



STATE OF MAINE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION



PAUL R. LEPAGE  
GOVERNOR

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COMMISSIONER

February 3, 2016

Craig Stuart-Paul, CEO  
Fiberight, LLC  
1450 South Rolling Road  
Baltimore, MD 21227

Greg Louder, Executive Director  
Municipal Review Committee, Inc.  
395 State Street  
Ellsworth, ME 04605

Re: Processing Facility Application (DEP# S-022458-WK-A-N)

Dear Mr. Stuart-Paul and Mr. Louder:

The Department has completed a review of your Application for a Solid Waste Processing Facility (Application) submitted by your consultant, CES Inc. (CES), dated June 2015. Supplemental information was provided in a series of Deliverables (Deliverables # 1 through 22) submitted during November and December, 2015 in response to comments made during an October 29, 2015 meeting with Fiberight LLC, Municipal Review Committee, Inc. (MRC), CES and Department staff. In addition, a copy of the Master Waste Supply Agreement between MRC and Fiberight was provided in a February 3, 2016 electronic mail message to the Department and others. Attached, please find a copy of a memorandum from Victoria Eleftheriou, P.E. to me dated February 3, 2016. Please provide a response to this memorandum in addition to the comments below.

**Attachment 7, Financial Ability**

Once completed, the finalized supporting financial documents need to be submitted.

**Attachment 8, Technical Ability**

This section must include a description of the personnel employed to design, construct, operate, maintain, and close the proposed processing facility. It is our understanding that Covanta will be the facility operator. This should be verified and Covanta's qualifications and experience should be described.

**Attachment 9, Disclosure Statement**

Covanta's interest in the project needs clarification. If their interest meets the licensing criteria contained in *General Provisions*, 06-096 CMR 400(12) (last amended April 6, 2015), supporting disclosure information must be submitted for Covanta.

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**Attachments 11 & 16, Fitting Harmoniously into the Natural Environment and Existing Uses and Scenic Character**

Comments from the Department of Inland Fisheries and Wildlife previously provided in a March 18, 2015 Letter regarding maintenance of winter shelter for deer and minimizing impacts to bat habitat and habitat components still need to be formally addressed in the Application.

**Attachment 12, Site Design Information**

This section states that a surface water monitoring point is shown on the *Overall Site Plan*; however, the monitoring point is not illustrated on the plan and the Application does not mention that surface water will be monitored. A clarification should be provided.

**Attachment 13, Process Design Information**

1. The third section, "Characteristics of Waste to be Received," should include a discussion of the actual materials that will be accepted at the facility. This section includes a general definition of municipal solid waste which mentions front end process residue (FEPR) and construction and demolition debris. We assume that these materials will not be accepted at the facility. A clarification should be provided.
2. The section, "Products and Waste Generated" states that a breakdown of residues to be landfilled is included; however, we could not find this breakdown. A recent mass balance summary was provided to the Department and includes this breakdown. The mass balance summary should be appended to the facility Operations Manual and should be consistent with the process flow diagram.
3. The approximate timeframe to fill a residue storage container should be provided. The description for residue storage states that residues will not be stored on site for longer than 24 hours, then states a full container will be transferred within 24 hours.
4. Additional information regarding the ash handling system should be provided including whether bottom and fly ash will be combined or stored separately and provisions for dust control, if necessary.
5. The amount of post-hydrolysis solids (PHS) storage space needed and the timeframe for its storage should be provided. PHS may be stockpiled on the floor in the event it cannot be immediately fed into the boiler.
6. An energy mass balance will be helpful in understanding the energy needs of the facility during a given period of time. The quantity of PHS and sludge from the dissolved air filtration (DAF) system expected to be produced, the quantity of PHS/DAF sludge needed as fuel and the quantity of supplemental fuel anticipated should be estimated. This will assist in our understanding of the process as well as confirm that there will not be an excess of fuel (PHS) that will ultimately require disposal. Deliverable #3 specifies that natural gas and bio-methane will be used as supplemental fuel for cold starts, hot starts and temperature control scenarios.

