

Oversight News

Spring 2017

Newsletter of the Commonwealth's Environmental Oversight Section for the Dept. of Energy's Paducah Site

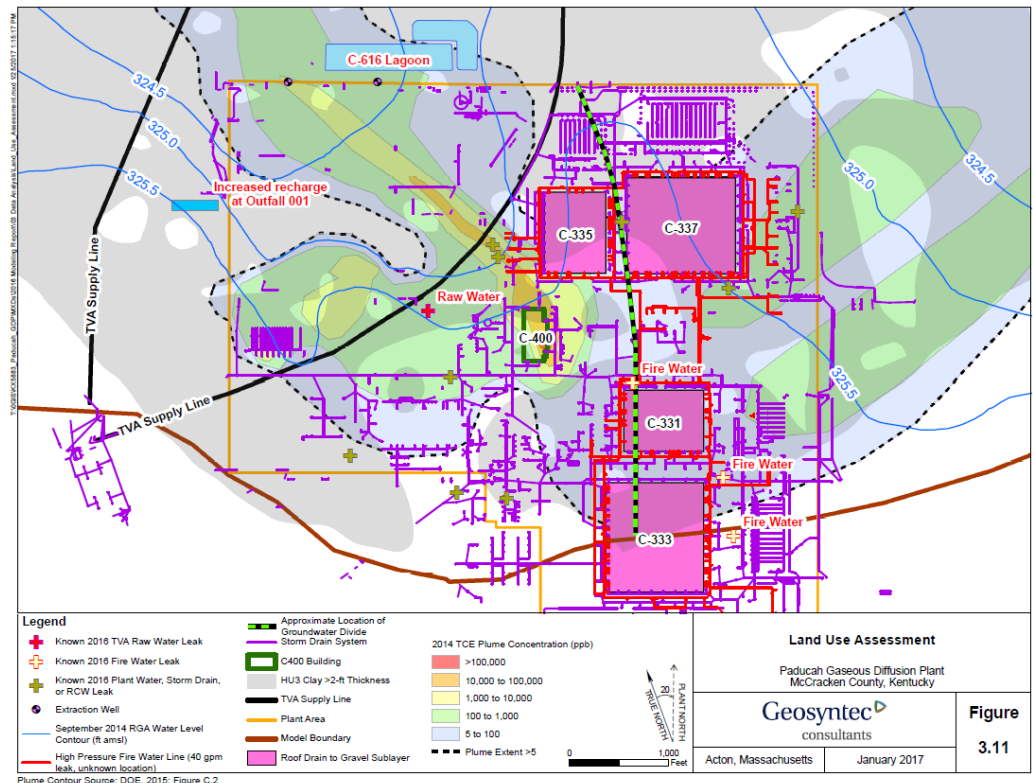
Groundwater Flow Model Updated



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Map courtesy of DOE.



In a series of meetings through the winter and spring, groundwater experts from DOE, EPA and Kentucky revised the Paducah Site specific groundwater model. This groundwater model, like previous models, is a tool that helps to predict how contamination may migrate over time. The model is also useful in identifying additional data needs and in evaluating groundwater remedies. The first groundwater flow model was designed in 1990 and revised several times through 1997. A transport model was developed in 1997 and 1998. The next major revision did not occur until 2008 and was developed to assist in determining additional data needs, evaluating potential remedies, and developing inputs to design selected remedies. The model was further refined in 2012 to evaluate how potential variability in anthropogenic recharge rates (e.g., leaking water from plant utility lines) can influence groundwater flow and extraction well capture zone performance. The 2016 model revision builds on the 2012 model update with revisions to technical parameters of the model.

The groundwater model simulates flow within the Regional Gravel Aquifer (RGA) and excludes flow in both the Upper Continental Recharge System (UCRS) and the McNairy Formations. The UCRS

conveys natural and anthropogenic recharge vertically to the RGA. The underlying McNairy Formation is represented in the model as a no flow boundary. The model includes an upgradient zone which accounts for recharge to the model along Terrace Gravel deposits. The model includes multiple sets of synoptic water level elevation events to better represent natural and anthropogenic variability as a large and complex system.

