

**Public Comments on Proposed  
U.S. Coast Guard Policy, ‘Carriage of Conditionally  
Permitted Shale Gas Extraction Waste Water in Bulk’**

**USCG-2013-0915-0001**

November 29, 2013

Submitted by 46 Organizations from Ohio, Pennsylvania, Michigan,  
Kentucky, Illinois, New York and West Virginia

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To the U.S. Coast Guard:

We offer these comments as organizations with members who live in the regions lying alongside hundreds of miles of the Ohio River, in or near those stretches of the River likely to be crisscrossed with barges carrying millions of gallons of waste materials from horizontal hydraulic fracturing extraction of oil and gas; with members from the Great Lakes region with concerns about waterborne shipping; and from elsewhere in the American heartland. We are united in our opposition to the implementation of the U.S. Coast Guard’s Proposed Policy Letter (“PPL”) to allow the carriage of shale gas extraction wastewater in bulk via barge on the nation’s rivers, as announced in the Federal Register on October 30, 2013 at 78 FR 64905.

Our comments are of two general types. We question the adequacy of the terms and conditions found in the PPL as a means of regulating transport of such waste. This is covered in Part I. In Part II, we believe that the undertaking and completion of a Programmatic Environmental Impact Statement (“PEIS”) must be accomplished as a prerequisite to the preparation of a national regulatory policy governing shipments of shale gas extraction waste water (“SGEWW”) via barge. In Part II, we further state our case that a site-specific Environmental Impact Statement (“EIS”) should be undertaken of the GreenHunter Water, LLC (“GreenHunter”) business plan. We believe such is compelled by the National Environmental Policy Act. GreenHunter will be the principal beneficiary of a policy allowing barge shipments, and there has been no comprehensive consideration of the environmental effects (and potential effects) of the loading, transporting and offloading stages of the barge shipment proposal.

**PART I**

**A. IMPLEMENTATION OF THE ‘PROPOSED POLICY LETTER’ DOES NOT  
PROTECT PUBLIC HEALTH AND SAFETY OR THE ENVIRONMENT**

***1. Introduction***

We understand that the scope of the barge shipment policy proposed by the Coast Guard would be national. However, the principal beneficiary at this point would be GreenHunter Water, LLC (“GreenHunter”), a wholly-owned subsidiary of GreenHunter Resources, Inc. of Grapevine, Texas, which would be able to barge-haul millions of gallons of produced water from fracking and associated flowback fluids to disposal destinations. The waste is derived from

horizontal hydraulic fracturing (“fracking”) extraction operations for oil and gas in several states, including Pennsylvania, West Virginia and Ohio.

GreenHunter is building a fracking waste water recycling plant in Wheeling, West Virginia, directly adjacent to the Wheeling Heritage Trail. The plant is located 1.2 miles upstream of Wheeling’s public water supply intake on the Ohio River. The company estimates one loaded barge will leave the dock each week, loaded with approximately 4,500,000 gallons of shale gas extraction waste water (“SGEWW”) bound for disposal.

GreenHunter also has leased land at the site of a 50-year-old Ohio River terminal in New Matamoras, Ohio, where the firm intends to receive, temporarily store, and downblend SGEWW for disposal in class II injection wells or for solidification for landfill disposal. The New Matamoras terminal will be a vital component of the waterborne fracking waste shipping network, serving as a transfer point for SGEWW storage and transport to waste disposal destinations in Ohio and other states.

GreenHunter’s leased property in New Matamoras is part of a ten (10) acre site owned by Weavertown Environmental Group, a Pennsylvania-based company that cleans up industrial accidents. In addition to dock facilities, there are above-ground petroleum storage tanks at the site which as previously noted, are 50 years old. Those tanks are capable of holding about 70,000 barrels (some 2,800,000 gallons) of waste fluids. There may also be below-ground tanks of similar age. Weavertown has applied for permits to the Ohio EPA to solidify fracking waste at the site. The firm would receive fracking waste from Ohio and surrounding states for dewatering, blending with other garbage (not from fracking), followed by trucking to Ohio landfills. Given the likely radioactive component of the fracking waste, this method of disposal will potentially comprise radioactive waste dumping in those landfills. Weavertown insists that its operation is completely separate from GreenHunter’s, but it is hard to imagine that GreenHunter will not avail itself of Weavertown’s services.

