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| SUMMARY Statement | Data scientist in The Institute for Environmental Modeling (TIEM) for the University of Tennessee, collaborating with the Environmental Sciences Division (ESD) at Oak Ridge National Laboratory (ORNL). Twenty five years of experience includes historical data and map research, database and website design and maintenance, technical writing and editing, help file and user guide development, training, software verification and validation, quality assurance, and project management. |
| Experience | **University of Tennessee (UT), Knoxville, TN, The Institute for Environmental Modeling (TIEM) (1994 – present)**Data Scientist* Collaborate with Oak Ridge National Laboratory (ORNL) on various projects with the U.S Environmental Protection Agency (EPA), U.S. Department of Energy (DOE), U.S. Army, Nuclear Regulatory Commission (NRC), and Food and Drug Administration (FDA).
* Mentor/Leader for ORNL HERE and SULI program interns

**Schuylkill Environmental Education Center, Philadelphia PA (1993)**Educator* Prepared and presented environmental classes and nature walks to multiple ages.

**The Nature Conservancy, Philadelphia, PA (1992)**Volunteer Hydrogeologist* Mapped the surface water pathways for specific areas of Pennsylvania
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| Education | **Lehigh University, Bethlehem, PA (1992)**Bachelor of Science, Environmental Science and Resource Management, Summa Cum Laude |
| SKILLS | * HTML, SQL, and LaTeX programming
* Microsoft Office; RoboHelp; JIRA
* Database and Website Design
* Technical Writing and Editing
* Quality Assurance
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| Recent TIEM Projects  | * Environment for Analysis of Geo-Located Energy Information (EAGLE-I) – Work with Oak Ridge National Laboratory (ORNL) and the U.S. Department of Energy (DOE) to develop documentation for EAGLE-I, including User Guide, User and Data Administration Guidance, Quick-Start Guide, and Version Control Document. EAGLE-I tracks the nation’s energy grid and identifies electric outages. This high-profile project is a permanent fixture in the White House Situation Room.
* Risk Assessment Information System (RAIS) – Quality Assurance Manager for the RAIS, a complete online repository of human health and ecological risk assessment tools that informs project managers and the public about environmental risk assessment. Prepare and implement configuration control system. Responsible for maintaining the toxicity values database. Plan, coordinate, and co-lead trainings on the RAIS.
* Radium Research – Search public resources and historical maps to identify radium sites of interest for the Nuclear Regulatory Commission (NRC) for a high profile project. Develop and maintain database to store all collected information. Prepare site summary reports for selected sites that will advise decisions by NRC upper level management. Responsible for fiscal management and development of monthly project reports.
* Drinking Water Standards and Health Advisory (DWSHA) tables – Work directly with the Environmental Protection Agency (EPA) Office of Water (OW) to derive values for the DWSHA tables. Write summary documents deriving these values that will link to the online table for each chemical. Coordinate internal review of the summary documents at ORNL before forwarding to EPA.
* Risk Assessment Information System (RAIS) – Quality Assurance Manager for the RAIS, a complete online repository of tools and documents to perform human health and ecological risk assessments and inform project managers and the public about environmental risk assessment. Prepare and implement configuration control system. Responsible for maintaining the toxicity values database. Planned, coordinated, and co-led trainings on the RAIS.
* Provisional Peer-Reviewed Toxicity Values (PPRTVs) – Review PPRTV documents for correct derivation of toxicity values. Maintain this database repository of toxicity values for EPA Office of Superfund Remediation and Technology Innovation (OSRTI).
* Spatial Analysis and Decision Assistance (SADA) – Develop the help file and user guide for SADA, a windows freeware program for integrating risk analysis, geospatial analysis, cost, statistics, visualization, and a variety of frameworks including secondary sampling schemes into a single package. Assist with SADA trainings.
* Provisional Advisory Levels (PALs) – Developed and maintained database and website for the EPA Homeland Security workgroup’s PALs, which are short-term toxicity values for emergency responders in the event of a terrorist attack. Attended all workgroup meetings to take notes and derive toxicity values on the fly based on selected studies from the meetings. Assisted in the writing and review of chemical summary reports for the derived toxicity values. One report for ricin was used by the White House in response to a letter mailed to the White House that was contaminated with ricin.
* Terminated Licenses Tracking System (TLTS) and Complex Sites Tracking System (CSTS) – Developed and maintained database and website to track closure of NRC nuclear contaminated sites and verified all NRC license closures on behalf of the NRC.
* U. S. Army Center for Health and Promotion and Preventive Medicine (USCHPPM) Chemical Exposure Guidelines – Acted as primary contact for USCHPPM Chemical Exposure Guidelines database. Researched EPA Maximum Contaminant Levels (MCLs) to help derive bottled water chemical standards for use by deployed military.
* Food and Drug Administration (FDA) Technical Evaluation Reports (TDERs) – Technical edit and format TDER reports prepared for the FDA, including verification of all mathematical calculations.
* Fiscal Management – Provide fiscal management for all University of Tennessee (UT), The Institute for Environmental Modeling (TIEM) projects contracted with ORNL. Prepare monthly status reports to the sponsors for these projects on behalf of ORNL.
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| SELECTED PUBLICATIONS | **Federal Guidance Report 15: External Exposure to Radionuclides in Soil, Air, and Water.**Hertel, N.E., Bellamy, M.B., Eckerman, K.F., Leggett, R.W., Easterly, C.E., Ryman, J., Stewart, D.J., Boyd, M. Awaiting publication.**Comparison of Federal Guidance Reports 12 and 15: External Exposure to Radionuclides in Soil, Air, and Water.**Bellamy, M.B., Eckerman, K.F., Manger, R.P., Easterly, C.E., Ryman, J.C., Stewart, D.J., Hertel, N.E., Veinot, K.G., Dewji, S.A., Hiller, M.M., Leggett, R.W.14th Congress of the Congress of the International Radiation Protection Association, May 2016, Conference Abstract based on IRPA-2016-FGR12-15-Final.**Data Source Summary Documents (DSSDs) Derived for Updated Drinking Water Standards and Health Advisories (DWSHA) Tables.**Stewart, R.N., Thomas, D.J. (now Stewart, D.J). The Terminated Licenses Tracking System. NUREG/CR-6669, <https://www.nrc.gov/reading-rm/doc-collections/nuregs/contract/cr6669/>, March 2002.**Guidance for Conducting Risk Assessments and Related Risk Activities for the DOE-ORO Environmental Management Program.**BJC/OR-271, April 1999.**Risk Assessment Quality Program Plan.**ES/ER/TM-117/R1, November 1997.**Risk Assessment Program Data Management Implementation Plan.**ES/ER/TM-232, November 1997. |