

## MARTA VANDUSSEN, E.I.T.

### Education

M.S. – Environmental Engineering, Water and Sanitary Engineering, 2002

B.S. – Environmental Engineering, Solid Waste Storage and Management, 2000  
University of Agriculture, Wroclaw, Poland

### Professional Licenses

Engineer in Training (E.I.T.), North Carolina

### Professional Training

40-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Annual 8-Hour Refreshers

Air Training, WM, August 2014 and November 2016 Meetings, Savannah, GA

South Atlantic Area Technical Meetings, WM, February 2016, 2017, 2018, Asheville, NC

Georgia Environmental Protection Division (EPD) Online System (GEOS) Training, June 2016

South Carolina Department of Health and Environmental Control (SCDHEC):

2014 Emissions Inventory Workshop on WebSat Web-Based Tool, March 2015

2017 Emissions Inventory Workshop on SLEIS, January 2018

### Professional Affiliations

Carolinas Air Pollution Control Association (CAPCA), Member

Global Methane Initiative (GMI) Landfill Subcommittee, October 2011 Meeting, Cracow, Poland, Attendee

### Professional Experience

Ms. VanDussen has extensive background in environmental engineering. She has experience in solid waste regulatory compliance and management, Clean Air Act permitting, environmental data analysis and management, assessment and remediation, projects cost management and finance. Ms. VanDussen has performed air quality services, including preparation of permit applications, evaluation of permitting requirements and exemptions, performance of compliance assessments, preparation of emission inventories, annual compliance certifications, and semiannual reports. Ms. VanDussen performed refined air dispersion modeling by applying state-specific modeling requirements. Her practice encompasses environmental compliance and reporting for small and Title V, both publicly and privately owned landfills in Carolinas and Georgia. Examples of her project experience include:

#### Clean Air Act - Air Dispersion Modeling

**Berkeley County Water and Sanitation, Solid Waste Landfill, Moncks Corner, SC.** Performed refined air dispersion modeling for the air toxics to demonstrate compliance with the South Carolina Air Quality Standards based on the quantity of emissions calculated for the Title V Operating Permit renewal application. Modeled emissions included fugitive and flare emissions.

**Republic Services, Upstate (Union County Regional) Landfill, Enoree, SC.** Performed refined air dispersion modeling by applying South Carolina Department of Health and Environmental Control (SCDHEC) modeling requirements and utilizing AERMOD View software to evaluate the estimated

fugitive LFG emissions from the landfill for the Title V Permit renewal application and for the construction permit application to assess emissions from the proposed expansion of the landfill.

**Three Rivers Solid Waste Authority Regional Landfill, Aiken County, SC.** Team member responsible for assisting in development of leachate evaporator system operation study plan and data reporting to evaluate impact on ambient air and surface water at the site. Performed refined air dispersion modeling utilizing AERMOD View software to assist in selecting air sampling locations to assess an impact on air emissions at the site.

**Greenville County Twin Chimney Landfill, Greenville, SC.** Performed refined air dispersion modeling for the criteria pollutants and air toxics by utilizing AERMOD View software to evaluate the estimated fugitive LFG emissions and emissions associated with capacity increase of the existing flare. The site had to demonstrate compliance with the South Carolina Air Quality Standards based on the quantity of emissions calculated for the Title V Construction Permit application. Interacted with SCDHEC modeling staff throughout the process to insure fulfillment of all modeling requirements and compliance with South Carolina standards applicable to the site.

**Republic Services, Foothills Environmental Landfill, Lenoir, NC.** Performed non-regulatory refined air dispersion modeling to assist with assessment of potential ambient air impacts from operating a mobile Leachate Aerosolization Unit.

**New Hanover County Landfill, Wilmington, NC.** Performed air dispersion modeling for the criteria pollutants and air toxics by applying North Carolina Division of Air Quality (NCDAQ) modeling requirements and utilizing AERMOD View software to evaluate the criteria pollutants and air toxic emissions from utilization of 20 temporary flares at the landfill.