The proposed GreenHunter barge shipping business would involve an unknown number of waterborne barges per year - there is no limit - each potentially loaded to a 4,500,000 gallon capacity. The frequency of shipments and the aggregate annual volume have not been publicly disclosed. No permits have been required for the New Matamoras terminal by either the Ohio Department of Natural Resources (“ODNR”) or the Ohio Environmental Protection Agency (“OEPA”). GreenHunter is believed to own or control disposal rights to several underground injection wells in the vicinity, located in Washington, Noble, and Athens counties in Ohio and nearby Ritchie County, West Virginia.<sup>1</sup>

High volume, horizontal slick water hydraulic fracturing requires injection of 4,000,000 to 9,000,000 gallons of water, sand and a mix of toxic chemicals underground into each well to

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<sup>1</sup><http://www.ohio.com/blogs/drilling/ohio-utica-shale-1.291290/greenhunter-water-acquire-s-ohio-w-va-injection-wells>

shatter the shale and free trapped gas or oil. Some of the fracking fluid flows back up, along with saltwater that has been underground for millions of years and which contains high concentrations of salt, heavy metals, bromides and various uranium isotopes, particularly radium (Ra-226 and Ra-228). The waste water returned to the surface contains not only the chemicals used to produce the well, but also high levels of technologically-enhanced naturally occurring radioactive materials (“TENORM”), which often consists of radioisotopes registering dozens, if not hundreds, of times background radiation levels. Heavy metals levels in liquid fracking waste also may routinely be measured at hundreds of times the permissible levels of the Safe Drinking Water Act.

Besides GreenHunter, there likely is or will be other commercial interest in transporting SGEWW from northern Appalachia, North Dakota or Texas via inland waterways to terminals for processing and further transport to waste disposal sites in Ohio, Texas and Louisiana. Because of the variable radioactive and toxic characteristics of fracking waste, which may contain hazardous compounds such as benzene, it is improper for the Coast Guard to merely consider whether or not to enter SGEWW as a “listed” cargo for transport via tank vessel per 46 CFR 153.900( c), unless its Certificate of Inspection has been endorsed or the vessel has been issued a letter pursuant to 46 CFR 153.900(d). It is administratively insufficient for the Coast Guard to propose use of a regulatory letter issued on a case-by-case basis to barge haulers, instead of a formal rulemaking that is subjected to scrutiny under the National Environmental Policy Act.

## ***2. Specific Objections to Proposed Policy Letter***

Section 8(b) of the proposed policy letter (“PPL”) allows a barge owner to “request endorsement of a barge’s Certificate of Inspection, or a letter, allowing the barge to transport Conditionally Permitted SGEWW in bulk.” According to PPL wording, the Coast Guard may, “***at its discretion,***” “provide the endorsement or letter, on condition that the barge owner conduct and document the analyses and surveys, and take the venting measures, described in this paragraph 8.”

According to Section 8( c) of the PPL, the Coast Guard has further reserved discretion to itself (“***may*** impose”) to engraft an “additional requirement” on the endorsement or letter described in paragraph 8(b). The Coast Guard may discretionarily require that “the barge owner must have each consignment load of SGEWW chemically analyzed in accordance with Enclosure (1) to this policy letter. The barge owner must keep records showing the results of each analysis for two years and make those records available to the Coast Guard upon request. These records are subject to the Freedom of Information Act (FOIA). The identity of proprietary chemicals may be withheld from public release pursuant to the FOIA and applicable Coast Guard policy.”

To recap, these sections confide to the Coast Guard complete discretion as to whether or not to require that chemical and radiological analysis be performed *at all*, on some, none or each load of fracking waste water cargo. The Coast Guard does ***not*** impose a universal requirement of laboratory testing. While the shipper is on notice that the test results will be retrievable under the

federal Freedom of Information Act, the records do not come into the possession of the Coast Guard automatically, but only if the CG requests to inspect those records. There will not be continuous archiving of all testing that is required - if, indeed, the Coast Guard imposes any testing regime in the first place. It is therefore very conceivable that the CG will not inspect laboratory testing records, as a consequence of which no information will come into the public domain at all. The loose, unreliable structure of this new Coast Guard practice does nothing to assure public confidence in the adequacy of protection of America's rivers, which are a major part of the largest drinking and agricultural water sources in North America. There are no criteria in the PPL - in other words, no regulations - which indicate when laboratory analysis is to be performed, nor when it may be waived.

