

# ESTER M. BRAWLEY-ROEHL

## PROFESSIONAL HISTORY:

*Risk Management Professionals, Inc.;*  
Mission Viejo, California; Engineering  
Consultant; 2002-Present

## EDUCATION:

Bachelor of Science, Mechanical  
Engineering, California Maritime  
Academy

## CERTIFICATION:

- *U.S. Coast Guard Licensed 3rd Assistant Engineer; Unlimited Horsepower; Motor, Steam and Gas Turbine*
- *STCW 95 Certified including Advanced Marine Firefighting*
- *Incident Command System (ICS) IS-100 Certified*
- *Incident Command System (ICS) IS-200 Certified*
- *National Incident Management System (NIMS) IS-700 Certified*
- *National Response Plan (NRP) IS-800 Certified*

## PROFESSIONAL AFFILIATIONS:

- *Refrigerating Engineers and Technicians Association (RETA)*

Ms. Ester M. Brawley-Roehl has played a key role in a variety of activities associated with risk and safety projects. She has provided high level Project Management and technical expertise to numerous Project Teams and has been instrumental in bringing about a successful completion of those projects. Ms. Brawley has experience in the following activities: California Accidental Release Prevention (CalARP) Programs, Environmental Protection Agency (EPA) Risk Management Plans (RMP), and OSHA Process Safety Management (PSM) of Acutely Hazardous Substances; conducting Process Safety audits of existing programs; 5-year updates; re-submittals; and training.

Ms. Brawley-Roehl has provided long-term support to a major refinery in Southern California implementing the Management of Change (MOC) program and overseeing recommendation closure for previous Process Hazard Analyses (PHA) studies and Incident Investigations. As part of Ms. Brawley's Process Safety support for this refinery, she assisted with the comprehensive audit by the Environmental Protection Agency. The focus of the audit was Incident Investigation of releases

and near misses over a five year period.

One of her Process Hazard Analysis (PHA) experiences includes the comprehensive revalidation of an Exploration and Production facility's PHA. She has conducted hazard assessments that involve Offsite Consequence Analysis (OCA) and dispersion modeling. Ms. Brawley-Roehl has completed document submittals to the EPA as well as local California Administering Agencies.

Sailing aboard commercial ships, Ms. Brawley has developed and implemented process safety for a number of applications. She has hands-on experience aboard ship, operating and conducting preventive maintenance on main propulsion engines, electrical generation plants, desalination, wastewater treatment, heavy fuel and lubrication oil process and transfer, refrigeration and all other systems required for a commercial ship's plant. Her experience includes emergency response elements such as firefighting, emergency response drills and training, oil spill response, and medical casualties.



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## PROJECT EXPERIENCE:

Ms. Brawley-Roehl has been involved in the following projects:

**Hazard and Operability Studies** – Ms. Brawley-Roehl has facilitated Process Hazard Analysis and Hazard Reviews using Hazard and Operability (HAZOP) and What-If/Checklist methodologies for gasoline and production facilities, as well as, major chemical manufacturers. In addition to the HAZOP method, Ms. Brawley-Roehl is well versed in SIS/SIL and LOPA. The following is a representative list of processes that Ms. Brawley has led Hazard and Operability (HAZOP) Study teams for pre and post design:

- Silane Distillation
- Silane Storage
- Polysilicon Production Systems
- Fluidized Bed Reactors
- Environmental Vapor Recovery System for a major refinery in Southern California
- Unicracker/Debutanizer/Fractionator and Auxiliaries for a major refinery in Northern California.
- Hydrotreaters and Hydrocrackers
- Water and Wastewater Treatment
- Amine Regeneration
- Sulfur Degassing
- Sour Water Treatment
- Oil Well Pumping, Treatment and Storage (including Water Injection).
- Catalyst Manufacturing
- Ammonia Refrigeration
- Fertilizer Manufacturing
- Carbon Composite Break Manufacturing
- Plating Facilities
- Circuit Board Etching
- Wastewater sludge dryer and conveyance system
- Power generation and cogeneration systems.

Specific petrochemical and chemical processing facilities includes the following clients and associated processes:

<b>Facility Name</b>	<b>Process Description</b>
• GoalLine LP	Cogeneration facility. Ammonia absorption refrigeration system and selective catalyst reduction system.
• Berry Petroleum	Three cogeneration facilities. Selective Catalyst Reduction systems.
• Fluor/THUMS	Amine CO2 Removal Plant
• REC Solar Grade Silicon/Fluor	Multistage Distillation of large-boiling-point-range materials analogous to hydrocarbons
• REC Solar Grade Silicon/Fluor	Effluent Water Treatment Systems
• REC Solar Grade Silicon/Fluor	Byproducts Area (Scrubbers)
• REC Solar Grade Silicon/Fluor	Fluidized Bed Reactor/Polysilicon production
• REC Solar Grade Silicon/Fluor	Metal Chlorides
• 7 Up/RC Cola Bottling Company	Ammonia refrigeration system.

