Performance Test Protocol for the Hampden Advanced Waste Processing Facility

1.0 Context

This Performance Test Protocol is agreed to by and between the Municipal Review Committee, Inc. (MRC or Landlord), Coastal Resources of Maine, LLC (Coastal or Tenant) and Fiberight LLC (Fiberight) as signatories to that Restated and Amended Site Lease dated August 17, 2017, as subsequently amended (the Site Lease). Under the Site Lease, Coastal is leasing property owned by the MRC (the Site) for development, construction and operation of the Hampden Advanced Waste Processing Facility (the Facility), which is owned by Coastal and utilizes Fiberight technology. Section 7.4 of the Site Lease provides for Coastal, Fiberight and the MRC to agree on a protocol for testing the performance of the Facility in order to demonstrate that commercial operation is achieved, and as a basis for determining the Commercial Operation Date pursuant to the Site Lease. This document is written as if Coastal will perform the tests. Capitalized terms not defined in this Protocol shall have the meaning set forth in the Site Lease and Master Waste Supply Agreement.

2.0 Performance Standards

Under Section 7.4 of the Site Lease, Coastal is obligated to demonstrate that the Facility has achieved the Commercial Operation Date by meeting the following Performance Standards:

2.1 The Capacity Test. Accept and process a minimum of 45 tons of Acceptable Waste per hour over a reasonable period of time (referred to in the Site Lease as the Initial Performance Test). The Capacity Test shall involve the following two components:

a. A continuous acceptance and processing test (the Three-Day Test), during which the Facility would demonstrate the capability to accept at the Facility and process an average of not less than 40 tons per hour of incoming MSW over three consecutive days (1200 total tons or an average of 400 tons per day(tpd)). Continuous operation at 400 tpd would confirm that the Facility is capable of accepting and processing the MSW committed for delivery on behalf of the MRC by all Joining Members per the Master Waste Supply Agreement (102,513 tons per year) with approximately a 10-percent margin factor for downtime and maintenance as follows:

   400 tpd x 5.5 days/wk x 52 weeks/yr = 114,400 tons/year
   102,513 / 114,400 = 89.6%

b. A design capacity test (the Three-Hour Test), performed during the Three-Day Test, for which the Facility would demonstrate the capability to process a minimum of 45 tons per hour of Acceptable Waste over a three-hour period of system run-time (a minimum of 135 total tons).

2.2 The Diversion Test. Verify the capability to produce commercially salable byproducts, or product precursors thereof, on a continuous and sustainable basis (referred to in the Site Lease as the Final

Performance Test) over a period that generally overlaps the period of performance of the Capacity Test per Section 2.1 above, with appropriate allowance for lag time in feeding materials processed in the front-end of the Facility (the Materials Recovery Facility equipment, or MRF) into the briquetter and the back-end of the Facility (the pulping, washing and fines processing equipment, or the Pulper). The Facility shall demonstrate a diversion rate of at least 50 percent, on a mass basis, of incoming Acceptable Waste.

3.0 Test Procedures

3.1 The Capacity Test.

a. To pass the Three-Day Test, the amount processed during the Three-Day Test shall meet or exceed 1200 tons. The amount processed shall be the total amount of Acceptable Waste loaded into the Facility process lines during the operating periods on each of the three days of the Three-Day Test, as measured by the scale weights of the materials included in the piles that were so loaded for processing (but not including Acceptable Waste remaining in such piles on the tip floor as of the time the Three-Day Test is completed). The total amount processed shall include Unacceptable Waste removed from Acceptable Waste that is processed during the Three-Day Test, but shall not include Unacceptable Waste removed from Acceptable Waste that is not processed during the Three-Day Test.

b. During the Three-Day Test, if the processing of Unacceptable Waste is agreed to be the cause of a significant outage, the duration of the test period shall be extended by the duration of the outage.

c. To pass the Three-Hour Test, at least 135 tons of segregated Acceptable Waste must be loaded into the process lines for processing during the designated three-hour period with no significant degradation of the Diversion Rate or other measures of performance as compared to average operations during the remainder of the Three-Day Test.

d. Before starting the Capacity Test,
   i. Provide evidence that the scale has been calibrated and certified.
   ii. Identify and document the inventory of materials on the tip floor and in other storage areas in the Facility by reference to scale records for the applicable loads and/or field measurements.
   iii. Clear the tip floor of Acceptable Waste except for tons that have been segregated and for which the scale weights are known.

