

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF INDIANA**

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<b>THE SIERRA CLUB; THE CHEMICAL WEAPONS</b>	)	
<b>WORKING GROUP; CITIZENS AGAINST</b>	)	
<b>INCINERATION AT NEWPORT (CAIN);</b>	)	
<b>COMMUNITY IN-POWER DEVELOPMENT</b>	)	
<b>ASSOCIATION (CIDA); SARA MORGAN;</b>	)	
<b>LEONARD AKERS; HILTON KELLEY;</b>	)	
<b>MOYA GREEN; AND ANISHA SWALLOW,</b>	)	
	)	
<b>Plaintiffs,</b>	)	
	)	
<b>v.</b>	)	<b>Case No.</b>
	)	<b>2:07-cv-0101 LJM-WGH</b>
<b>DR. ROBERT M. GATES, SECRETARY OF</b>	)	
<b>DEFENSE; PETE GEREN, SECRETARY OF THE</b>	)	
<b>ARMY; UNITED STATES DEPARTMENT OF</b>	)	
<b>DEFENSE; UNITED STATES DEPARTMENT OF</b>	)	
<b>THE ARMY; VEOLIA ENVIRONMENTAL</b>	)	
<b>SERVICES, INC.,</b>	)	
	)	
<b>Defendants.</b>	)	

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**PLAINTIFFS' MEMORANDUM IN SUPPORT OF MOTION FOR A TEMPORARY  
RESTRAINING ORDER AND PRELIMINARY INJUNCTION**

The Sierra Club, the Chemical Weapons Working Group, and the other named Plaintiffs hereby, by counsel, respectfully submit their Memorandum in support of their request that this Court issue a temporary restraining order and preliminary injunction directing Defendants to cease any further transport or incineration of chemical warfare agent VX or VX hydrolysate until Plaintiffs' Complaint is decided on the merits at trial or otherwise resolved. Expert declarations and other exhibits are attached in support of this memorandum.

## I. STANDARD FOR GRANTING PRELIMINARY INJUNCTION

The traditional standard for deciding a motion for a preliminary injunction is well established. In order to obtain a preliminary injunction, the moving party must show: (1) some likelihood of success on the merits, (2) irreparable harm if the preliminary injunction is denied, and (3) the inadequacy of any remedy at law. *See, e.g., Christian Legal Society v. Walker*, 453 F.3d 853 (7<sup>th</sup> Cir. 2006); *Joelner v. Village of Washington Park, Illinois*, 378 F.3d 613, 619 (7<sup>th</sup> Cir. 2004); *Eli Lilly & Co. V. Natural Answers, Incorp.*, 233 F.3d 456, 461 (7<sup>th</sup> Cir. 2000).

“[A] 'likelihood of success' exists if the party seeking the injunctive relief shows that it has a 'better than negligible' chance of succeeding on the merits.” *Washington v. Indiana High School Athletic Assoc.*, 181 F.3d 840, 846 (7<sup>th</sup> Cir. 1999). "Inadequate remedy at law does not mean wholly ineffectual; rather, the remedy must be seriously deficient as compared to the harm.” *Food Comm Intern. v. Barry*, 328 F.3d 300, 304 (7<sup>th</sup> Cir. 2003). Once this threshold showing is made, the Court balances the harm to the moving party if the preliminary injunction were wrongfully denied against the harm to the non-moving party if the preliminary injunction were wrongfully granted. *Ty, Inc. v. The Jones Group*, 237 F.3d 891, 895 (7<sup>th</sup> Cir. 2001); *see also American Amusement Machine v. Kendrick*, 244 F.3d 572, 580 (7<sup>th</sup> Cir. 2001).

When balancing the harms, a “sliding scale” approach is used. “[T]he more likely the moving party will succeed on the merits, the less the balance of irreparable harms need favor the [moving party’s] position.” *Id.* at 895; *Food Comm Intern. v. Barry*, 328 F.3d 300, 303 (7<sup>th</sup> Cir. 2003); *Promatek Industries, Ltd. v. Equitrac Corp.*, 300 F.3d 808, 811 (7<sup>th</sup> Cir. 2002); *Ty, Inc.*, 237 F.3d at 896 (7<sup>th</sup> Cir. 2001). The Court must also consider the public interest. *Id.* at 895. When weighing the interests of the parties and the public, a court should try to “minimize the

costs of being mistaken.” *Id.* at 902. This balancing test and the irreparable harm requirement may be relaxed where plaintiffs serving as private attorneys general pursuant to statute seek injunctive relief to protect public health and the environment. *United States v. Bethlehem Steel Corp.*, 38 F.3d 862 (7th Cir. 1994); *Scherr v. Volpe*, 466 F.2d 1027 (7th Cir. 1972).

Delay in pursuing a preliminary injunction does not lessen a claim of irreparable injury unless the delay lulled a defendant into a false sense of security or was unreasonable. *Id.* at 903. There is no rule that irreparable injury cannot exist if the plaintiff delays filing such a motion. *Ideal Industries, Inc. v. Gardner Bender, Inc.*, 612 F.2d 1018, 1025 (7<sup>th</sup> Cir. 1979).

## **II. PLAINTIFFS ARE LIKELY TO SUCCEED ON THE MERITS**

### **A. PLAINTIFFS ARE LIKELY TO SUCCEED ON THEIR COUNT 1 RCRA CLAIM**

Plaintiffs in Count 1 of their Complaint assert a claim under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6972(a)(1)(B). Plaintiffs' suit is brought to protect public health and the environment from dangers posed by the Defendants' hazardous waste activities. "[T]he idea behind citizen suit enforcement is to unleash an army of private attorneys general to force cleanups when the government drags its feet . . ." *AM International, Inc. v. Datacard Corp.*, 106 F.3d 1342, 1349 (7<sup>th</sup> Cir. 1997). Plaintiffs' claim in Count 1 does not assert violation of a specific hazardous waste regulation but asserts that Defendants' solid and hazardous waste handling and treatment activities are contributing to an imminent and substantial endangerment to public health and the environment subject to injunction under 42 U.S.C. § 6972(a)(1)(B). "Unlike its subsection (a)(1)(A) counterpart, subsection (a)(1)(B) does not require a plaintiff to point to a violation of a specific regulation." *AM Int'l, Inc. v. Datacard Corp.*, 106 F.3d 1342, 1349 (7<sup>th</sup> Cir. 1997).

The Army is in the process of chemically "neutralizing" large quantities of chemical warfare agent VX at the Army's Newport Chemical Depot in Indiana. The Army's VX neutralization process results in the creation of a large quantity of caustic VX hydrolysate (CVXH) – approximately two million gallons. This CVXH is being transported to Port Arthur, Texas and incinerated in a commercial hazardous waste incinerator. The attached declarations of experts Dr. Michael Sommer, Dr. Neil Carman, and Dr. Fred Millar, and government studies and reports referenced herein, make clear that Defendants' transport and incineration of CVXH poses a danger to the public and environment that warrants injunctive relief.

The United States has waived sovereign immunity. *See* 42 U.S.C. §§ 6961; 6972. The 90 day notice prerequisite to an imminent hazard suit imposed by the statute is not a bar to Plaintiffs' prosecution of Count 1 because other claims in the Complaint assert violations of applicable RCRA hazardous waste regulations.<sup>1</sup> *AM Int'l, Inc. V. Datacard Corp.*, 106 F.3d 1342, 1349-52 (7<sup>th</sup> Cir. 1997).

### **1. Legal Standard for Plaintiffs' Count 1 Claim of a RCRA Imminent Hazard**

RCRA's citizen suit provision prohibits (subjects to injunctive relief) the handling of solid or hazardous waste in a manner that contributes to the creation of an imminent and substantial endangerment (imminent hazard) to the public or the environment. 42 U.S.C §§ 6972(a)(1)(B).

