



## PHIL RUTHERFORD

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## CURRENT POSITION, SERVICES AND CLIENTS

Phil Rutherford *Consulting*  
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**PHIL RUTHERFORD Consulting**



Radiation safety  
Radiological risk assessment  
Nuclear decommissioning

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**Phil Rutherford**  
President  
Phil Rutherford LLC

## SERVICES

Providing consulting services and online resources in radiation safety, environmental radiological risk assessment and nuclear decommissioning since 2015.

## CLIENTS

- [Allergan](#) (2017)
- [Biolaerus Inc.](#) (2018-2019)
- [The Boeing Company](#)
  - [Santa Susana](#) (2016-2020)
  - [Seattle - Puget Sound](#) (2017)
  - [Huntington Beach](#) (2017-2018)
- [California Department of Public Health - Radiologic Health Branch](#) (2016-2018)
- [Centers for Disease Control and Prevention \(CDC\) - National Institute for Occupational Safety and Health \(NIOSH\)](#) (2017-2018)
- [CH2M Hill Inc.](#) (2016-2017)
- [Dominion Engineering Inc.](#) (2015)
- [Investigative Post](#) (2015)
- [Jacobs Engineering](#) (2018-2020)
- [MJW Companies](#) (2017)
- [MWH Americas Inc.](#) (2016)
- [Oak Ridge Associated Universities](#) (2017-2018)
- [Reuters](#) (2018)
- [Sage Veterinary Centers](#) (2019)
- [Sensor Kinesis](#) (2018)
- [Stantec Consulting Services Inc.](#) (2017-2020)
- [ToxStrategies](#) (2016)



## EXPERIENCE SUMMARY

Forty seven years of experience in the nuclear industry, with leadership and management responsibility for many aspects of nuclear plant reliability, safety analysis and probabilistic risk assessment (PRA) for LWRs, LMFBs and nuclear space power systems, health physics, radiation safety, radiological risk assessment, nuclear decommissioning, radiation worker epidemiology studies, community cancer studies, legislative affairs, litigation, waste management & disposal, interpretation of radiological data for soil, groundwater, surface water and air, community relations, media relations, records management, health & safety, DOE compensation programs, historical site assessments, and space nuclear safety.

Currently, President of Phil Rutherford *Consulting*, providing consulting services and online resources in radiation safety, environmental radiological risk assessment and nuclear decommissioning since 2015.

Until 2015, responsible for Boeing's radiation, health & safety programs at Boeing's Santa Susana Field Laboratory (SSFL), including the Department of Energy's (DOE) radiological cleanup of the Energy Technology Engineering Center (ETEC).

Past member of numerous U.S. DOE committees and working groups relating to nuclear safety and reliability, including the "Joint DOE/Industry Man-Machine Interface Working Group" (1981-82), the "Joint DOE/Industry Reliability Working Group" (1984-1986) and the "Safety Advisory Panel for the New Production Reactor" (1990-1992).

Current member of the Health Physics Society (2000 - present) and Past Chairperson of the California Radioactive Materials Forum (Cal Rad Forum). Past member of the Institute of Physics (UK) (1972-1978), the Institute of Nuclear Engineers (UK) (1973-1978) and the American Nuclear Society (1974-1978).

Invited lecturer on "Occupational and Environmental Radiation Protection" at the School of Public Health, University of California - Los Angeles (UCLA) (1994, 1995, 1998).

Webmaster for:

- [www.philrutherford.com](http://www.philrutherford.com)
- [www.calradforum.org](http://www.calradforum.org) (now inactive, archived at <http://www.philrutherford.com/CalRadForum/>)

Past webmaster for:

- Boeing Santa Susana Radiation Safety web site (past webmaster)

Past contributor to:

- [www.etc.energy.gov](http://www.etc.energy.gov) (DOE's Energy Technology Engineering Center web site)



## ENGINEERING AND MANAGEMENT POSITIONS

### **2015 - Present President, Phil Rutherford LLC**

Providing consulting services and online resources in radiation safety, environmental radiological risk assessment and nuclear decommissioning.

### **2006 - 2015 Senior Manager, Health, Safety & Radiation Services, Santa Susana Field Laboratory, The Boeing Company**

Led a department of up to 10 professional and technical personnel. Oversaw the health & safety program for the remediation work at the Santa Susana Field Laboratory. Managed the radiological safety program for nuclear facilities undergoing decontamination and decommissioning for the DOE, and ensured compliance with federal, state and local regulations related to both radiological safety and environmental monitoring. Key tasks for the department were the performance of final status radiological surveys of facilities and land to demonstrate acceptability for release for unrestricted use, and subsequent waste management, characterization and disposal of soil and building debris.

