

EASTERN RESEARCH GROUP (ERG)

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EDUCATION:

M.S., Environmental Science (Air Pollution Control), College of Civil and Environmental Engineering, University of Cincinnati (1984)
B.A., General Science, Hiram College (1978)

SUMMARY:

Mr. Koucky is a Senior Project Engineer; he has over 20 years of experience in environmental planning, modeling, permitting, monitoring, compliance and research. He has worked extensively with EPA headquarters, Regional offices, State and local programs. His current focus is on enforcement support. He also has experience in human exposure to toxic and criteria pollutants, control and control cost evaluation and regulatory development. During his career, he has developed expertise in a wide range of areas including risk assessment, risk management, regional and sector based initiatives, cost benefit analysis, teaching and training, permitting, enforcement, regulatory development, mobile sources, combustion and incineration, and control evaluation. Mr. Koucky is proficient in computer operations with experience in network development, database development, Geographic Information Systems, and data acquisition.

His support in developing regulations includes:

- 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.

He has performed and reviewed indirect exposure risk assessments, trial burns and other technical information on numerous BIF and hazardous waste incinerators to support RCRA permitting in Regions VI and VII. He supported the US Army Chemical Demilitarization Command in permitting incinerators for the destruction of chemical weapons.

His recent projects include supporting EPA/OECA/ORE's national sector-based initiatives. He has performed inspections and permit (including PSD) reviews for refineries, specialty chemicals, electric

utilities, primary smelters, wood pulp and paper mills, and steel mills. He has worked extensively in the area of combustion and incineration and the cement industry and supported Region 7 in the risk assessment and establishing of permit values for the first RCRA permit issued under the Combustion Policy. He supported development of the RCRA Special Waste Cement Kiln Dust Rule and regulatory gap analysis for Surface Impoundments under RCRA Special Waste Rules. He supported a steel drum manufacturer in the design and permitting of an incinerator and has supported clients in the wallcovering industry in a variety of control evaluation and permitting activities.

PROFESSIONAL EXPERIENCE:

September 2003 - Present: Eastern Research Group:

Supporting EPA's ORE in national enforcement initiatives including refineries and utility generators. This work involves assisting EPA headquarters and regions in case development for PSD and NSPS violations involving modifications to major emissions units. Also supporting EPA Exit 13 Initiative involving investigation of an air pollution "hot spot" near Elizabeth, New Jersey.

April 2000 - September 2003: Independent Consultant:

Supported EPA ORE's national enforcement initiatives for petroleum refineries and electric utilities. Expert witness for Department of Justice in support of national electric utilities enforcement activities. Supported Environmental Defense in Alcoa Case and in BACT analysis for a proposed coal-fired power plant. Supporting ongoing investigations in steel mini-mills sectors involving PSD, NSPS and Title V violations. Supporting EPA's OAQPS in revising the OAQPS Control Cost Manual for air pollution control equipment. Supporting EPA's ORD in developing a protocol for Risk Management Evaluations (RME), the RME protocol will improve current engineering evaluations to include human health and environmental risk parameters. Supporting 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.

November 1990 - April 2000: Science Applications International Corporation (SAIC): Senior Project Engineer

Air Quality Planning/Enforcement-Acted 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). Developing enforcement targeting methods using Title V permit compliance information and Annual Compliance Certification information. Led PSD, air quality and RCRA incineration reviews for several sites in national multi-media enforcement initiative for the specialty chemical, electric utility, primary smelters, wood pulp and paper mills and steel industries and supported other air quality and RCRA incineration issues. 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. Supported Y2K compliance audit for EPA's Office of Mobile Sources for Ann Arbor Testing Lab. 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.

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 and managed technical analyses to support an RIA for the proposed short-term SO₂ standard. Participated in preparing air quality analyses to support environmental impact statements for mining sites in Alaska and Idaho. Reviewed 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 BLIS 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. Managed the development of a pen-based, air pollution inspection prototype system; this system utilizes dBASE files and pen-based menus to perform a standard compliance inspection. Managing 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 database development project for AIRS AMS 1990 baseline inventory for the State of Ohio. Developed methodologies for statewide mobile source emissions and ambient impacts analysis for California Energy Commission's environmental damage cost assessment model (AQVM).