e. Before starting the Three-Hour Test, segregate on the tip floor not less than 135 tons of Acceptable MSW from which the Unacceptable Waste has been removed. The weight shall be verified by scale records on the segregated Acceptable MSW and by scale records on any Unacceptable Waste removed from the segregated Acceptable Waste.

f. Through the course of the Diversion Test, track the cumulative amount of Acceptable Waste that has been loaded into the process lines and the cumulative amount of Unacceptable Waste that has been diverted from Acceptable Waste, based on scale records and measurements of material loaded onto the infeed conveyor.

g. Coastal shall remove Residuals from the Facility for transport to the Back-up Facility during the conduct of the Capacity Test. Each load shall be weighed on removal. Residuals remaining at the end of the test period shall also be weighed.

h. At the end of the Capacity Test:
   i. Calculate the total amount of Acceptable Waste processed during the Capacity Test, including Unacceptable Waste removed from such Acceptable Waste.
   ii. Measure and estimate the MSW remaining on the tip floor.
   iii. Coastal shall segregate the Unacceptable Waste removed from Acceptable Waste that was processed during the Capacity Test, confirm its status, load it into a container or trailer and ensure it is weighed.

3.2 The Diversion Test

a. "Diversion" shall refer to material that is diverted from Acceptable Waste for beneficial use and therefore does not consume either (i) airspace permitted for disposal at a landfill; or (ii) disposal capacity at any other type of disposal facility.

b. To pass the Diversion Test, the Diversion Rate from Acceptable Waste shall meet or exceed 50 percent. The "Diversion Rate" shall be defined as 100 percent less the ratio of the amounts in tons of (i) Residuals Materials requiring disposal; to (ii) Acceptable Waste accepted and processed. By way of example, during a test for which 1200 tons of Acceptable Waste are accepted and processed and 300 tons of Residual Materials are generated and require disposal, the Diversion Rate would be

$$\text{Diversion Rate} = 100\% - 300/1200 = 100\% - 25\% = 75\%.$$

c. To determine the Diversion Rate, Coastal shall determine the mass balance across the facility by monitoring mass flows into and out of the Facility during the Diversion Test and afterwards to the extent such activity constitutes continuation of processing activity begun during the Diversion Test. In particular, Coastal shall make measurements and perform calculations necessary to determine the amount of Acceptable Waste loaded into the process lines, as well as the amounts of commercially saleable recovered materials and products and the amounts of Residual Materials produced (whether during the Capacity Test or lagged in time after the conclusion of the Capacity Test) from the Acceptable Waste processed during the Diversion Test. Exhibit A provides a process flow diagram that identifies all incoming and outgoing material streams and points of measurement of flows and inventories.

d. Before starting the Diversion Test,

i. Identify and document the inventory of material on the tip floor per the requirements of the Capacity Test.

ii. Identify and document the inventory of material in each of the material, product and residuals storage areas, containers and bunkers, with agreement between Coastal and the MRC on initial inventory prior to the start of the test for each case. Proceed as follows:

a) To the extent reasonable, empty all storage areas and applicable containers in order to start the test with zero inventory for the relevant material.

b) If emptying an area is not reasonable, consolidate existing solid material in one portion of any bunker or storage area. Estimate the mass of material on the basis of estimated volume and bulk density. Compute bulk density by weighing a known volume of a significant sample of material.

c) Identify and exclude from the inventory calculation existing bales or containers of material or bulk materials produced prior to the start of the Diversion Test.

d) Remove material from the conveyors, hoppers and storage areas within the MRF and Pulper process trains such that the inventory of material within such areas is agreed to be insignificant.

e. Through the course of the Diversion Test, track the cumulative amount of each material, product and Residual Material that has been removed from bunkers or storage areas, or placed in containers, for transport from the Facility. Track materials at intermediate storage locations (e.g., at the inlet to the Pulper) to the extent reasonable.

f. At the end of the Diversion Test,

i. Determine the total amount of Acceptable Waste that was processed during the Diversion Test per the procedures for the Capacity Test.

ii. Determine the total amount of each material, product and residuals that was produced during the test. Estimate amounts remaining in storage areas, containers and bunkers as necessary, with agreement between Coastal and the MRC on closing inventory for each case.

iii. Identify and exclude from the inventory calculation existing bales or containers of material or bulk materials produced prior to the start of, or after the conclusion of, the Diversion Test.

g. Balance the data on tons of Acceptable Waste loaded into the process lines with the data on tons of materials, products and residuals produced during the test. If the balance is within five percent in either direction, attribute the balance to "Process Losses". Consider half the Process Losses to be included with recovered materials and products and half the Process Losses to be included with Residual Materials. If the balance is not within five percent in either direction, the MRC and Coastal shall reconcile the data through agreed-on adjustments that might address moisture content in the various materials streams; fugitive materials; or other factors to be determined in good faith by agreement among the parties.

