

The VC zone will allow duplex units as shown on the attached sketch plan with a minimum lot size of 10,000 sf (4 units/ac). The Business B zone only allows residential with mixed commercial or single family and has a 1 ac minimum lot size.

It appears that VC zone would be the best suited to provide development of this parcel; however, without direct connection with that zone, the town would have to rezone multiple properties, provide for contract zoning or other modifications of the zoning/zoning ordinance.

We would appreciate the opportunity to review this property and discuss the development potential and options with the committee. Michael would like to increase the utilization of this property and provide the town with another quality housing project.

We look forward to meeting with you and the committee at their July 20<sup>th</sup> meeting. If you have any questions prior to the meeting, please contact us at your convenience.

Best Regards,



James R. Kiser, PE, LSE  
Kiser & Kiser Company

Enc.

C: Michael Levesque



SKETCH PLAN  
17 DEWEY STREET

FOR  
MICHAEL LEVESQUE

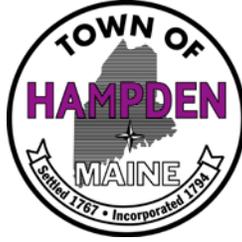


14 JUL 16



ENGINEERING & DEVELOPMENT CONSULTING  
PO BOX 282, HAMPDEN, MAINE 04444  
207-862-4700

**Town of Hampden**  
106 Western Avenue  
Hampden, Maine 04444



**Phone:** (207) 862-3034  
**Fax:** (207) 862-5067  
**Email:**  
townmanager@hampdenmaine.gov

TO: Planning Board  
FROM: Angus Jennings, Town Manager  
DATE: July 13, 2016  
RE: Proposed Ordinance Amendments referred by Town Council

The Town Council has referred the following proposed amendments to the Planning Board for review and consideration within a public hearing:

<b>Proposed Amendments</b>	<b>Date of Town Council Referral</b>
Zoning Ordinance, proposed amendments to allow Accessory Apartments	May 2, 2016
Zoning Ordinance, proposed amendments to Off-Premises Signs	May 2, 2016
Zoning Ordinance, proposed amendments to threshold for required building permits	May 16, 2016
Shoreland Zoning Ordinance, proposed amendments for consistency with Statute	May 16, 2016

It is requested that the Planning Board refer these proposals to its Ordinance Committee and/or to public hearing for consideration and recommendation.

To reduce printing/copying, the text of the proposed amendments, along with supporting materials that were considered by the Council's Planning & Development Committee regarding these items, has been circulated by email only. Hard copies will be provided upon request, and will be circulated prior to the meeting of the Board's Ordinance Committee.

Adopted Amendments to Subdivision Ordinance

As discussed at the Board's January 13 meeting and as outlined in my memo of May 25, the Town Council referred amendments to the Subdivision Ordinance to allow for permitting and construction of Private Roads on December 21, 2015. Following the

passage of the timeline provided in the Ordinance for Planning Board recommendation, the Town Council has since acted to approve these amendments following a public hearing on July 6. (Because the Planning Board did not make a recommendation the amendments required a two-thirds majority to pass; the vote was 7-0). The amended language, which is attached, will take effect on August 6. The new Town Planner will be prepared to review these amendments with the Planning Board in August.

Thank you for your attention to these matters.

*cc: Town Planner, Town Clerk, Code Enforcement Officer*