

When Did Pigs Become So Smart?

Pipelines generally are by far the safest, most reliable form of transportation; however, as with any form of transportation, there is a need to monitor and maintain the pipeline and its facilities.

The importance Iroquois places on safe operations and system reliability is reflected in the use of current technology – not only for our upgrades and expansions, but also in our ongoing integrity monitoring program. This program currently includes an annual walking inspection of the right-of-way, flyovers to detect any unusual activity, a periodic in-line inspection to detect damage or metal loss in the pipeline, and many other activities.

While we rely on our staff and contractors to detect abnormalities on our right-of-way – such as the detection of leaks, invasive species or third party disturbance – Iroquois has always utilized sophisticated tools to perform an internal inspection of the pipeline to detect abnormalities of

both the internal and external surfaces of the pipe. This is done with the assistance of a computerized tool commonly known in the natural gas industry as a “smart pig.” Launchers and receivers are strategically located along the pipeline to allow for the



Smart pig



Insertion of pig into launcher

insertion and extraction of these devices.

With both electronic and mechanical parts, a sealed computerized data module and several sensors, the “smart pig” collects data on the internal and external surface conditions as it is propelled inside the pipe by the flow of natural gas. The information is recorded, analyzed and reported by trained professionals to enable remedial action to be taken if needed.

This past June, Iroquois performed an in-line inspection on three segments of its 24” mainline: 1) Wright, NY to Pleasant Valley, NY; 2) Pleasant Valley to Milford, CT and 3) Milford to So. Commack, NY. This inspection indicated that the pipeline is free from any potentially significant deformations which could lead to an integrity issue. An inspection to detect metal loss in this same section of pipe is scheduled for 2010, and additional in-line inspections will be performed in accordance with our integrity plan.

Iroquois Commences Full-Scale Construction Activities

MarketAccess Project

With a targeted in-service date of November 1, 2008, construction of Iroquois’ *MarketAccess* facilities is in full swing. This expansion, designed to deliver additional transportation service to Consolidated Edison, includes the addition of cooling at our Dover, NY facility and the construction of a new compressor station with cooling in Brookfield, CT.

Construction of the Dover, NY cooling facility began this past January and remains on schedule. The cooler fans have been erected and installation of the underground piping is currently underway.

Iroquois expects to tie-in the coolers to the station in September. (See page 2 - *Compressor Venting*)

Construction of the Brookfield Compressor Station is also well underway. While site work began in early winter, a rainy spring and the discovery of a substantial number of buried tires during excavation caused some delay while the tires were properly disposed of and dirt was brought in to fill the area. Since purchasing this site, a former asphalt facility, Iroquois has worked diligently to improve and remediate the property to the satisfaction of the Connecticut Department of Environmental Protection.

At present, the foundations and slabs have been completed and structural work is in progress. The Solar T-60 turbine was delivered in June and has been set in place along with the cooler facility. Tie-in of this station to the mainline is scheduled to occur in September. (See page 2 - *Mainline Venting*)

08/09 Expansion Project

Following closely on the heels of *MarketAccess*, Iroquois’ *08/09 Expansion*, designed to serve KeySpan/National Grid, is also well underway. The *08/09 Expansion* is a three phase project with construction activities planned for the Connecticut towns of Newtown,

(continued)

Natural Gas Venting: What is it? Why is it important? How is it done?

In the natural gas industry, venting – commonly referred to as a blowdown – is the planned and controlled release of natural gas into the atmosphere. Venting, a normal part of the safe maintenance and operation of our system, ensures there is no gas present while work, such as welding, is being done. The venting process can be performed at valve sites located along the mainline, at a compressor facility or at a metering station.

Mainline Venting

For mainline venting, such as would be needed to make a repair or tie-in a new facility, several valves are closed to isolate a section of the pipeline and then a valve is opened to empty that section of the line. Since the gas is compressed at a very high pressure, a loud roaring noise occurs as the gas is vented through the opening. As this sound can be alarming if you are not aware of what is happening, Iroquois has developed a communication plan, as indicated below, for mainline venting.

Similar to letting air out of a tire, the most forceful and noisiest rush occurs at the beginning, and then gradually slows and quiets down. While the entire venting activity may take up to several hours to complete, the loudest

period typically occurs during the first 30-60 minutes of the vent. After the gas has been released, air movers are used to draw any remaining gas out of the line and displace it with air to ensure it is absolutely safe for work to begin.



Technician opens valve to start the venting.

Natural gas, which is odorless and lighter than air, rises into the atmosphere and dissipates quickly, even if it is not under pressure. However, mercaptan, an odorant added to Iroquois' southern section and typically added by local distribution companies for safety, may be detected by those in the immediate vicinity. Mercaptan is not harmful, but has an unpleasant smell similar to rotten eggs.

Upon completion of the scheduled work, the line is brought back into service by purging the air from the

pipeline and introducing gas back into the pipe. The air is purged through open valves until all the air has been displaced with gas and then any opened valves are closed and the line is pressurized back to normal operating pressure. Purging can produce some noise for a short time, but not to the extent of the gas vent.

Compressor/Meter Station Venting

Venting for planned maintenance activities at Iroquois' compressor and metering stations, in which only the gas contained within the piping of the facility needs to be removed, typically takes only a few minutes to complete.

Communication Plan

While we recognize that venting can be an inconvenience for our neighbors, we do everything possible to minimize the impact. For planned venting of our mainline, Iroquois initiates a communication plan well in advance of the scheduled vent date to notify nearby residents and local officials, and places notices in the local newspaper to inform the general public.

At Iroquois, the safety of our employees and the public is a priority. Immediately prior to performing a planned vent at any of our facilities, local emergency dispatch are always notified and Iroquois personnel always remain on-site during any venting operation to ensure that all safety precautions are taken.

For further information regarding venting, contact Ruth Parkins, Manager, Public Affairs, (203) 925-7209, ruth_parkins@iroquois.com

Construction Activities *(continued from page one)*

Milford and Brookfield. All necessary permits for the Milford Compressor Station and the 1.6-mile Newtown loop have been received and major construction activities have begun. Final permits for the addition of a second compressor unit with cooling at the Brookfield Compressor Station are anticipated by September 2008.

Having recently received approvals from the United States Army Corps of Engineers and the Connecticut Department of Environmental Protection, major construction activities in Newtown began in late July and the pipeline loop is on target for a November 1, 2008 in-service date.

In Milford, construction kicked off

in May with site clearing and grading. Building foundations have been set and Iroquois has taken delivery of the two T-70 Solar turbine units keeping us on schedule for a January 1, 2009 in-service date. Tie-in of this station to the mainline is also scheduled to occur in September. *(See Mainline Venting above)*

Anticipating a November 1, 2009 in-service date, full construction of the Brookfield second unit is not expected to begin until early 2009. However, preliminary activities may start later this year upon receipt of final permits.

Updates on these projects can also be found on our website www.iroquois.com or our landowner hotline 800-253-5152.

June 2008 Community Grant Recipients Announced

Schoharie Colonial Heritage Association
Schoharie County, NY
Preservation of historic railroad buildings

Naromi Land Trust
Fairfield County, CT
Development of a working community farm

Village of Cold Brook
Herkimer County
Improvements to playground and mini-park