**Attachment 15, Traffic**

1. The data source for MSW delivery vehicle percentages should be provided.
2. The expected morning and afternoon peak delivery times and the hours during which the facility will accept MSW delivery should be stated.

3. The inventory and analysis of accidents from Maine DOT is missing even numbered pages. These pages need to be provided.

**Attachment 17, Air Quality**

This section states that nuisance odors are expected to be contained within the building based on operations at comparable facilities. Additional information regarding which facilities were used for comparison and what information was obtained about them to reach this conclusion should be provided. Information from the existing Virginia facility may also be helpful.

**Attachment 20, Utilities**

Previously requested information regarding the electrical utility connection location and Bangor Natural Gas pipeline upgrades still need to be provided. Once finalized, the facility's wastewater discharge permit, the contract/agreement with Waste Management and other pertinent agreements should be provided and appended to the Operations Manual.

**Attachment 22, Residuals and Waste Derived Product Distribution Plan**

1. The finalized agreement reached with Bangor Natural Gas to accept biogas into the pipeline will need to be provided for the project file.
2. Fiberight's process description refers to manufacturing an energy bale from combustible rejects while the Operations Manual refers to producing an energy bale or engineered fuel pellet. It is unclear if Fiberight intends to manufacture this type of product. If so, additional information regarding the product constituents and the intended end use need to be provided. Additionally, it is likely that a license pursuant to *Beneficial Use of Solid Wastes* 06-096 CMR 418 (last amended April 6, 2015) must be obtained.

**Attachment 23, Operations Manual**

1. B.9, Routine Maintenance and General Cleanliness: The site-specific inspection and maintenance plan recommended by Victoria should include both indoor and outdoor components. In addition, a tipping floor management plan needs to be developed and include a discussion of MSW management within the tipping floor and unprocessed MSW storage areas.
2. D.1, Acceptable Waste, section 1 should describe how unacceptable waste will be handled. The facility needs to have a procedure for random inspection of incoming loads for hazardous or special wastes, and for preparing reports on the inspections. The location, design, size, and construction of the interim storage area must be shown on the facility site plan.
3. D.3, Secondary Materials may need to be revised if an energy bale or fuel pellet will be manufactured.
4. Section D.4 states that no liquid waste will be generated, except process wastewater from periodically purging the plant water system. Elsewhere the Application states that 36,000 gpd of wastewater will be generated. It is our understanding that the wastewater output will be 36,000 gpd. A clarification should be provided.

5. I., Annual Report: Items 1-4 will also need to include type of wastes, products, secondary materials, and residuals. Item 5 will need to include any responses to complaints received. Other necessary annual report information includes a complete description of residues leaving the site for disposal, including type and weight by destination, and data and results of waste characterization and analysis. The annual report will also need to include the demonstration required by *Processing Facilities*, 06-096 CMR 409(4)(l)(d) and (e) (last amended July 27, 2014).

**Attachment 25, Solid Waste Management Hierarchy**

Additional information is needed in order to determine whether the facility "will recycle or process into fuel for combustion all waste accepted at the facility to the maximum extent practicable, but in no case at a rate less than 50%" in accordance with 06-096 CMR 409(2)(C). The conclusion states that the proposed processing system "significantly reduces the volume of solid waste needing land disposal," but does not provide a quantitative summary. The quantitative summary should be derived from the facility mass balance once the input water is reconciled with the purge water shown on the recently revised mass balance table. This information should be provided.

In summary, please provide additional information in response to the above comments and the attached memorandum. If you have any questions, please contact me at (207) 941-4563.

Sincerely,



Lou S. Pizzuti  
Division of Technical Services  
DEP - Bureau of Remediation and Waste Management  
106 Hogan Road, Suite 6  
Bangor, ME 04401

Copy: Julie Churchill - Assistant Director, Office of Innovation & Assistance  
David Burns, P.E. - Director, Division of Technical Services  
Denis St. Peter, P.E. - President, CES, Inc.

