

CASSANDRA K. MOODY, M.S., P.E.

PRINCIPAL ENGINEER

Cassandra K. Moody, M.S, 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 a decade of midstream operations and integrity engineering experience with a mid-size oil and gas operator. As a proficient expert in the midstream pipeline industry, Mrs. Moody has represented both plaintiffs and defendants on a variety of cases, both by testimony and through expert opinion reports. In-the-ditch pipeline operator expertise sets her apart from other desktop “experts.” Mrs. Moody’s retained engagements as an independent engineering expert have resulted in favorable resolutions for 100% of her clients to date. Mrs. Moody is an effective communicator who excels at presenting complex information simply, both written and verbally.

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. She has gained encompassing operations engineering knowledge spanning the full life cycle of oil and gas projects. Mrs. Moody has been appointed to provide expertise in federal pipeline safety regulatory rule-making activities. Her unique perspective on resourceful applications of safely achieving integrity and compliance through risk-informed reasoning while working for such a cost-focused operator will cement her as a compelling asset to any matter. Safety Management Systems (SMS) are an overarching philosophy applicable to both midstream and oil and gas production projects. 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 for encouraging 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 and next-generation engineers through professional and personal coaching services, group workshops, and speaking engagements. Time For Change, LLC. 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 an additional certification as a Women’s Business Enterprise (WBE). The Texas Board of Professional Engineers and Land Surveyors acknowledges Time For Change, LLC. as a registered engineering firm in addition to Mrs. Moody’s accreditation as a certified professional engineer (P.E.) in the mechanical engineering discipline. Mrs. Moody also maintains mechanical PE licenses in the states of Oklahoma and New Mexico.

Recent Projects

Failure Analysis, U.S. Upstream Production Company

- Cassandra performed a detailed investigation of an oil and gas production facility failure involving an explosion and subsequent component failures. Responsibilities included hands-on analysis of damaged equipment, thorough review of process data, critical evaluation of witness statements, examination of relevant procedures, and the preparation of a comprehensive report of findings.

Root Cause Analysis (RCA), Midstream Pipeline Operator

- Cassandra investigated the root cause and contributing causes of the a horizontal-directional-drilling (HDD) machine incident during pipeline construction to inform preventative measures and improve operational safety. This involved the Department of Energy (DOE) RCA methodology and a detailed process of: site examination,



witness interviews, review of operating agreements and procedures, analysis of industry best practices and regulations, and leading a site reconstruction.

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

- Cassandra led a team of eighteen (18) engineering professionals and industry experts, a weighted mix of mostly seasoned personnel, responsible for the 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 an auditing firm were also involved in integrating 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 Assessments (EA) per mega-rule clauses in Title 49 CFR 192.
 - Comprehensive document nomenclature hierarchy system proposed and implemented company-wide.
 - Revised 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.

Facility Integrity Management Program (FIMP) Development, North American Pipeline Operator

- Cassandra worked with the midstream operator to develop a new FIMP to supplement the existing pipeline IMP in a phased approach. This project provided the operator to remain focused on day-to-day operations while Cassandra led the new program development. A phased approach allowed for future development aims to be planned for during subsequent budget cycles while ensuring safe and compliant program development.

IMP Framework Development, Overseas Pipeline Operator

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

Crack Management Program (CMP) Development, United States Refining, Renewables, and Transportation Company

- Cassandra leveraged the company's existing programs to leverage development of a crack management program suitable to the company's operations and philosophy. This project ensured the client was compliant while being cost conscious and systematic about managing threats to their pipeline and facility systems.

Engineering Critical Assessment (ECA), Canadian Pipeline Operator

- Cassandra evaluated the historical and current operations of a crude oil pipeline in Canada for fitness for service following a geohazard incident. As part of this project, a comprehensive threat analysis was performed, and an evaluation of a semi-quantitative risk assessment was to supplement the engineering review. This project was highlighted at the 2023 PPIM conference proceedings.

