

MICHAEL R. MARCIAL

Experience Overview

- 20 years of experience cumulating into competence in project management and hardware and software product design.
- Specialized in designing nuclear instrumentation, developing custom mechanical and electrical hardware and programming software applications.
- Expertise with electrical, electronic and mechanical design, development and implementation of components and systems including construction of prototypes and customer deployed equipment.
- Ability to design and debug from board level to overall culmination of components.
- Working knowledge in information technology that includes the hardware and software needed to run file, email and web servers.
- Proficient in data analysis, software development in firmware, desktop and web based applications.
- Focused on working with digital processes and applying them to solve business problems in fundamentally new ways.

Capabilities

Six core competencies: (1) project management, (2) instrument design, (3) data analysis, (4) software programming, (5) electrical circuit design, and (6) computer network design.

- Technical skills in multiple computer languages including: Visual Basic, Microsoft SQL Server, Microsoft Access, Paradox, Excel, QuatroPro, HTML/CGI/ASP, Matlab, and Intel 8051 assembler code.
- Ability to develop applications for the PC, PocketPC and embedded microprocessors using Visual Studio 2005 and predecessors.
- Capable of database design with integration with other applications.
- Expert in automating Excel to summarize and analyze data using VBA.
- Proficient with electrical circuit design and expertise in serial networking including RS-232 hardware and software.
- Working knowledge with Microsoft Project, setup and maintenance of web servers, Microsoft Windows domain networks, and firewalls.
- Ability to implement PLCs with coupled hardware and programming in ladder logic programming.
- Working knowledge of GPS, spatial data sets and ArcView.
- Understanding of hardware used for radiation detection, especially collecting spectra in a scanning survey including post-processing techniques and data analysis for reducing detection limits.

Professional Experience

Shonka Research Associates, Inc., 1999 – present

Product manager and lead engineer for SS series systems used in spectrometer applications. Actively involved in integrating systems to solve radiation detection needs for nuclear decommissioning projects together with pricing for software, hardware and labor costs for accomplishing such projects. In-depth knowledge of SRA's hardware systems and data analysis techniques such as NASVD (a noise reduction method), as well as the industry standard hardware such as Ortec digiBASE and Ludlum M2350 and M4612. Has direct input into the ongoing development of data post processing application called SIMS. Maintains SRA computer network including WLAN, in-house web servers and databases.

As product manager of the SS series, maintains product roadmap, development schedules, software and hardware feature sets, writing and reviewing field operations procedures, managing internal resources including electrical, mechanical and nuclear engineers, managing external resources such as electrical design shops and sub-contracting software programmers and interacting with management on costs of resources and materials. The SS technology is currently outperforming all competitors in both detection limits and throughput (tons/hr) when used to survey material on a conveyor belt.

Management of Key Shonka Projects Include:

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| Implementation of a Novel Sorting Conveyor | Detecting 0.1 μ Ci Ra-226 nuggets in soil at the pilot study at the Sumitomo Site, in Teterboro, NJ. Implemented a custom prototype \$300k system with a novel custom sorting conveyor to sort out nuggets in real-time that proved that off-site burial costs would be greatly reduced by shipping only contaminated material off-site. |
| Large Scale Demonstration with Real-time Data Analysis | Demonstrated a prototype system for a proposed \$10M project to the UKAEA's Beach Monitoring Steering group that the SS technology detection system was capable of detecting fragments of irradiated nuclear fuel, termed "Dounreay Particles". The test results proved that the SS technology could out perform the current methods being deployed. This system was operated wirelessly with near-real time NASVD data analysis. |
| Large Scale Sorting with First Ever Real Time Density Correction | Successfully managed the SS system at the Kaiser Aluminum and Chemical Company Thorium Remediation Project from May 2004 to June 2006 processing 240,000 tons at an effective rate \$4/ton virtually cutting costs by a factor of 10 based on previous generation conveyors deployed by other companies. Eliminated under-reporting of radiation activity by designing hardware and data collection protocols by implementing a real-time density correction for varying material fill on the conveyor belt. Performed role of off-site project manager for SS operations interfacing with client, overseeing on-site technician and creating custom data reports as well as occasional on-site operator for SS system. |

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Design and Implementation of Innovative Instruments with a Tight Deadline

Performed as pre-deployment project manager organizing internal and external resources to complete the design on three new SRA instruments as well as readying the use of the SS in conveyor mode within a three month period. Successfully deployed three new SRA instruments based on the design of a custom core electronic module: (1) a gamma detector system mounted on the boom of an excavator with Bluetooth communication to a PocketPC providing a pre-sort method of material to reduce conveyor sorter actuations increasing effective throughput when the material is conveyed, (2) a sub-surface gamma detector system that potentially could reduce the number of soil samples needed, and (3) a gamma detector system that logged data from a walk-over survey with linear wheel encoder providing a 2-D image when post-processed with the SRA i-Center, a post-processing information center application to report and chart data.

