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Rear Admiral Roy Nash
Eighth Coast Guard District
Hale Boggs Federal Building
500 Poydras Street, Suite 1240
New Orleans, LA 70130-3310
Via certified mail; also via email to Carlos Diaz <Carlos.A.Diaz@uscg.mil>, Cdr. Michael Roldan <Luis.M.Roldan@uscg.mil>, Cdr. Jeffrey Morgan <Jeffrey.R.Morgan@uscg.mil>, Richard Walter <Richard.W.Walter@uscg.mil>, Cdr. Christopher Woodle <Christopher.T.Woodle@uscg.mil>, Cdr. Emily Saddler <Emily.C.Saddler@uscg.mil>

RE: Analysis of GreenHunter Water, L.L.C. fracking waste barge shipment terminal project according to National Environmental Policy Act

Dear Adm. Nash:

I'm writing on behalf of a citizen grassroots organization in southeastern Ohio, Meigs Citizens Action Now (Meigs CAN). Our purpose in writing is to petition the U.S. Coast Guard to conduct a thorough investigation pursuant to the National Environmental Policy Act ("NEPA", 42 U.S.C. § 4321 *et seq*.) of the expected and potential environmental effects of the proposal from GreenHunter Water, LLC ("GreenHunter") to formally list produced water and flowback on the Coast Guard register of allowable cargo to be transported by container barges, per 46 C.F.R. § 30-25.1. As you know, GreenHunter has leased land containing an aging 50-year-old Ohio River terminal at New Matamoras, Ohio, where the firm intends to receive and store, possibly treat, ship millions of gallons of used fluids for disposal in class II injection wells or solidification for landfill disposal. The locations of other Ohio River or tributary terminals from which cargoes might originate have not been disclosed by the industry or regulatory agencies in adjoining states.

BACKGROUND

GreenHunter Water, LLC, of Grapevine, Texas leases several

liquid-storage tanks at the Ohio River terminal in New Matamoras.[1] The terminal, which would become a vital component of the first waterborne fracking waste shipping network in the United States, would serve as a transfer point to store and then transport the waste by truck to classified injection wells in Ohio.

The riverfront property that GreenHunter has leased to commence operations is part of a ten (10) acre site owned by Weavertown Environmental Group. Weavertown is a Pennsylvania-based company that cleans up industrial accidents. In addition to the dock facilities, there are above-ground petroleum storage tanks at the site from prior ownership, spanning 50-years. Those tanks are capable of holding approximately 70,000 barrels (some 2,800,000 gallons) of waste fluids. There are also below-ground tanks of similar age and questionable history. Weavertown has applied for permits to the Ohio EPA to solidify waste on this same 10-acre site. They would receive waste transferred to Ohio from surrounding states for dewatering and trucking to Ohio landfills. Part of the waste Weavertown would accept includes liquid and solid fracking waste, yet the firm insists that their operation is completely separate from GreenHunter's.

The proposed transport would involve an unknown number of waterborne barges per year - there is no limit - each potentially carrying up to 4,500,000 gallons liquid capacity, according to GreenHunter. The frequency of shipments and the aggregate volume have not been publicly disclosed. As no permits were required by the ODNR, GreenHunter owns or controls disposal rights to several underground injection wells in the vicinity, including in Washington, Noble, and Athens counties in Ohio and nearby Ritchie County, West Virginia.[2]

High volume, horizontal slick water hydraulic fracturing requires pumping of 3,00,000 to 9,000,000 gallons of water, sand and a mix of toxic chemicals underground to shatter the shale and free trapped gas. Some of the fracking fluid flows back up, along with saltwater that has been underground for millions of years and contains high concentrations of salt, naturally occurring metals and radium. When the waste water returns to the surface it contains not only the chemicals used to produce the well, but high levels of technologically enhanced naturally occurring radioactive materials (TENORM).

REGULATORY CONSIDERATIONS

The permitting trail for this facility is murky, at best. Various state and federal environmental laws apply to different aspects of this unprecedented barge shipping facility.

