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Land and Materials Administration ● Oil Control Program

Cleanup Actions and Environmental Investigation at the Jacksonville Exxon
14258 Jarrettsville Pike, Phoenix, Baltimore County, Maryland
MDE Case No. 2006-0303BA2

The Maryland Department of the Environment, Oil Control Program (MDE-OCP), has been overseeing cleanup activities at the Jacksonville Exxon. The groundwater study area and known area of impact has been defined. Groundwater cleanup systems are in place and have established hydraulic control of the gasoline plume. The MDE-OCP does not anticipate further impacts beyond those already known from detailed studies of the release. Cleanup activities will continue to ensure the protection and restoration of groundwater resources.

After receiving an initial report on February 17, 2006 that 15 feet of gasoline was discovered in an on-site monitoring well (MW3), located closest to the service station's tank field, and 8 feet of gasoline was observed in downgradient monitoring well (MW4). ExxonMobil's preliminary assessment of the situation was that a major petroleum release had occurred from a product line. The MDE-OCP immediately notified Baltimore County Department of Environmental Protection and Resource Management (BADEPRM) and the Greater Jacksonville Community Association of the emergency situation. On February 17, 2006, the MDE instructed ExxonMobil to close down gasoline retail activities at the station. By February 18, 2006, all remaining petroleum products were pumped from the four (4) underground storage tanks (USTs) two 8,000-gallon (mid and premium grade gasoline); a 12,000-gallon gasoline (regular-grade); and a 10,000-gallon diesel and the tanks have subsequently been removed.

After conducting an initial review of the station's inventory records, MDE-OCP suspects that over 25,000 gallons of regular unleaded gasoline was released from one of the underground lines that transports gasoline from the regular-grade gasoline UST to the fuel dispensers. Discrepancies in the inventory records showed that the release likely begun on or about January 12, 2006 with an average daily loss of over 675 gallons over a 37-day period. Although this UST had a 12,000-gallon capacity, gasoline was periodically delivered to the station between the time the release occurred and when it was discovered.

The MDE-OCP directed ExxonMobil to begin recovery operations of gasoline by installing recovery wells in the source area with additional wells on surrounding properties to assess groundwater migration. In response to this emergency situation, MDE mobilized to the site to monitor vapor levels and to evaluate subsurface conditions to ensure the protection of human health and the environment. During initial phases of the release MDE and ExxonMobil's contractors conducted frequent vapor screening in the stormwater manholes/outfalls and monitoring of the nearby, unnamed streams

To date, approximately 10,700 gallons of liquid gasoline product has been recovered from the Jacksonville Exxon release. Additional gasoline product has been recovered in both a vapor and dissolved phased. It is felt that there is no additional liquid product to recover and all remaining product is in a dissolved phase in the groundwater. Recovery activities are now being monitored and gauged through the level of dissolved petroleum in the groundwater. There have never been petroleum impacts observed in the nearby storm water outfall or the nearby streams.

Currently the remedial strategy involves the use of several technologies namely, submersible pneumatic pumps, submersible electric pumps, high vacuum dual phase extraction and soil vacuum extraction. Approximately 8.5 million gallons of groundwater has been treated through approved processes on site. These systems will continue to operate until MDE determines that remediation has been successful. Currently, there are a total of two hundred and sixty two (262) monitoring wells within the Jacksonville study area. Groundwater recovery is being performed from seventy eight (78) wells.

Since MDE's directive of February 21, 2006, ExxonMobil has been sampling drinking water wells located within the established study area. There have been over two hundred and fifty (250) private supply wells sampled over time. The majority of these supply wells remain on a sampling schedule. Carbon filtration systems have been installed on thirteen (13) supply wells either as a precautionary measure or because water from the well has exceeded state standards for petroleum contamination. Ten (10) of the supply wells with filtration units are currently below contamination standards and three (3) exceed standards.

Groundwater flow in the Jacksonville area is along a hydraulic feature that extends from the station in a northeasterly and southwesterly direction. Geophysical studies have been performed using boreholes, seismic and resistivity techniques to collect data on the bedrock both on-site and off-site.

As further precautionary measure vapor intrusion sampling has routinely been performed on five homes in the Hampshire Glenn area and on the Bradford Bank. This sampling has never revealed a level of contamination that has exceeded MDE standards.

The MDE-OCP continues to supervise cleanup actions at the Jacksonville Exxon. The property and vicinity are located in a high-risk groundwater use area served by drinking water wells; consequently, protection of the groundwater is a concern. At this time, the Department is not aware of any conditions that would preclude the occupancy of surrounding premises or the use of groundwater supply wells during these cleanup efforts.

Drinking Water Well Sampling Results:

- Approximately two hundred and fifty (250) drinking water wells have been sampled.
  - 3 wells had detections of petroleum constituents above the Department's regulatory levels.
  - A granular activated carbon (GAC) treatment system to remove petroleum constituents installed on a total of thirteen (13) wells.
    - The Bradford Bank has been supplied with an alternative water source.
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- All environmental reports and updates on this case investigation are posted at www.mde.state.md.us [at the MDE home page, (select) Land, (select) Program, (select) Oil Control, (select) Remediation Sites].

Contacts:

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Disclaimer:

The intent of this fact sheet is to provide the reader a summary of site events as they are contained within documents available to MDE. To fully understand the site and surrounding environmental conditions, MDE recommends that the reader review the case file that is available at MDE through the Public Information Act. The inclusion of a person or company's name within this fact sheet is for informational purposes only and should not be considered a conclusion by MDE on guilt, involvement in a wrongful act, or contribution to environmental damage.