



# SYREETA DICKERSON VAUGHN

Pronounce my name "Sah-REE-tah"

Senior Mission Support Specialist  
Senior Nuclear Safety Analyst (Dual)  
Facilities & Operations Directorate  
Oak Ridge National Laboratory

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## HIGHLIGHTED QUALIFICATIONS

- Master of Science degree in geological sciences and industrial & and systems engineering from the University of Tennessee; hold a Q security clearance from the Department of Energy.
- More than five years of experience working in a research and development environment with hot cell facilities, transuranic, high-energy particle accelerators, non-typical isotopes, and special nuclear materials.
- More than 18 years of operational and technical expertise in nuclear materials processing, nuclear waste operations, nuclear safety basis, nuclear facility operations, and weapons production.
- More than 10 years of line management experience, supervising employees as a lead to achieve business goals and serving as their intermediary between senior management; leading nuclear and environmental technical professionals, working with applicable bargaining unit staff, utilizing an understanding of bargaining unit contract requirements, and serving as the subcontract technical representative responsible for subcontracted staff.

## BASIC QUALIFICATIONS

- Experience managing large projects involving multi-organizational, collaborative work environments of technical and bargaining unit professionals; this includes managing teams from multiple institutions and divisions.
- Proven ability to function well in fast-paced research and production environments; set priorities that accomplish multiple tasks within deadlines; and adapt to change, while applying Lean Six Sigma and change management principles.
- More than 18 continuous years of nuclear industry experience serving as the subject matter expert for large multi-institutional site-level National Nuclear Security Administration and Office of Science capital projects.
- Experience executing line management responsibilities, including supervision of staff within the field, operating within fiscal year allocated budget, staff recruitment and termination, employee performance and career development, job and travel assignments, and group performance as it applies to the site-level agenda.

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**EDUCATION**

- 2013 University of Tennessee/Knoxville – Master of Science, Industrial & Systems Engineering
- 2005 University of Tennessee/Knoxville – Master of Science, Geology
- 2002 Florida State University/Tallahassee – Bachelor of Science, Geology

**PROFESSIONAL EXPERIENCE**

This section includes a summary of major responsibilities and duties held during 18 years of comprehensive experience as a Department of Energy contractor in Oak Ridge, Tennessee, and Amarillo, Texas. This experience includes Department of Energy contractor experience with four operators (Oak Ridge National Laboratory, Pantex Plant, Savannah River Site, and Y-12 National Security Complex) and three offices (Office of Environmental Management, Office of Science, and Office for the National Nuclear Security Administration.) The professional experience described below represents a dual ladder career development with upward mobility in both technical and managerial positions (See Table 1).

<b>Table 1: Dual Ladder Career Development Timeline</b>				
<b>Year</b>	<b>Technical Ladder</b>		<b>Management Ladder</b>	
<b>2017-current</b>	<b>Senior Staff Member</b>	Senior Nuclear Facility Safety Analyst 2017-current ~ Senior Mission Support Specialist 2021 - current	Nuclear Facility Safety Enterprise-Lead 2017-2019 (~\$750K allocated, 8 nuclear facilities, 5 members)	<b>Manager 3</b>
<b>2010-2017</b>	<b>Staff Member</b>	NEPA Program Coordinator 2010-2012 ~ Senior Operations Staff 2012-2015	Nuclear Facility Safety Facility Lead 2015-2017 (~\$350K allocated, 2 facilities, backup 2 facilities, 3 members, 1 matrixed)	<b>Manager 2</b>
<b>2005-20010</b>	<b>Associate Staff Member</b>	Senior Waste Engineer 2007-2008 ~ Waste Engineer 2005-2007	Waste Management Project Lead 2008-2010 (~\$500K, 10 members)	<b>Manager 1</b>

Management experience represented in Table 1 was performed in an organization that used a functional approach in management (i.e., function and mission managers). This experience represents managerial responsibilities under the mission functional area. Letters of support and endorsement may be provided upon request.

