ATTACHMENT 13

DESCRIPTION OF SITE GEOGRAPHY/GEOLOGY

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Description of Site Geography/Geology
125 Main Street Site
Brownfield Cleanup Program Application

ECOLOGICAL SETTING

The majority of the Site is covered with existing buildings, asphalt parking and driveways.

The Site is located in the Lake Erie-Niagara River Basin, which generally drains west/southwest from the Site, although localized variation may occur. Viable aquatic habitats in the vicinity of the Site include the Buffalo River (approximately 800-ft west) and Lake Erie (approximately 0.75 mile west).

DEMOGRAPHY AND LAND USE

The Site is located in highly developed urbanized area of the City of Buffalo, Erie County, NY. Land use surrounding the Site includes commercial, recreational, and some residential properties (see Figure 11-1).

REGIONAL GEOLOGY/HYDROGEOLOGY

The Site is located within the Erie-Ontario lake plain physiographic province, which is typified by little topographic relief and gentle slope toward Lake Erie, except in the immediate vicinity of major drainageways (USDA, 1978). The surficial geology of the Lake Erie Plain consists of a thin glacial till (if present), glaciolacustrine deposits, recent alluvium, and the soils derived from these deposits.

Surface soils within the City are characterized as urban land with level to gently sloping land in which 80 percent or more of the soil surface is covered by asphalt, concrete, buildings, or other impervious structures (USDA, 1978) typical of an urban environment. The presence of overburden fill material is widespread and common throughout the City of Buffalo

Based on the bedrock geologic map of Erie County (Buehler and Tesmer, 1963), the Site is situated over Onondaga Formation of the Middle Devonian Series. The Onondaga

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Formation is comprised of a varying texture from coarse to very finely crystalline with a dark gray to tan color and chert and fossils within. The unit has an approximated thickness of 110 to 160 feet.

SITE GEOLOGY/HYDROGEOLOGY

Based on the previous investigation (see Attachment 05), the geology at the Site is generally described as fill materials of variable density. The fill materials consist of crushed slag from 0 to 9 feet below graded surface (fbgs) in the northern portion of the Site. As well as varying amounts of slag, ash, brick, coal fragments, wood/organic matter, sand, and clayey silt in the southern portion and underlying the northern slag unit from 0 to 19 (fbgs). Native sands were encountered beneath fill material, described as dark brown, medium to fine, sand/silty sand. The former Hamburg Canal runs under the southern portion of the Site.

Based on the previous investigation, Site groundwater was typically found to be 16-18 fbgs. Site Hydrogeology will be further investigated during the Remedial Investigation fieldwork.