

## ***E-Tech Involvement in the Camisea Natural Gas Project, Peru***

The Camisea Project is the largest natural gas project in the history of Peru. Project infrastructure is located in the biologically sensitive and diverse lower Urubamba area in the Amazon jungle in indigenous reserves. Two pipelines carry the natural gas and natural gas liquids (NGL) from this sensitive area in the jungle across the Andes to an NGL processing plant and marine terminal in Paracas on the Pacific coast. The marine terminal is near the only marine sanctuary in the country. There have been five pipeline breaks in the NGL pipeline since the project began operation in August 2004 – most pipelines last 40-50 years before a major break occurs.

The ruptures have caused ecological damage, injured community members in the lower Urubamba region, and shaken confidence in the physical integrity of the pipelines. These ruptures have also generated heated debate among the conservation community, local indigenous communities, the Inter-American Development Bank (IDB, a co-funder of the project), the Camisea Project consortium, and the government of Peru over what went wrong, who is responsible, and what must be done to fix the problems.

E-Tech International was asked to evaluate technical aspects and environmental impacts of the Camisea Project following a meeting of environmental groups (WWF, BIC, ED, FOE) in Washington, DC in October, 2003 when the project was still under construction. The IDB loan conditions included a provision for an independent environmental and social monitoring program to begin in August 2004, the date anticipated for project start-up. With support from Oxfam America in early 2004, our staff visited with members of Peruvian civil society, the Ministry of Energy and Mines, and other governmental and academic stakeholders in Peru, to define the substantive elements of the proposed monitoring program.

E-Tech developed the elements the monitoring program, based on discussions and input from stakeholders in Peru, and submitted the proposed program to these stakeholders and the IDB in June 2004. We received financial support from the Dutch foundation Hivos through the Peruvian organization Proyectos Lead for this portion of the work

E-Tech also analyzed in late 2004 the environmental impact statement prepared for the expansion of the Camisea production area from Block 88 into adjacent Lot 56. E-Tech proposed a far less invasive drilling technique, known as “extended reach drilling” and in common use around the world, be considered best practices for Block 56 to minimize the disturbance to indigenous populations living in the area.

The Camisea natural gas liquids pipeline ruptured for the first time in November 2004, three months after the pipeline became operational. By early 2005, E-Tech was analyzing potential causes of the pipeline breaks with assistance from anonymous pipeline safety experts and calling for complete hydrostatic testing of the entire pipeline. In the fall of 2005, after four ruptures had occurred in only fifteen months of operation, and no sign of any comprehensive action on the part of the Peruvian government or the

IDB to determine the cause of these ruptures, E-Tech hired – at our own expense – an experienced pipeline inspector, Carlos Salazar, to work with E-Tech Chief Engineer Bill Powers to assess the causes of these ruptures. Mr. Salazar had worked as an inspector on the Camisea Project for a year-and-a-half during pipeline construction, and had expressed interest in early 2004 in working with E-Tech on the independent monitoring program.

The E-Tech report on the pipeline ruptures, released in late February 2006, detailed the pipeline construction deficiencies that were the probable causes of the pipeline breaks, identified locations where faulty welding, inadequately installation, and unstable soil would likely result in future ruptures, and recommended specific measures for conducting an independent pipeline audit. Five days after the release of the report the fifth natural gas liquids pipeline rupture occurred (March 4, 2006) within a kilometer of one of the locations identified in the E-Tech report as a high risk location. The fire that followed the fifth rupture injured two members of the nearby community.

E-Tech laid-out the specifics of a comprehensive pipeline audit and the likely testing and repair costs for the natural gas liquids pipeline amidst a highly publicized furor over the next four months. The controversy surrounding the ruptures generated in part by the E-Tech report was a major issue in the 2006 Peruvian presidential and congressional elections.

The Peruvian congress established a special congressional committee to investigate the ruptures in April 2006 and veracity of claims by E-Tech other observers that of hurried and substandard construction by the Camisea consortium. E-Tech (Bill Powers) testified before the committee in Lima on May 9, 2006. The committee report, issued in late June 2006, reached the same conclusions as those identified in the E-Tech report on a number of key substantive issues (hurried construction, lack of adequate geotechnical analysis or erosion control, lack of adequate supervision, need to define scope and cost of repair project).

The selection of a pipeline auditor was suspended by the Ministry of Energy and Mines on July 12, 2006. This was an important development as the accelerated process being used by the Ministry to select an auditor lacked transparency and appeared to be an attempt to control the auditor selection by the same government officials that had failed to adequately supervise the construction of the pipelines. The postponement will allow incoming García administration to select the firm that will audit the pipelines and recommend repairs.