



## **Cassandra K. Moody, P.E.**

*Principal Engineer*

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Cassandra K. Moody, P.E. is passionate about engineering risk-informed solutions to safely optimize ROI: Return on *Integrity*. She conveys visionary leadership, technical competency, and distinctive communication cultivated over years of midstream operations and integrity engineering experience with a mid-size oil and gas operator in the United States. As Principal Engineer, she excels in the development, implementation, and optimization of Integrity Management Programs (IMP) in addition to the engineering and execution of the integrity program's individual elemental components. Her ability to interface with individuals from field to executive personnel and lead effectively in order to drive change sets her apart. Mrs. Moody communicates complex ideas with ease appropriately to any audience to yield results leveraging her primary CliftonStrengths of Activator and Focus. She has gained encompassing operations knowledge in project management, regulatory compliance, and engineering capacities spanning the full life cycle of midstream projects which far exceed the quantity of years due to the nature and expectations of her previous employer. Mrs. Moody's unique perspective on resourceful applications of achieving asset integrity and compliance through risk-informed reasoning while working for cost-focused operators will cement her as a compelling asset to any project. Mrs. Moody believes "quitting" is the only definition of failure and any other result is simply an opportunity to reengineer.

In addition to serving in an engineering capacity, Cassandra has a special passion to encourage the female workforce. As females are a minority in both engineering and the oil and gas industry, another facet of her focus is encouraging professional women through professional and personal coaching services, group workshops, custom planners, and speaking engagements. Mrs. Moody is certified by the U.S. Small Business Association and the Women's Business Enterprise National Council as both a Women's Business Enterprise (WBE) and a Women Owned Small Business (WOSB). In Texas, she is registered as a Historically Underutilized Business (HUB). With the City of Houston Office of Business Opportunity, Mrs. Moody maintains a certification as a Women's Business Enterprise (WBE).

### **Recent Consulting Projects**

#### SOP Consolidation & Compliance Initiative, U.S. & Canadian Based Pipeline Operator

- Led a team of eighteen (18) engineering professionals and industry experts, a weighted mix of mostly seasoned personnel, responsible for review and delivery of over 100 Standard Operating Procedures (SOPs) in accordance with new Title 49 CFR Part 192, Title 49 CFR Part 195, and Canadian CER/ SOR 99-294 regulations for a major US and Canadian gas transmission company. This project was completed on time and under budget despite more than doubling the initial scope of forty-seven (47) procedures as gaps were identified. Change management, personnel training, and collaborative implementation roles with a third-party auditing firm were also involved to integrate the new procedures and processes across the newly merged pipeline company.

- Procedures include written and phased implementation plans for MAOP Validation, Material Verification, and Engineering Critical Assessments (ECA) in accordance with new mega-rule clauses in Title 49 CFR 192.
- Engaged with over fifty (50) key stakeholders across multiple functional discipline areas and legacy operating business units of the company in both the United States and Canada to achieve agreeable results for the project sponsors and thousands of affected company personnel.
- Comprehensive document nomenclature hierarchy system proposed and implemented company-wide.
- Revisited similar procedures across various business units and conducted meetings with stakeholders to present industry and company best practices in a comprehensive and consolidated suite of integrity procedures.

#### IMP Framework Development, Overseas Pipeline Operator

- Developed a liquid and gas Integrity Management Program (IMP) framework with sample Threat Response Guidance Document (TRGD) for a leading overseas operator based on API 1160 and industry best practices. As part of this project, a review and gap analysis of existing plans and procedures was conducted.

#### Return to Service Engineering Assessment (EA), Canadian Pipeline Operator

- Performed a comprehensive document review and threat assessment in accordance with Canadian Regulations CSA Z662 and ASME B31.8S Threat processes to ensure the safe operation and reactivation of a pipeline subject to historical geohazard threats. Confirmed associated stress calculations, repair documentation, and assessment records.

#### **Previous Operator Projects**

##### Integrity Management Program Owner

- Responsible for maintaining compliant and straightforward written gas and liquid IMPs while ensuring elemental components are executed and documented in accordance to plan. Extensive change management initiatives to drive lasting change on the people side in addition to the technical project components were successfully conducted through training and workshops lead enthusiastically by Mrs. Moody.
- Developed, managed, and lead a team of ten to fifteen engineers, analysts, and inspectors to support the integrity management initiative.
- Implemented an interim qualitative risk assessment methodology until quantitative risk assessment algorithm and necessary data sets were ready. Facilitated related Subject Matter Expert (SME) comprehensive risk assessments and related Process Hazard Analysis (PHA) meetings company wide.
- Created a standard documentation suite and template to support the IMP.
- Designed, planned, executed, analyzed, and conducted countless In-Line Inspection and Hydrostatic Pressure Tests in conjunction with Integrity Assessment requirements.
- Analyzed resulting data from integrity inspections and made cost-effective and sound engineering recommendations to ensure integrity and compliance of all assets.

- Ensured integrity repairs were completed in accordance with all applicable procedures. Individual repair projects included landowner challenges, swampy marshland coffer dam safety concerns, conflicting information, and typical project challenges to overcome.

