

The agency's comments pertaining to soils, wetlands, Total Maximum Daily Load and water quality in the Smyrna River watershed, stormwater management, source water protection, water supply, floodplains and wildlife habitat are moot because the project did not go through PLUS at the time and in manner prescribed by state law, and the site plan is already recorded.

Since the entire parcel is mapped as a wetland, we do remind the applicant that he is responsible (if he has not done so already) for determining whether any State-regulated wetlands (regulated pursuant to Title 7, Delaware Code, Chapter 66 and the Wetlands Regulations) are present on the property. This determination can only be made by contacting the Division of Water Resources' Wetlands and Subaqueous Lands Section at 302/739-9943 and consulting the State's official wetland regulatory maps, which depict the extent of State jurisdiction.

The applicant should also be reminded that they must avoid construction/filling activities in those areas containing wetlands or wetland associated hydric soils as they are also subject to regulatory requirements specified under Federal 404 provisions of the Clean Water Act. A site-specific field wetlands delineation using the methodology described in the 1987 United States Army Corps of Engineers (USACE, or "the Corps") manual is the basis for making a jurisdictional wetland determination for nontidal wetlands in Delaware.

We offer these additional comments regarding hazardous waste sites, underground storage tanks, air quality and energy efficiency.

### **Site Investigation and Restoration**

Only one Site Investigation & Restoration Branch (SIRB) site was found within a half mile radius of the proposed site: Delcote/ Eastwind (DE-0290) is located 0.17 miles east of the proposed site. Delcote/ Eastwind produced rain gear for the US military while Khem-Cote, a division of Delaware Eastwind produced the chemical coating for the gear. Delaware Eastwind was a small quantity hazardous waste generator with a valid EPA identification number. In September of 2003, Delcote/ Eastwind received a No Further Action (NFA) designation.

Based on the previous manufacturing and industrial use of the proposed project site, which involved the use of hazardous substances, SIRB recommends that a Phase I Environmental Site Assessment be performed prior to development. In addition, should a release or imminent threat of a release of hazardous substances be discovered during the course of development (e.g., contaminated water or soil), construction activities should be discontinued immediately and DNREC should be notified at the 24-hour emergency number (800-662-8802). SIRB should also be contacted as soon as possible at 302-395-2600 for further instructions.

### **Under/Aboveground Storage Tanks**

There is one (1) inactive leaking underground storage tank (LUST) site located within the perimeter of the proposed construction, one (1) inactive LUST site located within a quarter mile

from the proposed construction, and one (1) active LUST site located a quarter mile from the proposed construction:

Name: St. Joseph's School (Inactive—within proposed construction boundary)  
Facility ID: 1-000586  
Project: K0303027

Name: Nature's Pride-Hanover Foods (Inactive)  
Facility ID: 1-000080  
Project: K9203057

Name: Clements Supply Company (Active)  
Facility ID: 1-000055  
Project: K8803030

Should any additional underground storage tanks or petroleum contaminated soil be discovered by any person during construction, the DNREC-TMB at (302) 395-2500 and the DNREC Emergency Response Hotline at (800) 662-8802 must be notified within 24 hours.

In addition, should petroleum contamination be encountered during new construction activities, note that PVC pipe materials will have to be replaced with ductile steel and nitrile rubber gaskets in the contaminated areas.

Also, please note that if any aboveground storage tanks (ASTs) less than 12,500 gallons are installed, they must be registered with the TMB. If any ASTs greater than 12,500 gallons are installed, they are also subject to installation approval by the TMB.

## **Air Quality**

Housing developments may unnecessarily emit, or cause to be emitted, significant amounts of air contaminants into Delaware's air, which will negatively impact public health, safety and welfare. These negative impacts are attributable to:

- Emissions that form ozone and fine particulate matter; two pollutants relative to which Delaware currently violates federal health-based air quality standards,
- The emission of greenhouse gases which are associated with climate change, and
- The emission of air toxics.

Air emissions generated from housing developments include emissions from:

- Area sources like painting, lawn and garden equipment and the use of consumer products like roof coatings and roof primers.
- The generation of electricity needed to support the homes in your development, and
- Car and truck activity associated with the homes in your new development.