### **2004 Rocketdyne Propulsion & Power, The Boeing Company**

Nuclear Safety Integrated Project Team Lead for the Jupiter Icy Moons Orbiter (JIMO) Phase A, Task 2 study contract and the JIMO Phase B proposal to NASA's Jet Propulsion Laboratory (JPL).

### **1998 - 2006 Senior Manager, Radiation Safety, Santa Susana Field Laboratory, The Boeing Company**

Managed a department of 10 professional and technical personnel. The department enforced a radiological safety program for numerous nuclear facilities undergoing decontamination and decommissioning for the DOE, and ensured compliance with federal, state and local regulations related to both radiological safety and environmental monitoring.

### **1996 - 1997 Senior Manager, Environmental Remediation, Rocketdyne Propulsion & Power, Boeing Space Systems**

As part of a re-organizational change the existing radiation protection group (see below) was merged with another group whose function included many forms of chemical remediation. As a result, responsibilities also included groundwater monitoring and remediation and soils remediation for all Rocketdyne facilities. Managed an annual budget of \$7m and a staff of 22 environmental and radiation safety engineers.

### **1990 - 1995 Manager, Radiation Protection & Health Physics Services, Rocketdyne Division, Rockwell International**

Headed a department of up to 22 professional and technical personnel. The department enforced a radiological safety program for several nuclear facilities undergoing decontamination and decommissioning for the DOE, and ensured compliance with federal, state and local regulations related to both radiological safety and environmental monitoring. A key task of the department was the performance of final radiological surveys of facilities and land to demonstrate acceptability for release for unrestricted use.

### **1989 - 1990 Manager, Nuclear Safety & Reliability Engineering, Rocketdyne Division, Rockwell International**

Led a team of technical specialists in the safety and reliability arena that performed such design-specific engineering activities as failure modes and effects analyses, nuclear system/component reliability assessments, radiological consequence assessments for nuclear accidents, risk assessments, and safety assessments of ground based and space nuclear systems.

### **1978 - 1989 Member of Technical Staff, Rocketdyne Division, Rockwell International**

Responsible for the planning, managing and performance of all reliability and risk assessment programs of Rocketdyne's terrestrial and space nuclear projects. These included the Large-Scale Prototype Breeder (LSPB), the Sodium Advanced Fast Reactor (SAFR), the Multi-Megawatt Terrestrial Power Plant



(MTP) and the Dynamic Isotope Power Subsystem (DIPS). Areas of expertise included reliability and PRA code development and analysis, common cause failure analysis, man-machine interface, lessons learned from LWR operating experience, core and containment response analysis, sodium fires and aerosols, radiological transport and dose analysis, reactor physics and heat transfer.

#### **1973 - 1978 South African Atomic Energy Board (AEB)**

Senior scientist in the regulatory branch of the AEB, responsible for core physics and accident analysis for the Koeberg Nuclear Power Station. Specific projects included development of computer codes for fuel clad swelling and rupture, and fission product release following loss-of-coolant accidents. Performed the first probabilistic risk assessment for the Koeberg PWR.

#### **1974 - 1975 General Electric's Nuclear Energy Division**

Visiting engineer for one year, performing core physics and transient analyses for the Shoreham and Brunswick BWRs. These included reactivity insertion accidents, critical control rod patterns, shutdown margins, plant transients and reactor vessel overpressure protection.

## EDUCATION AND TRAINING

Year(s)	Degree	Subject	Institution
1971	M.A.	Physics	University of Oxford (UK)
1972	M.S.	Nuclear Engineering	University of Birmingham (UK)
1974 -1975		Numerous nuclear engineering classes	General Electric's Nuclear Energy Division
1978 - 1996		Numerous company training classes	Rockwell International Corporation
1981	Diploma	Human Reliability	University of Wisconsin
1983	Diploma	Risk Management	University of California, Los Angeles
1987	Diploma	Project Management	West Coast University
1990	Diploma	DOE Orders Training	U.S. Department of Energy
1992	Diploma	Analysis of Environmental Radioactivity	Georgia Institute of Technology
1993	Diploma	Environmental Regulations	Executive Enterprises Inc.
1994 - 2010		Numerous continuing education classes	Health Physics Society (HPS)
1996 - 2015		Numerous company training classes	The Boeing Company
1998	Diploma	MARSSIM Radiological Survey Protocols	Oak Ridge Institute of Science & Education
2001	Diploma	RESRAD, RESRAD-Build and RESRAD Probabilistic	Argonne National Laboratory
2015	Certificate	Requirements for Shipping Radioactive Material (DOT, NRC, IATA)	Dade Moeller Training Academy