

John M. Johnson

PROFESSIONAL HISTORY:

*Risk Management Professionals, Inc.;
Irvine, California; Project
Engineer; 2013-Present*

EDUCATION:

*Chemical Engineering, Bachelor of
Science, University of California,
Riverside*

*Chemical Engineering, Master of
Science, University of California,
Riverside*

TRAINING:

*Chevron CVX-SIS-201 SIS
Engineering 1 Certified*

*Chevron CVX-SIS-202 Safety
Objective Analysis / Safety
System Function Analysis for
Facilitators Certified*

*Occidental Petroleum Critical
Mitigating Element/Key Mitigating
Element (CME/KME) Methodology
Certified*

PROFESSIONAL AFFILIATIONS:

*American Institute of Chemical
Engineers (AIChE)*

Mr. John Johnson graduated from University of California, Riverside, with a Master of Science degree in Chemical



Engineering with an emphasis on environmentally benign manufacturing processes. In addition to development of EPA RMP/OSHA PSM/CalARP programs and performing HAZOP, LOPA, and other risk assessment techniques at facilities around the U.S. Mr. Johnson manages a small team of engineers. This consists of project coordination as well as quality assurance review of all projects being performed by the team. Mr. Johnson's project experience has been vigorous throughout various product lines offered by Risk Management Professionals, including the following: Risk Management Plans / Process Safety Management (RMP/PSM) Programs, Hazard and Operability (HAZOP) Studies, Hazard Mitigation Plans (HMP), and Hazardous Material Inventory Calculations.

Mr. Johnson understands the significance of the various regulatory elements required for the timely completion

of a successful project including the essential planning and monitoring of project progress, the supervision of the project budget, and the necessity of quality control throughout the project. Mr. Johnson's project experience has been vigorous throughout various product lines offered by Risk Management Professionals, including the following:

- Risk Management Plans/ Process Safety Management (RMP/PSM) Programs
- Regulatory Compliance Audits and Support
- Hazard and Operability (HAZOP) Studies
- Layer of Protection Analysis (LOPA)
- Development of Control Narratives
- Hazard Mitigation Plans (HMP)
- Emergency Response Plans
- Quantitative Risk Analysis (QRA)



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While Mr. Johnson has experience in diverse product lines, all completed projects have used high-end qualitative and/or quantitative risk analysis techniques for decision-making and are focused within the following disciplines:

- Gas Processing
- Petroleum (Refining)
- Anhydrous Ammonia Refrigeration
- Selective Catalytic Reduction (SCR) Systems
- Municipal Water Treatment
- Chemical Manufacturing (Blending & Production)
- Cogeneration

PROJECT EXPERIENCE

Process Hazard Analysis (PHA) Facilitation

Mr. Johnson has facilitated process Hazard Analysis (PHAs) using both qualitative and quantitative analysis methodologies including Hazard and Operability (HAZOP), Layer of Protection Analysis (LOPA), Safety Objective Analysis (SOA), and Quantitative Risk Assessment (QRA). Below is a partial list detailing recent PHA experience:

- *Refinery, Benicia, CA* – Facilitated the revalidation HAZOP/SPA (LOPA) for the Pipestill Unit (PSU).
- *Refinery, El Paso, TX* – Facilitated the HAZOP/LOPA for the BenSat Unit.
- *Refinery, Benicia, CA* – Facilitated the revalidation HAZOP/SPA (LOPA) for the Naphtha Reformer Unit (NRU).
- *Refinery, Carson, CA* – Facilitated the HAZOP/SPA/HCA for the Hydrocracker, FCC Steam Plant, and Alkylation ammonia units (utilized for SCR and ESP).
- *Refinery, Gallup, NM* - Facilitated the HAZOP/LOPA for the Crude Unit, the Ultra-Low Sulfur Diesel (ULSD) unit, the Naphtha Hydrotreater (NHT), and the Platformer (PLAT).
- *Refinery, Benicia, CA* – Facilitated the revalidation HAZOP for the Diesel Hydrotreater Unit (DHU) and the Virgin Light Ends (VLE) unit. The VLE unit encompassed cuts from the crude unit including Jet, Naphtha, and Diesel through each respective hydrotreating unit.
- *Refinery, Argentina* – Facilitated the design stage PHA for the Hydrotreater unit. The PHA included both HAZOP and LOPA methodologies as well as Safety Integrity Level (SIL)

