we energies

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Milwaukee, WI 53203
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July 21, 2008

Mr. Richard Jones
Department of Public Works
City of Racine
730 Washington Avenue; Room 303
Racine, WI 53403

RE: Notification of Potentially Affected Right-of-ways and Utilities and Request for Inclusion on City's Master Plan/GIS System
We Energies
Former Water Street and Grand Avenue Manufactured Gas Plant Site
621 and 601 Water Street, 513 Grand Avenue, Racine, Wisconsin
WDNR BRRTS# 02-52-543766, FID# 252243090

Dear Mr. Jones:

We Energies is providing the City of Racine notification of affected or potentially affected right-of-ways and utilities associated with their former manufactured gas plant (MGP) site. The MGP operated in the mid to late 1800's at the corner of Grand Avenue and Water Street in Racine. As part of the site remediation and closure process, We Energies is notifying the City of potentially affected right-of-ways to be identified on the City's Master Plan. The estimated extent of potentially affected right-of-ways is shown on Figure 1.

The current status of the street right-of-ways and utilities in the area of the former MGP site is the following:

- Water Street owned by the City;
- Grand Avenue (not-a-through street) owned by the City;
- The storm sewers, water lines and sanitary sewers located in the street right-of-ways owned by the City; and
- Other utilities (telephone, fiber optic, etc.) owned by others.

Background

Soil and groundwater investigation and sampling of the site was conducted in 2004 and 2005. MGP contaminated soil and groundwater was found at the site. The MGP contamination resulted from the by-products and residuals of the coal gasification process including coal tar. Compounds found in coal tar are similar to typical petroleum compounds, including benzene, etc. and polynuclear aromatic hydrocarbons (PAHs). Other potential contaminants associated with MGP sites include phenols, cyanide and metals. Fill materials, including soils containing cinders, clinkers, coal pieces, or foundry sand, generally exist in the vicinity between 2 and 20 feet below ground surface (bgs) and also contain similar contaminants. Historical impacts are also known to have been associated with the 701 Water Street property near the Grand Avenue right-of-way.

Remediation efforts of the MGP-impacted soil were conducted from September through November 2006 on We Energies and the adjacent east property (601 Water Street), as shown on Figure 2. Permits and approvals for the remediation were obtained from the City of Racine and the Wisconsin Department of Natural Resources (WDNR) in 2006. The remedial activities consisted of excavation of non-MGP-impacted overlying soil, in-situ stabilization and solidification (ISS) of MGP-impacted soil, backfilling with the non-MGP-impacted soil and placement of 15" of imported clean material to the current grade on We Energies property and asphalt on 601 Water Street. Figure 2 shows the area that was treated via ISS technology. The ISS technology process consisted of mixing the site soils with cement, a cement-like byproduct and water using a long stick back-hoe excavator. ISS in this area extended from approximately 8 feet to a maximum of 37 feet in depth.

Soil and Groundwater Investigation Results

During site investigation activities in 2004 and 2005, several soil borings were advanced in Grand Avenue and adjacent to Water Street. Borings were not able to be advanced in Water Street due to the dense amount of utilities present. Soil samples were collected for laboratory analyses and for visual observations. MGP tar impacts were observed in isolated, permeable zones in the Grand Avenue right-of-way at soil borings SB-121 and SB-119 below the water table. A thin layer of liquid-phase tar (approximately 4 inches) was noted in a sand seam at 17 feet bgs at SB-121 and at approximately 29.7 to 30 feet bgs at SB-119. Based on field observations and analytical results, the impacts indicated at SB-120 (15-17 ft bgs) are possibly unrelated to the former MGP, as the 701 Water Street property historically had releases of petroleum products and industrial-type wastes near the vicinity of the soil boring location. Odors at this boring were not distinctly MGP-type, but general petroleum odor. Generally non-detectable soil concentrations were found at SB-118.

Sample results from former well MW-105 and SB-104 located on We Energies property indicate it is likely that MGP soil impacts exist above the water table in the Water Street and Grand Avenue right-of-ways. The impacts above the water table are likely limited to the southeast corner of this intersection and are more than eight feet bgs. Soils containing MGP impacts in Grand Avenue and Water Street right-of-ways may generally range in depth from 8 ft to as deep as 30 ft bgs. Sample locations within and near the right-of-ways (within 15 feet) are shown on Figure 2. Soil analytical results are presented on Table 1.

