Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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APPROVAL

Alfred Kovalik, Managing Partner
Tipping Point Resources Group, LLC
PO Box 8532
New Haven, CT 06531

Re: Approval of Demonstration Project,
Application No. 202107450
Use of Dredged Sediment to Manufacture Engineered Fill.

Dear Mr. Kovalik:

Tipping Point Resources Group, LLC ("TPRG") proposes to conduct a Demonstration Project pursuant to Section 22a-208a(j) of the Connecticut General Statutes ("CGS") to assess the viability of manufacturing engineered fill utilizing sediment dredged from Long Island Sound and other dredging locations. TPRG proposes to manufacture engineered fill through its Pneumatic Flow Tube Mixing ("PFTM") process in which contaminated dredged sediments will be treated with Portland cement in order to stabilize, and thereby immobilize, contaminants present in the dredged sediments. TPRG proposes to conduct the activity and locate the PFTM equipment on a barge ("the Facility") anchored at 125 Depot Road, Montville, Connecticut ("the Facility").

Section 22a-208a(j) of the CGS authorizes the Commissioner to approve a solid waste Demonstration Project provided the Commissioner determines that such demonstration (1) is necessary to research, develop or promote methods and technologies of solid waste management which are consistent with the goals of the state solid waste management plan; (2) does not pose a significant risk to human health or the environment; and (3) is not inconsistent with the federal Water Pollution Control Act, the federal Rivers and Harbors Act, the federal Clean Air Act or the federal Resource Conservation and Recovery Act.

Therefore, pursuant to Section 22a-208a(j) of the CGS, and on the basis of the information provided in Application No. 202107450 submitted by TPRG to the Department on May 27, 2021 with supporting documents, TPRG is authorized to conduct a Demonstration Project in accordance with its application utilizing the PFTM process to manufacture engineered fill, provided the following conditions are met:

1) TPRG may process up to two thousand five hundred (2,500) cubic yards per day of dredged sediment. For the purposes of this Demonstration Project, "dredged sediment" shall mean dredged material from estuarine and freshwater sources and "treated dredged sediment" means dredged sediment that has undergone treatment using the PFTM process as described in Application No. 202107450.

2) TPRG may process up to two hundred thousand (200,000) cubic yards of dredged sediment under this Demonstration Project Authorization;

3) TPRG may store a maximum of five thousand (5,000) cubic yards of unprocessed dredged sediment at any one time;

4) The processing of dredged sediment through the PTFM shall be limited to Monday through Saturday 7:00 a.m. to 7:00 p.m.

5) Dredged sediment, prior to receipt at the Facility, shall be tested in accordance with the parameters specified in Attachment A and the frequencies provided in Attachment B;

6) TPRG shall ensure that dredged sediment does not contain hazardous wastes as defined by CGS Section 22a-115. Any hazardous waste delivered to the Facility shall be segregated from non-hazardous waste and transported to a licensed Hazardous Waste Treatment, Storage and/or Disposal facility. Nothing in this Approval authorizes TPRG to treat or process hazardous waste;

7) TPRG shall ensure that any material which may not be suitable for processing through the PTFM is: (i) promptly sorted, separated, isolated and temporarily stored in a safe manner prior to off-site transport; (ii) recorded in on-site records; and (iii) recycled or disposed at a facility lawfully authorized to accept such waste. TPRG shall store no more than one hundred (100) cubic yards of unacceptable material in roll-off containers unless otherwise authorized by the Commissioner in writing. Records of the quantity, classification and ultimate disposal of such non-processable material shall be retained by TPRG for the duration of the Demonstration Project approval and three (3) years thereafter;

8) All material processed through the PFTM shall be tested to ensure upland placement criteria have been met as required by the Department of Energy and Environmental Protection ("Department"). Processed material shall be tested to ensure that the material meets, at a minimum, the applicable pollutant mobility criteria and Residential Direct Exposure Criteria in accordance with the Regulations of Connecticut State Agencies (RCSA) Section 22a-133k-1 to 22a-133k-3 (a.k.a. the Remediation Standard Regulations or RSR). All sample analyses required by this approval shall be conducted by a laboratory certified by the State of Connecticut Department of Public Health. Results of such analyses shall be maintained as part of the Demonstration Project operating records by TPRG for the duration of this Demonstration Project approval, and three (3) years thereafter. Such records shall be made available to the Commissioner upon request;

9) To prevent the mixing of dissimilar sediments, TPRG shall maintain as segregated on barges, untreated dredged sediments from treated dredged sediments as well as sediments that have undergone analytical testing from sediments pending sampling and/or analysis in separate curing bins;

10) TPRG shall develop, implement and submit to the Commissioner a contingency plan within ninety (90) days of approval of this Demonstration Project, that describes corrective measures to be taken in the event of equipment breakdowns, delivery of unacceptable materials, spills, fires, extreme weather or other events;

11) TPRG shall post and maintain a sign at the facility which includes a phone number that provides the general public the ability to register questions or complaints twenty-four (24) hours per day. TPRG shall maintain a log of all calls received and how such calls were addressed or resolved;