Combustion, Risk Assessment and Hazardous Materials-Supported analysis of generation and disposal of combustion waste. Supported development of training materials for risk assessment with focus on cancer, non-cancer, exposure and uncertainty training courses. Supported analysis of controls, costs and benefits resulting from control of cement kiln dust. 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 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. Supported implementation of the free-market based Acid Rain Program and the Acidic Precipitation Report to Congress. 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.

Toxics Studies-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. Supported the Great Waters Report to Congress. Developed GIS system, industrial profiles, and historic contamination information for PCB and DDT contamination of the Los Angeles Harbor for NOAA. Developed prototype GIS system for data management of air, water and solid and hazardous waste facilities in the Los Angeles area. Developed methodologies and data for GIS targeting of monitor locations for PM₁₀ and nationwide silica exposure. 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. Developed training materials for performing air quality studies at RCRA corrective action sites. 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.

October 1987 - October 1990: Engineering Science: Senior/Supervising Engineer

Responsible for air pollution control analysis support for government agencies and industrial facilities. In charge of supervising local area network and computer staff and operations. 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. Design of software for emission inventory management. Preconstruction permit activities for traditional combustion sources and speciation and analysis for toxic substances. Performed quality assurance statistical analyses for California inspection maintenance programs. Developed a PC based system for New Jersey SO₂ study utilizing CAD system and custom software for mathematical cartographic coordinate conversion. Managed local area network and staff for office personal computer systems. 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. Developed statistical analyses for California BAR I/M Referee quality assurance program. Wrote technical specification for Pennsylvania's centralized CEM data acquisition system. Managed study of free-market cap and trade programs for control of acid rain. Supported development of RCRA Part B permit for munitions incinerator at Pine Bluff Arsenal. Supported and led permitting, environmental audit and inventory support efforts for numerous industrial clients.

June 1984 - October 1987: Polk County Physical Planning, Des Moines, Iowa: Air Pollution Engineer

Review of all permits for pollution control equipment and combustion equipment for conformance with Federal, State and local codes. Conduct computer modeling to determine impacts of proposed projects. Established and enforced RACT measures for control of carbon monoxide and particulate matter. Performed as quality assurance officer for ambient pollutant monitoring program. Projects include installation of computerized data acquisition system and design and development of custom monitoring data calculation, reporting and statistical analysis software. Responsible for equipment selection, obtaining grants, software development, installation and operation of network. Conducted 100 to 200 inspections per year for compliance with Federal, State, and local codes. Certified in USEPA Method #9 as a smoke reader. Performed asbestos demolition inspections and microscopic identification of asbestos fibers. Involved in a variety of planning functions including preparation and review of environmental

impact analysis, State implementation plan revisions, preparation of successful redesignation demonstration for carbon monoxide and represented Polk County on Des Moines Area Transportation Planning Committee (local MPO).

April 1983 - June 1984: University of Cincinnati, Cincinnati, Ohio: Research Assistant
Emission Testing Group - Designed and constructed automotive test facility under Cincinnati Gas and Electric grant utilizing chassis dynamometer, CVS sampler, various bench instruments and custom computer software. Performed alternative fuel research on various gasohol fuels including effect on stoichiometric ratio and aldehyde emissions. Stationary Source Emission Compliance Testing Team, conducted compliance testing on various power plants and city owned facilities.

Energy Research Group - Refrigeration testing, energy transfer and heat loss research utilizing analog to digital converter and personal computer. Ceramic coating testing for insulation (infrared reflection) of mechanical and engine components.

January 1981 - April 1983: US EPA, Center Hill Facility, Cincinnati, Ohio: On-site Contractor

Conducted particulate measurement, chemical and instrumental analysis, joint N.O.I.S.H. and USEPA toxicology project. Generated standard toxic exposure environments for exposure of rats and monkeys to coal dust and diesel aerosols. Conducted research and maintained nephelometry, process instrumentation and data acquisition for joint N.I.O.S.H. and USEPA toxicology research project (coal dust and diesel exposure toxicology).

COMPUTER PROFICIENCY:

Word Processing software, spreadsheets, database programs (ACCESS, FOXPRO, dBASE), network experience with NOVELL, WINDOWS 95 and NT and CISCO routers.

REFERENCES:

Scott Hedges	EPA/ORD/NRMRL	202 564-3318
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