h. "Residual Materials" shall include all of the following:

i. Materials that are removed from the processing line as residuals, or that pass through the Facility processing lines without removal for inclusion in recovered materials or products, and are conveyed to containers for transport to the Back-up Landfill for disposal.

ii. Materials that are diverted for inclusion in a recovered material or product but are subsequently deemed contaminants and removed from recovered materials or products either (a) prior to delivery to the off-taker, purchaser or broker, unless sent back through the process lines or included in another product; or (b) after delivery and returned to the Facility by the off-taker, purchaser or broker.
iii. Materials that are rejected prior to processing and deemed unprocessible, but are not identified as Unacceptable Waste.
iv. Fugitive materials that escape the processing lines and are neither returned to the process lines nor included in a recovered material or product.

i. Recovered materials or products may include the following subject to the requirements set forth below:
   i. Bales of ferrous metal or aluminum metal (beverage containers), old corrugated cardboard, #1 plastics, #2 plastics, mixed #3-#7 plastics, and other materials recovered from Acceptable Waste processed by the MRC equipment that are considered commercially salable.
   ii. Cellulose pulp produced in the Pulper.
   iii. Process engineered fuel (PEF) in the form of briquettes produced from materials recovered from Acceptable Waste processed by the MRF equipment and the briquetter.
   iv. Alternative daily cover (ADC).
   v. Bio-gas produced by anaerobic digestion.
   vi. Scrap metal collected in bulk.
   vii. Other products or materials recovered from Acceptable Waste processed in the MRF, the briquetter or the Pulper and ancillary equipment at the Facility.

j. Recovered materials or products shall be deemed commercially salable to the extent that the applicable provisions below would apply:
   i. The materials or products are verified by a potential off-taker, purchaser or broker as salable or as meeting a contractual specification for an industry for a product for which there are multiple purchasers.
   ii. For a recovered material or product that Coastal has sold prior to the test, Coastal can demonstrate to the reasonable satisfaction of the MRC that the materials and products produced during the test meet all of the applicable quality requirements or specifications as were met by the materials or products that were sold prior to the test, and the purchase market for such materials or products has not changed since the last sale.
   iii. If not verified as salable per (i) above, bales of material must be rectangular without excess shape distortion; compressed to a minimum density of 10 pounds per cubic foot; contain predominately the target material with what appears to be less than 0.5 percent visible contaminants; have no free-flowing liquids or prohibited materials; and be free of dirt, mud, stones, grease and glass.
   iv. For processed engineered fuel briquettes (PEF) and for cellulose pulp, product is produced such that either (i) a potential buyer confirms in writing that the product is suitable for purchase based on the buyer's requirements and the product's material properties; or (ii) the MRC or an outside expert acceptable to the MRC confirms both that

the product has material properties that are anticipated to make it suitable for commercial sale and that there is a feasible market for such product. The pulp shall contain acceptable levels of non-cellulosic materials. In addition, both the cellulose pulp and the PEF shall sustain the requirements for designation as Non-Hazardous Secondary Materials – Non-Waste.

v. Alternative daily cover (ADC) shall be deemed commercially salable if a representative of the Crossroads Landfill confirms in writing that the ADC is acceptable for use as daily cover at the Crossroads Landfill.

k. When bio-gas is produced, which may be after the conduct of the Diversion Test, but subject to the requirements of Section 4.5 below, bio-gas shall be deemed commercially salable if (i) the bio-gas can be combusted in the on-site boiler and/or the on-site flare; (ii) the bio-gas is comprised of at least 50 percent methane; less than 45 percent carbon dioxide; less than five percent balance gas (nitrogen, etc); and less than 0.5 percent oxygen, all on a dry basis; and (iii) emissions from combustion of the bio-gas in on-site combustors have not been shown to be out of compliance with standards in the air emission license.

l. Recovered materials and products that are deemed not salable during the test may be sent back through the process lines, but the weights of such re-processed materials shall not be counted toward the total weight of material processed in the Capacity Test.

