



MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP)

RCP has developed the most comprehensive MAOP analysis model on the market. Using this model, RCP has successfully conducted MAOP analysis for dozens of complex onshore / offshore gathering, transmission, and distribution pipeline systems.

PHMSA Advisory Bulletin ADB-11-01

PHMSA issued ADB-11-01 on January 4, 2011 entitled, *Pipeline Safety: Establishing Maximum Allowable Operating Pressure or Maximum Operating Pressure Using Record Evidence, and Integrity Management Risk Identification, Assessment, Prevention, and Mitigation*. The ADB states that, Operators:

- “must assure that the records used are reliable” when calculating MOP / MAOP.
- “These records shall be traceable, verifiable, and complete.”

Pipeline Safety, Regulatory Certainty, and Jobs Creation Act of 2011

The Act requires that gas transmission pipeline operators in class 3 & 4 and class 1 & 2 HCA locations verify that records accurately reflect the physical and operational characteristics of the pipeline and confirm whether the established MAOP is valid.

Changes to MAOP can have a direct impact to the bottom line. Many companies are finding that changes to the pipeline that occurred over years significantly impact the calculated MAOP value. RCP has experienced staff and the right tools to assist pipeline operators to efficiently manage MAOP, safety set point and associated data.

RCP is the unquestioned market leader providing MAOP Validation Services, including over 100,000 miles of gas and liquid pipeline analysis and support. Not only does RCP bring a wealth of experienced professional engineers and support staff, we have brought the most comprehensive and complete MAOP validation tool to the market, MaxOp®¹.

MAOP Validation Services

RCP has developed a turnkey process by which pipeline operating companies will have a traceable, verifiable and complete MAOP dataset. It starts with our MAOP document review services where RCP conducts detailed reviews of relevant MAOP documents, extracts the necessary data onto our MaxOp cover sheets and posts the data into the database for future dynamic segmentation and calculation.

Each document is digitized and posted to MaxOp, which creates a permanent link from the data set to the document image. Finally, once the document review is complete, MaxOp will dynamically segment any spatially related data and run the MAOP calculations.

The resulting values and data sets can then be exported to our customer’s in-house pipeline data set (ex. Excel, PODS, APDM, other). At the completion of this effort, the basis for an MAOP management of change has been established and our customers can be confident that their MAOP values are capable of being traced back to source documentation, the calculated values have been validated with the most comprehensive calculator tool on the market, and the MAOP values have been completely evaluated and any potential deficiencies identified.

¹ MaxOp® is protected by U.S. Patent Nos. 8,548,756, 8,548,757, and 8,548,758.



PROFESSIONAL ENGINEERS. REGULATORY EXPERTS. TRUSTED PARTNERS.

RCP is a registered professional engineering corporation with extensive experience in all types of pipeline risk management and regulatory compliance consulting. Our comprehensive range of services includes: integrity management, compliance assurance program, training, and risk management, as well as implementation assistance and ongoing, long-term support.

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Tulsa

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Introducing MaxOp^{®2}

RCP is extremely proud to announce the launch of a web-based version of our popular MAOP calculator model. Just like the model we built to conduct MAOP studies as a service, MaxOp[®] is the most comprehensive MAOP tool on the market. Through a secure web service, our customers can now push their MAOP data sets into RCP's MaxOp[®] tool, link documentation to MAOP algorithm variables, dynamically segment their data, run MAOP calculations, identify potential discrepancies between the established and calculated MAOP values, and export calculated data sets and customizable reports back to their own native data sets. The tool will accept common pipeline database formats, including Excel, PODS, APDM and others.

Applications MaxOp[®]

- MAOP studies (for individual or multiple systems)
- Conversion of service
- Uprate studies
- Class location studies
- GIS implementation

MaxOp[®]

- RCP can input the data including pressure test records, construction design records, and repair records to drive an accurate MAOP for your current system. MaxOp[®] can accept data from multiple input sources, including GIS (ex. ESRI PODS).
- MaxOp[®] allows operators to review the impact of proposed changes to the pipeline before they occur in a simulated format.
- Can be performed as a service with the results delivered on a system-by-system basis as well as detailed individual record MAOP reports that indicate the regulatory code citation or letter of interpretation that is driving the calculated MAOP value.
- MaxOp[®] can be licensed and configured to be run by your personnel using your in-house data sets.
- MaxOp[®] serves as an efficient tool to support both internal and external compliance audits. A detailed report can be produced in minutes that will include recent changes to the asset and the exact regulatory citation that is driving the MAOP.
- Instead of relying upon multiple people making independent interpretations of code, the MAOP will be calculated for every segment of pipe using the same algorithm. This brings consistency to the entire MAOP Process.
- The GIS system in league with the MaxOp[®] calculator becomes the central repository for all pipe related data including MAOP and MOP.



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