Conversion of Technology to New Market

First application of the SS technology using conveyors to move the surveyed material at the Saxton decommissioning in Saxton, PA, a NRC regulated site. Modified the software and created new hardware to adapt the SS from a land survey application to a conveyor application. Created custom reports using Matlab, interacted with the client with minimal support from the home office, and maintained and operated the SS system. This survey was accomplished in two campaigns that prevented 25,000 tons of soil from being shipped off-site eliminating costly handling and burial. The second campaign was implemented by another staff engineer deploying in less than 30 days after contract award.

Additional Shonka Highlights

Nuclear Decommissioning Experience

Field experience at nuclear decommissioning sites including being a post processor for the SCM survey of US Ecology's Molten Metals Facility and the ETTP 3-Building project in Tennessee.

Design and Implementation of Streaming Data Logger with Post-Processing Software Application

Lead design engineer for a project to automate hand-held survey meters for the Oak Ridge Institute for Science and Education (ORISE) organization. Designed specifications, flow charts, state diagrams and user manual for an add-on data logger electronic module for the Ludlum M2221 survey meter. Managed the schedule and design of the hardware and firmware by an external electrical design shop. Designed and implemented a software application called the i-Center to handle the static and scanned logged data, including design of download protocols, rudimentary database for data analysis, Excel interface, and application programming of a small Windows CE based computer.

GPS and Spatial Data Set Experience with Kalman Filter Analysis

Developed data management techniques for handling survey data and location data from global positioning systems (GPS) for large-scale outdoor surveys using a graphical information system (GIS) based on ArcView, a commercial GIS package. Developed Kalman filter methods to handle GPS location outliers. First application was at the Rancho Seco nuclear generating station.

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- Laundry Monitor Enhancement Lead design engineer and project manager for a venture that added gamma detectors to the SRA laundry monitor system in use at Eastern Technologies, a commercial nuclear laundry service company. Managed a team that brought together the hardware, electronics, radiation detectors, and modifying software with a sub-contractor programmer, as well as integrating and installing the system into existing laundry monitors.
- Database Experience Database experience includes developing entity-relationship diagram for Oak Ridge Pond B remediation project for Radian International, Inc., the design and implementation the Connecticut Yankee routine survey SCM operational database and the design of a proposed survey identification code and prototyped a date warehouse based on the envisioned Connecticut Yankee decommissioning needs.
- Search Engine Implementation Designed and maintained the Access database used for the Los Alamos Historical Document Retrieval and Assessment Project. Migrated Access to SQL Server and implementing a metadata search on 7,000 scanned documents (each document having multiple pages) with a web based interface. Worked with X1 Technology to develop custom search techniques based on the X1 search engine.

National Computer, Inc., 1996 – 1999

Designed, set up and maintained all hardware and server software for a new division of National Computer, a small business that provided Internet services including dial-up, interstate T1 lines, email, web sites, news servers, and chat servers. Worked with telephone technicians to set up and commission PRI and T1 lines. Provided support to a varied user community both on-site and via telephone.

- Commissioning and Troubleshooting Ma Bell Data Lines Gained an understanding of how to methodically troubleshoot data lines working with the telephone company's Network Operations Center trouble ticket system.
- Small Business Perspective Gained valuable experience in what it takes to make a company run profitably.

Scientific Ecology Group, Inc., 1995 – 1996

Developed a database application with data entry forms and reports used at the Ft. St.Vrain decommissioning project, a large scale nuclear decommissioning site in Colorado. Responsibilities included instrument download programs, database applications, calculating and reporting survey data and modifications to the firmware in the hand-held data logger that molded the instrument for this decommissioning application. Established and communicated new techniques to automate data collection and reporting for overall time savings and faster final data analysis.

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Database Implementation Reduces Man-hours	Designed from the ground up and managed the data analysis database using Paradox for the final release survey of the Fort St. Vrain Nuclear Generating Station Decommissioning Project. The radiological engineers needed to analyze the data were reduced from 5 to 1 by eliminating the use of Excel and manual data manipulation allowing the engineers to be re-allocated to front-end processes like survey design and logistics.
Design and Execution of Novel Data Collection Protocols	Led a team within SEG to develop a survey naming convention that provided a survey tracking method and allowed for an automated data analysis that also improved communication among management, survey technicians, and data analysis personnel. Parts of the naming convention can be found in current decommissioning databases.

Ludlum Measurements, Inc., 1987 - 1995

Designed and programmed instrumentation for the nuclear industry from hand-held portables to large conveyORIZED systems. Responsible for taking initial design specifications through complete instrument deployment ready for production. Managed mechanical engineers, engineering assistants, machine shop personnel, production assembly personnel and checkout technicians within the scope of new product development,

Design of 10 Instruments	Developed superb organizational and project management skills by designing or modifying over 10 nuclear radiation detection instrumentation systems including writing instruction manuals and programming example download and reporting software applications.
Component Level Design	Worked with schematic editor software, PCB layout software and the Intel 8051 source code compiler.

