

# JENNY COCHRAN

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## PROFESSIONAL EXPERIENCE

FLINT HILLS RESOURCES

JOLIET, IL

*Optimization Engineer – December 2015 to current*

### Process Engineering

- Manage and optimize the daily process of two petrochemical process units - Isophthalic Acid and Purified Isophthalic Acid. Interact daily as a key member of a cross-functional team with console and field operations, environmental, and reliability teams as well as plant leadership to maximize production.
- Perform investigations utilizing Root Cause Failure Analysis (RCFA) to improve the reliability of solids handling process and equipment. Perform calculations to evaluate equipment fouling. Make technical recommendations for the equipment and process evaluations to improve reliability, minimize operating costs, and increase unit run-time.
- Plan and prepare for turnaround activities: develop and write process plans for abnormal operations during turnaround activities, complete turnaround inspection packages, review turnaround project packages, and perform equipment inspections.
- Work closely with environmental group: perform calculations for liquid and vapor releases; serve as units' team leader for Title V permit reviews; and evaluate and manage environmental compliance points within the units.
- Manage the operating envelope for the units: manage and update alarms, standard operating conditions, and procedures. Support units' PHA activities. Conduct Management of Change (MOC) process for changes within the unit.

JACOBS CONSULTANCY

CHICAGO, IL

*Consultant – July 2008 to December 2015*

### Project Engineering

- Managed environmental compliance flare gas recovery project for domestic refiner: created proposal, pitched proposal, won project, developed scope, planned, scheduled, and executed project. Conducted site workshops with engineering and operations; determined peak venting scenarios and managed the risk of large vents to flare; recommended sizing options; and conducted Failure Mode and Effects Analysis (FMEA) on equipment technology review to select final equipment for a flare gas recovery system.
- Conducted risk analysis utilizing Crystal Ball, Monte Carlo simulation, to predict the impacts of potential event failures on a major US refiner's fuel gas and hydrogen systems. Identified and quantified risk events, built logic diagrams to describe the impact of risk scenarios, and linked logic within the model to represent the refinery's current and potential future operations.
- Conducted quantitative risk assessment for a bio-startup to evaluate the impact of process risks on the company's cash flow.
- Trended and analyzed key economic and energy market indicators: US and Canadian oil and gas prices, petroleum and chemical exports, employment recovery, unemployment rates, business spending and recessions and GDP.

### Process Engineering

- Conducted process simulation for SAGD/CSS bitumen production. Evaluated the economic implications of CPF size, degree of modularization, and labor productivity on a small SAGD facility for a major Canadian refiner. Created Material and Energy Balances for dozens of cases. Sized equipment and created equipment and line lists for clients.
- Updated VBA-based broad spectrum catalytic reformer simulation to include specific options for continuous catalytic reforming and total coke deposition. Utilized catalytic reformer simulation to provide theoretical reformate compositions under specific refinery conditions for multiple refineries to comply with Mobile Source Air Toxics (MSAT2) – Gasoline Benzene Reduction regulations. Optimized the financial implications and energy impacts of reformer pressure changes on reformate yields.

## PROFESSIONAL LICENSES

- Engineer in Training

## SKILLS

- Process simulation experience: Aspen Plus, Aspen HYSYS, Aspen FLARENET, Petroplan, and Phast 6.7
- Process monitoring software: PI Process Book, LIMS, CAPSALL, Navitrac, Maximo, Vanguard, and Integrity
- Proficiency with Microsoft Office Suite including Visio and Visual Basic
- Monte Carlo risk evaluation and simulation skills with Crystal Ball
- Extensive technical writing – including proposals and reports – and presentation experience

## EDUCATION

UNIVERSITY OF OKLAHOMA

NORMAN, OK

*Bachelor of Science in Chemical Engineering with Special Distinction – May 2008*

STOCKHOLM UNIVERSITY

STOCKHOLM, SWEDEN

*Studied Abroad – Spring Semester 2006*