4.0 Performance Test Conditions

The Performance Test shall be conducted in accordance with the following:

4.1 Operate in compliance with the Site Lease and Master Waste Supply Agreements.

4.2 Operate in compliance with all Facility permit conditions related to operations, and not sustain a notice or a warning of violation or notice of non-compliance or creation of an unacceptable nuisance condition, regarding any of the following:

a. Solid waste license from the Maine Department of Environmental Protection (Maine DEP), Bureau of Remediation and Waste Management, as revised and as determined through condition compliance decisions.
b. Air emissions license from the Maine DEP as amended.
c. Industrial wastewater discharge permit from the City of Bangor.
d. Land Use Permit for stormwater management from the Maine DEP Bureau of Land Reclamation, and for consistency with the Natural Resources Protection Act (NRPA), as revised.
e. Maine General Permit from the U.S. Department of the Army, NE Corps of Engineers, as revised.
f. Order for site plan conditional use from the Town of Hampden Planning Board.

4.3 Operate in accordance with normal operating conditions with normal ongoing maintenance procedures, including daily odor monitoring and reporting as required by the Maine DEP solid waste

license. Operate without extraordinary outside support or staffing in excess of expected levels of staffing other than as specifically required during the test that would not be required during normal operations (e.g., material sampling and weighing to determine amount processed or recovered, bulk density, etc.).

4.4 Demonstrate the operation of the fines processing system for delivering liquid feedstock to the anaerobic digester.

4.5 Regarding completion of the Diversion Test, the parties agree to the following:

- Coastal shall not initiate the Diversion Test until the following pre-conditions are satisfied:
  - Crossroads Landfill has accepted at least one load of ADC from the Facility.
  - Coastal has submitted a complete pulp sampling plan to the Maine DEP.
  - Coastal has demonstrated that pulp has been tested and deemed to meet requirements to be marketable for each test in the sampling plan.
- The digester need not achieve steady state performance prior to the start of the Diversion Test.
- Coastal may start the Diversion Test before the Facility has demonstrated the following capabilities that are considered integral to the operations of the Facility (Integral Capabilities).
  - Capability to produce bio-gas from anaerobic digestion of organic materials derived from Acceptable Waste processed at the Facility.
  - Capability either (x) to produce fuel briquettes from plastic that have been approved by the Maine Department of Environmental Protection for beneficial use by at least one facility located within the State of Maine; or (y) to produce and sell such briquettes for beneficial use to a purchaser outside of the State of Maine on a long-term and economically sustainable basis.
  - Capability either (x) to produce cellulose pulp that has been approved by the Maine Department of Environmental Protection for beneficial use by at least one facility located within the State of Maine. or (y) to produce and sell such cellulose pulp for beneficial use to a purchaser outside of the State of Maine on a long-term and economically sustainable basis.

Nonetheless, in the event Coastal has not demonstrated the Integral Capabilities by January 1, 2020, then the MRC will have the right to exercise rights under the Site Lease and the Master Waste Supply Agreement as if the Commercial Operations Date had not been achieved.

5.0 Additional considerations

- It is understood that the Performance Test cannot be performed unless sufficient quantities of Acceptable Waste are delivered. If necessary, the test period shall be adjusted to account for timely delivery of sufficient MSW for performance of the test.
- Coastal shall weigh all incoming MSW, Unacceptable Waste, and outgoing recovered materials and products and Residual Materials.
- Coastal shall document and present weigh-in and weigh-out times.
- For baled materials, Coastal shall count bales and measure bale weights by material.

- For bulk and contained materials, Coastal shall count container loads and estimate material densities on the basis of container volume, level of fill and container tare weight.
- Coastal shall produce a test report to document all data, calculations and findings from the Performance Test.

Agreed to as of this 26th day of September, 2019.

Municipal Review Committee, Inc.

By: Tony Smith, V.P.

