October 31, 2018

Wisconsin Department of Natural Resources
Remediation and Redevelopment Program
625 East County Road Y, Suite 700
Oshkosh, Wisconsin 54901-9731

Attn: Ms. Jennifer Borski

Re: **801 South Outagamie Street Sump Pit/Foundation Drain Documentation Report**
N.W. Mauthe Superfund Site
725 South Outagamie Street
Appleton, Wisconsin
Terracon Project No. 58117057
BRRTS No. 02-45-000127

Dear Ms. Borski:

On September 4, 2018, the Wisconsin Department of Natural Resources (WDNR) contacted Terracon Consultants Inc. (Terracon) about water problems in the basement of 801 South Outagamie Street (Beardsley residence). The Beardsley's indicated that water had backed up into their sump pit and covered the southeastern part of the basement in approximately 2 inches of water. Water was also slowly seeping through the walls or junction of the walls and floor at multiple locations. You requested that Terracon, along with Ogden Plumbing, investigate and diagnose the sump pit/basement water problem in accordance with your September 4, 2018, email.

Terracon met Ogden Plumbing at the residence on September 5, 2018, to perform the inspection. At that time, water had receded to below the top of the sump pit and was approximately 2 to 3 inches above the sump outlet pipe. Ogden placed a tracer dye in the sump pit water, but no movement was observed, and the dye remained in the sump pit. On the exterior, Terracon observed that the southeastern and western roof drain downspouts discharge into corrugated drain tubing extending beneath the ground surface. The northwestern roof drain downspout discharged to the lawn approximately 10 feet from the house. A photolog demonstrating site conditions is attached.

A video camera system was used to attempt to map the foundation drain system and identify potential problem areas. The camera was inserted into the vertical drain tubing associated with the southeastern roof downspout. The camera verified that the downspout tubing was tied into the horizontal foundation drain. The foundation drain was videoed from the southeast corner westward along the south foundation wall and a few feet along the western foundation. The observed foundation drain was full of water, but otherwise was in good shape with no observed

collapsed or blocked zones. Unsuccessful attempts were made to video the eastern foundation drain northward from the southeastern downspout and from the sump pit outlet pipe; however, it was verified that the sump pit outlet pipe was connected to the foundation drain.

The western foundation drain was also investigated from the western downspout northward toward the northwestern foundation corner, but refusal occurred in an area of sediment within the pipe short of the northwest foundation corner. Again, the foundation drain was full of water. The owner indicated that they had observed water leaking from the corrugated tubing attached to the western downspout at a point where it curved downward before going beneath the ground surface. Ogden Plumbing taped over the hole to seal it.

Lastly, the camera was inserted into the southeast trench drain pipe at manhole MH-2 to observe the collection piping extending southward along the east property boundary of 801 South Outagamie Street and attempt to locate a (potential) lateral connecting the foundation drain at 801 South Outagamie to the collection trench. The collection trench piping was observed for approximately 115 feet southward from MH-2. The pipe was full of water and was observed to be back-pitched (sloped downward away) from manhole MH-2, locally by an estimated 1 to 2 feet. A significantly smaller volume of water than anticipated was discharging into manhole MH-2, which suggests that the groundwater table has been sufficiently depressed near the collection trench to reduce the head. The back-pitched collection pipe stores water causing discharge to be less efficient than it would otherwise be. No indication of a lateral or connection coming from 801 South Outagamie Street was observed.

The inspection did not reveal the root cause of the drainage problem, but the reduced efficiency of the back-pitched collection pipe, likely contributes to the problem, and/or the lateral connecting the foundation drain to the collection trench is collapsed, blocked with sediment, or possibly tree roots at a location that was not directly observed.

Please contact us if you have any questions or comments regarding the information provided or need additional information.

Sincerely,

Scott A. Hodgson, P.G.
Senior Project Manager

SAH/BRS:sah/N:\Projects\2011\58117057\PROJECT DOCUMENTS (Reports-Letters-Drafts to Clients)\Other Reports\Sump Pit_Basement Water Assessment Report.final.doc

Attachments: Photolog
Copies to: File

Photo #1 Looking east at the northwest roof drain.

Photo #2 West roof drain. The corrugated connecting tubing was observed to be leaking at the bend.

Photo #3 Looking east at the southeast roof drain.

Photo #4 View west from the street.

Photo #5 Sump pit, water line, and sanitary sewer line in the southeast corner of the basement.

Photo #6 Sump pit with standing water above the discharge pipe.