[A]ny person may commence a civil action on his own behalf--  
(1) . . . (B) against any person, including the United States . . . including any past or present generator, past or present transporter, or past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or

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<sup>1</sup> "RCRA allows each state to promulgate its own hazardous waste program. 42 U.S.C. § 6926. If a state program receives EPA authorization, its standards supersede federal regulations. *AM Int'l, Inc. V. Datacard Corp.*, 106 F.3d 1342, 1350 (7<sup>th</sup> Cir. 1997).

disposal of any solid or hazardous waste which **may present an imminent and substantial endangerment to health or the environment.**

42 U.S.C. § 6972(a)(1) (emphasis added). Only a demonstration of threatened potential harm, not actual harm, is required to support an imminent hazard claim. *Reserve Mining Company v. EPA*, 514 F.2d 492, 519 (8th Cir. 1975). Where concepts of potential harm are applicable due to scientific uncertainty, preliminary injunctive relief is appropriate as a precautionary measure. *United States v. Vertac*, 489 F.Supp. 870, 880-81 (E.D. Ark. 1980).

Significantly, congress used the word "may" to preface the standard of liability: . . . *United States v. Price*, 688 F.2d 204, 213 (3d Cir.1982); *United States v. Waste Industries, Inc.*, 734 F.2d 159, 166 (4th Cir.1984). This is "expansive language", which is "intended to confer upon the courts the authority to grant affirmative equitable relief to the extent necessary to eliminate any risk posed by toxic wastes." *Price*, 688 F.2d at 213-14. [citations omitted] . . . *United States v. Waste Industries, Inc.*, 734 F.2d 159 (4th Cir. 1984). **Courts have consistently held that "endangerment" means a threatened or potential harm and does not require proof of actual harm.**

*Dague v. City of Burlington*, 935 F.2d 1343, 1355 - 1356 (2d Cir. 1991) (emphasis added), *rvsd.* on other grounds, 112 S. Ct. 2638 (1992). *And see, Maine People's Alliance v. Mallinckrodt, Inc.*, 471 F.3d 277 (1<sup>st</sup> Cir. 2006).

**Indeed, these provisions have enhanced the courts' traditional equitable powers by authorizing the issuance of injunctions when there is but a risk of harm, a more lenient standard than the traditional requirement of threatened irreparable harm.** H.R.Rep.No.96-191, 96th Cong., 1st Sess., at 45 (1979); H.R.Rep.No.93-1185, 93rd Cong., 2nd Sess., reprinted in (1974) U.S. Code Cong. & Ad. News 6454, 6488.

Congress, in the endangerment provisions of RCRA ... sought to invoke nothing less than the full equity powers of the federal courts in the effort to protect public health, the environment, and public water supplies from the pernicious effects of toxic wastes. Courts should not undermine the will of Congress by either withholding relief or granting it grudgingly.

*United States v. Price*, 688 F.2d 204, 211, 214 (3d Cir. 1982) (emphasis added). Congress in

amending RCRA affirmed the Price court's interpretation of the broad powers provided. H.R.Rep.No. 98-198, 98th Cong., 2d Sess., at 48 (1984), reprinted in, 1984 U.S. Code Cong. & Ad. News 5576, 5607. RCRA is a remedial statute and should be liberally construed. *United States v. Price*, 688 F.2d 204, 211, 213-14 (3d Cir. 1982). This RCRA imminent hazard standard was recently confirmed by the First Circuit in a thorough examination of the case law and legislative history. *Maine People's Alliance v. Mallinckrodt, Inc.*, 471 F.3d 277 (1<sup>st</sup> Cir. 2006).

## **2. Risk of Accident During Transport of VX Hydrolysate**

VX is a nerve agent and one of the most toxic chemical warfare agents ever synthesized. Sommer Declaration (Decl.) ¶8; Exhibit (Ex.) 13. With its high viscosity and low volatility, VX has the texture and feel of high-grade motor oil. Its high environmental persistence makes it more dangerous. *Id.* ¶9. VX is produced via the "Transester Process," a complex chemical process involving, among other chemicals, chlorinated compounds. *Id.* ¶10. According to the National Research Council (NRC), the VX stored at the Army's Newport, Indiana Depot is 90.5-94.8% pure, the components being poorly characterized. *Id.* ¶13.

VX may be destroyed by the reaction of VX with concentrated aqueous sodium hydroxide (hydrolysis or "neutralization"), but this process creates environmentally stable highly toxic EA 2192 and other toxic products. *Id.* ¶¶17,19; Ex. 4, Att.4 at 25. EA 2192 has a toxicity about the same as VX itself. Ex. 4, Att. 2 at 5. The federal Centers for Disease Control (CDC) concluded that there is inadequate data on the toxicity of the EMPA and MPA constituents of CVXH. Ex. 4, att.2 p.1. CVXH is highly corrosive. Dermal or eye contact or inhalation could result in severe, possibly irreversible damage. Ex. 4, att.2 p.1.

The CVXH may contain significant residual VX. The Army's stated approach for dealing

with this possibility is to use laboratory analyses to ensure that the residual chemical agent in the hydrolysate is less than 20 parts per billion (ppb). *See, e.g.*, Ex. 5 at 9. If the hydrolysate does not clear, it must be reprocessed. This limit of 20 ppb is the Army's effective battlefield drinking water guide for soldiers based on the limitations of the field analytical devices. Ex. 4 at 10, Att. 5 at 5. The NRC recommended 2.5-7.5 ppb for soldiers's drinking water in battle conditions. Ex. 8.

The Army assured the public that VX is non-detect in the hydrolysate. Ex. 6 at 9. The Army also has stated that EA 2192 must be “non-detect” in the hydrolysate with an MDL of 1 ppm or less. Sommer Decl. ¶21; Ex. 5 at 9. The Army has ignored actual instrument detections of VX or EA 2192 and misdescribed them as “non-detect.” Sommer Decl. 22. Validated testing methods for the VX hydrolysate are essential to ensure that the hydrolysate meets the Army's criteria. The Army claims it has developed “validated” test methods for VX and EA 2192 in the CVXH. However, the basis for this “validation” is not apparent in the Army's reports. *Id.* ¶23.

The CVXH has an aqueous phase, organic phase and solid phase. *See, e.g.*, Ex. 5 at 10. Differing VX and VX degradation products are distributed within each phase. The Army in its 2002 Environmental Assessment (EA) did not report details of the chemical/ physical nature of these aqueous, organic and solid phases, or the concentrations of VX, EA 2192 or other toxic contaminants in each phase. Sommer Decl. ¶26. The organic phase exists both as an emulsion with droplets distributed throughout the aqueous phase and as an organic layer that floats on top of the continuous aqueous phase. At 33% agent loading (weight) during neutralization, the organic layer was 3%–5% (volume). The VX in this organic layer was ~20 times the concentration in the bulk hydrolysate, greater than 20 parts per billion. Ex. 4, Att. 4 at 2.

The Army reports the Newport CVXH has a 2-5% organic layer. Ex. 2 App. B. CDC

reports that the CVXH organic layers for 16% and 33% VX loadings are similar. One study showed extraordinary toxicity in this layer, finding that toxicity testing of the top organic layer killed 12 of 12 dermally treated rabbits and 12 of 12 orally treated rats and that the animals died from agent (VX)-associated effects. Subsequent analysis showed the organic layer contained 2000 ppm VX. CDC, however, promptly discounted the result as lab contamination error, although no evidence of lab contamination was reported. Ex. 4, Att. 2 at 4. CDC also reported but discounted positive predictions of toxicity for developmental effects for MPA and EMPA and bacterial mutagenicity for EMPA. Ex. 4, Att. 2 at 5. CDC admits that dermal toxicity of EA 2192 may be increased because the caustic nature of the CVXH will "compromise" the normal protectiveness of the skin barrier. Ex. 4, Att. 2 at 5.

