



LINDSEY W. KROOS TECHNICAL MANAGER

CREDENTIALS

- ♦ B.S., Mechanical Engineering (Minor in Spanish) – Villanova University, 2005

PROFESSIONAL EXPERIENCE

- ♦ 2005-Present: ALL4, Kimberton, PA – Technical Manager

TECHNICAL EXPERTISE

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| ✓ State and Federal air permitting programs, including Title V, Synthetic Minor, State-Only, NSR, PSD, etc. | ✓ Air Program Management |
| ✓ State and Federal air quality regulations, including NESHAP, MACT, NSPS, and CAA Section 129 Solid Waste Combustion | ✓ Air Quality Training |
| | ✓ Compliance Plans |
| | ✓ Emissions Inventories |
| | ✓ Compliance Reporting |
| | ✓ Multimedia Regulatory Review |

PROFESSIONAL OVERVIEW

Ms. Lindsey W. Kroos has over 20 years of experience in air quality consulting, including permitting and ongoing compliance. She has prepared and managed the development of state construction and operating permit applications, New Source Review (NSR) applications, Title V permit applications, emissions inventories and annual emissions statements, greenhouse gas (GHG) reporting, and annual and semi-annual compliance reporting.

Ms. Kroos has experience in a variety of industries including, but not limited to, medical waste incineration; municipal solid waste landfills; ethylene oxide sterilization; fabric manufacturing; food processing; chemicals manufacturing, and pulp and paper. She has air quality permitting experience in many states including, but not limited to, Pennsylvania, New Jersey, Ohio, Utah, Florida, Maine, Illinois, Georgia, Texas, Kansas, and North Carolina. Ms. Kroos also has experience with New Jersey's RADIUS, Ohio's Air Services, and Pennsylvania's e-RFD software.

Ms. Kroos has worked with MACT/NESHAP standards for a variety of industries and has also worked extensively with the CAA Section 129 Solid Waste Combustion Regulations. Ms. Kroos also manages ALL4's internal and external training, and leads ALL4's Air Quality 101 (AQ101) training program.



AIR QUALITY PERMITTING EXPERIENCE

Operating Permit Applications, Multiple Clients, Multiple States, Project/Technical Manager:

Managed and supported the preparation and submittal of state-only and Title V operating permit applications (e.g., initial, renewal, modification), and negotiation of renewal permits for facilities in Ohio, New Jersey, Pennsylvania, North Carolina, Utah, Illinois, Kansas, and Florida in various industries, including hospital/medical/infectious waste incineration, municipal solid waste disposal, surgical/medical instrument manufacture and sterilization, municipal waste combustion, and pulp and paper.

Construction Permit Applications, Multiple Clients, Multiple States, Project/Technical Manager:

Managed and supported the preparation and submittal of construction permit applications for facilities in Ohio, New Jersey, Pennsylvania, North Carolina, Utah, Illinois, Kansas, Florida, Nevada, and Kentucky in various industries, including municipal solid waste disposal, surgical/medical instrument manufacture and sterilization, municipal waste combustion, pulp and paper, and hospital/medical/infectious waste incineration. Projects included state and Federal construction permitting requirements, including emissions inventories, Prevention of Significant Deterioration (PSD) requirements such as Best Available Control Technology (BACT) evaluations and air quality modeling, and Nonattainment New Source Review (NNSR).

Construction Permit Application, Pathological Waste Incinerator, Iowa, Technical Manager:

Managed the preparation and submittal of a construction permit application for a new pathological waste incinerator, including emissions inventory development, State and Federal rule applicability evaluation, and regulatory agency correspondence.

Construction Permit Applications, Hospital/Medical/Infectious Waste Incinerators (HMIWI), Multiple States, Project/Technical Manager: Managed and/or supported the preparation and submittal of construction permit applications for new HMIWI, including emissions inventory development, State and Federal rule applicability evaluation, Best Available Control Technology analysis, and regulatory agency correspondence.

