FREASE AND NICHOLS, INC. (FNI) PROVIDES comprehensive natural gas pipeline condition assessments, aerial and ground gas leak surveys, and annual patrols through a teaming arrangement with Imaging Atoms, Inc. Our team utilizes GIS/GPS mapping technology to provide gas pipeline owner-operators with accurate locations of natural gas pipelines and associated components.

Our team uses state-of-the-art military-grade analytical equipment to perform both aerial and ground leak detection.

Infrared optical gas imaging, tunable diode laser absorber spectroscopy and catalytic bead sensor detection equipment locates and identifies natural gas leaks that pose probable hazards to facility personnel and property.

Leaks are documented and survey images of leaks are recorded including GPS overlays with date and time of acquisition. These processes are fully compliant with 49 CFR Part 192 and U.S. Department of Transportation requirements as part of a Distribution Integrity Management Program.
COMPREHENSIVE NATURAL GAS PIPELINE CONDITION ASSESSMENTS

FNI utilizes existing facility mapping and service records to update the existing natural gas maps with pipeline material type, age and condition. We can provide simple CADD maps or more specific GIS/GPS mapping technology to upgrade the natural gas pipeline mapping. The assessment report incorporates physical observation and photo documentation of aboveground meters, regulators, valves and other appurtenances.

AERIAL AND GROUND GAS LEAK SURVEYS

Subconsultant Imaging Atoms surveys large facilities from helicopters (pictured above) to optically image gas leaks in the pipelines and appurtenances. The team uses an infrared FLIR camera to identify fugitive emissions. Ground surveys confirm the aerial identifications or, for smaller projects, serve as the primary leak detection method. A similar FLIR camera and other approved portable gas indicators and equipment, such as combustible gas indicators and flame ionization detectors, are used.

ANNUAL PATROLS

Annual monitoring of natural gas pipelines is required by the U.S. DOT Pipeline and Hazardous Materials Safety Administration. Our annual gas leak patrols use the same detection equipment as our aerial and ground surveys.

Often the local Gas Utility owns and operates natural gas pipelines; however, in many cases, private, military and other installations are considered owners-operators and may be required to comply with federal, state and/or local regulations regarding the maintenance of gas pipelines. Our team can develop a program for identifying and correcting gas leaks according to their hazard classification.

SERVICES AND CAPABILITIES

Freese and Nichols, Inc. is a professional consulting firm serving clients across the Southwest and Southeast United States. With sustainability in mind, Freese and Nichols plans, designs and manages infrastructure projects. It is the first engineering/architecture firm to receive the Malcolm Baldrige National Quality Award.

A surveyor uses portable combustible gas indicators to test a concrete manhole for gas leaks.