# Memorandum

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To: Lou Pizzuti, Environmental Specialist - Division of Solid Waste Management  
From: Victoria Eleftheriou, P.E., Environmental Engineering Services Manager - Division of Technical Services  
Date: February 3, 2016  
Subject: Application for a Solid Waste Processing Facility  
Municipal Review Committee, Inc. and Fiberright, LLC  
Technical Services Log Numbers 19140.2 & 6569  
MEDEP Project Number S-022458-WK-A-N

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CES Inc. (CES), on behalf of the Municipal Review Committee, Inc. (MRC) and Fiberright LLC, (Fiberright) have prepared an Application for a Solid Waste Processing Facility (Application), dated June 2015. Subsequent to the Application submittal, CES submitted supplemental information including a Letter from Bangor Natural Gas (Deliverable #11), an updated General Arrangement Process Diagram (Deliverable #12), a process mass balance diagram (Deliverable #13), a floor drain inspection and maintenance plan (Deliverable #16), an Odor Management, Complaint, and Response Plan (Deliverable #19) and an updated site plan and stormwater calculations (Deliverable #23). These deliverables should be appended to the Application. A comprehensive list of the supplemental information was provided in a November 4, 2015 electronic mail message to the Department and other additional parties. The supplemental information was provided, in part, based on our October 29, 2015 meeting with CES, MRC and Fiberright.

The proposed solid waste processing facility will be located in Hampden. In general, the process consists of municipal solid waste (MSW) sorting, pulping and washing, enzymatic hydrolysis and renewable energy production. Bio-methane gas will be produced and will be piped into the adjacent Bangor Natural Gas pipeline. Facility construction is expected to commence during 2016 and be substantially complete by September 2017. Operations are scheduled to begin shortly thereafter. We have the following recommendations and comments that need to be addressed.

## **Attachment 1, Description**

This section notes that the facility will be designed to accept up to 650 tons of MSW per day; however, Attachment 13 specifies that the facility will be designed to accept up to 950 tons and process up to 650 tons of MSW per day. We assume that the latter is correct. If so, a plan to effectively manage the additional 300 tons per day during full-scale production should be developed.

**Attachment 12, Site Design Information**Sheet C101, Proposed Site Plan (updated with Deliverable #23)

1. Riprap protection should be provided at the pipe outlets from the vegetated underdrain soil filters and roofline edge filters, the 6-inch pipe inlet and outlet from the tank area to soil filter #1 and the pipe inlet to the proposed 18-inch storm drain. Supporting sizing calculations should be provided. A typical culvert inlet/outlet protection detail is illustrated on Sheet C502 and specifies a  $d_{50}$  of 6 inches.
2. A roofline drip strip is illustrated on the northernmost edge of the proposed building; however, an outlet pipe is not shown and an edge filter was not modelled in this location within the stormwater hydrologic calculations. A clarification should be made as necessary.

## Subsurface Investigation Information

1. S.W. Cole's Report incorporating their final recommendations along with the details of their additional auger probes should be provided at this time. CES notes that the final report was anticipated in June 2015.
2. We recommend that S.W. Cole or an alternate qualified professional be retained to provide construction quality assurance and testing services to verify that the design components related to earthworks and stormwater management are appropriately implemented.

**Attachment 17, Air Quality**

G. Odor Control. CES should provide a comparative evaluation with similar existing facilities considering all potential odor sources and site-specific factors such as topographical and meteorological conditions that demonstrates that the proposed facility will not create nuisance odor at occupied buildings. We discussed the need for this additional information with CES, MRC and Fiberight during our October 2015 meeting. CES noted that this information would be submitted as part of Deliverable #19. We do not have a record of this information being submitted to date. The information should be submitted at this time.

**Attachment 18A, Basic Standard Submissions**

## Maintenance Plan of Stormwater Management System

1. B. 1., Vegetated Areas. The vegetation within the grassed underdrain soil filter should be rototilled if the filter area does not drain within 48 hours to reestablish the soil's filtration capacity.