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[1] "Coast Guard looking at brine shipments on Ohio River," http://www.ohio.com/blogs/drilling/ohio-utica-shale-1.291290/coast-guard-looking-at-brine-shipments-on-ohio-river-1.364840

[2] "GreenHunter Water acquires Ohio, W. Va. injection wells," http://www.ohio.com/blogs/drilling/ohio-utica-shale-1.291290/greenhunter-water-acquires-ohio-w-va-injection-wells-1.348614

Identification of Individual Chemical Constituents of Waste

1) The Coast Guard recently announced that before any barge shipments of fracking waste fluids would be allowed, fracking wastes must be formally added to an agency-approved public listing of allowable cargoes.[3] See 46 C.F.R. § 30-25.1. We insist that there be serious inquiry into which individual toxic chemicals are present in the mix, what radiation levels are present, and whether diesel fuel is present. We believe that the Coast Guard cannot simply view this as exempt, "unregulated" waste.

Benzene, Which Is Specially-Regulated, May Be Present in the Waste

2) Because the proposed shipments may contain quantities of benzene in excess of .5%, the barge transports will likely fall under the aegis of 46 C.F.R. § 30-25.3,[4] which imposes workplace safety equipment, signage and notification requirements on tank-ship haulers. It is possible that these chemicals also require hazardous materials training for workers. The workers already on site, and truck drivers are required to be so trained, based on the actual chemical content of what they are hauling, instead of dismissively regarding it as "oil and gas waste."

OEPA/ODNR Determinations that NPDES Permitting Is Not Required Are Suspect

3) The shipping barges and the upland storage tanks, as well as connective hosing and piping, constitute point sources for potential spillage and contamination of land and Ohio River water, which provides drinking water to millions of people in Ohio and adjoining states, thus Ohio EPA and federal permits are or may be required under the National Pollutant Discharge Elimination System (NPDES) permitting protocol. The process that culminated in the decision by the Ohio Department of Natural Resources ("ODNR") that no NPDES permits would be relevant to the unloading area on land is neither documented by ODNR and OEPA nor is it comprehensible, given the vast quantities of toxics that would be unloaded and transferred offsite.

OEPA/ODNR Determinations that Clean Air Act Permitting Is Not Required Are Suspect

4) The materials handling and storage infrastructure also constitute air pollution point sources and so require federal Clean Air Act enforcement consideration by the Ohio Environmental Protection Agency. We question what evaluation of this unprecedented facility was performed by the OEPA's air division, other than the ODNR's

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[3] See fn. 1 *infra*.

[4] "§ 30.25-3 Benzene. The provisions contained in 46 CFR part 197, subpart C, apply to liquid cargoes containing 0.5% or more benzene by volume."

geologist's evaluation, that resulted in the decision that this facility would only provide temporary storage and be exempt from permitting requirements. The ODNR staff are neither trained nor qualified to undertake these evaluations.

Radium and Irradiated Waste Contents (NORM and TENORM) Have Implications for Transit and Storage

5) The fracking waste will contain radium, which is a naturally-occurring element. But shale wastewater is potentially 3,609 times more radioactive than the federal safety limit for drinking water, or 300 times higher than a Nuclear Regulatory Commission limit for industrial discharges to water.[5] Moreover, Marcellus brine may have salinity and radium levels three times that of traditional sandstone/limestone oil and gas wells drilled in the era prior to 1990.[6]

Naturally-occurring radioactive material (NORM) is not governed by the federal Atomic Energy Act, but is, instead, regulated by the State of Ohio. According to Ohio Administrative Code §3701-39-02.1(B)(5), "[p]ossession of produced waters from crude oil or natural gas production" is exempt from state regulation, "provided that the produced waters are reinjected in a well approved by the United States environmental protection agency or discharged under the authority of the United States environmental protection agency."

It is suspected that the Ohio wells into which GreenHunter is likely to inject barge-delivered fracking wastes do not conform to this Ohio NORM regulation, and that it may even be mixed for solidification and sent to Ohio landfills that are inappropriate to accommodate this waste.

Compounding this probable lack of conformity to Ohio NORM regulation, there are TENORMs that further complicate safety issues. To date, there has not been testing by any Ohio regulatory agency to determine the radium or radioactivity levels inherent to TENORMs in produced water or flowback that has been repeatedly transferred from one site to another for the purpose of reinjecting to produce a well. Each time this waste is reinjected, it increases the level of radioactivity. None of the water treatment or recycling processes to date remove or reduce radiation, and testing has not been performed to verify levels for the purposes of identifying appropriate means of transport or assuring worker and public safety.

