



## Environmental Protection Matters

DNREC Office of Environmental Protection

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### Going Green at Metachem?

**What's green, sustainable all over, and potentially coming to one of Delaware's most highly contaminated, Superfund National Priorities List sites?** Why, a renewable energy source at the former Standard Chlorine/Metachem Products, LLC site!

The Division of Waste and Hazardous Substances' Site Investigation and Restoration Section (SIRS) submitted an application to the US Environmental Protection Agency (EPA) for a grant under the EPA's RE-Powering America's Land initiative. The grant will fund a feasibility study at the former

Metachem facility to evaluate the suitability of the site for alternative energy sources such as a photo-voltaic solar array, with a secondary goal of wind power.

The former Metachem facility manufactured chlorinated benzene compounds such as paradichlorobenzene (mothballs and urinal cakes). The facility had an extensive history of contamination and remedial action, including the largest spill in 1986, when 569,000 gallons of paradichlorobenzene were released to the environment due to the failure of

*(Continued on page 2)*



T. Keyser, SIRS

**Prior to remedial capping, concrete rubble remains at the former Standard Chlorine/Metachem site from the previous demolition activities.**

## Going Green at Metachem *Continued...*

multiple aboveground storage tanks. Chlorobenzenes from the spills are located in surface and subsurface soils, sediment, and surface and groundwater at the site and on adjacent sites.

The Superfund site, located in unincorporated New Castle County, was abandoned to EPA Region 3 and DNREC by the bankrupt owner in 2002. Since that time, the state and federal costs to remediate the soil and groundwater contamination have exceeded \$20 million, with no viable end-use for the site.

The elevated levels and areal extent of site contaminants restricts any residential or recreational use of the site. The State of Delaware Coastal Zone Act (CZA) precludes the use of the property for future heavy industry use. However, the CZA does allow utility and commercial operations.

Support and technical assistance from the EPA and the National Renewable Energy Laboratory in Colorado (NREL) will provide vital data regarding the site. Once the study confirms the feasibility of the site as a potential renewable energy project site, a high-return end use for the site will become a viable option for potential developers.

A remedial cap was selected for the remedy of the southernmost portion of the site included in the project. The cap is currently being engineered. Once the impervious cap has been constructed, the area will be flat with little to no sloping except for engineered drainage.

When the cap remedy is complete, the renewable energy infrastructure could be installed on the surface or in shallow corridors across the site with appropriate excavated material management.

This feasibility study will also evaluate the potential of using the former Metachem site as Delaware's first large-scale renewable energy

installation on a contaminated site for the sole purpose of providing community and virtual net metering benefits.

The former Metachem site has the potential to offer Delawareans access to renewable energy at a much less expensive cost per unit compared to individual onsite installation. If the project is a success, it may become a model for industrial Brownfield development in the state.

The project will be achieved in partnership with DNREC's Division of Energy and Climate, EPA Region 3 and NREL. The team will initiate the feasibility study in early 2012.

For more information on the USEPA's RE-Powering America's Land initiative, please visit:

<http://www.epa.gov/renewableenergyland/>.

*Article by T. Keyser, SIRS*



**Construction of the 70-foot deep barrier wall in 2007 for the groundwater remedy at the site.**

## Toxics Release Inventory in Delaware

### **Did you know? The Toxics Release Inventory (TRI) reports are here!**

The TRI program was established in 1986 to provide information to the public about the presence and release of toxic chemicals in their communities. The reports were submitted by industrial facilities and power plants in Delaware each year. Data is reported at the end of June for the prior calendar year, analyzed in depth, including national comparisons, and reported to the public in the fall.

**Delaware's rank was unchanged for 2010 at 44<sup>th</sup> in the nation.**

This is the 24<sup>th</sup> year of TRI data collection from facilities for distribution to the public. Each year, the Division of Waste and Hazardous Substances' Emergency Prevention and Response Section carefully reviews the data submitted by the facilities, checks for anomalies and then reports on the data with a detailed statistical analysis and summary reports. The Delaware reports are published before the US Environmental Protection Agency (EPA) releases their analysis, although the State and the EPA receive the data simultaneously.

