

CITY OF DES MOINES, IOWA
ENGINEERING DEPARTMENT

TO: Rita Connor
Economic Development

FROM: David N. McGuffin, P.E.
Civil Engineer II

DATE: January 26, 2009

RE: Environmental Review of the north half of 1700 DeWolf Street
Activity ID 02-2009-016

The City performed a Limited Phase 2 Environmental Site Assessment (ESA) of the above-referenced property in 2006.

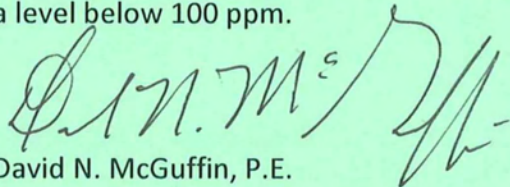
The findings of this Phase 2 ESA are as follows:

- Two (2) borings for soil sampling and analysis, and one (1) groundwater well for soil and groundwater sampling and analysis. See attached site map.
- Soil sampling for heavy metals was performed at depths of 0-2 feet, 2 feet, and 5 feet. Arsenic was detected above the action level based on statewide standards, but the concentrations for arsenic detected are below background levels in central Iowa. All other metal concentrations were below action levels.
- Soil sampling for semi-volatile organic compounds (SVOC) was performed at a depth of 9-10 feet. All SVOC concentrations were below action levels.
- Soil sampling for volatile organic compounds (VOC) was performed at a depth of 9-10 feet. All VOC concentrations were below action levels.
- Soil sampling for extractable petroleum hydrocarbons was performed at a depth of 9-10 feet. Extractable petroleum hydrocarbons concentrations were below action levels.
- Soil sampling for polychlorinated biphenyls (PCB's) was performed at a depth of 2 feet. PCB concentrations were below action levels.
- Groundwater sampling for dissolved heavy metals was performed. All dissolved heavy metals concentrations were below action levels.
- Groundwater sampling for VOC's was performed. All VOC concentrations were below action levels.
- Groundwater sampling for extractable petroleum hydrocarbons was performed. Extractable petroleum hydrocarbons concentrations were below action levels.
- Groundwater sampling for PCB's was performed. PCB concentrations were below action levels.

In addition, the soil pile was sampled at three locations. At each location a sample was collected from a depth of 2 feet, 4 feet, and 6 feet, and composited into one sample. See attached site map.