Education

- Bachelor of Science in Electrical Engineering
 - Texas Tech University, Lubbock, TX, 1987
- Radiation Detection and Measurement,
 - I.E.E.E. Professional Development Course, 1987
- Microsoft Continuing Education Courses:
 - Installing and Configuring Microsoft Exchange Server
 - Installing and Configuring Microsoft Windows NT Server 4.0
 - Microsoft Certified Professional - Implementing and Supporting Windows 95

References, Publications and Presentations Available Upon Request

JOSEPH J. DARMAN, CHP

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EDUCATION

Certified Health Physicist - Comprehensive Health Physics:
American Board of Health Physics, since 1992.
B.S., Nuclear Technology, University State of New York, 1993.

HONORS AND ACTIVITIES

National Health Physics Society
Decommissioning Section Health Physics Society
Greater New York Chapter Health Physics Society
National Registry of Radiation Protection Technologists
Good Conduct Medal/Honorable Discharge US Navy

AREAS OF TECHNICAL EXPERTISE

Health Physics
Int/Ext Dosimetry
Dose Assessments
Regulatory Compliance
Regulatory Interface
Program Audits
Decontamination & Decommissioning

SUMMARY - QUALIFICATIONS & EXPERIENCE

DATES	AFFILIATION	RESPONSIBILITIES
05-Prsnt	LSRS	Rad-Con Manager
03 - 05	MSI @ Yankee Atomic Electric Co.	Project Health Physicist Rad Engineering Supervisor
97 - 03	MSI @ Maine Yankee Atomic Power	Decommissioning Oversight Independent Assessor
94 - 97	NES, Inc.	Corporate Health Physicist Radiation Safety Officer Operations Section Manager Project Manager
93 - 94	Dames&Moore	Health Physics Consultant
81 - 93	New York Power Authority	Training Specialist Senior Health Physics Technician
75 - 81	United States Navy	Engineering Laboratory Technician Machinist Mate First Class

DETAILED - QUALIFICATIONS & RELEVANT EXPERIENCE

Mr. Darman has served as a Radiation Protection Manager, Project Health Physicist, Senior Radiological Engineer, Radiation Safety Officer, Corporate Health Physicist, Project Manager, and Operations Section Manager for major consulting firms; and performed Project Oversight and Independent Assessments at commercial Power Reactors and Reactor Decommissionings. His duties have included training, managing major radiation protection programs, managing technical and engineering staff, providing technical input and quality oversight for projects at radiologically controlled sites, proposal preparation and presentation, marketing, project management, and regulatory interface. His project experience includes:

2005 - Present: DOE SPRU Project/LATA-SHARP Remediation Services, LLC (LSRS)

- Functions as Radiological Controls Manager. Ancillary duties include: Health Physicist, Radiological Operations Manager, Radiological Engineering Manager, Dosimetry Manager, Radiological Instrument Manager, Radiological Compliance Manager, Radiation Protection/Radiological Control Instructor, and ALARA Planning Manager as specified in DOE Standard 1107-97, "Knowledge, Skills, and Abilities for Key Radiation Protection Positions at DOE Facilities." Delegate above authority to qualified staff augmentation positions as necessary.
- Manage a Radiation Protection staff including Radiological Control Senior, Technical, and Staff positions (*i.e.*, Sr. Radiological Engineer, Radiation Control Supervisor, and Radiation Control Technician)
- Prepare, implement and manage a Radiation Protection Program (RPP) to operate the SPRU Facility, while acting as the prime contractor for the DOE.
- Provide decontamination & decommissioning (D&D) oversight and regulatory compliance/interface services for SPRU which is undergoing D&D in accordance with 10 CFR 835 requirements, as regulated by the USDOE.
- Design MARSSIM compliant surveys, and provide input to remediation strategies.
- Prepare DOELAP accreditation packages for internal and external dosimetry programs.
- Set up and maintain HP counting equipment, including: HPGe system, Tennelec, and various Ludlum hand held meters.
- Maintain SPRU source accountability program.

2003 - 2005 : Yankee Atomic Electric Company (Yankee Rowe)/Millennium Services, Inc.

- Provide decontamination & decommissioning (D&D) oversight and regulatory compliance/interface services to Y AEC, which is undergoing D&D in accordance with MARSSIM and 10 CFR 20 Subpart E requirements as regulated by the USNRC.
- Design and implement MARSSIM compliant surveys, and provide input to remediation strategies.
- Radiological Engineering Supervisor, Responsible for: Count Room Quality Assurance and Quality Control, In Vivo Bioassay Quality Assurance Program, Monthly TLD Quality Control, Collection of Site Characterization and Site Release Samples, DAC Hour Accountability and Evaluation of Isotopic Mix, Portable Instrument Calibrations, Scaler Daily System Status, Sam-9 Daily System Status and Calibration, Body Count System Daily Status and Calibration, HPGe Daily System Status, Protean Daily Checks and calibration, IPM-7 Daily Checks and Calibration.
- Develop and implement Unconditional Release Sampling Plans and evaluate sample results.
- Perform various technical calculations including: Airborne consequences of building demolition; GTCC levels; Sample survey requirements; DAW Fire; etc.
- Develop and implement Scoping/Characterization Sampling Plans, evaluate results, and provide input to decisions and strategies to move forward with the decommissioning process.