VX is highly mobile in the environment, and persists for weeks in slightly acidic waters. A VX hydrolysis by-product, EA 2192, is environmentally persistent and highly toxic with infinite solubility in water. Sommer Decl. ¶28. VX hydrolysis can yield significant quantities of EA 2192. *Id.* ¶25. The NRC has noted the potential for VX to reform in VX hydrolysate (aqueous phase) if pH drops. *Id.* ¶¶8, 29; Ex. 3, App. D. VX is present in the emulsion droplets and the organic layer. The pH of the hydrolysate is irrelevant to the organic phases. To suggest that the total hydrolysate is safe at high pH ignores the nature of the organic layer and emulsion. *Id.* ¶31. The Army's sampling and analytical methods may not account for the VX in the organic layer and emulsion droplets. *Id.* VX levels are significantly higher in the organic phase. *Id.* ¶32.

The Army's test methods for post-neutralization CVXH are inadequate to ensure protection of public health and the environment. The Army's method ignores numerous reaction products and assumes that only VX and EA 2192 are in the hydrolysate. Many of the reaction

products are toxic. This flaw could result in serious adverse consequences. *Id.* ¶ 33.

Scientific studies indicate that organophosphates (OPs) may have synergistic effects in combination. Ex. 14 (subsection on "mixtures"). Such mixtures may have 50 times greater toxicity than would be expected from adding the components' toxicity. *Id.* OPs VX and EA2192 are both present in CVXH, and the public has already been exposed to organophosphate pesticides. *See* Ex.s 16, 18-20. Consequently, synergistic toxicity for CVXH cannot be ruled out.

Infants and children are more at risk from toxic chemicals than adults. Ex.s 17-20. The Army has not provided data regarding how much less VX or EA2192 it would take to harm an infant or child compared to the healthy adult soldier for which VX was targeted. The Army's toxicity tests on CVXH were performed on CVXH having no detectable EA2192 or VX. Ex. 2 App. B. The Army found that this CVXH had a toxicity 1,800 times less than pure VX. Ex. 2 at B-3. A toxicity 1,800 times less than VX would equate to the toxicity of 550 parts per million (or 550,000 ppb) VX (for adults). CVXH containing VX or EA2192 would be more toxic.

If synergistic effects occur from VX and EA 2192 together, or when humans with OP exposures are exposed to the CVXH, there is potential for a 50 times greater toxicity than VX and EA 2192 free CVXH tests would show. If an uncertainty factor of 10-100 is used for the greater sensitivity of infants and the developing fetus, then the VX and EA2192 in the upper layer, as a mixture, assuming synergy, could be orders of magnitude more toxic to an infant. VX also has increased toxicity at higher wind speeds. Ex. 14. In an accident involving an explosion, VX and EA2192 could be transported with explosive force, causing greater toxicity. Given this toxicity of the CVXH, VX and EA2192, synergistic effects, concentration in the upper layer, greater sensitivity of an infant or fetus, and greater toxicity with higher wind speed, an

accident would be likely to cause serious illness, injury and possibly fatalities. The anonymous and confidential whistleblower reports that several hundred ppm of EA2192 has been detected in the Newport CVXH, if proven out in an evidentiary hearing by Army records and testimony, adds to this concern. The potential for VX reformation increases the danger of shipping 2,000,000 gallons of CVXH through 8 states. Approximately 500 single truck trips will be required.

The Defendants, despite reports from Plaintiffs that Defendants' employees and agents disclose that samples of spilled CVXH contained 48 ppb VX and 500 ppm EA2192, first failed to retest the CVXH or its top layer before transport, or now appear to be using invalid and improper test methods. Defendants inaccurately represent that the CVXH being transported contains no detectable amount of VX or EA2192. *See* Ex. 6 at 9; Ex. 10 at 1. Plaintiffs are prepared to subpoena at hearing Army and Army contractor personnel who have knowledge of the test results showing levels of VX and EA2192 in the CVXH, and flammability, that violate the Army's own off-site shipment standards, and records of same. Plaintiffs are also prepared to subpoena such personnel with knowledge that the VX test method used is invalid and biased low.

The Army's EA estimates truck injuries, fatalities and crashes from shipment of CVXH to two hypothetical destinations, but does not consider release of VX or EA 2192 as a result of a crash, fire, or terrorist attack. The EA does not consider the specific shipment patterns and conditions for shipment to Port Arthur. The potential for a terrorist organization to acquire a CVXH truck and take steps to reform the VX using available chemicals is also not addressed in the EA. Millar Decl. ¶15. A release from a truck containing CVXH having residual VX, as with other ultra-hazardous materials, whether by accident or terrorism, could cause deaths, injuries, terror and economic harm, especially in densely populated or hard to evacuate areas. *Id.* ¶16.

Such an EA should take into account not only the probability that each type of hazardous materials release (by accident or by terrorism) would occur, but also the harmful consequences from each kind of release. *Id.* ¶17. There has been no careful government study of the likelihood and consequences of toxic chemical releases involving the CVXH shipments to Port Arthur. The CDC's earlier approval of shipments to New Jersey were premised on there being no VX in the CVXH. *Id.* ¶18. Even so, DuPont, did route analyses and chose a preferred safest route.

The tragic accident in Bhopal, India is a type of event many citizens and officials worry about – a toxic gas release that killed 3000 to 6000 and injured 100,000 people in one night. *Id.* ¶19. The U.S. Chemical Safety and Hazards Investigations Board concluded based on the tragic history of chemical facility and transportation disasters that community emergency response capabilities are sorely lacking and the safety culture of the shippers and carriers is defective. *Id.* ¶22. The Board chairman compared the woeful readiness of U.S. cities to Bhopal. *Id.*

After the 9/11 attacks, many efforts have been initiated by carriers and governments to improve security in chemical transportation. In Iraq, terrorists have used chlorine gas truck bombs as terror weapons. Any cargo containing residual VX, a weapon of war, carries a similar stigma and consequent power as a terror weapon, even aside from the potential for terrorists to increase VX levels in the CVXH. *Id.* at ¶24. The FBI has issued warnings that terrorists have expressed an interest in attacking shipments of ultra-hazardous materials. *Id.* at ¶25.

The Army previously decided, due to public concerns about transportation, to destroy the chemical weapons at eight existing storage sites and spent millions to help communities beef up emergency preparedness. Oak Ridge National Laboratories had developed routing plans (never implemented) to Utah that would avoid large cities. *Id.* ¶27. The State of Nevada commissioned

studies documenting public anxieties (“dread”) and potential “stigma” impacts on property values along nuclear waste routes. Proposed VX and related shipments have elicited similar public concerns. The proposed shipment of CVXH to Dayton, Ohio was abandoned largely due to public concern as was the subsequent planned shipment of the CVXH to New Jersey. *Id.* ¶28.

A partially-successful terrorist attack on a shipment containing any chemical agent could result in significant reactions by emergency response authorities, the public and the media, thus providing terrorists desired impacts. One slowly leaking chlorine rail tank car near burning propane tank cars derailed in Mississauga, Ontario in 1979 caused authorities to order the precautionary evacuation of 250,000 residents for a week. *Id.* at ¶29. There is no Army analysis of the vulnerability of the Port Arthur shipments to terrorist attacks, or impacts therefrom.

No U.S. container (truck or railcar) for ultrahazardous materials has been built to be resistant to terrorism. Even high-level nuclear waste (spent fuel) casks are penetrable by certain shoulder-held weapons. *Id.* at 32. No study of crashworthiness or terrorism resistance of the containers used in the Port Arthur shipments has been prepared. An accidental release of hazardous material is likely to be less devastating than a release engineered by terrorists. A shoulder-fired weapon could rupture a tank, releasing all of its contents. *Id.* ¶33. One cannot rule out several simultaneous attacks as happened in Spain and London. *Id.* Terrorists are more likely to choose targets that threaten densely-populated areas to maximize terror effects. *Id.*

Federal regulation of the chemical shipping and rail and truck carrier industries is woefully inadequate. *Id.* ¶36. A federal truck safety study decisively showed that the major gasoline tank truck on U.S. highways cannot contain its cargo. In the gentlest of overturn experiments, gasoline spews out from many openings along its top in what the study calls “a

spray pattern looking for an ignition source.” *Id.* ¶37. A gasoline tanker recently released its cargo in an overturn on a ramp in Oakland. The fire destroyed the Interstate freeway above. *Id.*

Physical security measures cannot prevent access by determined terrorists to routes over which CVXH are transported, as evidenced by ubiquitous graffiti on trains, trucks, and structures along such routes. *Id.* at ¶39. Nor do such measures prevent determined individuals from putting themselves in areas near ultra-hazardous placarded vehicles, where a terrorist could easily cause a catastrophic release with a number of explosive and incendiary devices. *Id.* at ¶40.

