



# STAFF *spotlight*

## Meet Geologist Yolande Norman



*Ms. Norman supervises employees in the oil control program. They are challenged with events such as the Jacksonville Exxon Station incident, where gasoline released into the soil prompted MDE to assess public health concerns.*

Essentially, it's a dream job: uncovering mysteries of the earth, digging in the dirt, discovering new approaches to soil assessment, working with smart people, traveling our fine state. That is the life of a geologist in Maryland.

When Yolande Norman joined the Maryland Department of the Environment (MDE) in January of 1997 as a Junior Geologist in the Voluntary Cleanup Program (VCP), she applied her fresh talents to assessing and redeveloping sites perceived to be contaminated by hazardous substances. "My first successful project was the American Can site in Canton," said Ms. Norman. "It was basically a blighted property laying fallow for quite some time, with lead and chromium content in the soil. MDE worked with the developer to bring it back to land use. It is now a modern shopping center in the Canton area." Learn more about this project on our website at: [www.mde.state.md.us/ResearchCenter/Publications/General/eMDE/vol1no6/vcpworkshop\\_photo.asp](http://www.mde.state.md.us/ResearchCenter/Publications/General/eMDE/vol1no6/vcpworkshop_photo.asp)

### Drilling Up Through the Ranks

As Division Chief of Oil Control Remediation in MDE's Waste Management Administration, Ms. Norman supervises a staff of 13, comprised of Environmental Compliance specialists, geologists and administrative personnel. She is tasked with overseeing oil groundwater cleanup activities, supervising contractors, and remediation of state lead cases that have no viable responsible party.

### Hard Rock, Soft Rock

"The great thing about this job is that you are constantly learning," said Ms. Norman. "I tap into the strength of this staff. MDE has such diversity in geological expertise and each geologist has individual strengths. Our state has such a variety of geologic characteristics. For the central to western part of the state, we have a bedrock geologist. Further west you can get limestone Karst features (where water has eroded features into the limestone). The Eastern Shore is mostly sand. We have a geologist who loves to be involved in design of remediation systems and another whose expertise is site characterization and understanding how remediation systems work. They all help to determine where the problem is and what is the best technology to use."

When Ms. Norman moved up through the ranks to section head in the VCP program, she was presented with an opportunity in the Oil Control



*MDE Oil Recovery team on the scene in Jacksonville.*

Program, dealing with remediation. Then in October 2003, Hurricane Isabel hit. "It was baptism by fire!" she said. Since there were many releases from above-ground storage tanks, her staff corroborated with local and federal agencies. She was part of the MDE team that met with federal and state emergency management agencies, and the Department of General Services to develop a construct that assists impacted Maryland citizens with petroleum cleanup at no cost. "It was a definite eye opener of the various roles each agency played in doing a statewide cleanup," said Ms. Norman.

## Yolande Norman, Geologist

In the Hurricane Isabel case, MDE's role was to define the responsibility that Maryland had in taking on a petroleum cleanup, an authority bestowed on this agency by the U.S. Environmental Protection Agency (EPA). It was quite an undertaking, because the state has more stringent control measures than EPA defines nationally.

Originally from Jamaica, Ms. Norman achieved a Bachelor of Science in a double major in geology from University of the West Indies, which was a "popular science major for many students because of the nearby island of Trinidad's big oil production." She holds a Masters Degree in Geology from University of New Brunswick in Canada - just over the Maine border, where she performed fieldwork on many logging trails. Coming from the Islands, her training in soft rock sedimentology has come in handy - for instance, on the Eastern Shore where the coarsening of rivers are sandy and streamways are preferential pathways for groundwater flow and petroleum contaminants. A Baltimore City resident for three years, Ms. Norman has lived in Maryland for 11 years.

On her supervisory style, she says, "It boils down to priorities of the assigned task and how it's executed," said Ms. Norman. "That's my philosophy across the board - to understand the task, what needs to be accomplished and execute it with the resources we have."

### Keeping Ahead of Catastrophe

During the Jacksonville Exxon incident, called a "catastrophic release" of 25,000 gallons of petroleum product, "we received the dreaded Friday evening phone call where our staff had to immediately mobilize to the site," said Ms. Norman. Everyone coordinated and worked under emergency conditions to deploy the right people to the site. She felt that it was crucial to get in on the process as early as possible to assess how aggressive the recovery efforts should be. This was followed up with Ms. Norman checking the site throughout the weekend, and providing frequent updates on the status of the release.

"Of high concern was that this area relied on private drinking water wells," said Ms. Norman. The team took drinking water contamination into consideration and assessed human sensitivity to the

released fuel. The responsible party in this instance had to shut down the station. In large-quantity liquid leaks, there is also the danger of potential vapor release, so it was critical to pump all remaining product out of the underground storage tanks and begin the site investigation immediately. The responsible party mobilized the response team to monitor the site and community around the clock until the emergency was abated.

### Raising the Bar in Standards to Protect Public Health

MDE works very closely with local agencies such as the health department and the fire department during fuel storage tank leak events. They are sometimes our eyes and ears in the first line of defense. MDE follows up on these releases providing oversight for site characterization and recovery actions. Vapor issues related to a gasoline additive in underground storage tank systems have forced MDE to develop more stringent protocols for gas stations located in high-risk areas to protect drinking water. Other states are consulting Maryland about this proactive approach to early detection of groundwater contamination.

"A good chunk of our job involves communication," claims Ms. Norman. "It's critical to be able to talk with station operators. The industry has changed significantly as we have seen major oil companies move into the distribution side of the business, while smaller corporations and independent station owners/operators are expanding into the retail aspect of the petroleum business."

### Strengths in the Field

MDE's Oil Control Program has been nationally commended and recognized for its strong field presence compared to other states. This agency approves work plans, corrective measures, then deploys staff to monitor and track cases to ensure compliance with MDE's directives. They don hardhats, steel-toed shoes, safety glasses and go into action.

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