Nathan Schulz

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EDUCATION

Texas A&M University, College Station, TX

• Major: B.S. Nuclear Engineering, Minors: Mathematics and Radiological Health Engineering

SKILLS

VSDS, PHA Pro, ARCMIS, MATLAB, SALUS, Python, Varskin+, GENIE 2000, LabVIEW, Apex-InVivo, TinkerCAD, MCNP •

EXPERIENCE

SLAC National Accelerator Laboratory - Menlo Park, CA

Radiation Health Physicist

- Program Manager for radiological training, radiological work permits (RWPs), and Search and Survey programs •
- Commissioning of the new Linac Coherent Light Source II (LCLS II) particle accelerator •
- Analyze and approve VSDS survey reports for linear particle accelerators (LCLS I and II), klystrons, beam switches and dumps
- Give trainings several times a week over Radiation Worker Trainings, Contamination Areas and Controls, and Sealed Sources •
- Radiation Protection Department project lead for Critical Utilities Infrastructure Revitalization (CUIR) accelerator cable tray installation project
- Radiation-Generating Device management, survey scheduling, and organization
- Hazard Analysis, Pre-Job Briefings, and Job Safety Analysis

Naval Nuclear Laboratories (Fluor Corporation) - Idaho Falls, ID

Radiation Health Physicist

- Perform dose investigation reports, audits, and peer reviews.
- Support environmental radiation level monitoring, medical qualification checks, whole body scans, gamma spectroscopy analysis, and dose estimation calculations.
- Manage the implementation of skin dose calculation software (Varskin+) in the Naval Nuclear Laboratory Radiation Health departments.
- Execute monthly DT-702 TLD Dosimetry Monitoring with Harshaw 8800 TLD Reader.
- Acquired certifications in Radiation Work, Thermoluminescent Detection, Source Handling, and Emergency Response (Health Physics Responder and Medical Coordinator).

Smith & Burgess Process Safety Engineering - Houston, TX

Engineering Intern

- Analyzed Piping and Instrumentation Diagrams (P&IDs), equipment data sheets, equipment drawings, and Vendor diagrams
- Completed calculations related to facility equipment for input Engineering Software (SALUS) and analyzed potential overpressure • scenarios for systems.
- Created Process Flow Diagrams (PFDs) using P&ID information and uploaded data to client databases.
- Scribed for multiple Process Hazard Analyses (PHAs) using PHA Pro for natural gas facilities.

PROJECTS

Senior Design Project: Redesign of Spent Fuel Storage Cask

- Analyzed existing nuclear dry fuel storage casks to provide a more economically viable cask with the intent to store promising fuels . currently being researched.
- Produced a 7.5% cheaper cask design using DUCRETE shielding with the intent to store primarily IronClad fuel.
- Supported heat transfer and fuel cask geometry modeling using Monte Carlo software and Python.

2016 - 2021

November 2022 - Present

August 2021 – September 2022

May – August 2019