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**January 2022 - Present**

UT-Battelle, LLC, Oak Ridge National Laboratory (Department of Energy National Laboratory)

*Senior Directorate Mission Support Specialist: Rotation Assignment & Dual Roles: Sr. Nuclear Facility Safety Analyst & Emergency Management; individual contributor.*

Reporting to Jimmy Stone, Facilities & Operations Directorate, Associate Lab Director

- Rotate both laterally and vertically throughout the Laboratory’s mission support and mission organizations (e.g., Environment, Safety, Health & Quality, Facilities and Operations, Business Services, Human Resources, and Communications) to learn and develop an enterprise-level understanding of the mission deliverables and establish relationships with key Laboratory leaders.
- Identify and implement six continuous improvement projects that drive efficiency and effectiveness of operational practices at the directorate level across the laboratory.
- Remain “on call” to address operational upsets and emergencies as the Environmental Monitoring Control Center Liaison for site area emergencies, general emergencies, and alerts (if requested by the Laboratory Emergency Director).
- Serve as the subject matter expert on ORNL’s Mobile Uranium Facility program and the DOE nuclear safety lead for all mobile nuclear facilities.
- Serve as a deployable support staff member versed in elements of Lean Six Sigma Methodology, including competencies contained within the phases of Define, Measure, and Control.

**July 2019 – January 2022**

UT-Battelle, LLC, Oak Ridge National Laboratory (Department of Energy National Laboratory)

*Senior Nuclear Facility Safety Analyst: Unreviewed Safety Question Subject Matter Expert; individual contributor.*

Reporting to Glenn Coppock, Nuclear & Criticality Safety Group, Lead

- Provide nuclear safety technical support services in accordance with 10 CFR 830 Subpart B, “Safety Basis Requirement” and all applicable standards, such as DOE-STD-3009-2014, “Preparation of Nonreactor Nuclear Facility Documented Safety Analysis,” DOE-STD-1189-2016, “Integration of Safety into the Design Process,” and DOE Order 420.1 C, Change 1 (pgChg), “Facility Safety.”
- Maintain the Documented Safety Analysis (e.g., Safety Analysis Report, Technical Safety Requirements, Transportation Safety Document, Design Analysis Calculations, etc.) as required by the standard for multiple hazard categories 1, 2, and 3 facilities.
- Performs, leads, and reviews engineering calculations related to nuclear safety, fluid flow, probability risk assessment, severe accident analysis, equipment qualification, heat, and mass transfer, and other duties as assigned by the manager.
- Interface with customers, vendors, and other internal/external functional groups on a subject matter expert level.
- Perform unreviewed safety question evaluations and independent reviews, develop, and implement evaluation of safety situations and justification of continued operations, as well as serve as the unreviewed safety question process subject matter expert.

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**IMPACT:** *Completed six mission support process improvement projects; Completed the unreviewed safety question process revision to all company level command media, participated in two mobile uranium deployment exercises.*

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**February 2017 – July 2019**

Consolidated Nuclear Security LLC, Y-12 National Security Complex, Pantex Plant, and Savannah River Site (Environmental Management and National Nuclear Security Administration part of Department of Energy)

*Enterprise Nuclear Facility Safety Group Lead: Derivative Classifier, Building Emergency Warden, NQA-1 Auditor, Subcontractor Task Representative; ~\$750K allocated budget.*

Reporting to: Jeffery Goodman, Safety Analysis Engineering Enterprise, Director

- Responsible for implementation of 10 CFR 830 for eight nuclear facilities; required bi-weekly trips from Tennessee to Texas; and includes a major project at Savannah River Site, requiring Sigma-level Department of Energy security clearance.
- Responsible as line mission technical group lead for a multi-discipline, five-member team; includes oversight of technical professionals ranging from senior level to new hire.
- Responsibilities included time authorization, travel authorization, qualification oversight and approval, performance review input and evaluation, staff funding justification, project/program scheduling staff recruitment, and employee relations.
- Established milestones and goals for technical leadership; ensured executed work aligned with the scope, schedule, and budget.
- Maintained frequent interactions with executives and high-level technical experts within the organization and at the headquarters level to facilitate enterprise-level success.

