TERRATHERM
a Cascade Company
151 Suffolk Lane
Gardner, MA 01440
Phone: (978) 730-1200
Fax: (978) 632-3422
www.terratherm.com

March 5, 2021

Attorney Andrew Rainer
Brody, Hardoon, Perkins & Kesten, LLP
699 Boylston Street
Boston, MA 02116

Re: Thermal treatment of Housatonic River sediment

Dear Attorney Rainer,

I have prepared this brief letter as a follow up to our phone call in which we discussed the viability of TerraTherm's thermal treatment technology for treatment of PCB-impacted sediment from the Housatonic River. TerraTherm is the worldwide leader in the development and implementation of thermal remediation systems for treatment of contaminated soil, sediment, and groundwater. We have advised on, designed, built, and operated thermal remediation projects both in the United States and internationally for a variety of clients, including federal government agencies.

TerraTherm's thermal conduction heating (TCH) technology can be applied in-situ to treat subsurface contaminants in place, or *ex-situ* to treat excavated soils and sediment in small containers or in larger constructed aboveground piles. We refer to the *ex-situ* treatment approach as in-pile thermal desorption (IPTD®). With either the *in-situ* or *ex-situ* (IPTD®) approach, contaminants are destroyed through a combination of oxidation and pyrolysis, and extracted vapors are treated using aboveground vapor treatment equipment capable of achieving 99.9999% destruction and removal efficiency (typically using a thermal oxidizer operating at 1100°C with a 2 second residence time, in accordance with Stockholm Convention protocols). TerraTherm has successfully applied our thermal treatment technology to remediate PCBs with starting concentrations well over 10,000 mg/kg (10,000 parts-per-million, ppm) down to concentrations well below 1 mg/kg (1 ppm).

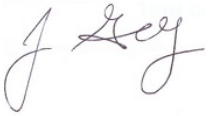
I am confident that TerraTherm's aboveground IPTD® approach can successfully treat PCB-contaminated sediment excavated or dredged from the Housatonic River, to achieve applicable regulatory standards. Although cost is obviously a limiting factor, there is no question that thermal remediation can be used to treat and destroy large volumes of PCB-contaminated sediments. For example, we recently remediated ~120,000 cy of sediments contaminated with dioxins for our client using our IPTD® approach. In order to reduce project costs, TerraTherm has partnered with our clients to segregate contaminated soil such that only the highest concentration soils and sediments

were treated with thermal remediation, while less contaminated materials were disposed of using conventional methods.

For your reference, I have enclosed a copy of a presentation describing thermal treatment of PCBs that my colleague Steffen Griepke recently provided at an Environmental Business Council Seminar. The presentation provides some technical information on TerraTherm's thermal treatment technology, as well as case studies and results from both small and large PCB and dioxin treatment projects.

I hope you find this information useful. Please let me know if you need any additional information.

Best Regards,
TerraTherm, Inc.



James Galligan
Sr. Vice President

Encl.