Prior to remediation on the site, the groundwater concentration for benzene and naphthalene at MW-101 and MW-105, and for benzene at MW-102 were above their respective NR140 Enforcement Standard. The majority of the source of groundwater contamination has been solidified/stabilized since remediation; however, MGP impacts in the groundwater may be present beneath the Grand Avenue and Water Street right-of-ways. Groundwater is typically 15 to 17 feet bgs at the corner of Grand Avenue and Water Street and appears to be influenced by the large diameter sanitary sewers beneath Water Street, discussed further below. Groundwater elevations and analytical results from the monitoring wells within 15 feet of the right-of-ways are presented on Tables 2 and 3 with groundwater contours shown on Figure 3.

Utilities Known to be Present in the Potentially Affected Right-of-Ways

Based on the City of Racine sewer maps, there are three sanitary sewers and one storm sewer with catch basin laterals located beneath Water Street including 10-inch, 84-inch and 42-inch sanitary sewers, and 15-inch storm sewer, as shown on Figure 1 and Appendix B. There is one 10-inch sanitary sewer and one 12-inch storm sewer located beneath Grand Avenue. The depth to the sanitary sewer inverts beneath Water Street ranges between 10 to 23 feet bgs, and beneath Grand Avenue is approximately 13 feet bgs. The possibility exists that one or both of the sanitary sewers in Water Street may be intercepting groundwater based on the lower groundwater levels measured in the monitoring wells than the Root River stage. The depth to the storm sewer invert beneath Water Street and Grand Avenue is at approximately 7 feet bgs, likely above MGP impacts and the groundwater level.

Telephone and fiber optic lines exist along Water Street. During remediation activities, the fiber optic line beneath Water Street sidewalk was found to exist at a depth of between 5 to 8 feet bgs. Water main and underground electric also exist along Water Street and Grand Avenue. The depths of these other (non-sewer) utilities are unknown.

Notifications to City

Based on the previous activities conducted, We Energies is notifying the City of the following conditions regarding the right-of-ways and request inclusion on the City's Master Plan:

- Samples collected within and within 15 feet of the right-of-ways indicate there is a potential for MGP-impacted soil and groundwater to be encountered in the Water Street and Grand Avenue right-of-ways due to past MGP activities in the areas shown on Figure 1. Potentially affected utilities also exist, as discussed previously.

- The City should notify We Energies and allow proper planning time (more than 3 months if possible) in the event any excavation activities are planned in the potentially affected right-of ways.

- Any work that the City plans to conduct in these right-of-ways may require proper health and safety training and protective equipment. Additional sampling prior to the work being conducted may be necessary to determine the level of training and protection needed;

- If soil is generated as part of any work within the right-of-ways and is confirmed to be MGP-impacted, the waste will need to be properly managed and disposed in accordance with applicable regulations. The waste generated is not expected to require hazardous waste disposal; however, sampling may be necessary for verification of this; and

- As part of the remedial action and future WDNR closure of the MGP site, the street right-of-ways will be considered an "engineered barrier" for limiting infiltration and leaching of the contaminants to groundwater. The engineered barrier is part of the "soil performance standard" approach for addressing the residual contamination.

We Energies will notify the City if there are any changes to these conditions. Please contact me at (414) 221-2162 with questions or if further information is required. Please sign and return the attached page (Appendix A) or otherwise acknowledge in writing that the City has included the affected right-of-ways on the Master Plan. Thank you for your assistance in this matter.

Sincerely,

Mark J. Collins
Principal Hydrogeologist

Enclosures:
Figure 1 – Estimated Extent of Potentially Affected Right-of-Way
Figure 2 – Samples Locations Near Right-of-Way
Figure 3 – Groundwater Elevation Contours – March 18-19, 2008
Table 1 – Summary of Soil Analytical Results Near Right-of-Way
Table 2 – Summary of Groundwater Elevations and Analytical Results Near Right-of-Ways – VOCs, Cyanide, Metals, Phenolics
Table 3 – Summary of Groundwater Elevations and Analytical Results Near Right-of-Ways – Polynuclear Aromatic Hydrocarbons (PAHs)
Appendix A – Acknowledgement of Affected ROW's on Master Plan
Appendix B – City of Racine Sewer Map

cc: Mr. John Feeney, WDNR

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