**February 2015 – February 2017**

Consolidated Nuclear Security LLC, Y-12 National Security Complex & Pantex Plant (National Nuclear Security Administration part of Department of Energy)

*Senior Nuclear Facility Safety Group Lead: Derivative Classifier, Building Emergency Warden, NQA-1 Auditor, Subcontractor Task Representative; ~\$340K of allocated budget.*

Reporting to: Alvin Gwathney, Nuclear Facility Safety Engineering Section, Manager

- Responsible for implementation of 10 CFR 830 as lead for one nuclear facility, backup for two facilities, and facility owner for site-level Documented Safety Analysis; facility owner required functional knowledge on all nine nuclear facilities.
- Responsible for a team of four similar-level experienced technical professionals; and for providing direction, assigning, and scheduling work, and monitoring completion of work.
- Responsible for requirements flow-down from all 10 CFR 830 critical safety management programs; this included the role of point of contact to the site office and collaborator on safety management program revisions and updates.
- Authorized by the company to interpret regulatory standards and form policy about safe operations of assigned nuclear facilities and interfaced with directorate operations staff and program managers; Role also included the development of a company-level nuclear facility safety engineering training program with four in-person training modules.
- Met milestones and goals set by management, ensured the team executed work, and that work aligned with the scope, schedule, and budget.
- Maintained frequent interactions with executives and high-level technical experts within the organization and at the headquarters level.

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**IMPACT:** *On schedule, on budget, on mission for deliverer of more than 15 documented safety analysis annual update submissions; > 48K safe man-hours of overseen by field deployed technical staff; Enterprise rating increase.*

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**October 2007 – February 2015**

B&W, LLC (formerly Babcock & Wilcox Technical Services, LLC [BWXT]) Y-12 National Security Complex, Oak Ridge, Tennessee (National Nuclear Security Administration facility part of Department of Energy)

**October 2012 – February 2015**

*Senior Operations Staff:* Action Office Analyst, Trainer, Senior Supervisory Watch Coordinator; individual contributor.

Reporting to: Rocky Walters, Action Office Division, Manager

The Action Office resided in the Production Department and included Production Performance Metrics, Conduct of the Operations team, Senior Supervisory Watch Program, and the 7S Housekeeping Program.

- Served as the technical advisor for Operations for monthly/quarterly performance evaluations; and responsibilities included revising, generating, and distributing Production performance metrics both internal and external.
- Developed, designed, and implemented annual training, including Conduct of Operations and 7S Housekeeping; participated in work team incident investigations and critiques and performed technical assessments.
- Maintained, monitored, and coordinated the Operation’s Senior Supervisory Watch Program, which consisted of 28 senior Operations Managers and more than 675 watch duty surveillances; and, issued site-level reports with direct input into the complex-wide strategic plan.
- Supported initiatives in cost savings, productivity gains, and process waste removal as a part of Lean Six Sigma.

**April 2010 – October 2012**

*NEPA Program Coordinator:* NESHAPs Backup, Spill Response Backup; individual contributor.

Reporting to: Robert John, NEPA Compliance Section, Manager

- Ensured proper management of National Environmental Policy Act activities from ongoing processes, abandoned operations, demolition projects, and newly proposed projects (site specifications: 6,500 personnel site, 393 facilities, and 150 acres).
- Developed and/or technically reviewed categorical exclusion determinations, environmental, and environmental impact statements for collectively more than 400 reviews; and contributed to one revision of “Ridge Reservation Annual Site Environmental Report,” 2011.
- Served as the alternate site Spill Response Coordinator and backup to national Emission Standards for Hazardous Air Pollutants (including Title IV) Coordinator.
- Provided definitions and interpretations regarding regulatory requirements including, the Resource Conservation and Recovery Act, Toxic Substances Control Act, and several other subject-specific environmental regulations.
- Ensured compliance with all local, state, and federal regulations, as required by the Act.