Although shippers, carriers and agencies emphasize ensuring compliance with existing hazardous materials regulations, see, e.g., Ex. 2 at 1-4, 3-1, 3-2, these regulations are based on (inadequate) data on the history of accidental spills. These regulations are not based on the potential for deliberate catastrophic terrorist releases. *Id.* ¶41. Given the inadequacy of existing regulations and the serious risks posed by the Army's transport of 2,000,000 gallons of CVXH, it would be prudent for the Army to prepare an Environmental Impact Statement (EIS) to assess these risks and alternatives, including treatment of CVXH at Newport using supercritical water oxidation (SCWO), as the Army originally decided, which may pose the smallest risks. *Id.* ¶43.

Given these dangers from transport of the CVXH, Plaintiffs have a high likelihood of showing that Defendants' actions in transporting CVXH from Indiana to Texas "may present an imminent and substantial endangerment to health or the environment."

### **3. Risks from Incineration of the VX Hydrolysate**

The incineration of CVXH also creates an additional set of dangers. Incineration as conducted at the Veolia Environmental Services (Veolia) commercial hazardous waste incinerator is not a perfect technology. Pollutants are continuously released to the atmosphere in

stack gases and fugitive emissions. Carman Decl. ¶13. The pollutants released contain an array of toxic substances, including many chemicals that remain unidentified. *Id.*; Ex. 15.

Chemicals released include dioxins and furans, polychlorinated biphenyls (PCBs), naphthalenes, benzenes, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and heavy metals including mercury, lead, chromium, and arsenic. *Id.* Such chemicals are released as a result of standard incinerator operations. *Id.*; Ex. 15. Incinerators have inherent flaws and are prone to certain types of upsets causing higher rates of chemical releases. Carman Decl. ¶14. The burning of waste containing the highly toxic agent VX poses serious health concerns given the proximity of the Veolia incinerator to the Port Arthur community. *Id.* ¶21.

Many incinerator emissions are known to be persistent (highly resistant to biological breakdown), bioaccumulative (tissue concentrations increase over time with repeated exposures), and toxic, including mutagens, carcinogens, teratogens, neurotoxins, immunotoxins, endocrine disruptors, developmental toxicants, and other poisons. The EPA terms such chemicals "PBT's" (persistence, bioaccumulative, and toxic). These properties of PBT's make them a danger to biological systems. *Id.* ¶16. Stack emissions and inadequately monitored emissions raise community health concerns. The permits allow certain toxic stack gaseous and particulate emissions. The emissions are assumed by regulators to be safe and within limits if the incinerator is operating within the permit, but many toxic substances are not monitored. *Id.* ¶17.

The National Research Council's (NRC) 2000 report confirms that chemical reformation of agent VX in the hydrolysate is expected if the pH drops (or is caused to drop) after the initial treatment. *Id.* ¶21; Ex. 3. The Army has provided no information on the pH levels of the hydrolysate during transport or hydrolysate being stored at Port Arthur, Texas. VX reformation

could convert the Veolia incinerator into an unpermitted chemical warfare agent incinerator.

The danger from CVXH incineration is serious because the Veolia incinerator is not equipped with a stack continuous emissions monitoring system to detect VX. Without operating stack VX monitors, unburned VX nerve agent may escape without being detected and without operators taking immediate action to abate the release. Carman Decl. ¶23. Nor is the facility equipped to do community air monitoring to track agent VX, or toxic byproducts, once emitted. Absent such systems, there will be no warning to Port Arthur residents of a VX release. *Id.* ¶24. Local and State officials are likewise not trained or equipped to conduct air monitoring. *Id.* ¶25.

Army ACAMS and minicams can detect VX in air, as can Fourier Transform Infrared technology (FTIR), but such technology is not in place at the Veolia facility. Current Army chemical warfare agent incinerators rely on air monitoring systems for agent VX and other agents. At these facilities, the local population is provided training and safety equipment for use in an emergency. None of these protective measures are available in Port Arthur. *Id.* ¶27.

Port Arthur, Texas is an Environmental Justice (EJ) community that already has been disproportionately impacted by oil refinery, chemical plant, and hazardous waste incinerator pollution. Burning of two million gallons of CVXH increases the injustice to the Port Arthur community. *Id.* ¶28. Jefferson county ranks near the top in Texas in terms of number of major industrial sources, with 72 such plants, and ranked #2 among Texas counties, second only to Houston-Harris County, the most heavily industrialized region in the U.S. for oil refining and chemical plants. *Id.* ¶29. Port Arthur sits in one of the most heavily industrialized and polluted corridors of the nation. *Id.* ¶32. Jefferson County has several large clusters of major petroleum refineries, chemical plants, other industrial plants, toxic waste sites, and incinerators. *Id.* ¶33.

These industrial facilities create a high volume of toxic and criteria air pollution. Criteria pollutants classified by the EPA include sulfur dioxide, particulate matter ten microns or less (PM 10) and two and one half microns or less (PM 2.5) in diameter, nitrogen dioxide, carbon monoxide, lead and ozone. EPA has designated the Beaumont-Port Arthur area as an eight-hour ozone nonattainment area due to ground level ozone-smog from industrial emissions. This area was designated as a one-hour ozone nonattainment area for more than a decade. *Id.* ¶42.

Based on the EPA's annual Toxic Release Inventory (TRI) database of the most polluted communities in the nation, the Port Arthur community and Jefferson County have frequently ranked among the top 10-20 areas in the U.S. for the highest volumes of toxic releases into the environment between 1988-2004, especially releases to the air. *Id.* ¶43. In 2002, TRI reporting plants in Jefferson County reported 25,167, 891 pounds of toxic substances released to the environment, and 11,035,685 pounds of TRI air releases, ranking #21 nationally for TRI air releases and #18 in total TRI releases. The TRI air releases are serious health concerns, exposing thousands of residents daily. *Id.* ¶44. Toxic chemicals released in Port Arthur include millions of pounds of TRI air pollution including oil refineries, petrochemical and chemical plants emissions of carcinogens, and reproductive, neurological, developmental, and other poisons. *Id.* ¶45.

Veolia's TRI chemical releases into the air of Port Arthur included 17,828 pounds of highly toxic air pollution including carcinogens, and reproductive, neurological, immunological, developmental, and respiratory toxicants. *Id.* ¶46. Veolia's Port Arthur commercial hazardous waste incinerator reported emissions of more different types of toxic chemicals than any refineries, chemical plants or other industrial facilities report most years due to the diversity of toxic waste disposed of at the incinerator. The 17,828 pounds does not include several criteria air

pollutants like nitrogen oxides, carbon monoxide, particulate matter, or sulfur dioxide which are reported to the state TCEQ under a separate state reporting system. *Id.* ¶48.

During 2002, Veolia reported releasing 87 TRI-reportable substances into Port Arthur's air supply in complex variable mixtures. The actual number of individual toxic chemicals released likely numbers in the hundreds. *Id.* ¶49. These chemical mixtures are inadequately evaluated in terms of health effects and toxicology. In addition to the 87 reported toxic substances, the emissions will include additional combinations of products of incomplete combustion (PICs) such as polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), dioxins and furans, chlorinated benzene and toluene compounds, and assorted metal compounds of mercury, arsenic, and chromium. *Id.* ¶50; and see Ex. 15. Metal compounds such as mercury, arsenic, and chromium are not destroyed via combustion. Carman Decl. ¶51.