1997 - 2003: Maine Yankee Atomic Power Company/Millennium Services, Inc.

- Decommissioning Consultant to Maine Yankee Atomic Power Company (MYAPC).
- Provide decontamination & decommissioning (D&D) oversight and regulatory compliance/interface services to MYAPC, which is undergoing D&D in accordance with MARSSIM and 10 CFR 20 Subpart E requirements as regulated by the USNRC. Additionally, MYAPC is regulated by the State of Maine's Department of Environmental Protection, Division of Health Services, Division of Health Engineering, and the State Planning Office.
- Work with State and Federal Environmental Protection Agencies to develop the technical basis for an end state cumulative risk assessment at the MYAPC site.
- Interface with interveners and the Governor's Technical Advisory Panel to resolve various technical issues.
- Prepare the documentation necessary to demonstrate that residual radioactivity at the majority of the site was indistinguishable from background, and therefore, NonImpacted by plant operations. This was the first USNRC License Termination of Non-Impacted areas via MARSSIM and the early partial site release process.
- Technical representative on MYAPCs oversight committee responsible for providing input and ensuring the accuracy of MYAPCs License Termination Plan. Provide independent review and verification of characterization surveys, final status surveys, dose assessments, and DCGL determinations utilizing MARSSIM, RESRAD, RESRAD-BUILD, RESRAD OFF-SITE, DandD, and DUST-MS modeling codes.
- MYAPC representative at various NRC, NEI, and EPRI workgroups.
- Provide ALARA and HP oversight for the MY APC asbestos removal project. This was the largest asbestos removal project undertaken in the state of Maine, and expend ~ 10% of the person-rem estimate for the total D&D of MY APC.

1994 - 1997: NES, Inc.

- Radiation Safety Officer for NES' USNRC Type C specific license of Broad Scope.
- Corporate Health Physicist, NES Inc. Responsible for oversight and regulatory compliance of NES' many operational radiation programs.
- Project Manager/Site Supervisor for the neutralization and packaging for transport and disposal of the following mixed waste streams: 1) Thorium - Barium Methanol. 2) Thorium - Mercury.
- Health Physicist providing technical input, quality oversight and management review and tracking of a comprehensive Radiation Protection Plan audit of a USNRC Licensee.
- Health Physicist providing technical input, quality oversight and management review for the disposal of Am-241, Co-57 Co-60, Cd-109, Th-230, Cs-137 and Mn-54 radioactive check sources by a USNRC Licensee.
- Project Manager for the Decontamination & Decommissioning of the thorium and uranium contaminated General Electric Tungsten Products Plant, Euclid, OH. USNRC licensed residual thorium contamination was distinguished from NORM contamination. License contaminated material such as bag house filter, tanks, furnaces, and mixers were volume reduced, packaged, and manifested for disposal.
- Project Manager for the radiological evaluation and risk assessment of a site potentially contaminated with iodines and tritium in Billerica, MA.
- Project Manager for the radiological characterization and decontamination of tritium contaminated facility. Operation entailed emergency response, dose calculations, reports to USNRC and license amendments.
- Project Manager for the radiological characterization and decontamination of a thorium contaminated building in Rochester, NY.
- Project Manager for the Decontamination & Decommissioning of the thorium contaminated General Electric Chemical Products Plant, Cleveland, OH. Including D&D Plan, Work Plan, Health & Safety Plan, and Quality Assurance Plan approval and implementation. Dose/Risk assessments were performed on residual activity remaining in drain lines.
- Project Manager for the radiological characterization of thorium and uranium contaminated soils and decommissioning plan development for General Electric's Tungsten Products Plant, Euclid, Ohio.

- Health Physicist providing technical input, quality oversight and management review for the decommissioning of an Americium-241 contaminated building located in Tonawanda, N. Y.
- Project Manager for the radiological assessment of a site containing thorium and uranium mine tailings in upstate NY.
- Health Physicist/Senior Radiological Engineer providing technical input, quality oversight and management review of decontamination and decommissioning (D&D) cost estimates for Los Alamos National Laboratories facilities contaminated with plutonium and uranium.
- Health Physicist/Senior Radiological Engineer providing technical input, quality oversight and management review for the development of a decommissioning plan for the University of Washington's ARGONAUT type training reactor contaminated with mixed fission products.
- Health Physicist/Senior Radiological Engineer providing technical input, quality oversight and management review of decontamination and decommissioning (D&D) cost estimates for Hot Cells located at Argon National Laboratories contaminated with alpha, beta and gamma emitting nuclides.
- Health Physicist/Senior Radiological Engineer providing technical input, quality oversight and management review for the radiological characterization and development of a decommissioning plan for a site located in Rever, Pennsylvania contaminated with thorium and uranium.
- Perform Dose Assessments evaluating the risk associated with residual activity present in rooms, within sewer pipes, and people utilizing computer codes such as RESRAD and MicroShield.
- Performed neutron activation calculations to estimate source terms in concrete and graphite.
- Provide quality oversight and management review for the transfer of radioactive sources including the following nuclides: Cesium-137, Thallium-204, Promethium 147, Polonium-210, Carbon-14, Depleted Uranium, and Tritium.
- Provide quality oversight and management review for Marking, Labeling, Packaging and preparation of Shipping Papers for radioactive material shipments.
- Prepare, revise and implement procedures, policies and plans for USNRC Licensed D&D activities.