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Assignment. The study included several separate operating modes for the Reactor, Separators, Combustion System, Stripper, and Naphtha Stabilizer.

- *Refinery, Argentina* – Facilitated the FEED stage PHA for multiple units including the Delayed Coker Unit, Atmospheric Distillation (Crude Unit), Vacuum Pipe Still (VPS) . The PHA included both HAZOP and LOPA methodologies as well as Safety Integrity Level (SIL) Assignment. The study included diverse equipment from across the process including the Atmospheric Distillation Tower, Overhead Stripper Column, Naphtha Stabilizer, as well as various support equipment (knockout units, blowdown equipment, exchangers, etc.). This study also included analysis of the Offsites and Utilities Systems for the refinery including the flare, fuel gas, steam, and cooling water systems.
- *Silane Distillation Plant, Butte, MT* – Facilitated the revalidation PHA (HAZOP) for a silane loading facility. The PHA included performing LOPA on all scenarios deemed high risk by the Team. As part of the PHA, the Team also reviewed the previous PHA recommendations, relevant MOCs, previous incidents, human factors, and facility siting.
- *Polysilicon Facility, Moses Lake, WA* – Facilitated the Design Phase HAZOP/LOPA for polysilicon production units. The study included main reactor units as well as peripheral systems including hydrogen (reactant), nitrogen (purge gas), as well as cyclone, degassing, and loading units.

CalARP/RMP/PSM Program Development and Revalidation

Mr. Johnson has developed California Accidental Release Prevention (CalARP) Programs, RMPs, and PSM Programs for a wide spectrum of industries and processes. As a part of these efforts, he has performed Offsite Consequence Analysis (OCA), external events analyses, dispersion modeling applications, recommendations review, program development, and United States Environmental Protection Agency (USEPA) and Administering Agency (AA) submittals.

Compliance Audits

Mr. Johnson has completed CalARP/RMP/PSM Compliance Audits, which includes facility walk downs and familiarization with the regulated covered process, reviewing Prevention Program documentation in order to identify deficiencies that would result in citations from the applicable regulatory agencies, developing a line item report that lists the specific deficiencies, and meeting with facility personnel in order to identify any other needs or services they may require.

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CLIENT LIST

The following is a partial list of clients that Mr. Johnson has managed and/or provided engineering support:

Municipalities and Water Treatment

- City of Pittsburg Water Treatment Plant
- City of Ventura Water Treatment Plant
- Monterey Regional Water Pollution Control Agency
- City of El Centro Water Treatment Plant
- Desert Water Agency

Manufacturing/Chemical Processing

- FXI, Inc.
- SGL Technic
- NALCO
- UTC Aerospace Systems
- REC Silicon
- Clariant
- Pacific Urethanes
- Cirtech, Inc.
- Pregis Innovative Packaging, Inc.

Ammonia Refrigeration Facilities

- Buttonwillow Warehouse Company
- Paramount Iceland, Inc.
- Thomson International
- Pepsi Bottling Company
- Systems Services of America, Inc.
- Northgate Market

Oil, Gas, and Other Energy Facilities

- Chevron
- Valero Energy
- Southern California Gas Company
- LINN Energy
- Matrix Oil
- TriState Energy
- Axion Energy
- BreitBurn Energy
- Andeavor
- Signal Hill Petroleum
- Freeport McMoRan
- Ormat
- Williams Midstream
- Bridge Energy