

## Frequently Asked Questions

### Potential DuPont Assistance to U.S. Army's Newport (Indiana) Project

#### **Why is the U.S. Army destroying the stockpile of VX nerve agent stored at Newport (Indiana) Chemical Depot now?**

Under a 1985 Congressional mandate and based on the Chemical Weapons Convention Treaty ratified by U.S. Congress in 1997, the U.S. Army is required to destroy all chemical weapons stockpiles in the United States, this includes the approximately 1,200 tons of VX nerve agent currently stockpiled at the Newport Chemical Depot, Newport, Indiana.

After the events of September 11, 2001, the priority for this process was accelerated to ensure that these stockpiles were eliminated as potential terrorist targets. The current target for completion of the U.S. Army's chemical weapons destruction projects is 2007.

#### **Will the U.S. Army or anyone else transport the VX nerve agent stockpile off the Newport Chemical Depot?**

No. Federal law prohibits transporting any chemical agent stockpiles. The on-site VX nerve agent stockpile at the Newport (Indiana) Chemical Depot will never be moved off the site. The chemical destruction process will be fully completed on-site under the monitoring of independent international chemical weapons inspectors and Indiana state regulators. No wastewater containing nerve agent will ever leave the Army's Indiana Depot.

#### **What is the result of the VX nerve agent destruction process?**

The result of the chemical destruction of the VX nerve agent is non-flammable wastewater. This wastewater is a corrosive similar to the chemicals found in household cleaners. The wastewater will not contain nerve agent, since the agent will be destroyed at the Army's site. Experts from the Indiana Department of Environmental Management (IDEM) and international chemical weapons inspectors will be on site and in the Army's labs to verify lab results as part of their responsibility to verify destruction of the agent stockpile. The wastewater will be certified non-detect for nerve agent before it will be allowed to be transported off the depot to an appropriate wastewater treatment facility.

#### **Can the VX nerve agent ever reformulate itself once it is destroyed?**

No. Once the destruction process is conducted at the Newport facility, the VX cannot reconstitute. Once it is destroyed, it will never be nerve agent again.

#### **Why not treat the wastewater at the Newport site where it was produced and is stored?**

The result of destroying the VX nerve agent is a large volume of caustic hydrolysate wastewater (NCH) that can only be treated and disposed of properly at a state-of-the-art wastewater

treatment facility. The U.S. Army has approached DuPont to provide transportation and treatment of the NCH at its Secure Environmental Treatment (SET) facility at Chambers Works (Deepwater, N.J.), the largest commercial wastewater treatment facility in North America.

**What makes DuPont’s SET facility uniquely qualified to handle this wastewater?**

DuPont’s Secure Environmental Treatment (SET) facility at Chambers Works (Deepwater, N.J.) is the largest commercial wastewater treatment facility in North America, handling more than 15 million gallons of wastewater each day with a capacity to treat 40 million gallons daily. Working under permits from the U.S. Environmental Protection Agency and the New Jersey Department of Environmental Protection, the SET facility uses a unique, DuPont-patented Powdered Activated Carbon Treatment (PACT<sup>®</sup>) technology, making it possible to safely and effectively treat complex industrial chemical wastewaters.

**Has DuPont handled the wastewater product of VX nerve agent destruction before?**

Since the wastewater produced at the Newport (Indiana) facility will be from the destruction of VX nerve agent, the origin of the wastestream will be new to DuPont SET facility. However, the wastewater proposed for transport and treatment at the SET facility is equivalent to typical corrosives accepted and treated at the facility on a daily basis. The wastewater will be certified non-detect for nerve agent before it can be transported off the U.S. Army’s Newport (Indiana) Chemical Depot site to an appropriate wastewater treatment facility. Experts from the Indiana Department of Environmental Management (IDEM) and international chemical weapons inspectors will be on site and in the Army’s labs to verify analytical results as part of their responsibility to verify destruction of the agent stockpile.

Additionally, the DuPont SET facility is currently conducting a successful project for treatment and disposal of wastewater produced from the destruction of mustard agent stockpiled at the U.S. Army’s Aberdeen Proving Ground, Aberdeen, Maryland.

**“DuPont Technical Assessment on U.S. Army Newport (Indiana) Project”**

**Why did DuPont complete four technical assessments for this project?**

Prior to signing any contract, DuPont’s scientists routinely conduct scientific assessments to determine the feasibility, safety and potential outcomes of the project. DuPont has conducted tens of thousands of advance studies for decades as part of the due diligence required for a contract.

