



The Dow Chemical Company  
Midland, Michigan 48667

March 31, 1997  
MICHIGAN OPERATIONS

Mr. Jack D. Parrott, Project Scientist  
U.S. Nuclear Regulatory Commission  
Division of Waste Management  
11555 Rockville Pike  
Rockville, MD 20852

cc: Mr. Ed Kulzer, U.S. NRC Region III, Lisle, IL  
Mr. David W. Minnaar, MDEQ Radiological Protection Section, Lansing MI

**Subject: Docket 40-173; License STB-527**  
**M. Madonia Replaces D. Hunter as F.O.L.**

Dear Mr. Parrott:

Mr. Kenneth Baker of Environmental Restoration Group, Inc., who has been providing radiological safety and health physics oversight for The Dow Chemical Company's Thorium Project, has advised me that Mr. David Hunter will no longer be the F.O.L. (Field Operations Leader) for the project. That function will now be fulfilled by Mr. Michael Madonia (please see enclosed materials).

I have reviewed Mr. Madonia's credentials and feel fully satisfied that he is especially qualified to fulfill the responsibilities of the F.O.L.

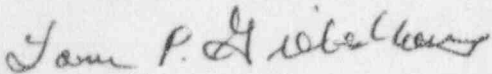
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


Mr. Jack Parrott (Cont'd.)

If you have any reservations about this, or any further questions, please contact me.

Sincerely,



  
Larry P. Diebelhaus, Project Manager  
Dow Chemical – Michigan Operations  
Environmental Services Department  
1261 Building  
Midland, MI 48657  
517-636-5977

Enclosures





Environmental Restoration Group, Inc.  
12809 Arroyo de Vista NE  
Albuquerque, New Mexico 87111  
(505) 298-4224

March 13, 1997

Mr. Larry Giebelhaus  
Dow Chemical Company  
1261 Building  
Midland, Michigan 48674

Dear Mr. Giebelhaus:

We have recently employed Mr. Michael Madonia as a Senior Health Physicist to replace Mr. David Hunter who has recently resigned. I have known and worked with Mike Madonia for approximately ten years and know that he will be a very suitable replacement for David on the THORAD Project in Michigan. A copy of his resume is enclosed.

If you concur with my selection, the NRC needs to be advised since David was listed in the license as the Field Operations Lead.

I will be traveling to Michigan on March 31 to assume on-site responsibility as we resume our normal reclamation activities.

Please advise me if you need additional information.

Sincerely,

A handwritten signature in cursive script that reads "Kenneth R. Baker".

Kenneth R. Baker, Ph.D.  
Principal



**MICHAEL MADONIA****FIELDS OF COMPETENCE**

Significant experience in the application and implementation of Nuclear Regulatory Commission (NRC), Environmental Protection Agency (EPA), and Department of Energy (DOE) regulations, guidance and orders pertaining to radiation protection, criticality modeling and dose assessment. Proficiency in various radiological dose and risk assessment software for criticality and environmental transport modeling, including MILDOS, KENO, INDOX, GENII, AIRDOS, RESRAD, AND RAECOM. Proficiency in the use of Macintosh and IBM microcomputers. Implementation of basic radiation protection and nuclear instrumentation worker training programs. Proficient in aspects of Decontamination and Decommissioning (D&D) applicable to license termination at NRC Site Decommissioning Management Plan (SDMP) facilities, including characterization, D&D Plan development, development of techniques and procedures, and project management and oversight. Calibration and operation of portable and laboratory radiation detection and industrial hygiene instrumentation.

**EXPERIENCE SUMMARY**

(ms)<sup>2</sup> Scientific Consultants, Inc., 7730 Cedar Canyon Rd. NE, Albuquerque, New Mexico

*President/Project Manager (1996-current).* Responsible for development and funding of small consulting business, business development and marketing, subcontractor and consultant management, and client services including project management and technical assistance. Currently providing technical and training support to several industrial clients performing site and facility remediation activities.