These three air emissions components (i.e., area, electric power generation, and mobile sources) are quantified below, based on a per household/residential unit emission factor that was developed using 2002 Delaware data. These emissions in the table represent the actual impact the Ovations development may have.

Emissions Attributable to Ovations Subdivision (Tons per Year)

	Volatile Organic Compounds (VOC)	Nitrogen Oxides (NOx)	Sulfur Dioxide (SO <sub>2</sub> )	Fine Particulate Matter (PM <sub>2.5</sub> )	Carbon Dioxide (CO <sub>2</sub> )
Direct Residential	6.2	0.7	0.6	0.7	25.1
Electrical Power Generation	ND*	2.5	8.5	ND*	1,258.8
Mobile	15.3	12.7	9.4	0.8	1,283.9
<b>Total</b>	<b>21.5</b>	<b>15.9</b>	<b>18.5</b>	<b>1.5</b>	<b>2,567.8</b>

(\* ) Indicates data is not available.

Note that emissions associated with the actual construction of the subdivision, including automobile and truck traffic from working in, or delivering products to the site, as well as site preparation, earth moving activities, road paving and other miscellaneous air emissions, are not reflected in the table above.

*Recommendations:*

The applicant shall comply with all applicable Delaware air quality regulations. These regulations include:

<b>Regulation 6 -</b> Particulate Emissions from Construction and Materials Handling	<ul style="list-style-type: none"> <li>• <b>Using dust suppressants and measures to prevent transport of dust off-site from material stockpile, material movement and use of unpaved roads.</b></li> <li>• <b>Using covers on trucks that transport material to and from site to prevent visible emissions.</b></li> </ul>
<b>Regulation 1113 –</b> Open Burning	<ul style="list-style-type: none"> <li>• <b>Prohibiting open burns statewide during the Ozone Season from May 1-Sept. 30 each year.</b></li> <li>• <b>Prohibiting the burning of land clearing debris.</b></li> <li>• <b>Prohibiting the burning of trash or building materials/debris.</b></li> </ul>
<b>Regulation 1145 –</b> Excessive Idling of Heavy Duty Vehicles	<ul style="list-style-type: none"> <li>• <b>Restricting idling time for trucks and buses having a gross vehicle weight of over 8,500 pounds to no more than three minutes.</b></li> </ul>

Additional measures may be taken to substantially reduce the air emissions identified above. These measures include:

- **Constructing only energy efficient homes.** Energy Star qualified homes are up to 30% more energy efficient than typical homes. These savings come from building envelope upgrades, high performance windows, controlled air infiltration, upgraded heating and air conditioning systems, tight duct systems and upgraded water-heating equipment. Every percentage of increased energy efficiency translates into a percent reduction in pollution. The Energy Star Program is excellent way to save on energy costs and reduce air pollution.
- **Offering geothermal and/or photo voltaic energy options.** These systems can significantly reduce emissions from electrical generation, and from the use of oil or gas heating equipment.
- **Providing tie-ins to the nearest bike paths and links to any nearby mass transport system.** These measures can significantly reduce mobile source emissions.
- **Funding a lawnmower exchange program.** New lawn and garden equipment emits significantly less than equipment as little as 7 years old, and may significantly reduce emissions from this new development. The builder could fund such a program for the new occupants.

Additionally, the following measures will reduce emissions associated with the actual construction phase of the development:

- **Using retrofitted diesel engines during construction.** This includes equipment that are on-site as well as equipment used to transport materials to and from site.
- **Using pre-painted/pre-coated flooring, cabinets, fencing, etc.** These measures can significantly reduce the emission of VOCs from typical architectural coating operations.
- **Planting trees at residential units and in vegetative buffer areas.** Trees reduce emissions by trapping dust particles and by replenishing oxygen. Trees also reduce energy emissions by cooling during the summer and by providing wind breaks in the winter, whereby reducing air conditioning needs by up to 30 percent and saving 20 to 50 percent on fuel costs.

This is a partial list, and there are additional things that can be done to reduce the impact of the development on air quality. The applicant should submit a plan to the DNREC Air Quality Management Section which address the above listed measures, and that details all of the specific emission mitigation measures that will be incorporated into the Ovations development. Air Quality Management Section points of contact are Phil Wheeler and Deanna Morozowich, and they may be reached at (302) 739-9402.