So what do the numbers show us about the toxic chemicals released to our environment in 2010? Statewide, TRI total on-site releases reported in Delaware were lower by 19% when compared to 2009. This can be attributed to the temporary shutdown of the Delaware City Refinery during 2010. There was also less hydrochloric acid gas released by the Calpine Edge Moor/Hay Road power plants because of their conversion to natural gas in July, and reduced barium compounds released to land at the Indian River Power Plant.

Releases to air were up by 10%, the result of an increase in the release of hydrochloric acid aerosols reported by the Indian River Power Plant, due to an increase in the chlorine content of the

coal used by the plant. Releases to water were down 62%, led by reductions in nitrate compound releases. Releases to land decreased by 61%, largely because of reductions in disposal of ash on-site at the Indian River Power Plant. The overall TRI reported on-site release trend since 1998 is down by 64%.



The decrease in total on-site releases in 2010 may have been due to the temporary shutdown of the Delaware City Refinery.

The trend for on-site releases of carcinogenic compounds was down by 24,000 pounds, 13% less than reported for 2009, and down by 698,000 pounds, or 82% less than in 1998. The trend for on-site releases of Persistent Bioaccumulative Toxins (PBTs), including mercury and lead compounds, trended down by 11,000 pounds, 55% less than reported for 2009. Reporting to this program is not based on emissions or releases, but rather on amounts manufactured, processed, or otherwise used.

The reports are made available to the public, government agencies, reporting facilities, and the public via the internet. An on-line searchable database is available at:

<http://www.dnrec.delaware.gov/SERC/Information/Pages/PublicInformation.aspx>.

In addition, 1995-2010 TRI data, TRI reports dating back to 1998, and other Emergency Planning Community Right-to-Know (EPCRA) information can be found at the site as well.

*Article by J. Parker, EPRS*

## Extreme Makeover—Delaware Gives Generously

**W**e all know that Delawareans are most generous, but for the Dunning family, it was more like a miracle occurred! And all in one week at the end of August 2011, when *Extreme Makeover—Home Edition* came to Cool Spring, Delaware. Even Hurricane Irene, tornadoes and earthquakes couldn't keep this project from happening!

Coordinated by local home builder, Schell Brothers, hundreds of subcontractors donated their time and materials to complete the *Extreme Makeover—Home Edition* project in record time.

Even DNREC's Division of Water was there, creating a little magic of their own to help facilitate the project. The Division of Water was called in at the very last minute when the DelDOT representative noticed that no one from DNREC was present at the 1<sup>st</sup> project design team meeting. The representative reportedly said, "If you don't have DNREC, you don't have a project!"

Seeing the project come to fruition was the Reverend Dale Dunning's life-long dream come true—the "Just Souup Ranch" that would house her family and a large-scale kitchen to prepare food to feed families across the State.

Although the site is currently zoned for the preparation of food for her outreach ministry, the Reverend envisions a small working farm with a



**The project involved building three structures and a pavilion at the site.**

garden and crops year round to provide produce for the kitchen, and perhaps in the future, creating micro-homes on the ranch to help families in need get back on their feet.



**Beginning of Day 3—septic system installation.**

*(Continued on page 5)*

*Extreme Makeover—Continued...*

The Reverend had been operating several soup kitchens across the State from her rental home in Nassau. The small house could barely contain the massive amounts of food, much less provide adequate family-living space.

The *Extreme Makeover-Home Edition* crew had just seven days to build the home and kitchen on land that had been donated by the Schell Brothers.

Permits were needed for the on-site septic system, public well, and agricultural well, as well as the related site evaluation and septic system design. DNREC's Division of Water went above and beyond the call of duty and delivered permits and on-site work in 15 days instead of the usual 60 days that this type of work requires.



**Governor Markell, lends a helping hand with the project on Day 3.**

In fact, some of the DNREC employees were so proud to be of service, that they paid for all of the required Division of Water permits themselves! With previous work experience as a septic system contractor, James Cassidy —

Program Manager with the Ground Water Discharges Section — even helped install the septic system in a record-breaking five-hour time span!

The site evaluation and the system design were also done for free by generous donors in the private sector. Cassidy reported that it was one of the most exhausting, but rewarding experiences in his life, and absolutely awe-inspiring to see Delaware at its best – giving generously.