AIR QUALITY COMPLIANCE EXPERIENCE



Title V and NSPS Compliance Program Management, Waste Management Services, Pennsylvania, Project/Technical Manager: Provided Municipal Solid Waste (MSW) Landfill New Source Performance Standards (NSPS) and Title V regulatory assistance. Assistance has included support relating to the transition from a State Only Operating Permit to a Title V Operating Permit, developing a compliance strategy for the Landfill New Source Performance Standards (NSPS)/Emission Guidelines (EG)/Federal Plan, development of construction permits, annual emission statements, etc.

Title V and NSPS Compliance Program Management, Waste Management Services, New Jersey, Project/Technical Manager: Provided Municipal Solid Waste (MSW) Landfill Emission Guidelines (EG), New Source Performance Standards (NSPS), and Title V regulatory assistance. Completed regular State, Title V, and NSPS reporting obligations such as annual compliance certifications, semi-annual deviation reports, semi-annual performance reports, emission statements, etc.

Title V and NSPS Compliance Program Management, Waste Management Services, Multiple Locations (FL, IL, KS, OH, NC, UT), Project/Technical Manager: Provided Hospital/Medical/Infectious Waste Incinerator (HMIWI) Emission Guidelines (EG) and New Source Performance Standards (NSPS) regulatory assistance at a corporate and facility specific level. Reviewed and commented on the 2008 proposed amendments to the rules, developed and implemented a corporate compliance strategy for the 2009 amendments, and continued ongoing implementation of compliance mechanisms, permitting air pollution control device retrofits, and renewing Title V operating permits. Support also included completing regular State, Title V, and NSPS reporting obligations such as annual compliance certifications, semi-annual deviation reports, semi-annual performance reports, emission statements, etc., and supporting other compliance requirements such as performance testing.

Annual Emissions Statements, Multiple Clients, Multiple States, Project Engineer/Technical Manager: Prepare and/or manage preparation of annual emissions statements for facilities in various industries in Delaware, New Jersey, Pennsylvania, Illinois, Utah, Florida, and North Carolina. The statements prepared for Delaware utilized DNREC's iSTEPS program, the statements prepared for New Jersey utilized NJDEP's RADIUS program, the statements prepared for Florida utilized FDEP's Electronic Annual Operating Report (EAOR) software, and the statements prepared for North Carolina utilized NCDENR's AERO online reporting system.

Quarterly Performance Reports, Semi-annual Deviation Reports, and Annual Title V Certifications, Multiple Clients, Multiple States, Project Engineer/Leader/Manager: Prepare and/or manage preparation of periodic reports for facilities in various industries in Ohio, New Jersey, Pennsylvania, North Carolina, Utah, Illinois, Kansas, and Florida.

Quarterly PADEP Reporting, Multiple Clients, Pennsylvania, Project Engineer: Assist in the preparation of quarterly CEMs data reports according to Revision 6 and 7 of PADEP's Continuous Source Monitoring Manual. Industries include cement manufacturing and power.

Regulatory Applicability Analyses, Multiple Industries, Multiple States Project/Technical Manager: Reviewed recently proposed and final rules for applicability to various industries in multiple states.

Reporting, Monitoring, and Testing Compliance Review, Multiple Industries, Multiple States, Project Engineer: Develop and/or review compliance tracking spreadsheet of multimedia reporting, monitoring, and testing requirements. Review materials included permits, Federal regulations, and state regulations.



OTHER EXPERIENCE

40 CFR Part 63, Subparts S and MM Information Collection Request (ICR), Pulp and Paper Manufacturing, Various Mills, Project Leader: Responsible for assisting and managing the process for various pulp and paper mills to respond to U.S. EPA's Pulp and Paper Information Collection Request (ICR) which was issued to evaluate the residual risk of Hazardous Air Pollutants (HAP) from the industry. The project involved responding to a comprehensive questionnaire regarding detailed process information for pulp and paper mills. This also entailed a comprehensive update to the National Emission Inventory (NEI) database for each facility. Facility-wide HAP emissions were calculated and detailed modeling information (emission points, stack characteristics, etc.) was developed and submitted to U.S. EPA.

Comment Development for Proposed HMIWI NSPS Rule Revisions, Waste Management Services, February 2009: Assisted in the development of comments on proposed revisions to the Hospital, Medical, Infectious Waste Incinerator (HMIWI) New Source Performance Standards (NSPS), specifically related to the technical and statistical approach used to develop proposed new emission limitations.