**For this project, four in-depth technical assessments were completed to address the entire process that the wastewater will undergo. The four categories of assessment are:**

- Transportation Safety & Risk Management
- Screening Level Environmental Risk
- Treatability
- Health Hazards

**Are the Army and DuPont the only ones evaluating the safety of this project?**

Independent, credible third-party scientists -- including scientists from Virginia Institute of Marine Sciences, Virginia Polytechnic Institute and the U.S. Centers for Disease Control & Prevention (CDC) -- have reviewed the technical assessments and deemed the project to be a safe and effective process for treating the wastewater from the destruction of the VX stockpile in Newport, Indiana.

**What were the key conclusions drawn from the assessments?**

Both the DuPont scientific assessments and independent third-party reviews have determined the proposed project is environmentally safe and poses no unique hazards.

**Transportation****Will the wastestream being transported contain VX nerve agent?**

No. Federal law prohibits transporting any chemical agent stockpiles. The nerve agent is destroyed on-site at the Army's Newport (Indiana) Chemical Depot. VX will never be transported to New Jersey or treated at Chambers Works. All nerve agent will be destroyed at the Army's Newport (Indiana) Chemical Depot under the supervision of international chemical weapons inspectors and Indiana state regulators through a rigorous neutralization process. Each load will be analyzed and certified before it leaves the Newport (Indiana) depot.

**If there is an accident en route, what are the potential consequences?**

The wastewater being transported poses only a moderate hazard to emergency responders and other persons in the immediate vicinity of the spill (range of 30-50 yards), but is highly unlikely to have wide-reaching effects or an environmental impact. Overall, the expected consequences from a spill are low and do not differ from other spills of other commercially transported corrosive materials.

**What steps is DuPont proposing to ensure safety during transportation of the wastewater?**

In order to further assure safe shipment of the material, DuPont will utilize its proprietary transportation safety management process, which includes:

- Pre-screening all drivers (including background checks)
- A dedicated fleet and team drivers for all transport
- Late-model, high-quality equipment, including trailers built to ASME boiler code standards
- Global Positioning Satellite (GPS) and speed governors in every truck
- DuPont dedicated emergency response capabilities

## **Treatability**

### **What is the PACT® process?**

DuPont's patented wastewater treatment technology is called the Powdered Activated Carbon Treatment (PACT®). Once the wastewater arrives at Chambers Works, the SET facility will pre-treat the wastewater by chemical oxidation to eliminate any odors. Following this process, the wastewater will be combined with other wastewater streams at the facility, and then receive sophisticated treatment through PACT®.

### **Is the wastewater toxic?**

No. The wastewater being transported does not contain nerve agent and is not considered toxic. The wastewater is only hazardous due to its corrosive characteristics that result from sodium hydroxide – which is common in commerce today. The Department of Transportation labels the wastewater as a Packing Group II (PG II) moderate, corrosive material.

### **How was the volume determined?**

Currently, the DuPont SET facility treats 15 million gallons a day, with a capacity of 40 million gallons. The treatability study demonstrates that DuPont can effectively treat the stated volume of 3,000 to 7,000 gallons per day of wastewater that would be generated at the Newport site. This is the anticipated rate of wastewater generated at the Newport site throughout the project as determined by the Army.

## **Environmental Impact**

### **Did the assessments uncover any negative impacts to the Delaware River?**

No. The anticipated discharge levels to the Delaware River are not toxic to aquatic organisms. Phosphonic acids are currently present in the environment from both naturally occurring and industrial sources.

### **Will this project dramatically increase the flow of DuPont's effluent in the river?**

No. Currently, the DuPont SET facility treats 15 million gallons a day, with a capacity of 40 million gallons. The stated volume is 3,000 to 7,000 gallons per day. This project will not dramatically increase the flow or change the stability of the river.

### **Aren't MPA and EMPA dangerous for the river?**

EMPA and MPA are not volatile (no airborne exposure) and do not bioaccumulate (does not build up in the food chain). EMPA and MPA at anticipated the level of discharged are not toxic to aquatic organisms in the Delaware River and Estuary.

## Health Hazards

### **Are there any risks of inhalation or smoke as the wastewater is being transported?**

No. The wastewater being transported is a water-based liquid with very low vapor pressure and a pH of 12-14 due to the presence of sodium hydroxide. The wastewater has been determined to be non-flammable by Department of Transportation testing procedures.

### **What is the health risk with this wastewater?**

The wastewater poses only a moderate hazard (primarily eye and skin irritation) to emergency responders and other persons in the immediate vicinity of the spill (range of 30-50 yards) during transport, but is very unlikely to have wide-reaching effects or an environmental impact. Overall, the expected consequences from a spill are low and do not differ from other spills of other commercially transported, corrosive materials.

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**To request additional information, send questions to: [set@usa.dupont.com](mailto:set@usa.dupont.com). If you prefer, you can write to us at:**

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