

LINDA E. CUMMINGS, D.V.M., Ph.D.

Director of Toxicological Services

CREDENTIALS/REGISTRATIONS

Louisiana State University, Ph.D., Toxicology, 1992

Louisiana State University, Doctor of Veterinary Medicine (D.V.M.), 1984

Licensed Veterinarian, State of Louisiana

PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS

Society of Environmental Toxicology and Chemistry (SETAC)

American Veterinary Medical Association (AVMA)

Baton Rouge Geological Society

FIELDS OF SPECIALIZATION

- Toxicology
- Human Health & Ecological Risk Assessment
- Litigation Support and Expert Witness Services
- RECAP
- Regulatory Standards

EXPERIENCE SUMMARY

Dr. Cummings is a toxicologist and veterinarian with over 15 years of experience in the areas of human health and ecological risk assessment and litigation support. She has conducted multi-media, multi-constituent risk assessments involving the use of complex fate and transport models. In addition, she has provided toxicological consultation and peer review services to industrial, municipal, and environmental consulting firm clients for facility Corrective Measure Studies, Superfund sites, and other risk-based projects. She has also provided project management for site investigation and remediation projects for multi-sector clients. Dr. Cummings was selected as a Senior Technical Advisor and Gulf/Southeast Regional Lead in the disciplines of human health and ecological risk assessment for a Fortune 500 corporation. She has provided toxicological litigation support and expert witness services to clients in the chemical, petrochemical, and maritime shipping industries, as well as other industrial/business sectors. Dr. Cummings has been qualified as an expert in toxicology, risk assessment and project management.

Dr. Cummings has a valuable regulatory background, having worked for the Louisiana Department of Environmental Quality (LDEQ) in the Hazardous Waste Permits Division. She reviewed risk assessments submitted to the department and participated in waste classification decisions. In 1992, she was appointed to the LDEQ's Clean-up Standards Committee, the precursor to the Risk Evaluation/Corrective Action Program (RECAP).

SELECTED PROJECTS

- Project manager. Performed a risk assessment at a former waste disposal facility, which required the evaluation of structure-activity relationships in order to identify appropriate surrogate compounds for numerous constituents for which toxicity information was unavailable.
- Project manager. Performed a site investigation and RECAP evaluation for a site impacted by chlorinated solvents in soil and groundwater, which was being taken for a state road construction project. Based on the RECAP evaluation, a No Further Action At This Time determination was made and the road construction project was able to proceed on schedule.
- Project manager. Performed a site investigation and RECAP evaluation for a site impacted by chlorinated solvents in groundwater. Developed a Corrective Action Plan proposing in-situ augmented bioremediation as the remedial measure, which has received regulatory approval.
- Expert witness. Provided an expert report in a suit alleging human health damages due to occupational exposure to polycyclic aromatic hydrocarbons.
- Project manager. Performed an ecological risk assessment and participated in negotiation processes with Natural Resource Damage Assessment (NRDA) Trustees to assess ecological damages and evaluate restoration alternatives following a major gasoline pipeline release.
- Project manager. Performed a site investigation, risk evaluation, and remediation of a former shipyard under Louisiana's Voluntary Remediation Program (VRP).
- Project manager. Performed a site investigation, RECAP evaluation, and risk-based remediation of a site impacted with petroleum sludge.
- Expert witness. Provided toxicological litigation support and expert witness services in a class action lawsuit involving a public school built on a former municipal landfill.

- Developed health-based remedial criteria for groundwater at an industrial site impacted by chlorinated hydrocarbons and herbicides, following an environmental fate and transport analysis.
- Ecological risk assessor. Performed a Tier 2 Ecological Risk Assessment at an industrial site adjacent to a tidally influenced bayou in Texas.
- Technical reviewer for the Corrective Measures Study and human health risk assessment of a major industrial facility.
- Expert Witness. Provided toxicological litigation support and expert witness services in a suit resulting from alleged environmental and human health damages due to petroleum sludge.
- Project manager. Performed a risk assessment project at an industrial site with chlorinated solvents in groundwater. Potential onsite and offsite exposures via multiple pathways were evaluated.
- Developed risk-based soil and water action levels for the RCRA Facility Investigation (RFI) at a major industrial facility. Chemicals of concern included polynuclear aromatic hydrocarbons (PAHs), aromatic and aliphatic ethers, dinitrophenols, dichlorobenzenes, and nitroaniline