TRAINING WORKSHOPS

Air Quality 101 (AQ101), Various Industries, 2019-present: Lead and co-present ALL4's internal and external training program, consisting of 16 live 1-hour webinars and covering foundational air quality topics.

Reciprocating Internal Combustion Engine (RICE) Training, Medical Device Manufacturing and Sterilization, Pennsylvania, March 2013: Presented upcoming requirements for the facility's RICE pursuant to the RICE MACT and NSPS regulations to facility personnel.

Title V and Plan Approval Training, Medical Device Manufacturing and Sterilization, Pennsylvania, May 2012: Presented and explained the Title V Operating Permit Program and Pennsylvania's Plan Approval process to facility personnel.

Visual Inspection Training, Medical Device Manufacturing and Sterilization, Pennsylvania, April 2009: Presented and explained inspection requirements contained in facility's Title V permit to facility personnel.

Corporate Air Quality Training, Waste Management Services, May 2008: Contributed to day-long presentation of multiple facilities' air quality requirements, which included sessions on New Source Performance Standards; Title V permit review, regulations, and renewal requirements; SSM and CMS plans; state regulations; stack testing; and recordkeeping and reporting requirements.

PUBLICATIONS/ PRESENTATIONS



- “U.S. EPA Releases TANKS 5.1,” December 2024
- “U.S. EPA Proposes SIP Calls for States with SSM Exemption Provisions,” March 2023
- “The Latest on Startup, Shutdown, and Malfunction (SSM) Provisions in Air Quality Regulations,” November 2022
- “Unpacking U.S. EPA’s Strategic Plan & Budget,” May 2022
- “U.S. EPA Reverses Reversal of 2015 SSM SIP Policy,” October 2021
- “New Landfill Air Regulations May Inspire a Round of Tic Tac Toe,” July 2021
- “U.S. EPA Reverses 2015 SSM SIP Policy,” January 2021
- “Final Amendments to 40 CFR Part 63, Subpart MM Signed October 9, 2020,” October 2020
- “6 Months Left to Comply with the Subpart MM Amendments,” April 2019
- “Preparing for Subpart MM 2020 Performance Testing,” April 2019
- “Subpart MM for Pulp and Paper Mills – Worst Anniversary Gift Ever?,” October 2018
- “How Consistent Is Your Emissions Data?,” June 2018
- “2015 Ozone NAAQS Implementation Update and Possible NOx Reductions for Portland Cement Kilns,” October 2017
- “Boiler MACT Update and Preparing for your July Report,” June 2017
- “U.S. EPA Task Force Seeks Public Input on Existing Regulations,” April 2017
- “Continuous Monitoring System Data – The Risk of Being Isolated,” April 2017
- “Boiler MACT Vacatur and Remand: The Details Unfold,” September 2016
- “D.C. Circuit Court Issues Remand and Vacatur of Certain Boiler MACT and CISWI Provisions,” August 2016
- “U.S. EPA Finalizes Major Source Boiler MACT Reconsiderations,” November 2015
- “Five Things to Consider Before the January 31, 2016 Major Source Boiler MACT Compliance Date,” August 2015
- “How to Get the Most Out of Your Boiler MACT Energy Assessment,” February 2014: Authored article for ALL4’s 4 The Record newsletter discussing the requirements for energy assessments contained in the Area and Major Source Boiler MACT rules.
- “Strategic Planning for the 4 Rules,” April 2013: Authored article for the Pennsylvania Chamber of Business and Industry’s Catalyst Magazine discussing the impacts of complying with the 4 Rules on other air quality programs.
- “Five Reasons Why Now May Be the Time to Consider Converting Your Boiler to Natural Gas,” November 2012: Authored article for ALL4’s 4 The Record newsletter discussing the benefits and drawbacks to converting a boiler from coal to natural gas.
- “HMIWI Rule Revisions Get Attention from Many Industry Groups,” March 2009: Co-authored article for ALL4’s 4 The Record newsletter summarizing recently proposed rule revisions for Hazardous, Medical, Infectious Waste Incinerators (HMIWI).