Environmental Justice is the concept that polluting industrial facilities, waste incinerators, landfills and Superfund toxic waste sites are disproportionately located in minority and low-income neighborhoods, and these communities are disproportionately impacted, suffering more health effects and associated problems. *Id.* ¶53. EJ in Port Arthur is a serious community concern due to minority demographics, significant numbers of low income families, high concentration of industrial plants, and high concentrations of toxic substances released. *Id.* ¶55. Port Arthur (57,042 people) has a large minority population with a African-American population at 43.7% (2000 Census). *Id.* ¶58. The African-American population in Texas is 11.5%. Port Arthur's White population is 39.0%. Port Arthur is also predominately low income. The median Port Arthur household income in 1999 was 66% lower than the Texas average, per capita income 28% lower, and persons below poverty high at 25.2% versus 15.4% statewide. *Id.* ¶61. The use

of the Veolia incinerator by the Army to dispose of the CVXH increases the disproportionate risks to this already heavily burdened EJ community. *Id.* ¶62.

Among other emissions, the Veolia incinerator will emit dioxins while burning CVXH, and expose people to unacceptable health risks. Sommer Decl. ¶35. The effectiveness of incineration of multiphase CVXH and the composition of chemicals adsorbed on emitted carbon particles during this incineration is unknown. *Id.* ¶36. Many of the chemicals produced during this incineration will adhere to soot particles (PM2.5 and PM10) released to air. The nature of the chemical reactions occurring on the fine particles emitted is unknown. *Id.* ¶37. Veolia TRI reports reveal large quantities of PM2.5 and PM10 released via incineration. No method of identifying many stack emissions during CVXH incineration has been implemented. *Id.* ¶38. VX retains chlorinated and other byproducts from the VX synthesis process not destroyed during neutralization. As a result, chlorinated dioxins and related carcinogens are formed in the incineration process and released on the PM2.5 and PM10. *Id.* ¶39. Onyx/Veolia Environmental Services at Port Arthur reported the toxic release of 13.25 tons of PM2.5 and PM10 particles for the year 2003. *Id.* ¶41. PM10 and PM 2.5 soot particles enter the lungs, are deeply embedded, and toxic substances are released into the body, causing adverse health consequences. *Id.* ¶43.

No trial burn or other data exists to demonstrate the effectiveness of incineration of the different hydrolysate phases, or to rule out the potential of chemical reactions that might lead to dispersal of nerve agent or agent-like chemicals from the incinerator. *Id.* ¶40. Fundamental scientific uncertainties and serious risks exist along the entire path from hydrolysis to incineration which are not addressed in the 2002 EA.

Dioxins, and numerous other toxic organic substances, were emitted to the environment

during the Army's incineration of agent VX on Johnston Island (JI). *Id.* ¶44. VX was detected in the cyclone ash from a JI furnace burning VX. *Id.* ¶45. In 2003 the Army and EPA confirmed that VX was released into the environment from the JI incinerator. *Id.* Army documents also show that in December, 2000 a chemical agent release to the environment occurred. *Id.* ¶46. EPA issued a "Notice of Violation" in June, 2001 for that release. *Id.* Workers at the Army's Tooele, Utah incinerator have reported agent releases from waste already processed in a furnace there. *Id.* ¶49. That facility was shut down for months after a 2002 worker agent exposure incident. *Id.*

Incineration of agent VX would require, in addition to requirements of sufficient temperature, residence time at that temperature, maximum turbulence, and excess oxygen, proper stack monitoring for VX, VX components and dioxins. *Id.* ¶50. The Defendants have no such monitoring in place. *Id.* ¶55. The absence of such monitoring creates an unacceptable risk to people exposed to the incinerator stack emissions, and to the incinerator ash during handling. *Id.*

The danger to the public and environment created by the Army's failure to test and characterize the hydrolysate, to ensure incineration under the required conditions, to monitor stack emissions for toxic substances including agent VX and dioxins, and to monitor surrounding areas for VX and related toxins is substantial, unacceptable and preventable. *Id.* ¶56. The Army's use of this highly flawed process risks serious consequences to public health and the environment. *Id.* Given the toxicity of the contaminants in the CVXH, the predictable release of chemical poisons on particulate and in vapor form, the lack of any trial burns or other demonstration that incineration of the CVXH is safe, the lack of air monitoring set up to detect release of agent VX or its degradation and combustion byproducts, the failure to provide training and emergency safety equipment to citizens in the communities surrounding the Veolia

incinerator, the high levels of pollution already experienced by Port Arthur area residents from existing pollution sources, and the failure of the Army to prepare an EIS or thorough risk assessment addressing toxic releases from incineration of CVXH, the incineration of the VX hydrolysate at the Veolia incinerator must be concluded to pose an imminent and substantial danger to public health and the environment. Carman Decl. ¶62.

As noted above, RCRA's citizen suit provision provides for injunctive relief on a showing that a defendant is handling or has handled solid or hazardous waste in a manner that contributes to the creation of an imminent hazard. 42 U.S.C § 6972(a)(1)(B). As noted above, only threatened harm is required, not actual harm, to support such an endangerment claim. *Reserve Mining Company v. EPA*, 514 F.2d 492, 519 (8th Cir. 1975); *Dague v. City of Burlington*, 935 F.2d 1343, 1355 - 1356 (2d Cir. 1991), *rvsd. on other grounds*, 112 S. Ct. 2638 (1992); *United States v. Price*, 688 F.2d 204, 211, 213-14 (3d Cir. 1982). Given the dangers from incineration of the CVXH described above, Plaintiffs have a good likelihood of showing that the Defendants' actions in incinerating 2,000,000 gallons of CVXH at the Veolia incinerator in Port Arthur may present such an imminent hazard, even ignoring the CVXH transportation risk.

This RCRA imminent hazard legal standard, which only requires a showing that there is a reasonable concern that some serious harm may result from Defendants' waste activities, has been recently re-affirmed in a thorough, thoughtful and persuasive analysis by the First Circuit. *Maine People's Alliance v. Mallinckrodt, Inc.*, 471 F.3d 277, 287-89, 292-96 (1<sup>st</sup> Cir. 2006). Given this standard, and the evidence that Defendants' transport and incineration of CVXH may cause serious harm to the public and environment, Plaintiffs are likely to prevail on Count 1.

**B. PLAINTIFFS ARE LIKELY TO SUCCEED ON THEIR NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) COUNTS TWO THROUGH FIVE**

Plaintiffs' claims in Counts 2-5 of the Complaint assert that Defendants have violated the National Environmental Policy Act (NEPA) by failing to prepare an EIS to assess the potential adverse environmental impacts from, and reasonable alternatives to, the transport and incineration of the CVXH. NEPA makes environmental protection a part of the mandate of every federal agency. *Calvert Cliffs' Coordinating Committee v. United States Atomic Energy Commission*, 449 F.2d 1109, 1112 (D.C.Cir. 1971). NEPA requires all federal agencies to prepare a detailed statement regarding major Federal actions significantly affecting the quality of the human environment. 42 U.S.C. § 4332(2) ( c ). This statement, known as an EIS, must describe (1) environmental impacts of the proposed action, (2) adverse environmental effects which cannot be avoided if the proposal is implemented, (3) alternatives to the proposed action, and (4) any irreversible or irretrievable commitment of resources which would be involved. *Id.*

An agency may first prepare an EA to determine whether a proposed action may have significant environmental impacts and therefore require an EIS. Regulations promulgated by the federal Council on Environmental Quality (CEQ) delineate factors that must be considered in determining the significance of an action, including: effects on public health or safety; highly controversial effects on the quality of the human environment; effects on the human environment are highly uncertain or involve unique or unknown risks; and threatened violation of Federal, State, or local environmental protection laws. 40 C.F.R. § 1508.27(b). These factors clearly warrant an EIS here. The evidence discussed *supra* regarding an imminent hazard under RCRA, including expert declarations and government reports referenced, are incorporated here.