Roy F. Weston, Inc., 6501 Americas Pkwy NE, Albuquerque, New Mexico

*Project Manager (1992-1996).* Responsible for management of radiological health/D&D projects for industrial and government clients with budgets ranging from approximately \$60K to \$9M. Provided cost and schedule control, technical oversight, regulatory interaction, plan development, and client relations. Typical professional staff ranged from 5-15 individuals of various disciplines, and as many as 90 subcontractor staff. Major projects managed included decontamination and decommissioning (D&D) of the Texas Instruments Incorporated Attleboro Facility (former nuclear fuel fabrication facility), D&D of the Army Material Technology Laboratory (AMTL) research nuclear reactor and depleted uranium fabrication facilities and Los Alamos National Laboratory (LANL) TA-21 RCRA investigations. Managed Weston Los Alamos Office from 1993-1994.

*Senior Health Physicist (1987-1989).* Provided technical health physics support to over 60 projects for industrial and governmental clients. Responsibilities included radiological safety program development, operating procedure development, development and implementation of environmental monitoring networks, waste management - assay, reduction and disposal, and regulatory assessment. Sites ranged from operating DOE and industrial nuclear facilities to defunct facilities and waste sites. Experienced in transuranic, uranium, thorium and radium health physics as applied to multiple sites. Criticality assessment for NRC licensee formerly involved in cladding and fabrication of highly enriched uranium naval reactor fuel.

*Radiological Services Section Manager (1992-1993).* Responsible for management and oversight of 8-18 individuals with disciplines ranging from health physics to environmental engineering. Duties included schedule and resource allocation, management of Radiological Equipment Rental Stores, corporate interaction, business development and proposal preparation.

Dames & Moore, 1125 17<sup>th</sup> Street, Denver, Colorado

*Staff Health Physicist/Project Manager (1990-1992).* Responsible for preparation and management of risk assessments for U.S. DOE Chicago UAVLIS Pilot Project, EG&G Rocky Flats Residue Drum Storage Facility, exposure scenario preparation for INEL perched water risk assessment. Managed field investigation and decontamination of radioactive waste storage site for radium-contaminated pipe scale, construction of storage facility.

Illinois Department of Nuclear Safety, 1035 Outer Park Drive, Springfield, Illinois

*Nuclear Engineer/Staff Health Physicist (1984, 1985-1987).* As field team member, participated in D&D projects for Luminous Processes, Inc. and Elgin National Watch radium sites. Responsibilities included subcontractor management, implementation of field monitoring programs, laboratory analyses, and environmental measurements.



**MICHAEL MADONIA****EDUCATION AND CREDENTIALS***Clearance*

Inactive Department of Energy "Q" Clearance (September 1994)

*Education*

Currently enrolled in MBA program, Robert O. Anderson School of Management, University of New Mexico

M.S., Health Physics - Texas A&M University (1990)

B.S., Nuclear Engineering - University of Illinois (1985)

Visiting Researcher - Technical University of Denmark, Lyngby, Denmark (1990)

Associate Member of the American Academy of Health Physics (passed Part I of C.H.P. exam)

*Professional Affiliations*

National Health Physics Society

Rio Grande Chapter Health Physics Society

American Public Health Association

**KEY PROJECTS**

**Decontamination and Decommissioning of Texas Instruments Attleboro Facility on NRC Site Decommissioning Management Plan (SDMP), Texas Instruments, Project Manager.** Project Manager responsible for development of D&D cost and schedule as applied to a facility engaged in active manufacturing of non-nuclear material (site was formerly utilized for fabrication and cladding of highly-enriched uranium fuel). Responsible for procurement and management of all necessary services to support project including structural engineering, specialized decontamination equipment and labor, health physics technical support, waste processing and transport and construction/repair services. Negotiated with state and local regulatory agencies, the US NRC, and Envirocare of Utah regarding effluent release and waste disposal. Managed preparation of D&D Implementation Plan, site procedures, NRC inspection and comment responses and final termination report preparation. Senior Health Physicist responsible for derivation of uranium enrichment data, analytical techniques, representative sampling of concrete, soils, piping and drain traps, criticality modeling, health physics monitoring procedure development, and NRC interaction. Project budget approximately \$9M.

**Radiological Risk Assessment for a Proposed U.S. Department of Energy (DOE) Uranium Atomic Vapor Laser Isotope Separation Plant at Oak Ridge, Paducah, and Portsmouth, Project Manager.** Responsible for selection and application of environmental radiation transport and dose assessment software including GENII, RSAC, CAP-88, and hand algorithms; development of meteorological, food use, and population distribution input data files for selected codes; application of NRC Guide 3.35 criticality source terms in transport codes; final dose assessment to maximum individuals and surrounding populations; and comparison to limits specified in the U.S. Environmental Protection Agency (EPA) National Emission Standards for Hazardous Air Pollutants (NESHAPS) and DOE orders.