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**IMPACT:** *Ensured 28 senior operations managers completed their field observation duties; conducted more than 400 NEPA reviews; and participated as a major contributor in the Conduct of Operations major revision.*

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**April 2010 – October 2007**

*Senior Waste Engineer:* Waste Management Project Lead, Procedure Coordinator, Trainer; ~\$500K.

Reporting to: Danny Nichols, Waste Management, Department Manager

- Lead for both Legacy & Infrastructure Reduction Demolition & Deactivation projects (multiyear, capital projects), which include the demolition and disposal of eight large contaminated surplus buildings and areas (e.g., 9204-4, 9766, 9711-5, 9720-8, Coal Tar Pile, and many more) and more than 2 M square feet of floor space; experience includes smaller projects.
- Develop and/or approve proposals, cost/man-hour estimates, and schedules for more than 30 projects; ensured tasks were completed on schedule and on task.
- Line mission management technical lead of a ten-member team for three of seven American Recovery & Reinvestment Act projects (Biology, 9206, & Beta-4) removing more than 650,000 square feet of legacy material; each team contained different members.
- Served as subcontract technical representative developing and reviewing contracts, hiring subcontracted staff, and conducting audits on vendors; and served as oversight supervisor to subcontracted technical staff for more than twenty small and large demolition projects.
- Responsible for a team ranging from similar-level experienced technical professionals to matrixed technician staff; and for providing direction, assigning, and scheduling work, and monitoring completion of work.
- Responsible for requirements flow-down from all 10 CFR 830 critical safety.

**July 2005 – October 2007**

BWXT, LLC, Y-12 National Security Complex, Oak Ridge, Tennessee (National Nuclear Security Administration facility part of Department of Energy)

*Waste Engineer*

Reporting to: Vanita F. Boston, Waste Management Department, Manager

- Ensure proper management (i.e., collect, transport, relocate, consolidate, characterize, package, treat, store, and dispose) of wastes from ongoing activities, abandoned operations, and demolition and disposal projects.
- Develop and/or technically review waste management plans, transportation plans, environmental requirements documentation, and contract Statement of Work.
- Provide definition and interpretation regarding regulatory requirements including but not limited to DOE Order 435.1, “Radioactive Waste Management.”
- Lead Lean/Six Sigma Yellow Belt on multiple Black Belt projects, estimated total cost savings of ~\$1M for waste container procurement process improvement.

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**IMPACT:** *stimulated job growth in the Oak Ridge area through the Act and growing from an individual contributor to overseeing a team of to ten; > 60K safe man-hours; completed projects on time and on schedule.*



## KEY TRAINING & CERTIFICATIONS

- Area Locations of Hazardous Atmospheres (ALOHA) atmospheric dispersion model
- Assessment & NAQ-1 Auditor
- Conduct of Operations (qualified trainer and developer)
- Derivative Classifier (Y-12 National Security Complex)
- Emergency Prediction Information code (EPIcode) & ARFxRF Five Factor Equation
- Fire Protection Engineering Safety
- OSHA 40-Hour HAZWOPER Trained (including supervisor certification)
- Leadership/Management Training (multiple courses, site-specific and corporate training)
- MELCOR Accident Consequence code Systems (MACCS2) Code
- Nuclear Facility Accident Analysis (qualified trainer and developer)
- Nuclear Facility Hazard Analysis (qualified trainer and developer)
- Nuclear Facility Safety Basis Qualified (qualified trainer and developer)
- Nuclear Criticality Training
- Nuclear Facility Unreviewed Safety Question Process (qualified trainer and developer)
- Project Management Training
- Radiological Control Worker II
- Six Sigma Yellow Belt Certification
- Subcontract Technical Representative
- Supplier Quality Auditor

Training records can be made available upon request.