Additionally, although the use of 4,500,000-gallon barges implies that there will be fracking waste from many, perhaps dozens, of wells, mixed together, the Coast Guard still appears willing to protect industrial secrecy of the poisonous contents through a grant of "proprietary" secrecy of these poisonous radioactive wastes. The point of using proprietary protections here is merely to keep secret the embarrassing and troubling extent of toxicity and radioactivity from the public, which is the only legitimate stakeholder. Imposition of proprietary privilege hinders or prevents emergency responders from effectively handling a sudden accident or spill, and also keeps the public from meaningfully analyzing the PPL approach to regulating barge-borne fracking waste transport. It also increases the chances that barge and terminal workers might be needlessly exposed or contaminated with chemicals or radioactivity, with no real knowledge of the dangers.

In sum, the PPL superficially suggests, but does not mandate, that the Coast Guard impose terms and conditions directing testing of 100% of all cargoes. It protects the drilling and shipping industries from informing the public of the details of toxicity and radioactivity of the waste being shipped. The sweeping discretion accorded the federal authorities to regulate SGEWW transport - or not - means that the NEPA and public goals of protection of human and animal health and the environment cannot be assured.

## ***PART II***

### **INVOCATION OF A NEPA CATEGORICAL EXCLUSION TO EXCLUDE THE PPL FROM NEPA COVERAGE IS LEGALLY FLAWED; AN ENVIRONMENTAL IMPACT STATEMENT IS REQUIRED**

#### ***1. Improper Designation of NEPA Categorical Exclusion***

The Coast Guard has gone to extraordinary lengths to avoid preparation of either an environmental assessment ("EA"), or an environmental impact statement ("EIS") under NEPA, by instead finding that implementation of the PPL is a "categorical exclusion" from NEPA coverage. That conclusion is unwarranted and legally incorrect.

Section 9 of the PPL states as follows:

9. ENVIRONMENTAL ANALYSIS. The development of this policy letter and the general policies contained within it have been thoroughly reviewed by the originating office in conjunction with the Office of Environmental Management, and are categorically excluded under current USCG Categorical Exclusion # 33 from further environmental analysis, in accordance with Section 2.B.2 and Figure 2-1 of the National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series). This policy letter will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment. All future specific actions resulting from the general policies in this letter must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), Department of Homeland Security (DHS) and Coast Guard NEPA policy, and compliance with all other environmental mandates.

The Coast Guard found that the “policy letter” will not cause “significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment.” Perhaps a paper letter will not cause any great damage, but the dangerous cargoes that will be enabled by the letter conceivably pose distinct dangers in the form of environmental damage or public health effects.

USCG Categorical Exclusion #33 excludes “[p]reparation of guidance documents that implement, without substantive change, the applicable Commandant Instruction or other Federal agency regulations, procedures, manuals, and other guidance documents.” But nowhere in the Notice of Availability or the PPL is there any articulation of what “applicable Commandant Instruction or other agency regulations, procedures, manuals, and other guidance documents” are the basis of the PPL. The Coast Guard has not proven the existence of any justification to avoid the consequences of compliance with the National Environmental Policy Act (“NEPA”, 42 U.S.C. § 4321 *et seq.*) in the form of preparation of an EA or EIS.

At pp. 2-4 through 2-5 of Commandant Instruction M16475.1D, the Coast Guard’s manual of National Environmental Policy Act “Implementing Procedures and Policy for Considering Environmental Impacts” appears this discussion:

b. *Limitations on Using Categorical Exclusions*. Some actions that normally would be categorically excluded in Figure 2-1 could require additional environmental review and, for this reason, responsible personnel should be alert for circumstances that dictate the need to prepare an EA or EIS. Enclosure (2) is provided to help identify extraordinary circumstances. ***A determination of whether an action that is normally excluded requires additional review must focus on the significance of the potential environmental consequences. The potential environmental consequences must be evaluated in their context (whether local, state, regional, tribal, national, or international) and in their intensity by considering whether the action is likely to***

