

MOHSEN ROUDSARI

HVAC, Automotive & Nuclear Diagnostics Expert | Technical & Regulatory Expert Witness
Aiken, South Carolina | 843-693-1670
mohsenroudsari@gmail.com | DOE Q Clearance

Available for expert case review, regulatory analysis, deposition, and trial testimony

Executive & Expert Profile

Senior diagnostics, nuclear operations, and environmental compliance expert with enterprise-level experience across DOE nuclear facilities, radiological and hazardous waste programs, transportation governance, and high-hazard operations. Recognized Subject Matter Expert (SME) in DOE and NRC radiological waste disposal, certification, and transportation. Combines executive leadership with forensic-level diagnostic capability to determine root cause, regulatory compliance, and technical causation in complex mechanical, environmental, HVAC, automotive, and nuclear systems.

Core Expert Competencies

- Root Cause Failure Analysis (RCFA)
- Forensic diagnostics & causation analysis
- DOE, NRC, EPA & RCRA regulatory interpretation
- Radiological, hazardous, mixed & TRU waste disposal
- HVAC refrigeration diagnostics (EPA 608)
- OEM-level automotive diagnostics
- Nuclear transportation & packaging compliance
- Audit-resilient technical documentation
- Expert reports, affidavits & testimony

Regulatory Subject Matter Expertise – DOE & NRC

- Recognized DOE and NRC radiological waste disposal Subject Matter Expert (SME).
- Expert interpretation of federal regulations governing waste characterization, certification, packaging, and transport.
- Root-cause investigation of regulatory non-compliance, misclassification, and procedural failures.
- Preparation and defense of documentation supporting waste acceptance and disposal decisions.
- Direct interface with DOE, NRC, EPA, and state regulators during audits, CEIs, readiness reviews, and enforcement actions.

Professional Experience

Savannah River Nuclear Solutions (SRNS)

Senior Waste Certification Specialist / Generator Certification Official (GCO) & Transportation Coordinator (TC) | 2021 – Present

- Provide enterprise governance and technical leadership for nuclear waste certification, characterization, transportation, and regulatory compliance.
- Serve as senior SME supporting mission-critical operations including FCA startup and completion, TRM disposition, and Accelerated Basin De-Inventory.
- Conduct forensic-level diagnostics to determine root cause of non-conformances, system failures, and regulatory deviations.
- Advise executive leadership, facility managers, and regulators on risk mitigation and compliance strategy.
- Prepare audit-defensible documentation supporting DOE, NRC, EPA, and RCRA requirements.

Savannah River Nuclear Solutions (SRNS)

Radiological Control Inspector – H-Canyon Facility | 2019 – 2021

- Performed continuous diagnostic assessment of radiological conditions in high-hazard nuclear operations.
- Verified compliance with radiological protection standards and work control requirements.
- Identified causal factors for deviations and validated corrective actions.

Automotive Diagnostics Experience

Lead Automotive Mechanic / Diagnostic Specialist | Independent & Commercial Automotive Shops | 10 Years

- Served as lead mechanic responsible for advanced automotive diagnostics, complex repair determination, and quality assurance.
- Performed root cause diagnostics on engine, drivetrain, electrical, HVAC, and control systems using OEM-level diagnostic methodologies.
- Diagnosed intermittent, multi-system faults involving mechanical, electrical, and software-controlled components.
- Differentiated manufacturing defects, improper repairs, wear-related failures, and misuse through systematic fault isolation.
- Utilized scan tools, electrical testing, and data interpretation to validate failure causation prior to repair.
- Reviewed and corrected misdiagnosed vehicles, reducing repeat failures and unnecessary part replacement.
- Provided technical guidance and oversight to junior mechanics on diagnostic methodology and repair validation.

- Interfaced directly with customers, insurers, and service managers to explain diagnostic findings and repair rationale.
- Ensured repairs met OEM standards, safety requirements, and regulatory compliance.
- Experience directly applicable to expert review of automotive defect, misdiagnosis, and liability claims.

Education

Bachelor's Degree Equivalency – DOE Order 426.2A Approved

Aiken Technical College – Radiation Protection Technology Coursework

Charleston County School of the Arts – High School Diploma

Certifications & Clearances

- DOE Q Clearance (Top Secret)
- Generator Certification Official (GCO)
- Transportation Coordinator (TC)
- Advanced RCRA Training
- DOT Radioactive Material Shipper Certification
- Radiological Worker II
- H-Area Person-In-Charge (PIC)
- Solid Waste Management Committee Representative
- EPA Universal 608 Refrigeration Certification
- KIA Motors Master Elite Plus Technician Certification

Expert Witness Disclosure Statement

All opinions rendered are based on objective technical analysis, documented evidence, applicable regulations and standards, and professional experience, independent of the retaining party.