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**KEY PROJECT/OPERATIONS EXPERIENCE**

- 2019-Current **Nuclear Safety Facility Lead** – Oak Ridge National Laboratory, “Mobile Uranium Facility,” funded by US Department of Energy National Nuclear Security Administration. ORNL Program Manager Steven Cleveland, Y-12 Program Manager Summer Mattmann, and National Nuclear Security Administration Program Manager Ian Kapuza
  
- 2018-2019 **Nuclear Facility Safety Enterprise-Lead** – Pantex Plant, “High Explosives Science & Engineering Facility,” funded by; Proposed new 72,000 square foot facility.
  
- 2012 – 2013 **Action Office Analyst** – Y-12 National Security Complex, major contributor to “Y-12 Conduct of Operations Manual” re-write.
  
- 2010 – 2011 **NEPA Program Coordinator** - Y-12 National Security Complex, contributor to 2011 “Oak Ridge Reservation Annual Site Environmental Report.”
  
- 2009-2010 **Waste Management Project Lead** – Y-12 National Security Complex, Integrated Facilities Disposition Project, funded by US Department of Energy Office of Environmental Management (~approximately \$500M/yr); Sub-project title: “Y-12 American Recovery & Reinvestment Act Beta-4 Cleanout;” Scope to prepare Hazardous Category 2 nonreactor nuclear facility Building Beta-4 for demolition, initiate CERCLA documentation and remove approximately 128,00 cubic feet of legacy material. Program Director, John W. Krueger and Program Manager Danny Nichols.
  
- 2009-2010 **Waste Management Project Lead** – Y-12 National Security Complex, Integrated Facilities Disposition Project, funded by US Department of Energy Office of Environmental Management (~approximately \$500M/yr); Sub-project title: “Y-12 American Recovery & Reinvestment Act 9206 Filter House Deactivation & Demolition;” Scope to prepare Hazardous Category 2 nonreactor nuclear facility Building 9206 for demolition, initiate CERCLA documentation and remove approximately 464,000 cubic feet of legacy material associated with uranium recovery activities. Program Director, John W. Krueger and Program Manager Danny Nichols.
  
- 2009-2010 **Waste Management Project Lead** – Y-12 National Security Complex, Integrated Facilities Disposition Project, funded by US Department of Energy Office of Environmental Management (~approximately \$500M/yr); Sub-project title: “Y-12 American Recovery & Reinvestment Act Biology Complex Demolition Project;” Scope to begin demolition of Biology Complex (Building 9211 – 83,500 square feet). Program Director, John W. Krueger and Program Manager Danny Nichols.
  
- 2008-2010 **Waste Management Lead** – Y-12 National Security Complex, Facilities and Infrastructure Recapitalization Program (FIRP), Infrastructure Reduction Project.







- Building 9735, “Engineering Row Demolition Project,” last of six facilities estimated at 92,690 square feet and 2,964 square meters of waste.
- Building 9766, Thorium Operations Machine shop & 9720-38 total reduction 44,504 square feet.

## ABSTRACTS, MANUSCRIPTS & PUBLICATIONS

Abstract: **Syreeta Vaughn** & Alvin Gwathney. “Documented Safety Analysis an Approach to Document Management.” 2018 EFCOG Nuclear & Facility Safety Subgroup.

Abstract: **Syreeta Vaughn**, Danny Walker, Troy McMillen, Alvin Gwathney. “Criticality Accident Alarm System Annunciation Reduction.” 2018 CNS Fellow Colloquium. March 2018.

Abstract: **Dalphania Syreeta Dickerson**, “Distribution and Transport of Coal Tar Contaminants in the Chattanooga Creek Floodplain.” Graduate Thesis, 25<sup>th</sup> Annual Society of Environmental Toxicology, AAPG Foundation 2003 Grants-in-Aid Projects. April 2003.

Abstract: **Dalphania Syreeta Dickerson** “Transport and Deposition of Coal Tar Contaminated Sediments in an Urban Freshwater Stream.” Geological Society of America. March 2005.

Publication: Vijay M. Vulava, **D. Syreeta Vaughn**, Larry D. McKay, “Transportation and Deposition of Coal Tar-Contaminated Sediments in an Urban-Industrial Stream and Floodplain.” Southeastern Section -55<sup>th</sup> Annual Meeting, The Geological Society of America. March 2006.