***involve one or more of the following:***

- (1) Public health or safety.
- (2) A site that includes or is near a unique characteristic of the geographic area, such as a historic or cultural resource, park land, prime farmland, wetland, wild and scenic river, ecologically critical area, or property requiring special consideration under 49 U.S.C. 303( c). [Section 303( c) of Title 49 U.S.C. is commonly referred to as section 4(f) of the Department of Transportation (DOT) Act which includes any land from a public park, recreation area, wildlife and waterfowl refuge, or historic site].
- (3) The quality of the human environment that is likely to be highly controversial in terms of scientific validity or public opinion.
- (4) An effect on the human environment that is highly uncertain or involves unique or unknown risks.
- (5) Future precedent setting actions with significant effects or a decision in principle about a future consideration.
- (6) An individually insignificant, but cumulatively significant, impact when considered along with other past, present, and reasonably foreseeable future actions.
- (7) A district, site, highway, structure, or object that is listed in or eligible for listing in the National Register of Historic Places, or the loss or destruction of a significant scientific, cultural, or historical resource.
- (8) Species or habitats protected by the Endangered Species Act.
- (9) A potential or threatened violation of a Federal, state, or local law or requirement imposed for the protection of the environment.
- (10) An impact that may be both beneficial and adverse. A significant impact may exist even if it is believed that, on balance, the effect will be beneficial.

The simple existence of any of the situations as described in (1)-(10) above is not necessarily a reason to prepare an EA or EIS. ***The determination that a CE is inappropriate and more environmental analysis is needed, or that an EA or EIS is needed, must be based on the potential significance of the proposed action's effects on the environment. The proposed action must be evaluated in its context (whether local, state, regional, tribal, national, or international) and in its intensity by considering the level of possible effects as listed in (1)-(10) above.*** However, a CE may not be used if the proposed action is likely to involve any of the circumstances set forth in section 20.b.(2) of DOT Order 5610.1 series (Enclosure 1). The ten listed circumstances and those in the DOT Order are addressed in the Environmental Analysis Checklist (Enclosure 2). If a CE is not appropriate, an EA or an EIS must be prepared.

(Emphasis supplied).

From this USCG instruction, the “proposed action’s effects on the environment” must be evaluated. The “proposed action” is not the generation of a “clean letter” form for approval of fracking waste shipments via barge; it is the putting into effect of a policy which will allow the actual of shipping millions of gallons of fracking waste water. Those actual effects have yet to be considered under NEPA.

The Coast Guard recently experienced a bad legal outcome following the improper designation of “categorical exclusion” in *U.S. v. Coalition for Buzzards Bay*, 644 F.3d 26 (1st Cir. 2011). There, the Massachusetts legislature enacted the Massachusetts Oil Spill Prevention Act in the wake of a commercial oil spill of 98,000 gallons into Buzzards Bay. The federal government saw this as a threat to its power to regulate commercial shipping on Buzzards Bay and sued to abrogate certain provisions of the MOSPA, asserting that the challenged provisions of the state statutory scheme were preempted by the federal Ports and Waterways Safety Act. While the case was pending before a U.S. district court, the Coast Guard changed the legal seascape by promulgating a final rule relating to navigation in Buzzards Bay. That rule purported expressly to preempt the state law, and it established manning and escort requirements limited to Buzzards Bay. As part of the rulemaking process that culminated in the issuance of that 2007 rule, the Coast Guard eschewed the preparation of either an EIS or an EA, determining instead that its proposed action fell within a categorical exclusion that obviated any such analysis.

Referencing Commandant Instruction M16475.1D and Enclosure 2, the latter of which is a checklist of potential effects,<sup>2</sup> the U.S. Circuit Court found that “The Coast Guard’s reliance on a CE permitted it to avoid *any* environmental analysis.” *Id.* at 35. Noting further that “In the view of many, the proposed rule threatened to decrease materially the level of protection against oil spills in Buzzards Bay,” the First Circuit concluded that “the Coast Guard’s eschewal of any meaningful environmental inquiry was arbitrary and capricious” and sent the agency back to the drawing board to compile either an EIS or EA. *Id.* at 36.