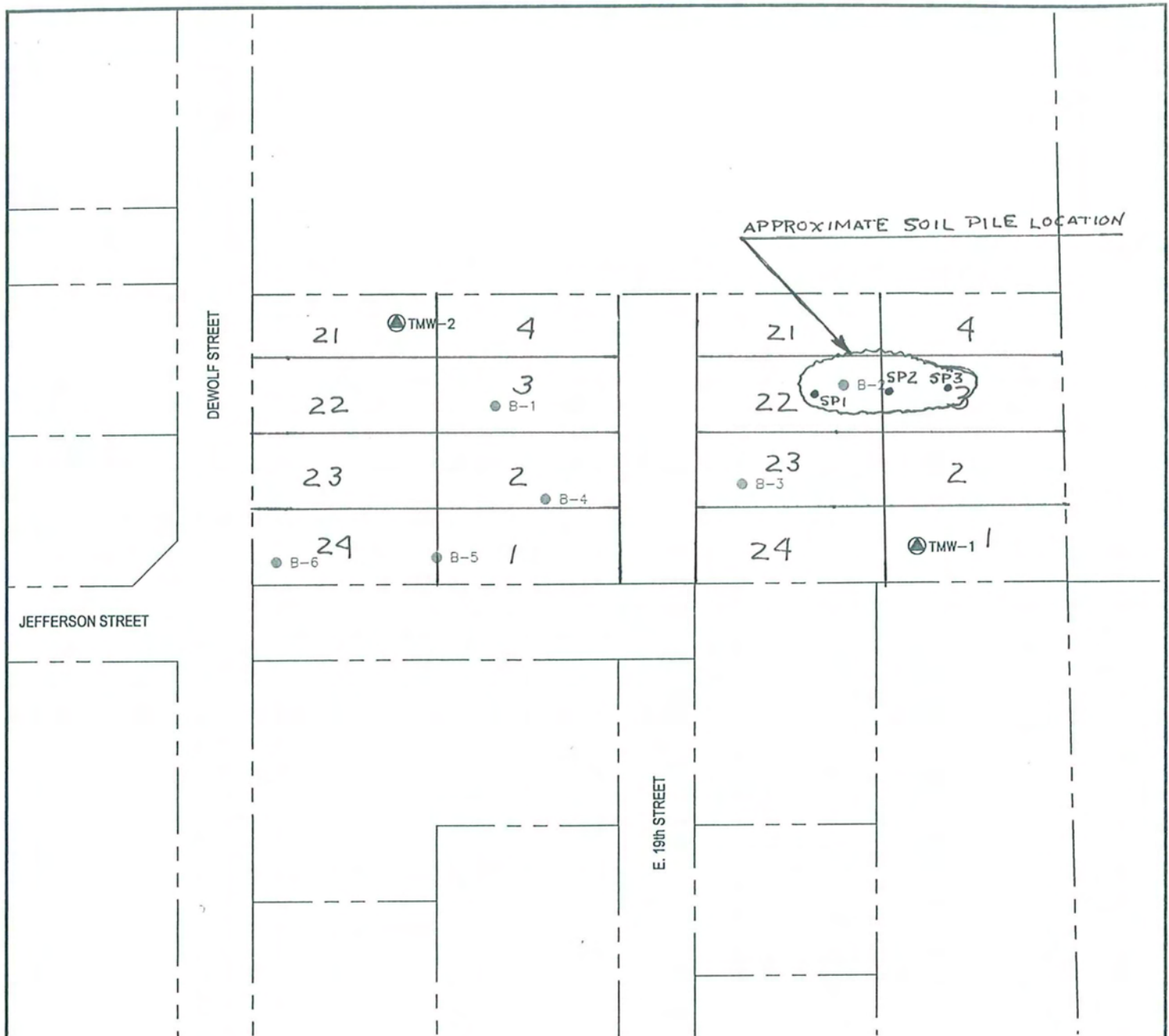
- Soil sampling for volatile petroleum hydrocarbons was performed. Volatile petroleum hydrocarbons were below action levels.
- Soil sampling for total extractable hydrocarbons was performed. The results indicated detectable concentrations of total extractable hydrocarbon as waste oil in each of the soil borings. There is not an established action level for waste oil in soil.
- Soil sampling for total lead was performed. Lead concentrations were below action levels.

In summary, the Limited Phase 2 ESA indicates that arsenic in the soil is above statewide standards, but the concentrations are below background levels in central Iowa. Total extractable hydrocarbon as waste oil is present, and one sample had a concentration of total extractable hydrocarbon as waste oil above 100 ppm, which may require the soil to be disposed of as special waste at a landfill. Landfills are required to treat petroleum contaminated sites to a level below 100 ppm.



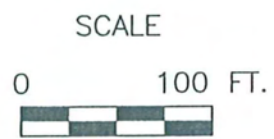
David N. McGuffin, P.E.
Civil Engineer II

DNM:lav



LEGEND

- MW-1 WELL LOCATION
- BH-1 APPROXIMATE LOCATION OF BOREHOLE
- SG-1 APPROXIMATE LOCATION OF SOIL GAS WELL
- W WATER SUPPLY
- W PLASTIC WATER SUPPLY
- SAN SANITARY SEWER
- SS STORM SEWER
- - - PROPERTY BOUNDARY



<p align="center">SITE MAP GUTHRIE AVENUE BUSINESS PARK PHASE II 1700 DEWOLF, DES MOINES, IA PROJECT NO. CTYDM 063 DRAWING DATE: JANUARY, 2005</p>	<p>BARKERLEMAR ENGINEERING CONSULTANTS 1801 Industrial Circle - West Des Moines, Iowa - 50265 Phone: 515.256.8814 - Fax: 515.256.0152 - www.barkerlemar.com</p>	<p>FIGURE 2</p>
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