Hazardous Liquid High Consequence Area Evaluation, Midstream Operator

- Cassandra ran a hazardous liquid spill analysis model to determine possible could affect high consequence areas (HCAs) before commissioning of a new pipeline operation. Optimization of regulated mileage and a comprehensive report to implement necessary integrity management and operational concerns was recommended to the client.

Annual Program Review, American Midstream Company



- Cassandra conducted a desktop review of the existing programs for integrity management and corrosion control to meet the client's annual review stipulation while also providing recommendations for audit preparedness in the operational jurisdictions the assets reside.

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

Certifications

Licensed Professional Engineer, State of Texas, #118840
Mechanical Engineering Discipline, Texas Board of Professional Engineers & Land Surveyors
Licensed Professional Engineer, State of Oklahoma, #35488
Mechanical Engineering Discipline, Oklahoma State Board of Licensure for Professional Engineers and Surveyors
Licensed Professional Engineer, State of New Mexico #30355
State Board of Licensure for Professional Engineers and Professional Surveyors
Registered Engineering Firm, State of Texas, #F-21372
Certificate of Authorization for Engineering firm license, State of Oklahoma
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

Employment History

President & Principal Engineer, Time For Change, LLC. Engineering Consulting
October 2019 – Present; Houston, Texas
Senior Operations Engineer, Harvest Midstream Company/ Hilcorp Energy Company
June 2011 – November 2019; Houston, Texas
Project Engineer, Element Markets (Alternative/Green Energy and Pipeline Projects)



May 2010 – June 2011; Houston, Texas

Expert Testimony

Crude oil pipeline failure, remediation, and environmental impact fact witness deposition, Texas; 2014–2016
 Gas pipeline welding operations personal injury expert deposition, New Mexico; 2022–2024
 Pipeline construction best practices and safety expert deposition, Oklahoma; 2022–2024
 Oilfield drilling safety and project management best practices expert deposition, Texas 2023–2025

Publications

National Academies of Sciences, Engineering, and Medicine. 2024. *Ensuring Timely Pipeline Shutdowns in Emergencies: When to Install Rupture Mitigation Valves*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/27521>.

Iyer, P., Moody, C., (2023, February 6–10). *Leveraging Engineering Assessments and Engineering Critical Assessments for an enhanced and practical approach to evaluating pipeline conditions* [Conference presentation]. PPIM 2023 Convention, Houston, TX, United States. https://timeforchangeengineer.com/wp-content/uploads/2023/10/PPIM-2023_Conference-Paper_Engineering-Assessments_Submitted.pdf

Recognition

Houston Business Journal, 40 Under 40 Honoree, Class of 2025
 Young Pipeliners International, John Tiratsoo Award for Young Achievement Recipient, February 2023

Speaking Engagements & Training

“Nothing is important...when everything is” International Women’s Day Drill-Quip Keynote Speaker, 2024
 Integrity Management 101 Training for Baker Hughes Pipeline and Pigging Services Division, 2024
 Midstream Talent Crisis Training, Technical Toolboxes, 2024
 “Leveraging Engineering Assessments...” PPIM Conference presentation, 2023
 “Engineering vision into results” Society of Women Engineers, Houston, TX 2022
 “Leveraging engineering processes to approach change resulting in positive ROI”, Oilfield Connections International, Houston, TX; 2021
 “Embracing change” Texas Women’s Business Conference, Houston, TX 2021
 “Engineering more time” Workshop, Houston, TX; 2019–2020
 Integrity Management Symposium Operator Panelist, Galveston, TX; 2017
 Monthly Company Lifting Cost Meeting Lead Speaker, TX, LA, CO, NM; 2011–2019

Professional Associations

National Academy of Science/PHMSA, Congressional Committee Member Pipeline Safety Valve Study, 2022–2024
 Interstate Natural Gas Association of America (INGAA) Foundation D&I Committee Member
 Society of Women Engineers, Houston Member, Introduce a Girl to Engineering (IAGTE) co-chair 2021–2
 Young Pipeline Professionals, USA and Houston Chapter Founding Member and Alumni