1993 - 1994: Dames & Moore

- Project Manager for characterizing areas within the Nuclear Lake Site, Pawling, N. Y.
- Oversee field activities during the characterization and remediation of a contaminated municipal sewer district in northern Ohio.
- Supervise field activities and interpret survey results for a Phase I Remedial Investigation/Feasibility Study at Picatinny Arsenal, NJ.
- Provide quality oversight and management review of the implementation of Draft NUREG/CR-5849 "Manual for Conducting Radiological Surveys in Support of License Termination" at a mixed waste pond closure project in Lima, Ohio.
- Performed a probabilistic safety analysis for a proposed underground radioactive waste disposal facility in Japan.
- Provide health physics support and consultation services to the West Valley Demonstration Project, West Valley, NY.
- Performed an environmental assessment and evaluation of the land surrounding the Western New York Nuclear Service Center for the New York State Energy Research and Development Authority.
- Assisted in license application process by developing Safety Analysis Reports and Dose Estimates for the North Carolina Low-Level Radioactive Waste Disposal Facility.
- Consultant to the Commonwealth of Massachusetts Low-Level Radioactive Waste Management Program. Gathered information to provide assurance that LL W is being managed in a responsible manner, consistent with regulation, to protect public health, safety and the environment. Evaluate licensee programs for extended interim storage of low-level radioactive waste.

1981 - 1993: New York Power Authority

- Designed and implemented a comprehensive health physics training program for a major utility to satisfy the requirements set forth by the Institute of Nuclear Power Operations (INPO) and the Nuclear Regulatory Commission (NRC).
- Designed and maintained a health physics counting laboratory to facilitate hands on training of job incumbents in the use, repair and calibration of Canberra high purity germanium detection system, various scintillation and gas proportional counting systems, hand-held radiation detection instruments, air monitoring systems and computer systems.
- Conducted audits of health physics practices and procedures including areas of respiratory protection, dosimetry issuance and processing, bioassay monitoring, hazardous waste management, operational health physics, emergency planing and radioactive waste shipping practices.
- Liaison with NRC inspection staff during an NRC team inspection of maintenance work practices. Represented the utility by fielding NRC staff questions and concerns, and by directing NRC staff to cognizant utility staff.
- Assisted the utility in outage management as an outage coordinator during modifications to technical specification required systems including area radiation monitoring systems, component cooling water systems and process monitoring systems.
- Supervised Health Physics Technicians supporting the utility during outage conditions both in the classroom and in the field.
- Designed the following systems: supply air system for 1000 Ci. Cs-137 source; breathing air system for operators of a post accident sample system; air sample retention device for stream generator channel head workers; shielding support system for steam generator access; and computerized tracking system for source inventory and control; and a computerized screening exam for incumbent Health Physics Technicians.
- Assisted in the operation of a health physics instrument calibration and repair facility for equipment such as the Eberline RO-2, RO-3, E-530, E-520, RM-14, neutron monitoring devices such as rem balls, high level gamma survey instruments such as teletectors, continuous air monitors such as triton III, triton 1055, triton 955, AM2B, AMS2, AMS3 and grab samplers RAS-I and RAD's.
- Prepared procedures for the implementation of a health physics training programs and the conduct of an operational health physics program.
- Prepared and conducted training for Emergency Directors, aided in emergency plan scenario development and conducted audits and oversight of the implementation of the emergency plan.

1975 - 1981: United States Navy

- Assisted in maintaining an operational health physics and chemistry control program for the United States Navy at sea, and during major overhauls.

Publications/Presentations

- "Emergency Response to the Uncontrolled Release of Tritium;" HPS 41st Annual Meeting, July 1996.
- "Computer Model Generated Density Correction Factors for Gamma Spectroscopy Counting;" Health Physics 72(2): 313-317.
- "Problems Associated With Decommissioning a Thorium Contaminated Facility;" GNYCHPS 1997.
- "Nuclide Suites for the Decommissioning of Maine Yankee Atomic Power Plant;" HPS 46th Annual Meeting, July 2001.
- "Determining Background Radiation Levels in Support of Decommissioning Nuclear Power Plants" EPRI Report 1003030, November 2001. (Contributing Author)
- "Partial Site Release at a Power Reactor Facility;" Health Physics 86(1): 67-79.

