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August 22, 2019

Ms. Jennifer Dorman
Environmental Program Associate
Remediation and Redevelopment Program
Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King Jr. Drive
Milwaukee, WI 53212-3128

Subject: **RESPONSES TO WDNR SUPPLEMENTAL COMMENTS**
Site Investigation Work Plan
Milwaukee Die Casting Company Site
4132 North Holton Street, Milwaukee, Wisconsin
WDNR BRRTS # 02-41-000023
WDNR FID # 241228240

Dear Ms. Dorman,

The purpose of this letter is to present responses to the Wisconsin Department of Natural Resources' (WDNR's) supplemental comments to the December 14, 2018 Site Investigation Work Plan ("Work Plan") for the Milwaukee Die Casting Company Site ("Site") as transmitted via email from Mr. Stephen Mueller to Geosyntec Consultants (Geosyntec) on June 28, 2019. The Work Plan, prepared in accordance with NR 716.09, was submitted to the WDNR pursuant to Item 2 on Page 3 of WDNR's August 10, 2018 letter to Pharmacia and Fisher Controls International, Inc. (Fisher). This letter is being submitted on behalf of Pharmacia which is acting on behalf of Fisher in this matter.

This letter supplements the April 2, 2019 letter responding to WDNR's February 13, 2019 email comments to the Work Plan.

Comment responses are provided below, inclusive of WDNR's supplemental comment, in the order presented in WDNR's June 28, 2019 email.

WDNR Supplemental Comment 1: "*The MDCC case has a long history with multiple consultants (at least seven) conducting numerous investigations over three decades. During this time, no "officially" defined list of contaminants-of-concern (COCs) has been established for the MDCC site. To date, PCBs and various VOCs, especially PCE, TCE, & related breakdown compounds, have been the primary focus of MDCC site environmental activities. However, until the MDCC case is closed by the Department, new (i.e., emerging) parameters of concern (e.g.,*

1,4-dioxane) that can reasonably be attributed to the documented contamination, as well as past operations, at the MDCC site should be analyzed before the case is submitted to the Department for closure review."

Response: Pharmacia objects to WDNR's statement that "*no "officially" defined list of contaminants-of-concern (COCs) has been established for the MDCC site*". Firstly, the number of consultants and the duration of the project are not criteria for site investigation scoping pursuant to NR 716.07. Moreover, consistent with NR 716.07(1), (2) and (3), it is the history and knowledge obtained through numerous investigations and due diligence assessments that have provided the rationale for the supplemental investigation scoping documented in the Work Plan, including that CVOCs and PCBs are the salient COCs at the Site. Specific responses to WDNR's requested addition of SVOCs and 1,4-dioxane to the MDCC Site groundwater analyte list are provided in the responses below.

WDNR Supplemental Comment 2: *"SVOCs have been analyzed in approximately 50 soil samples and 20 'grab' groundwater samples, mostly during the 2004 site assessment by Braun Intertec for the Target Corporation. Several SVOCs were detected above Wis. Admin. Code, §NR 140 Enforcement Standards (ESs) and/or Preventive Action Limits (PALs) mostly in a number of the Braun Intertec 'grab' groundwater samples (e.g., GP-142 and GP-147). Because 'grab' or temporary well groundwater results are "screening" level data and often do not accurately characterize groundwater quality, the Department's long-standing requirement is that the results be confirmed (or refuted) by analytical results for groundwater samples collected from monitoring wells constructed per Wis. Adm. Code §NR 141."*

Response: Consistent with the April 2, 2019 comment responses, it remains Pharmacia's position that there is insufficient rationale to support the addition of SVOCs to the MDCC Site groundwater analyte list.

As referenced in the April 2, 2019 comment responses, the United States Environmental Protection Agency (U.S. EPA) conducted an assessment of the MDCC site in 2011 (as documented in a February 29, 2012 Removal Site Assessment Summary Report[1]). The 2012 U.S. EPA report documents that the purpose of the 2011 assessment was *"confirming known contaminated areas, assessing reported remediation performed by a responsible party (RP), and evaluating the extent to which the Site poses imminent and substantial threats to the public health or welfare of the United States or the environment*." The report further documents *"The goals of the removal site assessment were to confirm the environmental impacts, assess reported remediation performed by the RPs, and provide additional information to the U.S. EPA to determine appropriate action for*

[1] Weston Solutions, Inc. (2012). Removal Site Assessment Summary Report for the Milwaukee Die Casting Site, Milwaukee, Milwaukee County, Wisconsin; prepared for United States Environmental Protection Agency; February 29, 2012.

the Site." Moreover, pursuant to the purpose and goals of the assessment, the 2012 U.S. EPA report documents that "*samples were collected during the investigation and analyzed for contaminants of concern (COC) appropriate for the area being investigated*." It is noteworthy that SVOCs were not identified by the U.S. EPA as COCs for the Site. The 2011 assessment did, however, include the collection of a sample of "*oily material as identified as accumulating behind a makeshift "weir" where a storm sewer lateral exiting the MDC property*" that was analyzed for SVOCs. The only SVOC detected was acenaphthene (42 mg/kg). By comparison, the WDNR industrial direct contact residual contaminant level (RCL) for acenaphthene is 45,200 mg/kg. There are no WDNR groundwater protection RCL or NR 140 groundwater quality standards for acenaphthene. A sample of "*brown liquid*" from a "*drum located near the southern loading dock near the foundry area*" was also analyzed for SVOCs. SVOCs were not detected in this sample. Based on the documented purpose and goals of the U.S. EPA site assessment, the absence of SVOCs on the U.S. EPA COC list, and the sole low-level detection of only one SVOC (in one material sample at a concentration three orders of magnitude less than the WDNR RCL), there is sufficient rationale to eliminate SVOCs from further evaluation in accordance with NR 716.07.

