

Client
Global Manufacturer

Key Services Provided

- Whole Effluent Toxicity Testing
- Toxicity Identification/Reduction Evaluations
- Evaluation of Biological, Chemical and USGS Flow Data
- Negotiate Final NPDES Limits and Permit Conditions

Project Duration
2013 - 2014

ES Key Staff
Paul Anderson

NPDES PERMIT SUPPORT FOR A GLOBAL PAINT & GLASS MANUFACTURER IN OHIO

EnviroScience, Inc. was contracted to support a global paint and glass manufacturer as they evaluated biomonitoring requirements and limits in a draft NPDES permit prepared by Ohio EPA. The facility is a major discharger and the permit contained target TUC limits of 1.0. Draft permit toxicity and chemical parameter limits were based on an assumption of critical low flow in the receiving stream of zero. EnviroScience's review of the Agency's biological data in the receiving stream indicated that it was likely a perennial flowing stream and that permit limits based on the zero low flow assumption should be reconsidered.

EnviroScience prepared a GIS-based watershed map showing existing sampling locations, tabularized and graphed biological and chemical data from those locations, and analyzed USGS flow data from comparable streams to determine a proposed set of critical low flow values appropriate for application to the company's NPDES permit.

Using this information, EnviroScience determined an appropriate and statistically valid 7Q10 flow value for the receiving stream. Existing biological, chemical, and toxicity information was evaluated and compared to biocriteria in Ohio's Water Quality Standards to determine whether the company's discharge was responsible for macroinvertebrate populations being in non-attainment of Exceptional Warmwater Habitat standards. The evaluation conclusively demonstrated that no near-or far-field impacts were present. This information—coupled with a revised WLA toxicity value—strongly supported re-evaluation of the hazard category Ohio EPA had assigned to the facility. This resulted in the Agency's dropping toxicity limits and further TRE studies, and modification of discharge limitations of other parameters in the renewal permit.