JAVID L. KELLEY
Project Engineer and Manager

Objectives

Obtain a Project Engineer or Management position in a Nuclear Engineering, Radiological Engineering, Health Physics, or otherwise challenging high-tech industry which will allow me to demonstrate and continue to develop my technical, management, and business development skills. To join a company with strong career advancement opportunities for self-motivated and business oriented employees.

Education

Bachelor of Nuclear Engineering, Georgia Institute of Technology
1998 to 2005

Skills

- Project Management including strong client interface, workforce management, QA/QC, safety, and regulatory compliance skills. Excellent project planning, estimating, bidding, scheduling, resource management and budget analysis skills.
- Marketing and Sales including opportunity management, generation of proposals, negotiation and demonstrations.
- Report generation including executive and technical summaries, operational procedures, training manuals, and custom and automated survey reports.
- Design, setup, calibration, and operation of off the self and custom radiation instrumentation.
- Software development including data collection, processing, management and user interfaces.
- Mathematic analysis including discrete and continuous statistics, Monte Carlo simulations, discrete time data processing and Fast Fourier Transforms, and exploratory data analysis.
- Data processing, analysis, and reporting for large scale projects.
- Computer software skills including Microsoft Office Suite (Word, Excel, PowerPoint, Outlook, and Access), MatLab, Visual Basic 6.0, uShield, SugarCRM, Visio.

Work History

5/99 – Present Shonka Research Associates, Inc. Marietta, Georgia
Project Manager

Experience Summary by Client / Project

- MACTEC Development Corporation (03/06 – 10/06)

Project Manager for Pilot Study using SS-Series (formerly Sub-Surface Multi-Spectral Contamination Monitor) conveyor survey. Generated firm fixed price costing schedule, reviewed and edited contractual agreements, managed development and expansion of soil sorting technology for point source contaminants. Designed and managed pilot study on-site, collaborated with client management and heavy equipment operators to complete testing ahead of schedule. Oversaw data processing and review of results, evaluation of quality measures, tracked costs, wrote executive summary.

- CH2MHILL Mound Inc. (07/05 – 5/06)

Project Manager for Final Status Surveys using SRA's Surface Contamination Monitor (SCM). Generated time and material contract, performed survey design and review of results, direction of survey personnel, evaluation of quality measures, tracked costs, generated invoices, and routine interaction with site management for logistical planning and scheduling.

- GPU: Saxton Facility Decommissioning (10/04 - 06/05)

Project Manager for Sub-Surface Multi-Spectral Contamination Monitor (SMCM) conveyor survey in support of site closure activities. Responsibilities included setup, initial calibration, and routine alignment of a multi-detector spectrometry system; direction of support personnel; evaluation and certification of results; and routine interaction with client and regulatory representatives.

- Kaiser Aluminum: Tulsa Facility Thorium Remediation Project (6/04 – 6/06)

Developed technical reports summarizing the detection equipment, process, and capabilities. Performed custom data analysis and processing. Program manager / client interface from 10/04-6/06.

- K-25: BNFL 3-Building Project (11/03 - 5/04)

Data Processing Manager for the Shonka Research Associates / Millennium Services Inc. team. Managed postprocessors, performed custom data analysis and processing. Managed software development for optimal data processing and report generation.

- GPU: Saxton Facility Decommissioning (7/03 - 10/03) and (2/03 - 6/03)

Project Manager for Surface Contamination Monitor (SCM) surveys including the steam plant, intake and exhaust tunnels, and various pads and buildings. Technical support for a Sub-Surface

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Multi-Spectral Contamination Monitor (SMCM) Gamma surveys, including software development, detector calibration and sensitivity, and executive summary.

- Nuclear Fuel Services: Gamma survey of the Proposed BLEU complex (6/02 - 8/02)
Designed, built, and commissioned a detector platform that included seven different detection systems. Processed, analyzed and reported on the collected data.
- Participated in a number of decommissioning projects including ORNL, Excelon facilities, BNFL 3 Bldg Chattanooga, Martin Marietta - Molten Metals Final Status Survey, La Salle, Rocky Flat, K-25, SMUD, W.R. Grace, Curtis Bay, and the Nevada Test Site.
- Team member in the product development of the Surface Contamination Monitor, Automated Laundry Monitor, SR-60, Sub-Surface Multi-Spectral Contamination Monitor, and various Custom Radiation Monitoring Systems.

Publications and Presentations

Shonka, J.J. and Kelley, J.L. "Rigorous Application of Signal Detection Theory to Field Measurements." Paper Presented at the Health Physics Society Topical Midyear Meeting. January 2007. (To be presented).

Shonka, J.J., Marcial, M.R., and Kelley, J.L. "Efficient Treatment of Bulk Materials from D&D." Presented at the American Nuclear Society Winter Meeting. November 2006.