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Facility Name	Process Description
• SVP Winery	Ammonia refrigeration system
• Edwards Lifesciences	Formaldehyde sterilization system.
• Pepsi (2 facilities)	Ammonia refrigeration systems.
• Ontario Ice & Cold Storage	Ammonia refrigeration system
• City of Galt Wastewater Treatment Plant	Chlorine storage and feed systems. Sodium Dioxide storage and feed systems.
• KAR Ice Service	Ammonia Refrigeration system
• Hinsdale Farms	Ammonia Refrigeration system
• Eskimo Pie	Ammonia Refrigeration system.
• Criterion Catalysts	Ammonium Molybdate Catalyst production system
• John Taylor Fertilizer	Ammonium Polyphosphate Production system.
• Artesia Ice	Ammonia Refrigeration system
• Union Ice	Ammonia Refrigeration system
• Andritz Ruthner, Inc.	Biosolids Management Facility. Sludge drying system and pellet production.
• GrowMore, Inc.	Metal Nitrate Production system
• Winonics	Ammonia Etching and Circuit Board manufacturing process
• Oxy/THUMS	Oil production Islands including interconnecting piping, utilities, and Pier J facilities
• Conoco Phillips/Fluor	Unicracker
• REC Silicon/Fluor	Effluent Water, Influent Water, and Chemical Handling
• Petrotrin/World GTL	Gas to Liquids Facility
• Pacific Energy Resources	Offshore Production
• Tesoro	Hydrocracking Unit
• Valero	Butamer Unit

**CalARP/RMP/PSM Program Development and Revalidation** –As part of developing a facility's CalARP/RMP/PSM, Ms. Brawley-Roehl must put together the technical data and information to create comprehensive: Process Safety Information, Process Hazard Analysis, Operating Procedures, Training Procedures, Mechanical Integrity/Preventive Maintenance Programs, Management of Change Programs, Pre-Startup Safety Review, Compliance Audits, Incident Investigation, Hot Work Permit, Contractor Safety, and Emergency Response Planning. She has conducted hazard assessments that involve Offsite Consequence Analysis (OCA) and dispersion modeling. Below is a recent list of facilities Ms. Brawley has managed the development of their CalARP/RMP/PSM programs.

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- 7-Up
- Airgas
- Artesia Ice
- Benicia Water
- Berry Petroleum (3 facilities)
- Bumble Bee
- Carson Cogeneration Inc.
- City of Avenal
- City of Brawley
- City of Calexico
- City of Galt
- Cosmetronics
- Cott Beverage
- Criterion Catalyst
- DairiConcepts
- Desert Water Agency
- DPS Juniper
- Edwards Lifesciences
- Eskimo Pie
- Fountain Valley Public Works Dpt
- Frontier Cooling
- Goal Line Cogeneration LP
- Growmore
- Harris Ranch
- Highline Cooling
- John Taylor Fertilizer
- Kar Ice Service
- Kingsburg Cogeneration
- Los Angeles County Department of Public Works
- Magarro Farms
- Northrop Grumman
- Ontario Ice & Cold Storage
- Otto & Sons
- Pepsi Bottling(4 facilities in Southern California)
- Preferred Freezer
- Santa Fe Irrigation District
- Saputo Cheese
- Shandon Valley Partners Winery
- Sunworld
- Ventura Foods
- Ventura Wastewater Treatment Plant
- Union Ice
- Thums/Oxy
- Wilbur Ellis
- Wileman Brothers & Elliot
- Winco Foods
- Winonics (Two facilities)

**Response Capabilities Assessment** – Ms. Brawley-Roehl has completed Response Capabilities and Needs Assessments to evaluate a City’s ability to respond to medium and large-scale chemical releases. These assessments included an evaluation of each departments responsibilities and resources for emergency response. Additionally, the City’s conformance with California Certified Unified Program Agency (CUPA) standards and the National Incident Management System were evaluated. Additionally, with emerging terrorism and Weapons of Mass Destruction threats, the City’s capacity to respond to chemical releases resulting from criminal or terrorist acts was included in the study. To document the Response Capabilities and Needs Assessment, the analysis is completed through the evaluation of current capabilities, performing a tabletop exercise, and analyzing the need for additional capabilities. Ms. Brawley-Roehl has completed Capabilities Assessments for the following agencies:

- City of Berkeley
- City of Los Angeles Urban Area including Los Angeles County and the 17 contiguous cities.