In the case of the PPL proposed for fracking waste, the Coast Guard tacitly acknowledges

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- <sup>2</sup>“1. Is there likely to be a significant effect on public health or safety? (p. 5)
2. Does the proposed action occur on or near a unique characteristic of the geographic area, such as a historic or cultural resource, park land, prime farmland, wetland, wild and scenic river, ecologically critical area, or property requiring special consideration under 49 U.S.C. 303( c)? (p. 5-6)
3. Is there a potential for effects on the quality of the environment that are likely to be highly controversial in terms of scientific validity or public opinion? (p. 7)
4. Is there a potential for effects on the human environment that are highly uncertain or involve unique or unknown risks? (p. 7)
5. Will the action set a precedent for future actions with significant effects or a decision in principle about a future consideration? (p. 7)
6. Are the action’s impacts individually insignificant, but cumulatively significant when considered along with other past, present, and reasonably foreseeable future actions? (p. 7-8)
7. Is the proposed action likely to have a significant impact on a district, site, highway, structure, or object that is listed in or eligible for listing in the National Register of Historic Places, or to cause the loss or destruction of a significant scientific, cultural, or historic resource? (p.8)
8. Will the proposed action have a significant effect on species or habitats protected by Federal law or Executive Order ? (p. 9)
9. Is there a potential or threatened violation of a Federal, State, or local law or requirement imposed for the protection of the environment? (p. 9-10)
10. Is the action likely to have other significant effects on public health and safety or on any other environmental media or resources that are not specifically identified in this checklist? (p. 10)”

that NEPA must be applied at some point. The final sentence of Section 9 of the PPL states, “All future specific actions resulting from the general policies in this letter must be individually evaluated for compliance with the National Environmental Policy Act (NEPA). . . .” It appears that the Coast Guard by these words might have imposed a requirement of EA or EIS preparation each time a shipper requests issuance of a PPL, and if that were true, then perhaps many concerns might be allayed. But that interpretation is improbable, given the CG’s finding of a Categorical Exclusion.

In these comments, below, the commenters discuss the sundry factual aspects of the fracking water cargo policy which require a “yes” check on the Enclosure 2 checklist, and necessitate preparation of an EIS before a PPL can be considered.

## ***2. Fracking Water Has Not Been Adequately Characterized and Chemistry Has Not Been Disclosed to the Public***

There must be serious inquiry into which individual toxic chemicals are present in the fracking waste to be hauled by barge, what the permissible range of radiation levels is, and whether diesel fuel is present in the waste. For example, benzene, which is specifically regulated on the DOT allowable cargo list, is likely to be present in fracking waste. Because the proposed shipments may contain quantities of benzene in excess of .5%, the barge transports may fall under the aegis of 46 CFR § 30-25.3, which imposes workplace safety equipment, signage and notification requirements on tank-ship haulers.<sup>3</sup> However, the Coast Guard has installed no PPL requirement for analyzing SGEWW cargoes for benzene.

It is possible that these chemicals may also require hazardous materials training for barge and terminal 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. But without mandatory analysis of every cargo, this cannot be determined.

## ***3. Missing NPDES and Clean Air Act Enforcement at GreenHunter Terminals***

At New Matamoras, 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. This is similarly true at the Wheeling plant facility. State and federal permits are or may be required at GreenHunter’s facilities under the Clean Water Act’s National Pollutant Discharge Elimination System (NPDES) and Ohio and West Virginia Clean Air Act permitting protocols. These must be disclosed as part of a comprehensive NEPA document, in order for the public to have assurances that they are being protected.

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<sup>3</sup>“§ 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.”

#### ***4. Radium and Irradiated Waste Contents (NORM and TENORM) Have Implications for Transit and Storage***

As the Coast Guard is aware, the fracking waste will contain radium, thorium and uranium, which are naturally-occurring elements. 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.<sup>4</sup> 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.<sup>5</sup>

Naturally-occurring radioactive material (NORM) is not governed by the federal Atomic Energy Act, but is, instead, regulated by the states. According Ohio's 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 not established that the Ohio wells into which GreenHunter is likely to inject fracking wastes conform to Ohio NORM regulations. It is also possible that NORM and TENORM will be mixed for solidification and disposal at the Weavertown facility, then inappropriately sent to Ohio landfills that are not constructed or managed to accommodate this waste. There is a TENORM rulemaking pending in Ohio at a very early stage, which must be accounted for in the Coast Guard's regulatory scheme by means of identification, discussion and analysis in an EIS.