*Article by C. Wirtz, WHS*



**Midway on Day 3—the septic installation is well underway.**

*Photos by Leafo Photo and Ritz Camera & Image*

## Cleaner Air for Claymont

Everyone will be breathing easier in Claymont, now that DNREC's Secretary Collin O'Mara issued a construction permit to Evraz Claymont Steel for the installation of state-of-the-art air pollution control equipment. The new equipment will collect dust and reduce other air emissions at the facility.

The new permit builds on environmental progress in an earlier consent decree between DNREC and the company, in which the company committed to continue technology upgrades that improve air quality for the surrounding community.

Evraz Claymont Steel, a wholly-owned subsidiary of Evraz Inc. North America, manufactures and sells custom-order steel plates and recycles scrap metal from the consumer and industrial refuse stream.

Since acquiring the facility from Claymont Steel Holdings, Inc. in January 2008, Evraz has invested in improving the environmental performance of the facility including completing projects that were required of, but not completed by, the facility's previous owner. These improvements include projects to enhance air pollution control practices, as well as voluntary measures to help control dust from the facility, including paving a large area of the site that was previously exposed.

DNREC's Division of Air Quality has been diligently working to continue implementation of significant upgrades at the Evraz Steel plant in Claymont. The consent decree was signed in August 2010 by DNREC Secretary O'Mara and Evraz Inc. - North America's

president and chief executive officer, and required Evraz Claymont Steel to implement a comprehensive series of investments in equipment and operational changes to make the plant and surrounding environment much cleaner.



**The electric arc furnace, used to melt iron and steel at the facility.**

Many of those changes – including installation of state-of-the-art pollution controls to improve air-quality significantly in neighborhoods surrounding the Claymont steel mill – are well under way or nearing completion.

The new DNREC permit for Evraz requires additional dust control capacity at the facility and its "melt shop" by adding an additional new baghouse which will almost double the facilities' particulate collection and filter system by August 2013.

The emissions control technology authorized by the permit includes installation of systems to capture additional emissions from the electric

arc furnace, stir station and ladle reheat operations and direct those emissions to the existing and expanded dust control baghouse.

Other consent decree requirements for Evraz included the implementation of operational practices to reduce the potential for emissions and continued particulate monitoring around the facility. For more information on the 2010 consent decree and the new construction permit, please visit:

<http://www.dnrec.delaware.gov/News/Pages/DNREC-permit-approval-clears-way-for-cleaner-air-in-Claymont.aspx>

*From DNREC Press Release 2/8/12*

## New Castle County's Premier HAZMAT Team

In Delaware, first responders turn to the New Castle County Industrial Hazardous Material Response Alliance, or NCCIHMRA to help with incidents that involve hazardous materials (HAZMAT). NCCIHMRA supports the State of Delaware's emergency response community in protecting public health and the environment by providing knowledge, experience, and resources during HAZMAT emergencies.

NCCIHMRA is a professional organization of experts in HAZMAT management and remediation. Unique to the state and nation, NCCIHMRA members are all volunteers from local industrial corporate teams. DNREC's Emergency Response Team, (DNREC ERT) is charged with the overall management of HAZMAT incidents in the State of Delaware and the activation of the NCCIHMRA team.

At DNREC ERT's request to respond, NCCIHMRA volunteers provide in-depth expertise to DNREC to control the emergency during the release of hazardous materials for events occurring at fixed facilities or transportation incidents.

The industrial corporate community in New Castle County is committed to the well being of the citizens that live and work in the State of Delaware. This commitment by industry to the public led the New Castle County Local Emergency Planning Committee (LEPC) to partner with industry and the State in the development of NCCIHMRA.

The concept for the NCCIHMRA was first discussed in 1994 at a New Castle County LEPC meeting, because of growing concerns regarding HAZMAT responses that relied on outside contractors. Currently in its 11th year as an active HAZMAT team, NCCIHMRA has over 40 members, representing nine industrial corporations and the University of Delaware. NCCIHMRA sponsors an active training schedule, conducting more than four HAZMAT training sessions each year for its members and the DNREC ERT—just one of the ways the State benefits from its NCCIHMRA partner.

