

**MARK B. HAMMERS****E d u c a t i o n**

B.S., Aerospace Engineering and Mechanics, University of Minnesota–Twin Cities, 2014

**Pro f e s s i o n a l A f f i l i a t i o n s**

Federation of Environmental Technologists (FET)  
Great Lakes Graphics Association

**Sp e c i a l t y C e r t i f i c a t i o n s**

USEPA Method 9, Certified Opacity/Visible Emissions Reader

**Pro f e s s i o n a l E x p e r i e n c e**

Mr. Hammers has over 5 years of experience as an engineer in the environmental field. His areas of expertise include regulatory compliance, sustainable practices, and chemical management. He has an in-depth knowledge of Wisconsin, Minnesota, and federal regulatory programs including the Clean Air Act, Clean Water Act, Oil Spills Prevention and Preparedness Regulations, and the Emergency Planning and Community Right-to-know Act (EPCRA).

**Environmental Engineering Experience at the WDNR**

**La Crosse, Wisconsin, Multipath Way Risk Analysis - Municipal Solid Waste Incinerator.** Performed a multi-pathway risk analysis in order for the municipal solid waste (MSW) incinerator to increase the total amount of refuse-derived fuel (RDF) combusted per hour. MSW combustors that combust greater than 50% RDF are required in Wisconsin to control emissions of hazardous air contaminants having a control requirement identified in column (i) in Table A, B, or C in NR 445.07 to a level that is the lowest achievable emission rate (LAER). As an alternative, a multi-pathway risk analysis was performed for toxic air pollutants that have a unit risk factor established by either the USEPA or the California air resources board, in order to demonstrate the cumulative multipath way risk off the source property from all of the contaminants was not greater than  $1 \times 10^{-5}$ . By performing this analysis, the facility avoided performing a LAER analysis for each toxic air contaminant.

**Waupaca, Wisconsin, Iron Foundry, Prevention of Significant Deterioration Major Modification Construction Permit.** Prepared and issued a Prevention of Significant Deterioration major modification construction permit for the purpose of modifying the existing ventilation system at the foundry. The project updated the ventilation system so the exhaust flow rate of 18 foundry operations either increased, decreased, or were directed to a different baghouse and stack. The project was reviewed to determine whether the change resulted in a significant net emissions increase under ch. NR 405, Wis. Adm. Code using the Actual to Potential Applicability Test. As part of the review, a PM, PM<sub>10</sub>, PM<sub>2.5</sub>, visible emission and lead top down best available control technology analysis was performed for various existing foundry operations.

**Green Bay, Wisconsin, Recycle Pulp and Paper Mill, Prevention of Significant Deterioration Major Modification Construction Permit.** Prepared and issued a Prevention of Significant Deterioration major modification construction permit so as to retire an existing coal-fired boiler and install a 505 million British thermal units per hour natural gas-fired boiler and a wet paper machine. Because of

the wide-ranging timeframe of the project, a project aggregation analysis was performed in order to adequately address and analyze the separate and combined impacts of both the boiler and paper machine. As part of the review, a volatile organic compound top down best available control technology analysis was performed for both the boiler and paper machine.

**Stoughton, Wisconsin, Trailer Manufacturer, New Source Review Construction Permit.** Prepared and issued an air pollution control construction permit for the installation of a specialty paint booth and refrigerated trailer line. Prepared and reviewed air emission calculations, identified applicable state and federal air regulations, and established recordkeeping requirements and monitoring support.

**Hixton, Wisconsin, Industrial Sand Mine and Processing Plant, New Source Review Construction Permit.** Prepared and issued an air pollution control construction permit for the installation of mining, crushing, and overland conveyor activities, wet plant, dryer, dry plant, and storage operations. Prepared and reviewed air emission calculations, identified applicable state and federal air regulations, and established recordkeeping requirements and monitoring support.

**La Crosse, Wisconsin, Brewery, New Source Review Construction Permit.** Prepared and issued air pollution control construction permit for the installation of two enclosed flares. Prepared and reviewed air emission calculations, identified applicable state and federal air regulations, and established recordkeeping requirements and monitoring support. Performed an ambient air quality review to demonstrate the facility will not cause or exacerbate a violation of the ambient air quality standards or ambient air increments.

**Various Locations across Wisconsin, Federal Operation Permits and New Source Review Construction Permits.** In addition to the experience described above, Mr. Hammers was the Air Management Engineer that prepared and issued a total of 35 Operation Permit Renewals, 39 Operation Permit Revisions, and 23 New Source Review Construction Permits. Types of facilities included refineries, paper mills, foundries, power plants, landfills, industrial sand mines, and manufacturing plants.

**Various Locations across Wisconsin, Full Compliance Evaluation.** Air Management Engineer for five different Full Compliance Evaluations to determine the compliance status of each facility. Evaluations included the review of all required reports and the underlying records, an assessment of air pollution control devices and operating conditions, observation of visible emissions, and an assessment of process parameters.

### **Environmental Engineering Experience with SCS Engineers**

**Eau Claire, Wisconsin, Landfill, Construction Permit Application.** Negotiated with the WDNR transition language and permit conditions for the first landfill in Wisconsin subject 40 CFR 63, Subpart XXX - Standards of Performance for Municipal Solid Waste Landfills.

**Horicon, Wisconsin, Landfill, Construction Permit Application.** Prepared a construction permit application and Part 70/Title V operating permit revision application for the expansion of a landfill. Additionally, submitted an applicability determination request to the USEPA for 40 CFR 63, Subpart XXX - Standards of Performance for Municipal Solid Waste Landfills (Subpart XXX). The request was approved by the USEPA and increased the design capacity, above what was previously determined by the WDNR, before the landfill triggered Subpart XXX requirements.

**Various Locations across Wisconsin, Minnesota, Illinois and New Jersey, Annual Air Emission and Compliance Reporting.** Assisted regulated entities with annual air emission reports, environmental recordkeeping, compliance certifications, and monitoring reports.

**Milwaukee, Wisconsin, Manufacturing Plant, Atmospheric Dispersion Modeling (AERMOD).**

Performed a steady-state Gaussian plume air dispersion model to determine air pollution concentrations at receptor locations around the facility. Air dispersion modeling was required by the WDNR to ensure the facility will not contribute to or cause an exceedance of the national ambient air quality standards.

**Madison, Wisconsin, Hospital, Operation Permit Application.** Prepared Part70/Title V operating permit renewal application. Negotiated permit terms and conditions and developed plans for associated compliance demonstration.

**Twin Lakes, Wisconsin, Fiberglass Manufacturing Plant, Construction Permit Application.** Prepared construction permit application and Part 70/Title V operating permit revision application for the installation of a gelcoat spray booth and natural gas fired oven.

**Various Locations across Wisconsin, Spill Prevention, Control, and Countermeasure Plans.** Served as staff engineer for five SPCC plans across Wisconsin. Conducted site visits, updated SPCC Plans, completed SPCC Plan amendments, and prepared SPCC training modules to aid facilities to comply with annual training requirements.

## Presentations

Identifying Applicable Air Regulations, Great Lakes Graphics Association Webinar, May 2, 2019.

Basics of Waste Determinations, Federation of Environmental Technologists, October 23, 2019.