Shonka, J.J., Marcial, M.R., and Kelley, J.L. "Efficient Treatment of Bulk Materials from D&D." Paper presented at the American Nuclear Society Annual Meeting. June 2006.

Shonka, J.J., Marcial, M.R., and Kelley, J.L. "Sorting Bulk Material at High Throughput." Paper presented at the American Nuclear Society Topical Meeting: Decommissioning, Decontamination, & Reutilization, and Technology Expo. August 2005.

Shonka, J.J., Marcial, M.R., Kelley, J.L., DeBord, D.M., O'Brien, J.M., and Murray, K.L. "New Methods for Sorting Bulk Material at High Rates." Works In Progress Poster Session at the Health Physics Society Annual Meeting. July 2004.

Shonka, J.J., DeBord, D.M., Kelley, J.L., and Marcial, M.R. Letter to the Editor: "When the "Detection Efficiency" is not the "Detection" Efficiency." Health Physics 85(4): 502-503. October 2003.

Shonka, J.J., DeBord, D.M., Marcial, M.R., and Kelley, J.L. "Causes of and Cures for Background Radiation." Presented at the Electric Power Research Institute Decommissioning Topical Workshop: License Termination Plans and Final Site Release. September 2003.

Marcial, M.R., Kelley, J.L., Turner, C.R., Burmeister, R.E., Shonka, J.J., and Holmes, R. "The New State of the Art in Debris Sorting Systems." Paper presented at the Electric Power Research Institute

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Decommissioning Topical Workshop: License Termination Plans and Final Site Release. September 2003.

Shonka, J.J., Marcial, M.R., Kelley, J.L., and DeBord, D.M. "The New State of the Art in Debris Sorting Systems." Works in Progress Poster Session at the Health Physics Society Annual Meeting. July 2003.

Shonka, J.J., Burns, R.E., Burmeister, R.E., DeBord, D.M., Marcial, M.R., and Kelley, J.L. "Utility of Scanning Spectrometers for Radiological Characterization." Poster Session at the Health Physics Society Midyear Joint Topical Meeting: Decommissioning and Environmental Restoration. February 2002.

Shonka, J.J., Burns, R.E., Burmeister, R.E., DeBord, D.M., Marcial, M.R., and Kelley, J.L. "Failure of *A Priori* Scan MDCs to Predict Field Performance." Presented at the Health Physics Society Midyear Joint Topical Meeting: Decommissioning and Environmental Restoration, Instrumentation Session. February 2002.

Kevin K. Overbey

POSITION:

Radiation Safety Officer/Senior Health Physics Technician

EDUCATION:

1996, State of Connecticut EMT Training, State Certified EMT

REGISTRATIONS/LICENSES/AFFILIATIONS:

U.S. Department of Energy CORE certification to perform Health Physics oversight on DOE facilities nationwide.

TRAINING:

Radiation Safety Officer Certification-September 2002
SM 22, Fixture, Rosa (Remote Operated Service Arm), steam generator tube pull, (waltz mil-Madison PA)
EMT (Danielson, CT) 08/31/01
Forklift Truck Certified
OSHA 40-hour Hazardous Waste Operations and Emergency Response Training (29 CFR 1910.120), 1989
OSHA 8 Hour Radiation Safety Worker August 2002
OSHA 8 hour Refresher Course (29 CFR 1910.120), 05/03
OSHA 8 hour Refresher Course (29 CFR 1910.120), 06/04
OSHA 8 hour Refresher Course (29 CFR 1910.120), 06/05

EXPERIENCE:

MACTEC Development Corporation
Former Starmet CMI Site, Barnwell, SC
07/06-Present - RADIATION PROTECTION OFFICER

Develop and implement the radiation safety program at the Former Starmet Site. Manage the radiation safety policies as required by South Carolina Administrative code 61-63 and MACTEC Radiation Protection Program. Manage the environmental sampling and analysis of air samples, soil samples and water samples obtained during site remedial operations. Manage the maintenance and calibration of all site radiological instruments.

WRS Infrastructure and Environment, Inc.

Starmet Superfund Site, Barnwell, SC

08/03-06/06 - Radiation Safety Officer/Senior Health Physics Technician

Developed and implemented the radiation safety program at the Starmet Superfund Site. Supervises the on-site health physics staff of two Senior health Physics Technicians and one Junior Health Physics Technician. Manages the radiation safety policies as required by South Carolina Administrative code 61-63. Manages the environmental sampling and analysis of air samples, soil samples and water samples obtained during site remedial operations. Manages the maintenance and calibration of all site radiological instruments.

GTS Duratek, Memphis Facility

03/02 - 04/02 - Sr. Health Physics Technician, Carolina Systems

Managed the Performance of shipping surveys of refurbished CD's (control rod drives) and reactor coolant pumps. Performed environmental soil and water sampling, various quarterly and monthly surveys. Also performed task specific health physics coverage for G.E. and flowserve workshops.