Regarding the WDNR's reference to the sporadic SVOC groundwater detections in the 2004 Braun data set,[2] it is important to note that there were no SVOC detections in the Braun data set soil samples. The lack of SVOC soil impacts suggests a low probability that the sporadic SVOC groundwater detections are Site related. As WDNR is aware, sporadic SVOC detections are common in urban Milwaukee groundwater. Further, it is noteworthy that the Braun data were collected in 2004, prior to the U.S. EPA 2011 Site assessment. These sporadic SVOC groundwater data were evidently not considered justification for U.S. EPA to add SVOCs to the Site COC list.

Pharmacia would like to move the additional investigation work forward; therefore, although Pharmacia remains in disagreement with WDNR, groundwater samples collected in the two planned sampling events will be analyzed for SVOCs and the Work Plan will be updated accordingly. Recognizing that the MDCC Site is located in a historically and currently industrial area of the City of Milwaukee and that SVOCs are ubiquitous in urban areas, the presence of SVOCs in collected groundwater samples, if detected, will not be considered evidence of a release from the Site.

WDNR Supplement Comment 3: " *While it is common knowledge that 1,1,1-TCA was the primary solvent in which 1,4-dioxane (1,4,-DX) was incorporated as a stabilizer, 1,4-DX has been found at TCE-only plume sites (see attached). High concentrations of TCE (up to 200,000 ug/L in GMMW-104) have been detected across the MDCC site. Furthermore, TCA and its breakdown*

[2] Braun Intertec Corporation (2004). Focused Phase II Environmental Site Assessment of the Milwaukee Die Casting Company Property, 4132 North Holton Street, Milwaukee, Wisconsin; prepared for Target Corporation; October 21, 2004.

products, 1,1-DCA and 1,1-DCE, albeit at relatively low concentrations (as you pointed out), have been detected at the MDCC site, especially on the east side of the former plant property. Therefore, it is appropriate to consider 1,4-DX to be a potential contaminant of concern. The Department again suggests that SVOCs, including 1,4-DX, be included in the initial two groundwater sampling rounds for the pending new monitoring wells. If 1,4-DX is found not to be associated with TCE at the MDCC site, it seems likely that concentrations that may be associated with TCA at the site will be minimal."

Response: Consistent with the April 2, 2019 comment responses, it remains Pharmacia's position that there is insufficient rationale to support the addition of 1,4-dioxane to the MDCC Site groundwater analyte list.

The abstract[3] provided by WDNR states: "Evidence regarding the co-occurrence of 1,4-dioxane and trichloroethylene (TCE), however, has been heavily debated." The U.S. EPA's 2017 "Technical Fact Sheet - 1,4-Dioxane" seems to be on the opposite side of that debate from WDNR. The 2017 Technical Fact Sheet, which is dated five years after the provided 2012 abstract, does not cite the use of 1,4-dioxane as a stabilizer for TCE nor does it include the 2012 abstract in its reference list. Rather, the 2017 Technical Fact Sheet includes a 2001 White Paper[4] by reference that documents "*Primary evidence for the presence of 1,4-dioxane in TCE could not be found by the author or Doherty, 2001, although numerous articles list it as an additive to TCE. Officials at Dow Chemical assert that 1,4-dioxane was not a constituent of TCE*."

Again, Pharmacia would like to move the additional investigation work forward; therefore, although Pharmacia remains in disagreement with WDNR, groundwater samples collected in the two planned sampling events will be analyzed for 1,4-dioxane and the Work Plan will be updated accordingly. Recognizing that the MDCC Site is located in a historically and currently industrial area of the City of Milwaukee, the presence of 1,4-dioxane in collected groundwater samples, if detected, will not be considered evidence of a release from the Site.

An updated Site Investigation Work Plan that incorporates the SVOC and 1,4-dioxane analyses will be submitted to the WDNR within 30 days of the completion of the requested utility survey, which will be completed within 60 days of the date of this letter.

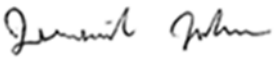
By submitting this letter, neither Pharmacia nor Fisher is waiving any of its rights under federal or state law. Additionally, nothing in this letter should be deemed an admission of fact or law, or a

[3] Anderson, RH, Anderson, JK, Bower, PA (2012). Co-occurrence of 1,4-dioxane with trichloroethylene in chlorinated solvent groundwater plumes at US Air Force installations: Fact or fiction; Abstract; Integr Environ Assess Manag, 2012, Oct; 8(4):731-1.
[4] Mohr, Thomas K.G., Solvent Stabilizers White Paper, Santa Clara Valley Water District. June 2011.

waiver of any defense or right to contest Pharmacia or Fisher's liability under any state or federal law.

Please contact us if you have any questions regarding this letter.

Sincerely,



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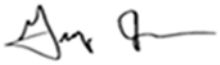

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cc: Mr. Christopher Clark, Pharmacia LLC
Ms. Mary Jo Anzia, BSI
Mr. Stephen Mueller, WDNR