STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
Grand Rapids District Office

RICK SNYDER
GOVERNOR

DEQ

DAN WYANT
DIRECTOR

September 10, 2012

Mr. Kenneth Grady
General Counsel and Secretary
Wolverine World Wide
9341 Courtland Drive NE
Rockford, Michigan 49351

Dear Mr. Grady:

SUBJECT: Conceptual Site Model
Wolverine Leather, Rockford, Michigan

The Department of Environmental Quality (DEQ), Remediation Division (RD) has prepared the following Conceptual Site Model (CSM) to broadly identify data needs, and to provide a framework within which to prioritize activities and interpret data at the above referenced site. It describes the geologic and hydraulic setting as interpreted from site specific and regional data. Additional investigations needed to flesh out the CSM, which will allow the DEQ to reach regulatory conclusions, are also broadly described.

In brief, a century of leather tanning at this site has left contaminants in the soil and groundwater. These contaminants are migrating via surface runoff and groundwater into the adjacent surface water bodies, the Rogue River and Rum Creek. The presence and migration of these contaminants may present unacceptable risks to the surrounding community and/or the environment.

The former tannery site occupies about 15 acres along the east bank of the Rogue River, at its confluence with Rum Creek, in the City of Rockford, Kent County. The Rogue River flows almost due south along the site's western border, while Rum Creek flows west across the property. The Rockford dam is located about 600 feet south of the site; the water it impounds extends well north of the tannery property.

The alluvial deposits of the Rogue River and its glacial antecedents completely underlie the lowlands in the local area. Medium-textured and morainic deposits constitute the higher elevations that bracket the lowlands on the west and east. At the former tannery location, that bracket is roughly concordant with the north-south running Wolverine Boulevard NE on the east and Summit Avenue NE on the west, see Figure 1. Geologic logs from area water wells, that encountered bedrock, suggest that the unconsolidated deposits, glacial and post-glacial, total about 200 feet thick in this area. The depth of the alluvium-till contact, if present, remains unknown.

In addition to the alluvial deposits, which underlie the east side of the former tannery property, fill material underlies the western side of the property. The location of the pre-fill river bank is difficult to ascertain. However, estimating from multiple generations of Sanborn maps, it appears that the pre-fill river bank ran, in a gentle arc, from the westbound bend of the river bank, the location of RP-1, to just south of sample location S-14, see Figure 2. Material to the west of that line, the natural bank, is fill material. While to the east of the line is natural soils. There may also be surface fill over parts of the rest of the property. The total of fill material extends