Respecting TENORM, to date there has not been any systematic testing by any Ohio regulatory agency to determine the radium or radioactivity levels inherent to TENORM in produced water or flowback that has been repeatedly transferred from one site to another for the purpose of reinjecting into a producing well. Each time this waste is reinjected into fracking wells, its level of radioactivity is increased. No water treatment or recycling processes to date remove or reduce radiation, and without systematic testing there can be no verification of radiation levels for the purposes of identifying appropriate means of transport, disposal or assurance of worker and public safety. All treatment and recycling processes must be identified to the public in order to establish whether there are adequate arrangements in place for adherence to state laws in Ohio, West Virginia, and any other state which govern SGEWW handling and disposal. This would be another function of a NEPA document.

#### ***5. Rivers and Harbors Act and Clean Water Act Implications During Waste Transport are Unanalyzed and Undisclosed***

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<sup>4</sup><http://www.dispatch.com/content/stories/local/2012/09/03/gas-well-waste-full-of-radium.html>

<sup>5</sup>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/>

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 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). The likelihood of inevitable spillage - for it is inevitable - must be identified, quantified, and discussed in a NEPA document. Spillage will add to the pollution burden in the nation’s rivers, and in the case of GreenHunter, the Ohio River.

#### ***6. Inadequately-Identified Inventorizing of Migratory Birds and Endangered Plant And Animal Species; Islands National Wildlife Refuge***

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 New Matamoras terminal site. Dozens of islands in the Ohio River make up the refuge and provide habitat for freshwater mussels and migratory birds, and also federally-threatened and endangered plant species. 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. There have been no known consultations involving the U.S. Fish and Wildlife Service respecting the protection of threatened and endangered species 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 do not exist. An EIS requires disclosure of such investigations.

This point is also true of downriver parks, game preserves and refuges, state and federal, in the greater Mississippi system.

#### ***7. No Comparison of Barge Transport with Alternative Modes of Transport***

There has been no factual comparison of the economics and environmental effects of barge shipping to other alternative modes, such as truck and rail, other than the casually-repeated observation that barging would be less costly than other means. Hence the overall environmental effects from barge shipping, such as major catastrophic polluting spill events, have not been assessed for probability or built into comparisons with alternative transport modes.

#### ***8. Inadequate Consideration of Worker Safety Hazards and Mitigation Measures***

Onloading and offloading periods are significant windows for environmental and worker safety impacts. Nevertheless, the PPL affords virtually no consideration of potential onloading and offloading impacts or of safety protocols relating to these crucial junctures in the SGEWW transportation process. Moreover, while the PPL does identify radon venting as an important safety precaution, the PPL’s suggestion that workers avoid vent areas is overly simplistic and begs more in-depth analysis of mitigation measures such as worker distance from vents, changes in wind direction, and breathing mask options, to name a few.

**PART III. THE PROPOSED ALLOWANCE OF BARGE SHIPPING  
OF FRACKING WATER MUST BE ADDRESSED UNDER NEPA**

The unique, unprecedented nature of the planned water shipments of fracking waste, with unique terminal operations, obligates the U.S. Coast Guard to compile an environmental impact statement pursuant to 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.

When there is a regional plan, or when multiple federal programs will have a "cumulative or synergistic environmental impact upon a region," the lead agency must prepare a programmatic environmental impact statement ("PEIS") on the regional plan or on the programs' combined impact. *See Kleppe v. Sierra Club*, 427 U.S. 390, 400-02 & 410, 96 S.Ct. 2718, 49 L.Ed.2d 576 (1976) (citing § 4332(2)( c)).

Fracking waste water transport on the scale contemplated by the PPL must be evaluated under NEPA for the additional reason that the SGEWW has been historically exempted from regulation under the Resource Recovery and Conservation Act ("RCRA"), despite the fact that SGEWW contains many chemicals otherwise regulated under RCRA. Fracking waste is exempt from RCRA through the point of permanent disposal. Make no mistake - many of the known chemicals involved in hydraulic fracturing qualify under RCRA as "hazardous waste" when used in other processes than fracking. Mere administrative or statutory nomenclature does nothing to reduce toxicity or risk of exposure of human beings or the environment to chemicals or radiation.

***1. The Coast Guard's 10-Point Checklist Result Compels an EIS***

Applying the Coast Guard's 10-point checklist for determination of whether or not a NEPA EA or EIS must be compiled suggests, convincingly, that EIS treatment is indicated. Taking the checklist points *seriatim*, there are many justifications which oblige an EIS:

"1. Is there likely to be a significant effect on public health or safety?"

Yes. There is spillage and accident potential onto land adjacent to river systems, and into the rivers themselves. The spills would involve toxic chemicals and radiation. Shipping and terminal workers and members of the public could be affected.