12) TPRG shall at all times take reasonable precautions to control nuisance emissions, such as fugitive dust and odors, in accordance with RCSA Sections 22a-174-18 and 23. TPRG shall develop and implement an odor control plan that is appropriate for the size and type of operation that will minimize the production and migration of odorous compounds. The plan shall identify specific action that will be taken to address complaints for nuisance odors that are detected beyond the Facility. All complaints and the detection of nuisance conditions beyond the Facility shall be monitored and recorded in the Demonstration Project operating records;

13) TPRG shall ensure that its operations do not result in any unpermitted discharges of pollutants to air, water or other natural resources, create a public nuisance, or present a significant threat to public health, safety or the environment;

14) If at any time the Commissioner determines that the activities approved herein can reasonably be expected to cause pollution to the waters of the state or otherwise adversely impact human health or the environment, the Commissioner has sole discretion to terminate the demonstration project. Such activities shall cease and a plan shall be submitted on or before ten (10) days from receiving such notice from the Department detailing how the unprocessed dredged sediment will be managed (i.e. removed from the site and disposed at a location authorized to receive this waste);

15) TPRG shall submit for the Commissioner's review and written approval all necessary documentation supporting any proposed physical and/or operational upgrades, improvements and/or minor changes in the Facility design, practices or equipment. The Commissioner may issue a written approval only if, in the Commissioner's judgment, the proposed physical and/or operational upgrades, improvements and/or minor changes: (a) are deemed necessary for a better and more efficient operation of the Facility; (b) do not significantly change the nature of the Facility, or its impact on the environment; and (c) do not warrant the issuance of a permit or authorization pursuant to Section 22a-208 et seq. of the CGS;

16) Quarterly progress reports shall be submitted to the Department during the term of the Demonstration Project approval. The reports shall identify:
    a. The weight and volume of dredged sediments received each month of the quarter;
    b. The volume of Portland cement used in the process each month of the quarter;
    c. The weight and volume of material not suitable for processing through the PTFM;
    d. The weight and volume of materials which do not meet upland placement criteria following treatment through the PTFM;
    e. The volume of and location or facility to which all treated dredged sediments were sent for staging or disposal;
    f. A discussion of any problems encountered and the approach used to solve them during such quarter;
    g. Any noteworthy observations;
    h. A list of the types of contaminants encountered;
    i. Any problems encountered and associated solutions; and
    j. Recommended changes to the Operations and Management Plan.

    The progress reports required pursuant to this condition shall be submitted quarterly no later than January 31, April 30, July 31, October 31, of each year directly to the Solid Waste Program, Waste Engineering and Enforcement Division, Bureau of Materials Management and Compliance Assurance, Department of Energy and Environmental Protection, 79 Elm Street, Hartford, CT 06106-5127;

17) A final report shall be submitted, on or before sixty (60) days after the Demonstration Project approval expires, analyzing the project's level of success. The final report shall include the following:
    a. A description of the overall project operations including volumes received and processed, final disposition, treatment, sampling, analytics and placement of treated dredge sediments;
    b. A discussion of any problems encountered and the approach used to solve them;
    c. A discussion regarding improvements and changes made during the implementation of the Demonstration Project;

d. A summary and tabulation of dredge locations, owners or operators thereof, volumes dredged, volumes of engineered fill manufactured; and
e. A set of conclusions about the success of the Demonstration Project and lessons learned;

18) The duration of the Demonstration Project shall not exceed twenty-four (24) months, beginning with the date of this approval, unless an extension is first granted in writing by the Commissioner.

This approval does not relieve TPRG of other obligations under applicable federal, state and local laws. If you have any questions regarding this approval, please contact Brent Madho of the Waste Engineering and Enforcement Division at Brent.Madho@ct.gov or at 860-424-3092.

Issued on this 5th day of January , 2022

Betsey Wingfield

Betsey Wingfield
Deputy Commissioner

Application No. 202107450
Demonstration Project Approval No: 08601340-DP
E-Certified Mail

Attachment A

Parameter and Testing Methods	
Parameter	**Method**
Soil Moisture	(ASTM D-2216-10)
Proctor Density	(ASTM D-698)
Grain Size Sieve Analyses	(ASTM D-422)
RSR Metals (total and SPLP** for total>method detection limit) and total cyanide	(SW846 EPA Method 6020, EPA Method 7471 and EPA Method 9014)
ETPH	(CT ETPH)
PCBs	(SW-846 EPA Method 8082A)
PAHs	(SW-846 EPA Method 8270) full list SVOCs if PAHs>method detection limits total and SPLP** (if total > GB PMC)
*VOCs including 1,4-dioxane	(SW-846 EPA Method 8260)
Pesticides	EPA Method 8081A
Herbicides	EPA Method 8151A
Sodium & Chloride	Method as determined by CT DPH Certified Lab
Any other substance reasonably expected to be present (based on the environmental conditions at the location from which the material originated) in concentrations exceeding either the RDEC or GA PMC of the RSRs (via appropriate/current EPA SW846 Test Method)	

Attachment B

Volume of Dredged Material (CY)	Number of Sample Stations	Number of Composites Analyzed
< 5,000	Determined on case-by-case basis by CTDEEP	
5,000 – 20,000	4	1
20,000 – 100,000	8	2
100,000 – 200,000	12	3
200,000 – 300,000	16	4
300,000 – 400,000	20	5
400,000 – 500,000	24	6
>500,000	Determined on case-by-case basis by CTDEEP	