Community Outreach

Houston Livestock Show and Rodeo, Scholarship Administration Committee (SAC) member, 2025– present



Engineering Services

Integrity Management

Cassandra K. Moody, P.E. believes asset integrity management refers to more than the set of procedures, data, and assessment schedules relating to a collection of assets. Integrity management is a risk-informed philosophy to achieve safe and reliable operations of assets throughout their lifecycle while balancing the competing demands of revenue targets and compliance. Integrity management consulting services include:

- Written development of Integrity Management Programs (IMP) and asset-specific plans for liquid and gas assets as well as associated procedures and forms
- Performing hazard, threat, and risk assessment, especially when data limited
- Data collection, analysis, and management, including creative solutions to overcome data gaps
- Conducting pipeline and asset integrity inspections and assessments, including In-Line Inspections (ILI), hydrostatic pressure tests, and Direct Assessments (DA)
- Creative Engineering Critical Analysis (ECA) solutions
- Coordinating repairs from planning to commissioning
- Implementing and documenting risk-informed Preventative & Mitigative Measures (P&MM)
- Integrity Management Program (IMP) benchmarking to industry standards such as API 1160
- Extensive familiarity with industry standards and best practices including ASME B31.8S, ASME B31G, API 1160, NACE SP0102, and others incorporated by reference (IBR)

Expert Witness

Mrs. Moody offers expert witness services in pipeline safety, oil and gas operations, and mechanical engineering, distinguished by a foundation of practical, real-world experience. She excels at communicating intricate technical details in a clear and accessible manner, ensuring effective presentation of evidence. Key areas of proven experience and testimony include:

- Pipeline operational safety
- Oil and Gas safety for jobsites, worksites, project sites, facilities, processing, ROW, etc.
- Hazard analysis
- Welding and machine safety practices
- Contractor relationships
- Job Safety Assessments (JSA), and project planning/management documentation reviews
- Root Cause Analysis, failure investigations, etc.
- PHSMA and OSHA regulations and compliance
- API and ASME industry recommended practices

Implementations and Optimizations

Whether a new set of procedures, software, or principles of thought are at hand, Mrs. Moody is well suited to assist in driving change across organizations. With over a decade of experience in implementing new initiatives, processes, and software, her leadership, vision, and communication skills are proven assets to project success. Examples of recent implementation support:

- Integrity software evaluation and execution
- Training, communication, and implementation of new procedures from corporate to field personnel
- Creative solutions to increase Return on Investment (ROI)

Regulatory Compliance

Mrs. Moody has extensive knowledge of state, provincial, and federal regulatory agencies in the United States and Canada while being well-informed of new requirements. Regulatory compliance consulting services include:



- Ensuring compliance and audit support for Title 49 CFR Part 192, including all new mega-rule clauses, Title 49 CFR Part 195, Title 49 CFR Part 193, and CER Onshore Pipeline Regulations (SOR 99/294)
- Jurisdictional determinations, class location, and High Consequence Area (HCA) analysis
- Establish or validate Maximum (Allowable) Operating Pressures (M(A)OP)
- Perform program gap analyses
- Creative and proactive data management solutions

Project Management

When projects arise exceeding the capacity of current company resources, Cassandra Moody is nimble and eager to infuse our experience in order to ensure project success. From planning, executing, optimizing, and executing, Mrs. Moody has the technical competency with the critical communication and leadership skills to accomplish the task at hand. Project management consulting services include:

- Planning and execution for integrity-specific or general operations projects
- Evaluate, optimize, and implement decarbonization and emission reduction projects
- Acquisition, merger, or divestiture due diligence
- Incident, failure, and root-cause analysis
- Creation of corrosion control programs (monitoring, corrosion inhibition, biocide, pigging, etc.)
- Optimization, asset investment planning, budgeting, and forecasting