Coastal Resources of Maine, LLC

By Fiberight LLC
its Manager

By: Craig Stuart-Paul
Chief Executive Officer
Fiberight, LLC

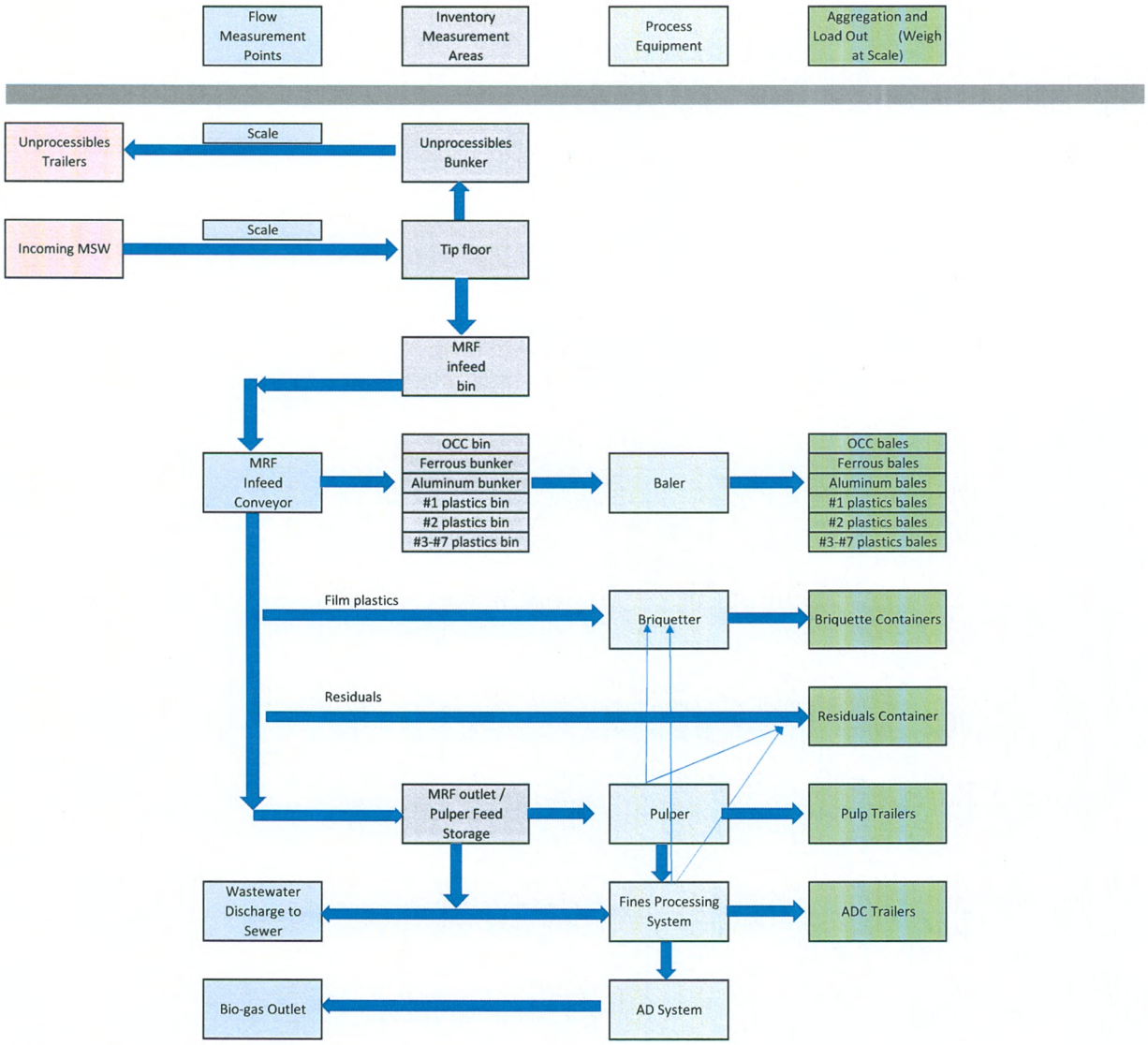
Fiberight LLC

By: Craig Stuart-Paul
Chief Executive Officer
Fiberight, LLC

Exhibit A

Performance Test Protocol for the Hampden Advanced Waste Processing Facility

Process Flow Diagram and Measurement Points to Support Mass Balance Calculations



Test measurements

1	Incoming MSW	Tons over scale
2	Wastewater discharge	Gallons, COD ? Permit parameters
3	AD tank bio-gas outlet	Scf, % CH4, MMBtu
4	Unprocessibles bunker	Tons based on volume and density
5	Tip floor	Tons based on volume and density
6	MRF infeed bin	Tons based on volume and density
7	MRF infeed conveyor	Tons based on rate over time
8	OCC bin	Tons based on volume and density
9	Ferrous bunker	Tons based on volume and density
10	Aluminum bunker	Tons based on volume and density
11	#1 plastics bin	Tons based on volume and density
12	#2 plastics bin	Tons based on volume and density
13	#3-#7 plastics bin	Tons based on volume and density
14	MRF outlet storage	Tons based on volume and density
15	Unprocessibles trailers	Tons over scale
16	OCC bales	Bale count; tons over scale
17	Ferrous bales	Bale count; tons over scale
18	Aluminum bales	Bale count; tons over scale
19	#1 plastics bales	Bale count; tons over scale
20	#2 plastics bales	Bale count; tons over scale
21	#3-#7 plastics bales	Bale count; tons over scale
22	Briquette containers	Container count; tons over scale
23	Residuals containers	Container count; tons over scale
24	Pulp trailers	Trailer count; tons over scale
25	ADC trailers	Trailer count; tons over scale