#### Integrity Software Solutions Implementation (PODs, New Century)

- Lead the evaluation of various data and software solutions to manage and analyze integrity management data. Made a multi-million dollar and multi-year phased change management implementation recommendation to top-level company executives and executed successfully ahead of schedule and under-budget.

#### Audit Support

- Provided extensive support to audits during the data gathering and preparation, desktop, field, and all associated audit meetings, and post-audit recommendation and response phases with PHMSA, TXRRC, LDNR, and other local entities.

#### Project Management

- Primary engineer responsible for feed study, hydraulic modeling, scoping, design, planning, construction, installation, retrofit, commissioning, and project-close out projects throughout the United States.

#### Due Diligence & Asset Integration

- Technical integrity management lead for reviewing documents and data during acquisition due diligence efforts in North American project evaluations. Interview and evaluate current personnel to incorporate into post-acquisition team. Made recommendations of findings and performed initial economic evaluations.
- Once assets were purchased, provided personnel onboarding and integration support as well as documentation and procedural integration of new assets to existing operations and procedures.

#### Operations Engineering

- Supported pipeline, midstream gas processing, facilities (production, barge, tank metering, pigging, etc.) and exploration and production company activities in maintaining “low-cost producer” status across projects by engineering creative solutions to emergent problems.
  - Optimized dual-state compressor station system operation configuration and associated emissions reduction efforts.
  - Overhauled the Lower 48 United States midstream chemical corrosion inhibition and biocide injection program while achieving consistency in monitoring and evaluation in addition to substantial cost efficiencies, company-wide. Evaluated purchasing an inhibition and biocide chemical production facility as part of this project.
  - Implemented a comprehensive, cost-effective maintenance pigging program.
  - Extensive vendor negotiations to reduce costs on all projects.
- Applied Great Game of Business Open Book Management principles to business units.
- Responsible for the regional budget development and adherence over yearly cycles.
- Managed and mentored summer engineering interns and recruited young talent at universities.

### Renewable Energy Project Management & Engineering

- Performed engineering assessments and annual validation of carbon credit calculations using the California Climate Action Reserved (CAR) protocol as applied to monitored and managed Landfill Gas to Energy carbon capture projects.
- Engineered alternative energy project design plans and submitted Request for Proposal (RPF) documents.

### **Endorsements**

“Five Star integrity engineering consultant” - Executive, U.S. & Canadian based Midstream Operator

“Cassandra is very effective in providing cost effective solutions to her clients. She is dedicated to her role, and is passionate about helping others. She possesses great communication skills, is very safety conscious, and is easy to work with.” - Process Safety Manager, US Pipeline Operator

“I have worked with Cassandra for over eight (8) years. Through this time, Cassandra has demonstrated good professional character and has knowledge of operating crude oil and natural gas pipelines where she worked as an Operations Engineer and Integrity Engineer. The Operations Engineer role included technical support, project engineering and management, and pipeline modeling. The Integrity Engineer role involved being part of the establishment an integrity program, working with vendors to match needs with inspection tool availability and required technology. I was always impressed with Cassandra’s positive attitude and have no reservation in endorsing her for future work.” - Senior Operations Engineer, Midstream Operator

“I believe that Cassandra is an excellent resource to help spearhead the [Project]. She was always professional, very responsive, and positive/courteous to engage with (even when her and her team were extremely working longer hours to meet delivery dates). I would definitely enjoy working with Cassandra again and would recommend her again for her positive demeanor as well as her diligent work ethic/commitment to see things through.” – Department Head, U.S. & Canadian based Pipeline Operator

## Education

University of Houston  
Environmental Engineering, Master of Science; 2011

Texas A&M University  
Biochemistry, Bachelor of Science; 2009  
Genetics, Bachelor of Science; 2009  
Chemistry, Minor; 2009

## Licenses & Certifications

Licensed Professional Engineer, State of Texas, #118840  
Mechanical Engineering Discipline, Texas Board of Professional Engineers & Land Surveyors  
Registered Engineering Firm, State of Texas, #F-21372  
U.S. Small Business Association Women's Owned Small Business, #WOSB210624  
WBENC National Women's Business Enterprise, #WBE2100849  
Texas Historically Underutilized Business  
City of Houston, Office of Business Opportunity, Women's Business Enterprise, #21-05-15009

## Expert Testimony

Crude Oil Pipeline Failure Defendant Deposition and Testimony, Texas; 2014-2015  
Produced Water Pipeline Dispute Plaintiff Report and Testimony, Texas 2021

## Speaking Engagements

"Change Management x L.D. Regulations" Speaker, Leak Detection Conference, Houston, TX; 2021  
"Engineering More Time" Workshop, Houston, TX; 2019-2020  
Integrity Management Symposium Operator Panelist, Galveston, TX; 2017  
Young Pipeline Professionals Leadership, Houston, TX; 2015-2017  
Monthly Company Lifting Cost Meeting Lead Speaker, TX, LA, CO, NM; 2011-2019

## Professional Associations

Society of Women Engineers, Houston Section  
Young Pipeline Professionals, USA and Houston Chapters