**Waste Management, Great Oak Landfill, Randolph, NC.** Assisted in initial air permitting of green-field landfill in North Carolina. Responsibilities included performing refined air dispersion modeling by applying NCDAQ modeling requirements and utilizing AERMOD View software to assess fugitive emissions from the landfill cell proposed to be filled with municipal solid waste.

**Shoosmith Sanitary Landfill, Chester, VA.** Performed refined air dispersion modeling by utilizing AERMOD View software to evaluate the estimated fugitive LFG emissions from the Quarry Waste Disposal Unit at the landfill. The modeling mainly served to assess health risk of the waste disposal related emissions onto the neighboring residential properties. Modeling was completed outside of the air permit or regulatory requirements.

**Mount Carberry Landfill, Success, NH.** Performed refined air dispersion modeling to evaluate the estimated landfill fugitive LFG emissions and flare-emitted criteria pollutants with corresponding New Hampshire Department of Environmental Services (NHDES) ambient air standards (i.e., carbon monoxide, nitrogen dioxide, sulfur dioxide and particulate matter) to be modeled. Air dispersion modeling for Regulated Toxic Air Pollutants (RTAPs) also required inclusion of changes to the Landfill since the prior air dispersion model was prepared. The modeling was associated with a capacity increase of existing flare at the site and required to be submitted with permit application.

#### Clean Air Act and Landfill Gas

**Title V Municipal Solid Waste Landfills, Leachate Evaporator Permitting, Richland and Dorchester Counties, SC.** Team member responsible for assisting in Title V construction permit application process for adding landfill gas LFG-fired leachate evaporator systems at two sites, including review of federal, state, and local rules applicability, data and calculations quality control and reporting. Performed refined air dispersion modeling by applying SCDHEC modeling requirements and utilizing AERMOD View software. Reviewed draft of the construction permit issued by the state.

**Eight Title V Municipal Solid Waste Landfill Sites in South Carolina.** Assisted in various air quality permitting related activities at the sites including preparation of permit applications, permit modifications, evaluation of permitting requirements and exemptions, performance of compliance assessments, preparation of emissions inventories and annual compliance certifications. Prepared air emission inventories for calendar year 2014 and 2017 at sites utilizing landfill gas (LFG) generation. Tasks included emission calculations, data quality control and reporting using SCDHEC WebSteps online system. Attended training organized by the SCDHEC, Emission Inventory Section staff.

**Seven Title V Municipal Solid Waste Landfill Sites in North Carolina.** Prepared annual air emission inventory for the sites utilizing LFG generation, with Title V air quality operating permits. Reported required emission inventory data using NCDEQ AERO online system. Prepared annual compliance certifications through review of current permit conditions. Assisted with Title V permits renewal and modification process, including review of federal, state, and local rules and regulations applicability, data and calculations quality control and reporting. Assisted with preparation of semiannual New Source Performance Standards (NSPS), Title V Permit, and Startup, Shutdown, Malfunction (SSM) reports. Performed refined air dispersion modeling by applying specific NCDEQ modeling requirements and utilizing AERMOD View software.

**Waste Management, R&B Landfill, Homer, GA.** Team member responsible for wellhead and flare data review and reporting, semiannual reporting, annual emission inventory, annual compliance certification, and Title V Permit renewal application process. Attended Georgia Environmental Protection Division (EPD) Online System (GEOS) training to gain the knowledge of the system in order to submit Title V permit application through that system, as currently required by EPD.

**Republic Services, Foothills Environmental Landfill, Lenoir, NC.** Assisted with Startup, Shutdown and Malfunction Plan, Semi-Annual Title V Reports including data compilation, gas collection and control system (GCCS) assessment. Assisted in performing initial performance test (IPT) on newly installed utility flare at the site, including data quality control and reporting. Generated annual air emission inventory and reported required data using NCDEQ AERO online system. Prepared annual compliance certifications through review of current permit conditions.

**Baldor Electric Company Clio, Marlboro County, SC.** Performed regulatory compliance tasks related to the painting operation at the plant, including annual update of the volatile organic compounds (VOCs) and Hazardous Air Pollutants (HAPs) emission tracking sheet with new equipment and materials used. Reviewed Safety Data Sheets (SDS) emissions data for new materials.