DOE submitted the '2016 Update of the Paducah Gaseous Diffusion Plant Sitewide Groundwater Flow Model' document to the regulators in April 2017 even though it is not subject to regulatory review and approval under the Federal Facilities Agreement (FFA). The 2016 update to the sitewide groundwater model was the result of a collaborative approach and process undertaken by all three parties to the FFA with an objective to represent and reflect groundwater flow conditions of the past, present, and future. The intent of the model update is to provide FFA decision makers with a tool that can predict how contamination will migrate over time. Both Kentucky and EPA reviewed and provided comments to be considered in the next revision.

DOE Rolls Out New Version of Environmental Database

DOE has rolled out the newest version of the plant database, PEGASIS. PEGASIS, which stands for PPPO Environmental Geographic Analytical Spatial Information System, contains all the plant's environmental data. This version includes greatly

enhanced GIS features which allow the user to search for all data available from a location within or near the facility. PEGASIS provides the selected data in several formats, including Excel, which can be exported for independent data assessment and evaluation. It also provides access to an extensive reference library

of historical plant documents that contain context to the sampling information. DOE is in the process of providing training to regulators and other interested users of the system. The newest version of PEGASIS can be accessed at: <http://pegasis.ffspaducah.com>

Welcome to the Paducah version of PEGASIS!

PEGASIS was designed to provide dynamic mapping and environmental monitoring data display for the U.S. Department of Energy (DOE) - Portsmouth/Paducah Project Office (PPPO).

[Site GIS Viewer](#)

[Analytical Data and Plotting](#)

[Well and Bore Logs](#)

[Groundwater Level Data](#)



PEGASIS

PPPO Environmental Geographic Analytical Spatial Information System

[What is PEGASIS?](#)

[Public Documents](#)

[User Instructions](#)

[Related Links](#)

[Portsmouth Version](#)

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Other Internet Sites that Provide Information on the Paducah Site

<http://www.paducahsun.com/>

<http://www.energy.gov/pppo/portsmouthpaducah-project-office>

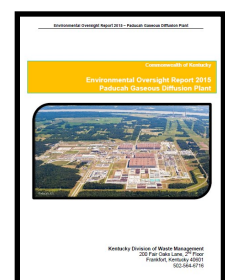
<http://www.pgdpcleanup.com/>

<http://www.pgdpcab.energy.gov/>

<http://paducaheic.com/>

<http://www.em.doe.gov/SiteInfo/paducah.aspx>

<http://www.ukrcee.org/>



<http://waste.ky.gov/HWB/Pages/PaducahGaseousDiffusionPlant.aspx>

DOE Plans Community Two Outreach Activities

The Department of Energy (DOE) is planning two community outreach activities. The first is an informational “Fact Sheet” to plant neighbors living within the Water Policy Area. The “Fact Sheet” explains the history and current extent of groundwater contamination underlying portions of the Water Policy Area. Information on remedial actions taken towards cleaning up the groundwater contamination sources is also provided.

DOE is planning a second broad-reaching community survey tailored to gauge the overall understanding and level of interest within the communities surrounding the Paducah Site. DOE anticipates mailing out 1,600+ invitations requesting the completion of a 15 question on-line survey this summer. The survey is anonymous and the preferred method of response will be on-line. For community members preferring to receive the survey in paper format, DOE will provide contact information on the invitation to request a paper version. All of the responses will be evaluated and summarized in the FY2018 Community Relations Plan. Keeping the community engaged and apprised of the clean-up progress is a shared goal of Kentucky, EPA, and DOE. The responses received from the survey will greatly inform DOE on how better to communicate with the surrounding community and where to focus resources.

An electronic version of the most recent Community Relations Plan can be viewed and downloaded by visiting the Online Public Document Repository at <http://www.ffspaducah.com/public-documents/>.

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The mission of the Kentucky Division of Waste Management is to protect human health and the environment by minimizing adverse impacts on all citizens of the Commonwealth through the development of fair, equitable, and effective waste management programs.



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Kentucky Environmental Oversight News is published quarterly by the Kentucky Department for Environmental Protection's Division of Waste Management. It features information regarding environmental cleanup activities at the DOE Paducah Site and related topics. Additional information is available from:

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