

SUMMARY OF EXPERTISE IN NEW SOURCE REVIEW AND OTHER PERMITTING

I have worked in the air pollution control permitting since 1984. Since that time, I have worked on permits for individual facilities as well as supported USEPA in national efforts in both regulatory development and national enforcement initiatives. As part of this technical work involving New Source Review and other permit programs, I have:

Worked for US Department of Justice as an expert witness in support of national electric utilities enforcement activities. Led PSD, air quality and RCRA incineration enforcement investigations for several sites in national multi-media enforcement initiative for the petrochemical, specialty chemical, electric utility, primary smelters, lead smelters, wood pulp and paper mills and steel industries.

Supported EPA's OAQPS in revising the OAQPS Control Cost Manual for air pollution control equipment.

Developed a preliminary PSD air quality analysis for a proposed greenfield coal-fired utility generator to burn mine-mouth coal on tribal lands for the Crow Tribe.

Worked as permitting expert for OECA national review of compliance information in Part 70 permit submittal and national review of synthetic minor permits under Part 70 (Title V). Developed enforcement targeting methods using Title V permit compliance information and Annual Compliance Certification information.

Supported development of the revised ozone standards by evaluating impacts of standards revisions on existing air quality programs such as permitting, conformity and mobile sources. Managed Regulatory Impacts Analysis (RIA) and Information Collection Request (ICR) project for EPA's final Part 70 Operating Permits Rule changes published in August 1994 and the RIA and ICR for the proposed Part 71 rule, provided updates to NSR Reform and Part C and D RIA and ICR's based on state Part 70 workload submittals, managed project to develop RIA and ICR for the CAM Rule.

Prepared air quality analyses to support environmental impact statements for mining sites in Alaska and Idaho. Reviewed the PSD permit for a mining site for the State of Arizona. Performed BACT analyses and drafted PSD and major NSR permits for chemical weapons incinerators of the Army's Chemical Demilitarization program. Managed Title V inventory support and permit development for NASA/Langley. Managed updates of BACT/LAER determinations to support permit decisions through the RBLC System.

Managed project to update New Source Review Workshop Manual to reflect 1990 CAA changes. Instructor for University of Cincinnati/Environmental Training Institute teaching two USEPA air permits courses (APTI # 460 & # 461). Managed development

of an expert system for New Source Review permit applicability determinations.

Managing PSD air permits and conducted permit compliance audits for the US Army to construct incinerators for the destruction of the national stockpiles of chemical weapons.

Reviewed all New Source Review permits for pollution control equipment and combustion equipment for conformance with Federal, State and local codes in the Des Moines, Iowa area; conducted 100 to 200 inspections per year for compliance with Federal, State, and local codes.

Managed a contract to perform PSD reviews for the State of Arizona, performed PSD review on a permit for a new mining site.

Reviewed a BACT analysis and PSD permit application and provided expert testimony to the **Board of Environmental Review, Department of Environmental Quality, State of Montana** for a new pulverized coal-fired boiler project.

EMISSIONS AND CONTROL EVALUATIONS

During my career, I have developed experience in calculation of emissions and evaluation of air pollution controls. As part of this technical work involving emissions and air pollution control evaluations, I have:

Supported USEPA in developing regulations, these regulations include:

Part 70 and 71 Air Permit Rules under Title V-analysis of regulatory impacts, Compliance Assurance Monitoring (CAM) Rule-analysis of regulatory impacts, Cement Kiln Dust (CKD) Standard as a RCRA Special Waste, Regulatory gap analyses for Surface Impoundments as RCRA Special Wastes, Short-term Sulfur Dioxide Standard-analysis of regulatory impacts, Regional Haze Rule-analysis of regulatory impacts, and Combustion MACT-support in addressing public comments, Gap analysis RCRA Surface Impoundments regulations.

Supported EPA's OSW in regulatory gap analyses to evaluate need for RCRA Special Waste rule to address air pathway exposure to hazardous compounds from surface impoundments.

Supported various enforcement actions involving short-term releases and toxic exposure for ammonia releases, open burning/open detonation and EPCRA releases.

Managed software development project for OMS non-road vehicle emissions model. Led technical analyses of control options for primary and secondary emissions of PM from mobile sources.

Managed ambient monitoring network evaluation for CO and ozone for Des Moines,

Iowa. Assisted in developing cost and fugitive dust emissions models for fugitive emissions of cement kiln dust.

Managed technical analyses to support an RIA for the proposed short-term SO₂ standard.

Managed RACT updates including inventories and control analyses for conformance with new CAA requirements for the Chicago area. Managed inventories and control options analyses for 15% Reductions for the Chicago area.

Managed Southeast Kansas Risk Communication Project to establish risk based monitoring values and sampling locations for impacts of multiple hazardous waste combustors in Southeast Kansas and key pollutants such as mercury and dioxins/furans.

Managed project to improve design and obtain permits for drum reclamation incinerator. Managed direct and indirect risk assessments for Region VII Managed RCRA/BIF permit evaluation of eight cement kilns burning hazardous waste and for various hazardous waste incinerators issues including evaluation of quarry and cement kiln dust as well as volatile hazardous waste emissions for a facility in Chanute, Kansas. Updated risk assessments performed by SAIC and other contractors in Region VII using revised equations and modeling parameters based on the "Mercury Report to Congress". Reviewed trial burn, risk assessment and performed incinerator evaluation for CERCLA hazardous waste incinerator in Baton Rouge, Louisiana. Managed risk assessment for commercial hazardous waste incinerator in Kimball, Nebraska for EPA Region 7 and Nebraska DEQ. Performed pre-operational audit on chemical weapons incinerator in Toelle, Utah. Managed emissions inventory of combined HAPs and EPCRA Section 313 toxic air pollutants from federal facilities in Region VIII.

Managed research project investigating information on biological and ecological impacts resulting from toxics deposition into the Great Waters. Supported analysis of nutrient deposition in Great Waters from Maine to Mexico. Supported the Lake Michigan LAMP providing analysis of non-point loadings for mercury.

Provided air quality analysis including modeling, control equipment review, risk and exposure analysis for various RCRA corrective action, CERCLA RI/FS studies and EIS including chromium plating, CAFOs, landfills and harbor dredging projects. Assisted in evaluating control options for permit support document for RCRA Subpart X units. Managed project to evaluate control options for charcoal kilns. Provided modeling, inventory, emission estimation and exposure assessment for various projects including landfills and remediation sites.

Developed emission inventories for Lake Michigan air toxics deposition and Transboundary Air Toxics exposure and deposition studies for USEPA, studies also included dispersion modeling and risk assessments. Developed specifications and manual for I/M programs in Virginia and Missouri. Managed and performed

multimedia environmental audit for printing facility including SARA Title III compliance. Prepared air toxics inventory for New Jersey; activities include mobile, area and stationary source characterization.

Managed four post-87 ozone SIP inventories and a special study for USEPA concerning proposed acid rain policy implementation issues. Prepared control strategy analysis for fuel volatility measures for the South Coast FIP; designed an RFP tracking system for area and mobile sources for the South Coast FIP.