An EIS must be produced for all major federal actions unless the project fits within a categorical exclusion determined to have only minimal environmental impacts. Under Army regulations, actions that degrade the existing environment, are environmentally controversial or adversely affect environmentally sensitive resources require an EA. 32 C.F.R. § 651.29(b); 32 C.F.R. § 651.29 ( c ). The transport and incineration of CVXH, for the reasons stated *supra*, do not qualify for a categorical exclusion due to obvious impacts, controversy and other factors.

NEPA analysis should be early in the planning process. Supplementation of an EIS may become necessary with passage of time and changing conditions. 40 C.F.R. § 1502.5(a). Agencies must prepare a supplemental EIS if either: 1) substantial changes to the project are proposed, or 2) there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. 40 C.F.R. § 1502.9(c)(1). Obviously here, with the Army decision to transport the CVXH to Texas for incineration, rather than destroy it on site in Indiana with SCWO, a substantial project change has occurred requiring a supplemental or new EIS. This is required by Army regulations as well. 32 C.F.R. § 651.5(g)(2).

The Army prepared an EIS in 1998 addressing only the proposed neutralization of the VX on-site followed by on-site treatment of the resulting hydrolysate using SCWO, and the no action alternative of continued storage of VX. This EIS did not address the environmental impacts of transport of CVXH from Indiana to Texas or the impacts of incinerating CVXH in Port Arthur. *See* Ex. 1 at 1-8 . The Army rejected the use of off-site incineration of the hydrolysate. *Id.* at 1-10. This EIS recognized the need to assess EJ issues, *Id.* at 4-40, and cumulative impacts, *Id.* at 4-45 – 4-50. This EIS noted that if the neutralization pilot test failed, the NEPA process would be restarted. *Id.* at 1-8. The Army did prepare an EA in 2002 that addressed CVXH transport

off-site (destination unspecified). Ex. 2. This EA was limited to generic issues related to CVXH transport and impacts near Newport. *Id.* at 3-15 – 3-18. The Army recognized that impacts avoided at Newport could be transferred to the disposal locality. *Id.* at 1-3, 1-4. The Army made explicit that evaluation of a specific treatment, storage, and disposal facility (TSDF) or technology was beyond the scope of the EA, *Id.* at 1-2, and analysis of environmental impacts at the CVXH disposal location was beyond the EA's scope, *Id.* at 3-2. This EA provided generic hypothetical descriptions of the off-site treatment without identifying locations. *Id.*

The EA assumes that the CVXH will have non-detect concentrations of VX. *Id.* at B-1. The EA fails to address EA 2192 in the CVXH. *Id.* at B-2. This EA recognized the need to assess EJ issues, *Id.* at 3-29, 3-30, as well as cumulative impacts, *Id.* at 3-31, 3-32. However, after noting that Executive Order 12898 requires federal agencies to assess and prevent or minimize EJ adverse impacts (disproportionate pollution impacts on minorities and low income groups), this EA went on to assess EJ issues in regard to the non-minority and only slightly lower income populations near Newport, Indiana, ignoring EJ issues related to the communities near the facilities on the "candidate" list under consideration, such as Port Arthur. *Id.* at 3-29, 3-30.

No EA or EIS was prepared that analyzes the choice of routing of CVXH shipments from Newport to Port Arthur. Nor has an EA or EIS been presented that analyzes the original alternative of not transporting the CVXH but treating it on site, in regard to comparative risks of and dangers from a terrorist attack. Millar Decl. ¶34. The Army withheld from the public the identity of the CVXH treatment facility until public comment was futile, to avoid opposition. Opposition was predictable, given the environmental and health concerns detailed *supra*, which provide a clear basis for the Army to conduct an EIS on CVXH incineration at Port Arthur.

The Army's NEPA process to date is clearly inadequate to comply with the NEPA requirements for assessment of environmental impacts, including EJ and cumulative impacts, assessment of alternatives, and opportunity for public review and comment on the specific action proposed and selected. Environmental impacts of hazardous waste disposal are always critically dependent on both the choice of treatment technology and the specific environmental setting (treatment location). The Army in 2006 issued a revised Finding of No Significant Impact (FONSI) that addressed alternative routes to the DuPont facility in Deepwater, New Jersey, an acknowledgment that the Army had awareness that location matters. The Army did not follow-up, however, with a new EA, FONSI or EIS addressing incineration of the CVXH in Port Arthur.

Further, at an evidentiary hearing, after modest discovery, Plaintiffs expect to prove, based on disclosures from confidential and anonymous sources, that the CVXH is contaminated by VX and EA2192 to the extent that off-site shipment would not be allowed under the Army's own policies. No Army EA or EIS assesses or even acknowledges these key facts. Another blatant omission in Defendants' NEPA process is reflected in the fact that although an ecological risk assessment was prepared for the plan to treat the CVXH at the DuPont facility in New Jersey, no new ecological risk assessment has been performed by the Army or Veolia Environmental Services in regard to the Army's new decision to incinerate the CVXH in Texas. The Army's 2002 EA also ignores the significant fact that, as the CDC reported, there is a potential for cross-contamination of a CVXH shipment with untreated VX due to the interconnections of valves and pipes and the potential for human error. *See* Ex. 4 at 10, Ex. 5 at 11. These issues, and ecological impacts of toxic incineration stack and fugitive emissions, should have been but were not addressed in the Army's NEPA process.

Another omission in the Army's NEPA analyses is a failure to consider the question of what limit for VX in the off-site shipments of CVXH would be protective of the most sensitive human populations, infants and the developing fetus, and sensitive non-human species. *See, e.g.*, Ex.s 16-20. It is undisputed that the Army's 20 ppb VX limit used for CVXH transport is based solely on the (partial) protection of soldiers from a battlefield drinking water source.

EPA and CDC reported that acute exposure studies of VX showed that 7 out of 10 juvenile striped bass were killed after 14 to 20 hours of exposure to 20 ppb of VX. Ex. 4, Att. 5 at 5. All of the white perch (10 of 10) exposed to 25 ppb of VX in aqueous medium died in ~9 hours. *Id.* The effects of chronic exposures to lower levels of VX had not been studied. *Id.* Army scientists have acknowledged, based on EA2192's persistence and toxicity, that potential EA 2192 impacts must be evaluated seriously wherever VX is being destroyed. *Id.* Army scientists have acknowledged that EA 2192 may pose a greater potential for chronic toxicity than VX, and once in solution, EA2192 is extremely persistent in the environment. *Id.*

The Army's commitment of millions of federal dollars to transport two million gallons of CVXH from Indiana to Texas and incinerate the CVXH in Texas are major federal actions under NEPA. For all the reasons stated *supra*, these actions are likely to have significant adverse environmental effects. The Army's NEPA analyses to date also fail to consider the potential for violation of Federal law and Treaties through the interstate shipment of partially treated chemical warfare agent VX and chemicals capable of reforming to create agent VX. For all these reasons, Plaintiffs are likely to prevail on their claim that the Defendants have violated NEPA, 42 U.S.C. §§ 4321 et seq., by not preparing an adequate EA or EIS to carefully assess and take a "hard look" at potential adverse environmental impacts from their major federal actions.

Plaintiffs are likewise likely to prevail on their NEPA claim that Defendants have failed to adequately assess reasonable alternatives to their proposed actions as required under 42 U.S.C. § 4332(2)(E). Federal CEQ regulations describe the consideration of alternatives as the heart of the environmental impact statement. 40 C.F.R. § 1502.14. No major federal project should be undertaken without intense consideration of other more ecologically sound courses of action. *Environmental Defense Fund v. Corps of Engineers*, 492 F.2d 1123, 1135 (5<sup>th</sup> Cir. 1974); *Simmons v. United States Army Corps of Engineers*, 120 F.3d 664, 666 (7<sup>th</sup> Cir. 1997). The 2002 EA notes but summarily eliminates an option of accelerated neutralization of VX nerve agent and construction of on-site storage for hydrolysate waste pending on-site SCWO or other treatment facility development because it would add cost and delay disposal of the CVXH, despite the fact that it would meet the primary identified purpose of the proposed action by reducing terrorist threats by accelerating VX destruction. Ex. 2 at 2-1. This alternative is available, feasible and safer than off-site transport to an incinerator. Both the Army and concerned citizens have already approved use of on-site SCWO. Ex. 2 at 1-1; Ex. 1 at 1-1, 1-3. On-site SCWO survived the scrutiny of a feasibility analysis by citizens and the Army, including a NEPA analysis. Ex. 1.