Starmet CMI, Barnwell, SC

08/00 - 03/02 Senior Health Physics Technician

Performed health physics oversight to include performing radiological surveys and enforcing radiological regulations as required by South Carolina Administrative code 61-63. Performed environmental sampling to include soil, water and air samples. Managed on-site counting room operations for sample processing and analysis. Managed the facility inventory of radiological instruments ensuring maintenance and calibration. Also, as a member of Health and Safety Department, developed safety policy and procedures and performed the safety oversight of plant systems and employees.

Triad, Inc., Barnwell, SC

01/99 - 08/00 - Senior Health Physics Technician/Mechanic

Provided support for the decontamination and decommissioning of the Allied General Nuclear Services Spent Fuel Processing Facility. Performed various radiological surveys, counting room operation including daily response checks and minor repair of instruments and air sampling equipment including Canberra Continuous Air Monitoring systems. Dismantled glove-boxes, fumehoods, ventilation and system piping contaminated with Plutonium, Americium, and Uranium. Involved with the process of handling, packaging and disposal of both radiological and mixed

waste generated during D&D activities. Involved in documentation and auditing of records reviewed and generated for the final release of the facility.

FW Hake, Inc., Memphis, TN

08/98 - 11/98 - Health Physics Technician/Quality Control, Quality Nuclear

Provided Health Physics coverage on various job assignments. Performed inspection and free release and/or rejection of cleaned and decontaminated materials. Performed inspection and survey of the grounds and related properties. Provided counting room coverage for counting smears and air samples. Operated forklift for loading and unloading trucks.

Cecom Directorate of Safety Risk Management, Camp Evans, NJ

07/97 - 09/98 - Jr. Health Physics Technician

Performed radiological surveys in support of license termination. Those surveys included determining loose and fixed surface activities in various structures. Collected soil, sediment, and water samples for radioactive analysis. Also provided support during remediation and decontamination activities. Other duties included count room instrumentation quality control setup.

Farley Nuclear Power Plant, Ashford, AL

05/07/97 - 05/28/97 - Health Physics for Refuel Support

Performed manual tube pulls from steam generator. Assisted with swabbing of tubes with ROSA III, disassembly of ROSA III system, steam generator channels head cleanout, and decontamination of equipment.

Comanche Peak Steam Electric Station, Glen Rose, TX

9/96 - 11/96 - Refuel Specialist

Assisted Westinghouse personnel in refueling, removal and reinstallation of reactor head, detension, removal and cleaning of reactor head studs, blind flange removal and installation. Removal and installation of pressurizer relief valves, assisted technicians with moving fuel on refuel bridge (under direct supervision of Westinghouse technicians). Assisted with loading and setup of systems test equipment, as well as light decon of tools.

Moon Engineering Shipyard, Portsmouth, VA

02/90 - 04/90 - Pipe fitter/Mechanic

Removed and repaired valves and piping, i.e., lube oil systems, fuel oil systems, boiler repair, main steam, auxiliary steam piping repair, replaced ward room air conditioning unit and replaced piping with a modified system.

Connecticut Yankee Atomic Power Stations, Haddam Neck, CT

08/89 - 11/89 - Junior Mechanic

Assisted house personnel in repair of systems that operate the plant and generate electricity. Assisted Westinghouse personnel in refueling, removal and repair of reactor head, core barrel removal, core barrel lifting rig installation and removal, detension and removal of reactor head studs, cleaning, lubrication, and storage of studs, unloading and setup of systems testing equipment. Erected staging, performed F.M.E. firewatch duties, tool control and issue, as well as light decon of tools.

Canal Electric Power Co., Sandwich, MA

03/88 - 07/88 - Laborer/Mechanic

Fixed piping systems and repaired boiler. Built and erected staging and metalizing.

Connecticut Yankee Atomic Power Station, Haddam Neck, CT

08/87 - 10/87 - Junior Mechanical Maintenance Tech.

Assisted house personnel in repair of systems that operate the plant and generate electricity, assisted in reactor coolant pump removal and repair, core barrel removal, feedwater pump repair, steam trap replacement, manipulator crane repair, polar crane repair. Performed firewatch duties and pressure tests.

Connecticut Yankee Atomic Power Station, Haddam Neck, CT

12/85 - 05/86 - ALARA Tech./Building Maintenance Tech./Jr. Mechanic

Responsible for HEPA ventilation installation, maintenance and removal from reactor cavity, steam generators and transfer canal; camera setup and modification for loop coverage. Assisted ALARA in coding of RWP's; pre and post shielding surveys under direct supervision of a Sr. Health Physics Tech. with subsequent installation and removal of lead. Performed daily ALARA audits in

containment to ensure direct compliance with specific ALARA controls required for work in progress.

General Dynamics, Groton, CT

06/83 - 03/85 – Pipe fitter, Electric Boat

Built piping systems (valves, pumps, etc.) that make up the reactor and reactor compartment. Working with NQC inspectors to keep all records of work completed and updated. Aid and assist nuclear test personnel with the testing of systems.