**Environmental Assessment, Proposed Residual Drum Storage Facility (RDSF), DOE Rocky Flats Plant, Colorado, Task Manager.** Responsible for development of routine and accident exposure scenarios for proposed RDSF; review of facility design per UCRL 15910, historical waste generation records, worker time and motion studies, and release mechanism research studies; development of source terms for release and environmental transport modeling; assessment of potential criticality events resulting from drum storage configurations; development of spreadsheets utilizing atmospheric dispersion algorithms; calculation of onsite and offsite doses to public; and comparison to DOE Orders and NESHAPS.

**Project Oversight for D&D of Army Material Technology Laboratory Nuclear Facilities and Research Reactor, USATHAMA, Site Health Physicist.** Responsible for review and oversight of decommissioning contractor activities for compliance with NRC license and Decommissioning Plan requirements for dismantling of a nuclear research reactor and depleted uranium testing facilities listed on the NRC SDMP (objective of license termination). Coordinated health and safety, health physics reviews of decontamination techniques, radiation surveys of work areas and contaminated waste material in facilities contaminated with activation products, depleted uranium, and beryllium. Prepared SOPs and Quality Assurance Measurements Plan to be used by WESTON personnel.



**Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) at TA-21 and Installation General Environmental Restoration Program Support, Los Alamos National Laboratories (LANL), New Mexico, Project Manager.** Project Manager for RCRA facility investigation at TA-21; responsible for costing and scheduling of RFI work tasks, coordination of field teams, daily client interaction, preparation of technical Phase Reports, special technical reports, and data management and processing. Manage a multidisciplinary staff of technical professionals and serve as senior technical reviewer for all work performed at TA-21. Responsible for the preparation of activity monthly and quarterly summary reports of TA-21 activities, development of RFI costing software, and input to cost and schedule baseline development.

**Decontamination and Decommissioning (D&D) of Medical Storage Facility, Confidential Client, Project Manager.** Responsible for preparation of characterization report and decommissioning plan submitted to U.S. Nuclear Regulatory Commission (NRC) for approval. Prepared cost estimate for decommissioning labor, equipment, and radioactive waste disposal; prepared work plan and standard operating procedures (SOPs); procured subcontractor labor and laboratory support. Managed decontamination and decommissioning of facility within projected budget; prepared final release report for NRC approval.

Project Support for D&D of Thorium Waste Storage Area in Illinois, Confidential Client, Site Manager/Health Physicist. Site Manager responsible for characterization of thorium distribution through site features, offsite migration, and risk-based cleanup criteria development. Responsible for monitoring worker exposure to radioactive materials (thorium-230, thorium-232), organic solvents, PCBs, and heavy metals during waste excavation and removal of vegetation at the site. Also responsible for implementation of respirator and heat stress monitoring programs, airborne sampling for all contaminants, access and contamination control, radiological verification surveys, and hazardous waste drum overpacking. Site under regulatory jurisdiction of the State of Illinois.

Preparation of BAIRD Phoswich Account System Calibration Manual and System Evaluation, U.S. Army Toxic and Hazardous Materials Agency, Aberdeen Proving Grounds, Maryland (USATHAMA), Technical Lead. Evaluated performance of laboratory-based phoswich detection system to multiple radioactive calibration sources. electronic signal analysis, statistical variations, and performance trends. Prepared calibration procedure manual based upon recommendations of the American Society for Testing of Materials and National Council on Radiation Protection and Measurements.

**Remedial Action for Naturally Occurring Radioactive Materials-Contaminated Properties, Confidential Client, Alaska, Lead Health Physicist.** Responsible for coordination and performance of initial field characterization to identify extent of radium-226 contamination from oil pipe scale; and implementation of soil sampling programs and radiation surveys. Prepared Characterization Report and Site Decontamination Plan addressing decontamination techniques and radiological monitoring equipment, radioactive waste disposal options, and general health and safety issues.

**Radiological and Chemical Screening Laboratory, LANL, New Mexico, Health Physicist.** Responsible for the daily operation of an onsite screening laboratory that performed gross alpha and beta screening, high explosive screening, organic vapor analyses, soil moisture and density, and soil liquid extractions for tritium analysis. Performed routine maintenance and calibration of all equipment and maintained a log all data forms associated with the sample screening.