In addition to being likely to prevail on their NEPA claims regarding the Army's failure to assess conventional environmental impacts and reasonable alternatives, Plaintiffs are likely to prevail on their claim that the Army's NEPA analyses have failed to assess the potential for major non-conventional risks of adverse environmental impacts resulting from an intentional act of sabotage or terrorism. By eliminating the SCWO of CVXH, the Army will be transporting constituents of VX that could reconstitute to form VX under suitable conditions, such as a significant drop in pH. Decl. of Dr. Carman, Ex. 12; Decl. of Dr. Sommer, Ex. 13; NRC 2000

report, Ex. 3. Addition of a strong acid through deliberate action could lower the pH.

The Army's 2002 EA indicates that in the wake of the September 11, 2001 terrorist attacks, the Army determined that accelerating destruction of VX stockpiles was necessary. Ex. 2 at 1-3. However, the Army's 2002 EA does not discuss or analyze the risks of intentional attack or hijacking of CVXH shipments, including intentional acts to reconstitute VX. *Id.* CDC estimated a 1 per 20,000 risk of unprocessed VX being shipped as a result of valve linkages allowing cross contamination, and deemed the probability low that cross-contamination and a transportation accident will coincide. But CDC does not consider the risk of cross-contamination in the context of deliberate sabotage or hijacking of a shipment. Ex. 4, Att. 3. Further, during the start-up of the facility, incidents occurred during which CVXH storage tanks were contaminated with VX when manual tank valves were incorrectly operated or automatic valves failed. Ex. 5 at 11. The Army asserts that no means currently exist for it to resample the tanks to determine the impact of these incidents. Ex. 5 at 11. It is thus impossible for the Army to determine that the thus far detected incidents of contamination were the only such incidents.

In the 2005 CDC report, CDC considers that a maximum credible event would involve a 5000-gallon tank truck or tote in an in-transit accident that ruptures the containment. CDC does not consider an explosion or fire, caused either by accident or an act of terrorism. The potential for a fire during a release of CVXH is significant. CVXH produced at NECDF exhibits the (apparently unexpected) characteristic of flammability. Ex. 5 at 9. Although the Army planned to perform treatment at NECDF prior to shipment of the CVXH to reduce flammability, Plaintiffs expect to show at hearing that the Army abandoned those steps. The Army also has not performed any analysis of the risk of explosion or fire during transport of the CVXH.

The potential for malicious wrongdoing during the transport of CVXH in light of the higher than expected levels of VX and EA2192 in the CVXH, the potential for reformation of VX, and the possibility of cross contamination of the CVXH by VX is a particularly strong basis for requiring the conduct of a new EA and/or EIS given that the Army's primary rationale for changing the original plan was the terrorist attacks of September 11, 2001. The 9<sup>th</sup> Circuit, in a recent decision, has made clear the need for agencies to assess the risks and consequences of potential acts of terrorism in order to comply with NEPA. This thorough and thoughtful analysis by the 9<sup>th</sup> Circuit adds to Plaintiffs' likelihood of success on their NEPA Count 4 claim. *San Luis Obispo Mothers for Peace v. Nuclear Regulatory Commission*, 449 F.3d 1016 (9th Cir. 2006).

Plaintiffs are also likely to prevail on Count 5 which concerns cumulative environmental impacts and environmental justice. The declaration of Dr. Neil Carman, Ex. 12, makes a compelling case that Defendants' incineration of CVXH in Port Arthur will exacerbate an already unacceptable toxic pollution burden suffered by minority and low income populations. Federal Defendants, while recognizing the need to address EJ and cumulative impacts in their 2002 EA, including Executive Order 12898 requirements that federal agencies act to minimize EJ impacts, Ex. 2 at 3-29 – 3-32, have failed to consider the socio-economic, public health and ecological impacts of their actions in Port Arthur. Thus, Plaintiffs are likely to prevail on Count 5.

CEQ regulations define “cumulative impact” as the impact which results from the incremental impact of agency action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person takes such other actions. 40 C.F.R. 1508.7. Cumulative impacts can result from individually minor but collectively significant actions over time. Dr. Carman makes clear that the Port Arthur area offers a classic example of

how combined toxic emissions from multiple sources create environmentally unacceptable situations. The residents of Port Arthur deserve, at minimum, strict compliance by the Army with the NEPA EIS requirements before the Army adds more toxic insult to existing injuries.

**C. PLAINTIFFS ARE LIKELY TO SUCCEED ON THEIR CLAIMS OF OTHER ENVIRONMENTAL VIOLATIONS IN COUNTS 6-10**

Plaintiffs are also likely to prevail on Counts 6-10. Count 6 asserts that the Army and Veolia have violated the requirement to provide a valid and adequate transportation safety plan required by Indiana's hazardous waste laws. The term chemical munition includes agent VX. I.C. § 13-11-2-25(6). VX is an acute hazardous waste. 329 I.A.C. § 3.1-6-3. Before transporting agent VX, Defendants must file with State agencies, *inter alia*, a written evaluation of potential transportation risks that accounts for the type and quantity of hazardous waste to be transported, identifies the most likely types of harmful incidents during transport, the likelihood of occurrence these incidents, and the magnitude of the potential harm to public health or environment. A transport safety plan tailored to these identified risks is required. I.C. § 13-22-7.5-2.

Based on the analysis *supra*, including the declarations of Dr. Millar, Dr. Carman and Dr. Sommer, Plaintiffs can demonstrate Defendants have violated these requirements. Apart from the obvious omission of terrorism incidents, the transportation safety plan and risk assessment submitted, Ex. 10, are based on inaccurate and/or false data. Plaintiffs will show at hearing that the Army has scientific information and test results that it has withheld from the State in its required submittals that show both the presence of VX and EA 2192 at levels exceeding the Army's own off-site shipment standards as well as the invalidity and unreliability of the sampling

and analytical methods being used. Thus, Plaintiffs are likely to prevail on Count 6.

In Count 7, Plaintiffs assert that Defendants have violated hazardous waste (RCRA) regulations that require hazardous waste chemical contents be characterized prior to transport or treatment. *See* 40 C.F.R. § 264.13 and the Indiana and Texas counterpart regulations. These regulations require that the owner and operator obtain a detailed chemical and physical analysis of a representative sample of the waste. At minimum, this analysis must contain the information which must be known to treat and handle the waste in accordance with RCRA regulations. RCRA regulations require that hazardous waste must be reanalyzed as necessary to ensure that the waste analysis remains accurate. *See* 40 C.F.R. § 264.13 and the Indiana and Texas counterparts. If new information, an inspection, or other reason to believe that the waste character has changed is received, a new waste analysis must be done. *Id.* As stated above, Defendants have not adequately characterized the CVXH waste, have misrepresented and concealed the chemical contents of the CVXH, and have used test methods known to be invalid. For these reasons, Plaintiffs are likely to prevail on Count 7, and Count 8 which asserts a related violation of hazardous waste manifest requirements, *see* I.C. §§ 13-20-2-1(12), 13-22-4-1, 13-22-4-2; 40 C.F.R. §§ 262.20, 263.20.