"2. Does the proposed action occur on or near a unique characteristic of the geographic area, such as a historic or cultural resource, park land, prime farmland, wetland, wild and scenic river, ecologically critical area, or property requiring special consideration under 49 U.S.C. 303

(c)?”

Yes. GreenHunter’s principal focus is the Ohio and Mississippi River basins, which are critical river systems with critical ecological features, farmland, wetlands, parks and cultural resources which could be affected.

“3. Is there a potential for effects on the quality of the environment that are likely to be highly controversial in terms of scientific validity or public opinion?”

Yes. The waste from hydraulic fracturing poses unprecedented volumes and concentrations of toxic, heavy metals, and radioactive content. The science is emerging (or finally achieving notice) and the controversies over the safety of fracking and its resultant wastes and disposal of those materials, along with the consumption of water, are very significant.

“4. Is there a potential for effects on the human environment that are highly uncertain or involve unique or unknown risks?”

Yes. Routine leakage and, as well, large-volume spillage into major river systems will add proprietarily-protected but toxic chemicals and radiation to the burdens already present, threatening drinking water and irrigation facilities for hundreds of miles downstream.

“5. Will the action set a precedent for future actions with significant effects or a decision in principle about a future consideration?”

Yes. While the proposed regulatory action would benefit at present only a single firm by allowing the transport of fracking water via barge, the availability of this considerably less-expensive transportation mode may attract other firms to barge shipping of fracking waste. To accord such a huge and dangerous waste stream access to water transportation without compliance with NEPA would be administratively and legally precedential.

“6. Are the action’s impacts individually insignificant, but cumulatively significant when considered along with other past, present, and reasonably foreseeable future actions?”

The action will likely generate impacts across the nation. In addition, the consequences of major spills could themselves be individually significant. Moreover, a new policy opening the nations’ rivers to the transportation of SGEWW – the volumes of which will be potentially unprecedented – is reasonably certain to substantially impact the locations and methods of ultimate SGEWW disposal, the shale gas and shale gas waste disposal industry, and the environment.

“7. Is the proposed action likely to have a significant impact on a district, site, highway, structure, or object that is listed in or eligible for listing in the National Register of Historic Places, or to cause the loss or destruction of a significant scientific, cultural, or historic resource?”

Yes, in the event of a major spill or spills, the Ohio River Islands Refuge and other scientific and cultural resources downstream would be affected, including the Ohio River itself, which is a popular recreation facility for hundreds of miles of its length, and potentially such facilities in the Mississippi River basin as well.

“8. Will the proposed action have a significant effect on species or habitats protected by Federal law or Executive Order?”

Yes, major spills could affect aquatic and mammalian species because of significant polluting effects.

“9. Is there a potential or threatened violation of a Federal, State, or local law or requirement imposed for the protection of the environment?”

Yes. NEPA, Clean Water Act, Clean Air Act, Endangered Species Act, Rivers and Harbors Act of 1899, Safe Drinking Water Act, various Ohio environmental statutes.

“10. Is the action likely to have other significant effects on public health and safety or on any other environmental media or resources that are not specifically identified in this checklist?”

Yes. Drinking water systems for large and small cities and population centers downstream of major spills and routine toxic/radioactive leakage of fracking waste don't have the capability of removing radiation and some toxics, and would have to be shutdown or produce poisoned water for consumption. Irrigation and industrial systems drawing directly from affected rivers could poison food supplies or endanger workers and local streams and drainage networks.

## ***2. Conclusion: Coast Guard Has Not Complied with NEPA***

The Coast Guard's insufficient discharge of its legal responsibility here threatens public health and safety. The agency proposes to exempt a major formalized new shipping cargo policy from scrutiny for its potential effects on human health and the environment, The public interest and the law require that fracking waste water be analyzed as a cargo type which contains many possibly unique hazardous and toxic chemical compounds, as well as the hazard of radioactivity. The Proposed Policy Letter - *viz.*, federal approval to ship fracking waste - 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 a new policy which allows 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).

For all these reasons, we respectfully request that the PPL be withdrawn; that the Coast Guard comply with the requirements of NEPA; that a Programmatic Environmental Impact Statement be compiled; and that a site-specific EIS be prepared for the GreenHunter Water, LLC business plan.

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