**To report HAZMAT or other environmental incidents in Delaware, call DNREC's toll free, 24/7, emergency response line: 1-800-662-8802.**

For more information on emergency planning in New Castle County, please visit:

<http://www.dnrec.delaware.gov/SERC/LEPC/Pages/NewCastleCountyLEPC.aspx>



Joe Murabito, NCC LEPC

Ellen Malenfant, DNREC's NCCIHMRA Co-Chair (left) and David Irwin, also Co-Chair and NCC LEPC Chair (right), present awards at the NCCIHMRA 10th Annual Training Dinner last Nov. in recognition of outstanding dedication, commitment and leadership in planning, developing and conducting HAZMAT training for the NCCIHMRA team.

From 2nd to the left to right: Sam Palermo (Astra Zeneca-retired and Aetna Fire Company, Newark); Kristina Kreutzer and Bruce Galloway (DuPont Experimental Station); Joe Leonetti (Elsmere Fire Company, New Castle County Decontamination Team); Mark Dolan (BASF); Dave Anderson (Delaware Technical and Community College); and Darryl Meade (DuPont Experimental Station).

DELAWARE  
DEPARTMENT OF  
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ENVIRONMENTAL  
CONTROL

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**The Division of Waste and Hazardous Substances** plans for and responds to, environmental incidents; regulates the handling, transfer, storage and disposal of solid, infectious and hazardous waste; manages the recycling program in Delaware; regulates above and underground storage tanks and boilers; oversees the remediation of sites that have been contaminated by hazardous substances and chemicals; and implements Delaware's Brownfields Development Program.

**The Division of Air Quality** handles the majority of air issues in Delaware including: monitors and regulates all emissions to the air; issues "permits to construct" and "permits to operate" to air contaminant sources; maintains emission inventories from business and industry; develops the State Implementation Plan as required by the Clean Air Act; adopts new regulations and enforces existing regulations and permits; and Inspects asbestos removal sites.

**The Division of Water** manages and protects water resources through various programs by providing technical assistance, laboratory services, regulatory guidance and implementation, and educational services; and performing applied research.

## EASY REFERENCE PHONE NUMBERS

### **24-hr. Environmental Report and Spill Notification Line - 1-800-662-8802**

Aboveground Storage Tanks - 302-395-2500  
Air Quality - New Castle Office - 302-323-4542  
Asbestos—New Castle - 302-323-4542  
Asbestos—Kent & Sussex - 302-739-9402  
Biosolids Permits - 302-739-9946  
Boiler Safety - 302-744-2735  
Brownfields - 302-395-2600  
Delaware Estuary Program - 302-739-9949  
Div. of Air Quality, Director's Office - 302-739-9402  
Div. of Waste and Hazardous Substances, Director's Office - 302-739-9400  
Div. of Water, Director's Office - 302-739-9950  
Dock/Dredging/Bulkheads/Rip-Rap/Wetlands & Subaq. Lands - 302-739-9943  
Emergency Prevention and Response - 302-739-9404  
Environmental Crimes Unit - 302-739-9401 or 1-800-662-8802  
Hazardous Waste - 302-739-9403  
Loans & Grants for Wastewater and Septics (FAB) - 302-739-9941  
Medical Waste - 302-739-9403  
Non-Hazardous Liquid Waste Transporters - 302-739-9948  
On-site Wastewater Licensing Program - 302-739-9948  
Open Burning - 302-739-9402  
Outreach Ombudsman - 302-395-2515  
Recycling - 302-739-9403  
Septic System Permits - Large Systems Statewide - 302-739-9948  
Septic System Permits - Small Systems for Kent & NCC - 302-739-9947  
Septic System Permits - Small Systems for Sussex Co. & Holding Tank Compliance Program - 302-856-4561  
Site Investigation & Restoration Section (NPL & Brownfields) - 302-395-2600  
Solid Waste - 302-739-9403  
Source Water Protection - 302-739-9945  
Stormwater Permits - 302-739-9946  
Surface Water Discharge Permits (NPDES) - 302-739-9946  
Underground Injection Control & Spray Irrigation - 302-739-9948  
Underground Storage Tanks - 302-395-2500  
Wastewater Collection, Conveyance and/or Treatment Facility Construction Permits - 302-739-9946  
Wastewater Treatment Facility Operators - 302-739-9946  
Water Allocation Permits - 302-739-9945  
Water Testing - Drinking Water (Div. of Public Health) - 302-741-8630  
Well Driller's License - 302-739-9944  
Well Permits & Licensing - 302-739-9944