



## Integrity Management Program Summary

Kern River Gas Transmission Company has a strong tradition of providing reliable natural gas service while ensuring the safety of the public and employees and protecting the quality of the environment. Kern River is continuing this tradition with the implementation of its Integrity Management Program (IMP).

The IMP is required by the 2002 Pipeline Safety Improvement Act and U.S. Department of Transportation Office of Pipeline Safety regulations. Kern River developed its IMP to include some processes that have proven successful in the past and to address threats, risks and performance history specific to Kern River. The IMP was implemented in December 2004 as required by the Pipeline Safety Improvement Act. While the 2002 Pipeline Safety Improvement Act is directed at high consequence areas (areas where a pipeline failure would impact high population concentrations or buildings housing individuals with limited mobility), Kern River's program extends beyond the federal government requirements to ensure safety and reliability along all sections of the pipeline.

### **Kern River's IMP contains the following:**

- Data gathering, review and integration for integrity management must be of sufficient quantity, quality and reliability to provide an accurate summation of the pipeline infrastructure and its use. This procedure describes the process for gathering of data, including type, identification, resolution and location of resources. These data are then used to determine threats to the pipeline system.
- Identifying High Consequence Areas (HCAs) is completed annually in the fourth quarter by evaluating existing HCAs and researching and gathering data to identify new HCAs. This will be conducted in conjunction with the class location survey.
- Threat Evaluation is conducted by technical and location experts to identify any of the 22 possible standard threats that may impact each pipeline or pipeline segment.
- Risk Assessment is a key element and is a culmination of other processes within the overall program. The results of data gathering, threat assessment, previous integrity assessments, changes in procedures, remediation activities, system operational changes and maintenance activities are analyzed and the results are evaluated to develop relative risk rankings. The results also help determine where and what additional prevention and mitigation measures may be necessary to mitigate risk. Kern River's current process for conducting risk assessment involves the implementation of a relative risk ranking model, which is run annually.

- Preventive and Mitigative Measures are projects or activities specifically selected to address the threats and risks on the pipeline or pipeline segment. These measures are in addition to those required by code or other agreements.
- Integrity Assessment is the inspection of the physical system and the evaluation of the results. The integrity assessment method is selected based on the type of threats encountered to ensure proper assessment. Integrity assessments are periodic, which is addressed in reassessment. The following integrity assessment methods are allowed by regulations and have been or may be used by Kern River to assess the entire system as necessary – not just HCAs:
  - Pressure Testing – typically hydrostatic testing.
  - In-Line Inspection (ILI) – typically with geometry and magnetic flux leakage (MFL) tools.
  - Direct Assessment – for internal and external corrosion and stress corrosion cracking (SCC).

The current status of Kern River’s aggressive integrity assessment efforts can be found at [www.kernrivergas.com](http://www.kernrivergas.com) on the Safety and Damage Prevention/Integrity Management tab in the document titled “Kern River’s Integrity Management Program Performance Metrics.”
- Remediation is completed to repair any defects found that impair the safe operation of the pipeline. A more conservative repair criteria is used within HCAs to protect human life and property.
- Reassessment timing is based on the pipeline design and the results of the latest integrity assessment. Maximum established reassessment intervals are generally seven to ten years. An evaluation of program results is conducted to determine if reducing the reassessment interval is necessary.

**Additional IMP Elements Include:**

- A Management of Change Plan describing the mandatory requirements for documenting changes in system operations, system design, construction practices, maintenance practices and how information is recorded. The primary purpose of this is to ensure changes are documented in a format that will identify impacts to HCAs and allow for management of those changes to minimize risk.
- A Quality Control Plan documenting steps taken for maintaining the quality of the program and ensuring improvement on a continuing basis. The procedure that addresses quality control provides processes for program evaluation and the necessary documentation. In addition, it provides procedures for auditing the various parts of the plan.
- A Communications Plan developed to ensure the proper communication of the IMP and its objectives, as well as the results achieved, to involved parties. The involved parties include the Office of Pipeline Safety and other governmental and regulatory agencies, emergency responders, those who live and work along the pipeline, the general public and company personnel at all levels.
- Training and Qualification requirements outlining what level of training and qualification needs to be maintained by those involved with the IMP in order to assure program quality and consistency.

- Performance Measurement requiring performance metrics to be maintained. These metrics demonstrate how the IMP is working to allow for adjustments so improvement can be gained. Some performance measures are required to be submitted to the U.S. Department of Transportation Office of Pipeline Safety on an annual basis.

The entire IMP integrates with Kern River's existing Operating and Maintenance procedures resulting in an aggressive program to protect the safety of the public and personnel and to protect the environment.

If you have questions about the IMP, its implementation or results, please contact the Kern River Pipeline Safety Manager at 801-937-6000 or go to [www.kernrivergas.com](http://www.kernrivergas.com) and access the Safety and Damage Prevention/Integrity Management tab.