**New Hanover County Landfill, Wilmington, NC.** Prepared annual air emission inventories and annual compliance certifications through review of current permit conditions. Performed refined air dispersion modeling by applying NCDEQ modeling requirements to evaluate the estimated fugitive LFG emissions from utilization of 20 temporary flares at the landfill.

**Waste Management, Great Oak Landfill, Randolph, NC.** Assisted in initial air permitting of green-field landfill in North Carolina. Responsibilities included review of the construction application and performing refined air dispersion modeling for criteria pollutants and air toxics by applying NCDEQ modeling requirements to assess emissions from the landfill cell proposed to be filled with municipal solid waste.

**Lockhart Power Landfill Gas to Energy Projects, SC.** Assisted in preparation of Title V air permit application for landfill gas to energy project utilizing an engine to generate electricity for sale on the local grid. Prepared annual air emission inventories.

## Groundwater and Surface Water Assessment and Monitoring

### **Clay, Jackson, McDowell, Madison, Polk, Yancey-Mitchell Counties, NC, MSW and C&D Landfills.**

Managed semiannual groundwater and surface water quality monitoring events at municipal solid waste and construction and demolition debris landfills owned by regional counties. Coordinated field and laboratory staff to complete work within required timeframe. Reviewed and evaluated field data and analytical data. Completed Appendix I and Appendix II reporting according to the North Carolina Division of Waste Management (DWM), Solid Waste Section (SWS) environmental monitoring requirements. Evaluated and interpreted analytical data via statistical analysis. Supported counties in data assessment efforts to ensure state and regulatory compliance, as well as in technical engineering and hydrogeologic services related to the monitoring systems in effect at the landfills.

**Cumberland, Guilford, Pitt, and Randolph Counties, NC, C&D Landfills.** Completed Appendix I and/or Appendix II reporting according to the North Carolina DWM, SWS environmental monitoring requirements. Completed groundwater surface contour maps utilizing Civil AutoCAD software and performed groundwater flow data evaluation.

### **Environmental Compliance Services**

**Marion, McDowell County, NC, Eldorado Natural Stone.** Developed Stormwater Pollution Prevention (SWPP) Plan for the site performing stone cutting operations. The task included site visit, evaluation of stormwater best management practices and worked closely with client to ensure compliance with applicable federal and state rules.

**Black Mountain, Enka, Hendersonville, Weaverville, Rutherfordton, Burnsville, Penrose, NC, Asphalt Production Plants.** Created and updated Spill Prevention Control Countermeasure (SPCC) and Stormwater Pollution Prevention (SWPP) Plans for the sites located in the Western North Carolina. Conducted site inspections and worked closely with client to ensure compliance with applicable rules. Tracked deadlines for plan reviews. Utilized AutoCAD and ArcGIS to generate site location maps and site layout diagrams.

**Andrews, Cherokee County, NC, TEAM Industries.** Responsible for maintaining compliance calendar for various permits and their requirements issued for industrial manufacturing facility. Prepared NPDES wastewater permit renewal application. Responsible for reporting the stormwater and wastewater sampling events data to NCDEQ. Updated SWPP and SPCC plans.

## Assessment and Remediation

**Swannanoa, Buncombe County, NC, Superfund Site.** Assisted in the drafting and implementation of Remedial Investigation and Feasibility Study for an Environmental Protection Agency (EPA)-regulated Superfund Site. Responsible for tracking field documentation during extensive soil, sediment, groundwater, and surface water sampling events. Responsible for management of field and analytical data with a wide range of parameters, including data study by creating tables, graphs and data maps. Worked directly with the EPA to prepare electronic data deliverables to be submitted to the EPA and stored in their database. Managed budget and financial aspects of the project.

**Asheville Area, Buncombe County, NC, Phase I Environmental Site Assessments.** Identified property conditions and risks by conducting environmental site assessments for industrial, urban and rural properties within Asheville area. Phase I Environmental Site Assessments included site reconnaissance, acquiring all required background and current information to comply with the ASTM standard for Phase I ESAs (E1527-05), including the "all appropriate inquiry" (AAI) standards. Completed regulatory research and receptor surveys to identify potential receptors.