The federal, Indiana, and Texas RCRA programs require that hazardous waste facility owners and operators take all necessary measures to prevent and minimize releases of hazardous wastes to the environment, both during normal treatment, storage and disposal and during an accident, incident or emergency. *See* 40 C.F.R. §§ 264.31, 264.56(b), 264.56(e) and the Indiana and Texas counterpart RCRA regulations. Defendants are continuing to store and ship the CVXH in the same type of intermodal containers that have historically leaked. Defendants have

also failed to take needed actions to minimize the potential of a release resulting from acts of terrorism. Further, at the Veolia incinerator, there is no air monitoring system in place to detect agent VX or EA 2192 in the workplace or outside air or in the incinerator stack emissions, despite this type of monitoring being standard at Army chemical weapons facilities. Thus, if VX or EA 2192 is present in the CVXH and released in an accident or simply not destroyed during incineration, there will be no detection, no warning, and no immediate action to correct the problem and minimize the toxic release. These are obvious examples of Defendants' failures to take necessary measures to prevent and minimize releases of CVXH, a hazardous waste, and the hazardous waste constituents of the CVXH, including VX and EA2192, to the environment. For these reasons, Plaintiffs are likely to prevail on Count 9.

Under the Defense Authorization Act of 1986 (DAA), 50 U.S.C. § 1512 et. seq., the Secretary of Defense may not transport any chemical munition that constitutes part of the chemical weapons stockpile out of the State in which that munition is located as of enactment in 1994, and in the case of chemical munitions not located in a State, may not transport any such munition into a State. 50 U.S.C. § 1512a(a). The Secretary of Defense must construct adequate and safe facilities designed solely for the destruction of lethal chemical agents and munitions. 50 U.S.C. § 1521( c )(1)(B). Facilities constructed to carry out section 1521 may not be used for a purpose other than the destruction of the stockpile of lethal chemical agents and munitions existing in 1985. 50 U.S.C. § 1521( c )(3)(A). No chemical warfare agent shall be disposed of within or outside the United States unless such agent has been detoxified or made harmless to man and his environment, absent a human health emergency. 50 U.S.C. § 1518. The CWC requires that when a nation state disposes of its chemical weapons, it must do so in compliance

with applicable laws and in a manner that protects the public and environment. CWC Art. IV.

VX is a chemical munition under Indiana law and the DAA. 50 U.S.C. § 1521(j); I.C. § 13-11-2-25(6). EMPA (ethyl methyl phosphonic acid), MPA (methyl phosphonic acid), and thiolamine (diisopropylaminoethanethiol) are classified under the CWC as Schedule 2 compounds, precursors, and therefore chemical weapons. CWC Art. II. The CWC defines destruction of a chemical weapons or agent as treatment until the potential for agent reformation is precluded. CWC, Sec. C(12). Therefore, transport of CVXH with detectable levels of VX, EA2192, EMPA and MPA equates to transport of a chemical weapon/agent and is prohibited by federal law and treaty. In deciding to transport partially treated VX across State lines and utilize a facility not constructed for the sole purpose of destroying chemical munitions to destroy the partially treated VX, Defendants have acted arbitrarily and in violation of 15 U.S.C. §§ 1512-1521 and the CWC. For these reasons, Plaintiffs are likely to prevail on Count 10.

### **III. PLAINTIFFS HAVE NO ADEQUATE REMEDY AT LAW AND WILL BE IRREPARABLY HARMED IN THE ABSENCE OF AN INJUNCTION**

Plaintiffs incorporate here the attached declarations of Dr. Carman, Dr. Sommer, and Dr. Millar, as well as the analysis above regarding the RCRA imminent hazard, NEPA, and hazardous waste violations. It is apparent from these attached declarations and the analysis above that the harm sought to be prevented by the requested temporary restraining order and preliminary injunction is not any kind of financial or property loss but rather harm to human health and the environment. Consequently, a remedy at law, i.e. a money judgment, would be a substantially inadequate remedy for Plaintiffs here. Further, once the chemicals of concern in the CVXH and incineration emissions are released to the environment, the chain of events that

ultimately lead from these toxic releases to harm to humans and wildlife will be irreversible. The harm caused by such releases, which can include cancer and a variety of non-cancer adverse health effects including harm to reproductive, neurological and immunological systems, is irreparable. Nothing that could be ordered post-trial following the occurrence of toxic exposures resulting from Defendants' challenged activities could repair the damage done. Only a TRO and preliminary injunction can serve to protect Plaintiffs' and the public's health and the environment pending resolution of Plaintiffs' claims.

Because Plaintiffs here have brought NEPA and other federal environmental statutory claims, the above traditional showing of irreparable harm may not be required under 7<sup>th</sup> Circuit precedent. *Scherr v. Volpe*, 466 F.2d 1027 (7th Cir. 1972) (emphasis added). Although Plaintiffs here can show irreparable harm here both in the traditional manner and in the sense of Defendants' actions frustrating the statutory purpose absent an injunction, neither type of showing of irreparable harm nor the normal balancing of interests may be required here under 7<sup>th</sup> Circuit precedent. *United States v. Bethlehem Steel Corp.*, 38 F.3d 862 (7th Cir. 1994) (emphasis added).

#### **IV. DEFENDANTS WILL NOT SUFFER SIGNIFICANT IRREPARABLE HARM**

There will be no harm to the Federal Defendants from issuance of the preliminary injunction as their duty is to follow the laws intended by Congress to protect public health and the environment. Requiring a careful analysis of the potential harm to the public health and the environment as required under NEPA and avoidance of an imminent hazard under RCRA is in the public interest and therefore in the interests of the Federal Defendants as well. The government is mandated by federal law to conduct its chemical weapons disposal program in a

manner that provides maximum protection to public health and the environment. 50 U.S.C. § 1521(c)(1)(A). The Chemical Weapons Convention (CWC) also provides that the disposal of the chemical weapons stockpiles should be conducted in a manner that complies with national laws intended to protect the environment and public health. Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, Jan. 13, 1993, 32 I.L.M. 800.

Defendant Veolia under its federal contract undoubtedly is required to comply with federal environmental laws as well. This is a standard contract provision required by the Federal Acquisition Regulations (FAR). It would be significantly in the interests of Veolia to find out sooner than later if its activities under the federal contract as currently conducted are in violation of federal law, both in terms of potential liability to the federal government for violations of its contract requirements and liability for fines under the federal environmental statutes directly, and to avoid continuing any such violations.

#### **V. THE PUBLIC INTEREST IS SERVED BY ISSUANCE OF AN INJUNCTION**

Consistent with the 7<sup>th</sup> Circuit RCRA and NEPA precedent cited above, an injunction here would be in the public interest. *See, United States v. Bethlehem Steel Corp.*, 38 F.3d 862 (7th Cir. 1994); *Scherr v. Volpe*, 466 F.2d 1027 (7th Cir. 1972). Further, the potential for serious harm to public health and the environment from an accident or act of terrorism during the shipment, or from releases of chemicals during the incineration, of the CVXH, as detailed in the attached declarations of experts Carman, Millar, and Sommer, makes clear that issuance of the requested TRO and preliminary injunction would be in the public interest here.

In a separate motion, Plaintiffs have requested an evidentiary hearing on their motion for

a preliminary injunction. Apart from the normal usefulness of an evidentiary hearing on a motion for preliminary injunction when technical and scientific issues are involved, there is another reason why such a hearing is important in the instant case. Plaintiffs are aware of significant information material to Plaintiffs' claims and the determination of whether a preliminary injunction should issue, information which remains under the control of Defendants. Plaintiffs are prepared to produce this information in admissible form if allowed some focused discovery and the use of subpoenas. This information relates, *inter alia*, to the Army's sampling and chemical analysis of the CVXH, including test results showing significant levels of VX and EA 2192 in CVXH samples, and the validity of Army methods for conducting sampling and analysis.

#### **VI. CONCLUSION AND RELIEF REQUESTED**

For all the foregoing reasons, Plaintiffs respectfully request that this Court issue a temporary restraining order and preliminary injunction directing Defendants to cease further transport or incineration of VX hydrolysate until Plaintiffs' Complaint is decided on the merits.

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### **CERTIFICATE OF SERVICE**

The undersigned hereby certifies that the foregoing Memorandum in Support of Motion for Temporary Restraining Order and Preliminary Injunction was electronically filed and thereby automatically served on the parties indicated below. Notice of this filing will be sent to the following parties by operation of the Court's electronic filing system. Parties may access this filing through the Court's system.

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All done June 18, 2007.

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