Publication: Vijay M. Vulava, **D. Syreeta Vaughn**, Larry D. McKay, Steven G. Driese, Lee W. Cooper, Fu-Min Menn, Norman S. Levine, Gary S. Sayler. “Flood-induced transport of PAHs from streambed coal tar deposits.” Science of the Total Environment 2017.

Thesis: **Dalphania Syreeta Dickerson**, “Distribution and Transportation of Coal Tar Contaminants in the Chattanooga Creek Floodplain.” Committee: Larry D. McKay, Steven G. Driese, Gary S. Sayler. University of Tennessee. April 2005.

## SPEAKING ENGAGEMENT

2023 Engineering Development Forum, Diversity, Equity, & Inclusion Panelist, Plenary I, University of Tennessee, Tickle College of Engineering, Natalia P. Sanders, Director of Development (June 2024).

2022 Commencement Keynote Speaker, “Today, we are not our differences,” the University of Tennessee, Tickle College of Engineering, Matthew M. Mench, Dean (May 2022).

2021 Black History Panelist, Tickle College, Travis Griffin, Director (February 2021).

2019 Endeavor Summit Workshop Presenter, Diversity, Equity, & Inclusion Young Professionals Workshop, titled “I am not my label,” (August 2019)

2019 Engineering Day, University of Tennessee, Tickle College of Engineering, “Dare to Be You: Defying Limits & Labels,” Ozlem Kilic, PhD, Associate Dean (October 2019).

2016 TEDx Talk, University of Tennessee, Theme: Without Limits, “I am not my statistic,” Becky Ashe, Organizer (June 2016).



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**HONORS & AWARDS**

- 2019 UT Alumni Promise Award
- 2016 Young Professionals of Knoxville Outstanding Young Professional Finalist
- 2016 National Urban League Young Professional Heroes in the Movement Award
- 2013 Knoxville Business Journal 40 under 40
- 2013 Distinguished Young Alumni EPS/UTK
- 2012 Special Recognition Award- Business Improvements to NEPA Program
- 2008 Special Recognition Site-Wide Waste Tracking System
- 2007 Special Recognition Award-Contribution to Development of Department-level Website

**AFFILIATIONS, APPOINTMENTS & MEMBERSHIPS**

**Professional Affiliations & Memberships**

- American Nuclear Society – Local Executive Member ([link](#)) – (2020 – Current)
- Women in Nuclear (2017)
- National Association of Environmental Professionals (2010-2014)
- American Association of Petroleum Geologists (2000 – 2008)
- Geological Society of America (2000 – 2008)

**Company Employee Resource Group**

- Women’s Alliance Council – Vice President
- African American Resource Council – Secretary
- ORNL Gives Campaign - Co-Chair

**Community/Industry Board Appointments**

- Tickle College of Engineering - Advisory Board Member ([link](#)) (2020-2026)
- Earth & Planetary Science Alumni Advisory Board– Board Member ([link](#)) (2008 – Current)
- Chancellor’s Advisory Board – Governor Appointed ([link](#)) (2018 – 2021)
- ConnectKnox – The Big Table – Table Host (2018)
- Knoxville Area Urban League Board Member – Position Required (2015 - 2016)
- City Tree Board – Mayoral Appointed ([link](#)) – Board Member (2014 – 2015)

**Philanthropic Organizations**

- Alpha Kappa Alpha Sorority, Inc. ([link](#)) - Chapter Secretary highest position, 2003 - current
  - Jack and Jill of America, Inc. ([link](#)) - Chapter President highest position, 2013 - current
  - Knoxville Area Urban League Young Professionals - President highest position, 2010 - 2018
  - Homeowners Associate Board Member - Secretary, 2023
  - United Way of Knoxville, Women United - Executive Member, 2022 - Current
  - Big Brothers Big Sisters of America - Big Sister, 2008-2010
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