**Analyses of Radionuclide Emissions from Inactive Surface Uranium Mines for Preliminary Assessment of Applicability to NESHAPS, SC&A (under contract to EPA), Lead Health Physicist.** Responsible for development of strategy to determine radon and particulate emissions from more than 1200 surface uranium mines; development and implementation of gamma spectroscopy, charcoal canister radon flux, and portable radiation detection systems; coordination of field characterization teams; collection of demographic and land use data; and preparation of data for use in AIRDOS modeling code.

Engineering Cost Estimate/Health and Safety, Decommissioning of a Uranium Mill and Tailings Pile, Kaider Engineers, Health Physics. Responsible for development of unit labor prices based on industrial hygiene and radiological monitoring requirements for D&D of uranium mill buildings and associated tailings pile. Reviewed historical health and safety/radiological monitoring data at facility to develop costs.



## MICHAEL MADONIA

**Remedial Action, KTI Chemicals, Inc., Carrollton, Texas, Site Health Physicist.** Performed radiological characterization of a chemical processing plant contaminated with polonium-210 from leaking static eliminators manufactured by the 3M Company. Responsible for outlining and quantifying the extent of contamination with portable radiation detection instrumentation, and summarizing data in a report for the NRC. Provided oversight for decontamination of the facility; interacted with onsite NRC inspectors; and performed radiological release surveys that were documented in a summary clean-up report approved by the NRC.

**Characterization of Hastings Radiochemical Disposal Site, Houston, Texas, EPA Technical Assistance Team/Site Health Physicist.** Site Health and Safety Officer responsible for access and contamination control; worker chemical and radiological exposure monitoring. Performed particulate air sampling for cesium-137 and americium-241; collected downhole gamma logging data to determine three-dimensional contamination profile.

**Radiological Characterization, ARCO Bluewater Uranium Mill, Grants, New Mexico, Site Manager.** Responsible for planning characterization strategy and direction of field sampling and radiological measurement technicians; training technicians for chemical and respiratory protection program; developing and implementing safety plan; and supervising of Level B and Level C activities. Responsible for calibrating and maintaining radiological and industrial hygiene survey equipment.

**Uranium Mill Tailings Cover Placement, ARCO Bluewater Uranium Mill, Site Health Physicist/Site Health and Safety Officer.** Responsible for worker exposure and access control, airborne silica and radionuclide monitoring, radiological contamination surveys of heavy equipment, and calibration of radiological monitoring equipment.

**Waste Storage Area Characterization, DOE Fernald Feed Materials Production Center, Ohio, Site Health Physicist.** Responsible for collection of Resource Conservation and Recovery Act soil, sediment and liquid samples in waste storage areas and radiological characterization surveys. Site Health and Safety Officer during placement of monitoring wells, responsible for construction safety.

**Decontamination of Elgin National Watch Co. Property, Elgin, Illinois, Site Health Physicist.** Participated as a team member during decontamination of the former property occupied by the Elgin National Watch Factory, which had used luminous radium paints during operation. Responsible for gamma spectroscopy analyses of soil and building debris samples, radon soil gas measurements, and indoor radon assessment in neighboring residences. Assisted in radon assessment design for neighboring residences and in the design and implementation of a manual waste segregation system for radium-contaminated debris.

**Luminous Processes, Inc. Vicinity Property Radiological Surveys, State of Illinois, Site Health Physicist.** Participated in radiological surveys of Luminous Processes waste disposal areas, grid gamma exposure and count rate surveys, radon in soil gas surveys, and soil sampling. Health physicist during excavation and packaging of 1000 cubic feet of radium-contaminated soil in a residential area; implementation of indoor radon surveys and indoor radon reduction measures. During Phase II D&D, served as field team member responsible for sample preparation for gamma spectroscopy and liquid scintillation analyses; radiological verification surveys of clean debris bound for a county landfill; representative sampling and analyses of waste containers for shipping in accordance with 49 CFR 173. In Phase III D&D, served as Site Health Physicist during excavation of radium and tritium-contaminated foundation and building substructures. Responsible for maintenance of air sampling and thermoluminescent dosimeter stations, radiological release surveys, and for supervision of subcontractor spending.