Rivers and Harbors Act and Clean Water Act Implications During Waste Transport are Undisclosed

6) During transport and at all times while the material is held aboard barges, the spillage of fracking waste, as a hazardous substance, into the Ohio River or tributaries will be subject to

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[5] "'Fracking' brine: Gas-well waste full of radium," http://www.dispatch.com/content/stories/local/2012/09/03/gas-well-waste-full-of-radium.html

[6] E.L. Rowan, M.A. Engle, C.S. Kirby, and T.F. Kraemer, "Radium Content of Oil- and Gas-Field Produced Waters in the Northern Appalachian Basin (USA)," http://pubs.usgs.gov/sir/2011/5135/

regulation and penalties for violation under Section 13 of the 1899 Rivers and Harbors Act, 33 U.S.C. § 407; and the Federal Water Pollution Control Act (FWPCA, better known as the "Clean Water Act"), § 311(b)(2)(A), 33 U.S.C. § 1321(b)(2)(A).

Presence of Migratory Birds and Endangered Plant And Animal Species; Islands National Wildlife Refuge

7) The Ohio River Islands National Wildlife Refuge lies along some 360 river miles of the Ohio River valley from Pennsylvania to a point downriver of the GreenHunter terminal site. Dozens of islands in the Ohio River make up the refuge and provide habitat for freshwater mussels and migratory birds, plus federally-threatened and endangered plant species. The launching terminal(s) for barge shipments of fracking waste to GreenHunter have not been identified. The refuge lands and habitat which might be damaged or destroyed by multiple high-volume river barge shipments of fracking waste (not to mention spills of such material) are not known, but may span dozens, even hundreds, of river miles. The requisite consultations involving the U.S. Fish and Wildlife Service under the federal Endangered Species Act of 1973, 7 U.S.C. § 136, 16 U.S.C. § 1531 *et seq.*, and mitigation plans in the event of spills of waste have not taken place.

THE PROPOSED SHIPMENT MUST BE CONSIDERED UNDER NEPA

Multiple federal statutes and regulations control the decision as to whether the barge shipments of fracking waste will be allowed to proceed. Because of the unique, unprecedented nature of the planned terminal operation - there is no other frack waste barge shipping operation in the country - we respectfully request that the U.S. Coast Guard compile an environmental impact statement pursuant to the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321 *et seq.* An EIS is required for "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C).

The test for "major Federal action" and "significantly affecting" is the single criterion of "significance." 40 C.F.R. § 1508.27. The degree of environmental impact (or adverse environmental consequences in the event of an accident) determines significance. "Significantly" involves "intensity", which (at 40 C.F.R. § 1508.27(b)) "refers to the severity of impact" - i.e., that environmentally negative consequences may occur as the project proceeds.

We believe that a gross misunderstanding of the Coast Guard's mission here threatens public health and safety. By mistakenly classifying millions of gallons of toxic liquid garbage as generic "fracking waste," it is exempted from regulation. But the public interest and, we believe, the law, require that it be analyzed as a cargo type which contains many hazardous or toxic chemical com-pounds of fracking fluid with the additional hazard of radioactivity. To engage in semantics instead of chemistry is disingenuous and downright dangerous. There must be evaluation of the individual constituent contents within the fracking fluid. A great deal of scientific inquiry has defined how those constituents are hazardous and dangerous chem-

icals and how they must be handled. Only by identifying those chemicals as individual constituents in the mix of fracking fluid will it become possible to determine whether fracking fluid should be added to the list of permissible, hazardous cargoes. The decision about adding fracking fluid to the list therefore comprises a "major federal action." Federal approval is the *sine qua non* of GreenHunter Water's proposal. Since the Coast Guard exercises discretionary authority over the outcome, and the project cannot go forward absent listing of fracking waste as permissible barge cargo, the project is thus "federalized" and falls within the requirements of NEPA. *See Save the Bay v. U.S. Army Corps of Engineers*, 610 F.2d 322 (5th Cir. 1980); *Sylvester v. U.S. Army Corps of Engineers*, 884 F.2d 394, 400-401 (9th Cir. 1989).

My client group is a public representative which typifies the growing numbers of citizens who are questioning the safety and stability of the GreenHunter barge terminal. We request that the Coast Guard assume federal lead agency responsibility under NEPA and that the agency please examine the environmental aspects of this proposal in service of the public interest.

Thank you very much, and we hope to hear from you soon.

Sincerely,

Terry J. Lodge

cc: Elisa Young, Meigs CAN