PROFESSIONAL ACTIVITIES

- Emissions Reduction Tax Credit (ERTC) Program Working Group. Louisiana Department of Environmental Quality, 2008.
- Chairman. Industry Workforce and Baton Rouge Community College Associate of Applied Sciences Partnership Committee, October 2007 – present.
- Steering Committee. Annual Environmental Regulatory Compliance Conference (ERCC). City of Alexandria, LA, Louisiana Municipal Association, Louisiana Department of Environmental Quality and Louisiana Department of Health and Hospitals, 2002 - present.
- Advisory Committee. Baton Rouge Community College, National Science Foundation Advanced Technology Education Regional Center Planning Grant, 2006 – present.

- Chair. Onshore Infrastructure Session, Post-Incident/Recovery Tract, 2006 Clean Gulf Conference, New Orleans, LA, October 17-19, 2006.
- Advisory Committee Member. 2006 Clean Gulf Conference, New Orleans, LA.
- Facilitator. Interdisciplinary Planning Team Meeting, Louisiana Comprehensive Coastal Protection Master Plan, Louisiana Coastal Protection and Restoration Authority, Baton Rouge, LA, May 2006.
- Nominating Committee Member. Keep Louisiana Beautiful, 2006 - 2007.
- Steering Committee. Louisiana Department of Environmental Quality, Annual Office of Waste Services Conference, 1998 – 2000.
- Steering Committee. Louisiana Department of Environmental Quality, Annual Solid and Hazardous Waste Management Conference, 1995 – 1998.
- Chairman. Risk Assessment Panel, Louisiana Department of Environmental Quality, 17th Annual Solid and Hazardous Waste Management Conference, Lafayette, LA, April 1995.

PRESENTATIONS

Invited Speaker. “Risk Evaluation/Corrective Action Program (RECAP): Maximizing Your Options,” Louisiana State Bar Association (LSBA) Environmental Section Seminar, New Orleans, LA, November 8, 2007.

Speaker. Overview of the Risk Evaluation/Corrective Action Program (RECAP). 2003 Environmental Regulatory Conference. “Protecting Yourself and Your Government from Environmental Liabilities.” City of Alexandria and the Louisiana Municipal Association, February 2003.

Instructor. Risk Evaluation/Corrective Action Program (RECAP) Seminar, PPG Industries, Lake Charles, LA, September 2001.

Instructor. Human Health Risk Assessment. Environmental Law Course. Tulane Law School, November 1999.

Speaker. “Enhancing Ecological Risk Assessment with Geographical Information Systems (GIS),” Louisiana Department of Environmental Quality, 20th Annual Office of Waste Services Conference, Lafayette, LA, March 1998.

Instructor. Environmental Fate and Transport. Environmental Geology/Hydrology Course, Professional Environmental Program, Louisiana State University, June 1996.

Instructor. Ecotoxicological Risk Assessment Course, Professional Environmental Program, Louisiana State University, February 1996.

Speaker. "Risk Assessment Methodology," American Society of Environmental Sciences, 5th Annual Conference and Technical Exhibition, Lafayette, LA, October 1995.

Speaker. "LDEQ's Perspective on Risk Assessment," Louisiana Department of Environmental Quality, 17th Annual Solid and Hazardous Waste Management Conference, Lafayette, LA, April 1995.

PUBLICATIONS

Cummings, L.E. 1992. *Investigations into the pathogenesis of acute equine laminitis*, Dissertation.

Cummings, L.E., A.J Guthrie, J.D. Harkins and C.R Short. 1990. "Pharmacokinetics of gentamicin in newborn to 30-day-old foals." *American Journal of Veterinary Research*, 51(12):1988-1992.

Jewell, C.S.E., L.E. Cummings, M.J.J. Ronis and G.W. Winston. 1989. "The hepatic microsomal mixed-function oxygenase (MFO) system of *Alligator mississippiensis*: induction by 3-methylcholanthrene (MC)." *Xenobiotica* 19(10):1181-1200.

Jewell, C.S.E., L.E. Cummings; M.J.J. Ronis and G.W. Winston. 1989. "Induction of the hepatic microsomal mixed-function oxygenase (MFO) system of *Alligator mississippiensis* by 3-methylcholanthrene (3-MC)." *Marine Environmental Research* 28:73-78.