2. B. 2. a., Soil Filter Inspection. For clarity, this section should be updated to specify that the soil filter will be inspected at least once every six months to ensure that it is draining within 48 hours following a 1-inch storm or greater for conformance with Maine's Stormwater Best Management Practices Manual, updated May 2014. In addition, following storms that fill the system to overflow, the system must drain in no less than 36 to 60 hours.

### **Attachment 21, Flooding**

Post Development Drainage. For clarity, the post developed hydrology plan illustrates 9 not 8 distinct drainage areas. Subarea 9, a 0.33-acre area to the northwest of the proposed building, was inadvertently not included within the narrative but was included within the hydrologic calculations.

#### Sheet C501, Site Details

Typical Frost Wall backfill & Drip Edge Detail. The detail specifies a dripline filter trench width of 4 feet; however, the sizing calculations provided in Attachment 18B note that a minimum trench width of 5.5 feet is required. A clarification should be made.

#### Sheet C502, Erosion Control Details and Notes

Grassed Underdrain Soil Filter Field Detail. Construction details for the proposed emergency spillway should be provided on the drawings. In addition, the dimensions of the riprap apron and the  $d_{50}$  riprap size should be clearly specified.

### **Attachment 23, Operations and Maintenance Manual**

1. B., General Operations. The process description should be updated to be consistent with the updated process diagram submitted on December 8, 2015. All of the process components should be clearly described. This section and Attachment 13 should be updated accordingly. Revisions to the Operations and Maintenance Manual (Manual) could be made a condition of the Solid Waste License.
2. B.9., Routine Maintenance and General Cleanliness. A site-specific inspection and maintenance plan (Plan) will need to be established for the inspection and maintenance of the proposed processing facility infrastructure. Provisions for tracking maintenance needed and corrective actions performed should be included. A floor drain inspection and maintenance plan was provided as Deliverable #16. Applicable sizing calculations for the leachate trenches, common pit and common drainage tank should be provided. The common pit and drainage tank should be clearly illustrated on the General Arrangement Process Diagram. The Plan including Deliverable #16 should be appended to the facility Manual. In addition, the sample BMP Inspection Log and corresponding procedures should be appended to the Manual.

3. F. Odor Control. The Odor Management, Complaint, and Response Plan provided as Deliverable #19 should be appended to this section of the Manual. We have the following additional comments regarding this plan:
  - a. Section 2.0 should be updated to specify procedures that will be implemented to minimize the potential for odor from waste hauling vehicles as they enter the facility property and are waiting to off-load. For example, if waste hauling vehicles arrive containing certain waste streams that exhibit a higher degree of odor they should be given higher priority for delivery and off-loading rather than having to idle in line. We discussed this approach with CES, MRC and Fiberight during our October 2015 meeting.
  - b. Section 4.0 should discuss provisions for odor minimization during timeframes when an odor control scrubber may be offline due to routine maintenance activities.
  - c. Section 5.3 should provide an anticipated timeframe for procuring the specified odor neutralizing agents. MRC and Fiberight need to provide assurance that neutralizing agents as well as critical back-up equipment can be obtained in a timely manner.

#### **Deliverable #11**

It is our understanding that additional upgrades to the natural gas pipeline between Hampden and Bangor will need to be completed prior to facility operations. Once upgrades are completed, verification should be provided to the Department.

#### **Deliverable #13**

As a reminder, an updated process mass balance table detailing all inputs and outputs including flow still needs to be submitted.

#### **General**

1. Construction-ready drawings and technical specifications for the project will need to be prepared and submitted to the Department for review and approval at some point prior to construction activities.
2. Record drawings illustrating infrastructure layout, stormwater management structures and other applicable features should be provided to the Department at the conclusion of construction activities.

We would be happy to meet with CES, MRC and Fiberight to discuss our recommendations and comments as needed. Please call if you have any questions.

Ec: David Burns, P.E., Director, Division of Technical Services