

7852.2900 OPERATION AND MAINTENANCE

Pipeline operations and maintenance are assumed to be in compliance with all applicable state and federal rules or regulations, unless determined otherwise by the state or federal agency having jurisdiction over the enforcement of such rules or regulations. For public information purposes, the applicant must provide a general description of the anticipated operation and maintenance practices planned for the proposed pipeline.

As a crude oil pipeline, EPND's design, construction, maintenance and operation functions are regulated by the U.S. Department of Transportation under Part 195 of Title 49 of the C.F.R., which governs Transportation of Hazardous Liquids by Pipeline. Oversight of EPND's operations is undertaken by the federal Pipeline and Hazardous Materials Safety Administration ("PMHSA") pursuant to the Hazardous Liquid Pipeline Safety Act, 49 U.S.C. 2001 et seq. EPND abides by all regulations issued by that agency. EPND also works directly with various regional, state, and local agencies, landowners, and other interested stakeholders to ensure its programs meet the needs of the community in which it operates.

The federal agency charged with enforcement of Part 195 is the U.S. Department of Transportation, PMHSA. In 1991, the Minnesota Office of Pipeline Safety ("MNOPS") was designated as an inspector on behalf of the PMHSA. Findings, reports, and recommendations from MNOPS inspectors are referred to the PMHSA for review and action.

In order to establish standards and guidelines for EPND's personnel, as well as to comply with Part 195 and other government regulations, EPND has developed comprehensive written procedures for the operation and maintenance of the pipeline. EPND's procedures and activities meet, and generally exceed, these government requirements. The following discussion provides a general overview of EPND's operation and maintenance practices.

Pipeline Control Center

The Project will be monitored by the EPND control center located in Estevan, Saskatchewan.

The Control Center is manned by pipeline operators 24-hours per day. A computerized pipeline control system allows these operators to remotely monitor and control the pipeline and related facilities. The Control Center also serves as an emergency response center to receive calls from employees, the public or public officials reporting unusual conditions or

pipeline failures.

The computerized pipeline control system has been designed to control the pipeline within pre-established minimum and maximum operating pressures. Both the computer system and operating practices include procedures for abnormal operating conditions, including emergency shutdown and isolation of the pipeline and notification procedures in the event of suspected emergencies.

In 2010, EPND developed a new Control Room Management plan based on the C.F.R. The plan was fully implemented by August 2012. EPND also revised and enhanced its procedures pertaining to decision making, handling pipeline startups and shutdowns, leak detection system alarms, communication protocols, and suspected column separations. EPND has enhanced its organizational structures to better support pipeline operators and workloads.

Pipeline Integrity and Reliability Program

EPND, understanding the risk of release associated with the volumes transported and the size of its lines, continues to be diligent in its program to ensure safety. Since 2010, Enbridge (inclusive of EPND) has:

- Heightened the importance of its pipeline and facility integrity program to assure broader company involvement and commitment to integrity management with new committees and planning processes focused on increasing planning and formalized issue resolution.
- Re-organized the functional areas responsible for pipeline and facility integrity, adding leadership and focused resources on traditional, new and emerging areas of pipeline integrity management, while also nearly doubling personnel dedicated to integrity management.
- Increased the number of in-line inspection programs and integrity digs (including excavation, examination, maintenance and repair by welded sleeve or pipe segment replacements) by more than 50% compared with pre-2010 levels. Additionally, the number of integrity digs more than doubled over that same time period. Pipeline integrity management spending was increased to over \$450 million in each of 2011 and 2012.
- Strengthened its focus on the tools, technologies and strategies needed to ensure that pipeline networks have the strength and operating fitness to perform safely, reliably and in an environmentally responsible manner.

- Revised and improved numerous procedures within its Integrity Management program. Specifically, process and procedure enhancements have been implemented to ensure that anomalies will be identified and repaired.

Enbridge (inclusive of EPND), and the industry as a whole, continues to improve accuracy of and develop new technology for pipeline integrity assessments. Enbridge (inclusive of EPND) has worked with the Association of Oil Pipelines and Pipeline Research Consortium International in launching further research to improve the ability of inspection tools to gather certain information from pipelines, and enhance techniques for pipeline operators to interpret information the tools collect.

EPND's operating and maintenance practices are aimed at preventing emergencies or releases from facilities at stations. However, it is imperative that EPND be prepared to respond to an emergency or release should one occur. In addition to the preventative activities described above, EPND's emergency response program has been prepared in compliance with PHMSA rules under 49 C.F.R. Part 194. The Emergency Response Plan has been approved by PHMSA and includes pre-planning, equipment staging, emergency notifications, and emergency and leak containment procedures.

Training

EPND has established and implemented a comprehensive orientation, technical, safety, emergency, and on-the-job training program that is in compliance with the Operator Qualification rules issued by the PHMSA under 49 C.F.R. Part 195. EPND personnel receive hundreds of hours of formal and on-the-job training as they progress in pipeline operation and maintenance positions. Demonstrations of competence are shown through a variety of measures that may include review of job performance, periodic use of pipeline control system simulators, emergency exercises, welding certification tests, and other functions required to continue safe pipeline and station facility operation and maintenance.

Public Outreach

EPND conducts a comprehensive public education program to ensure that the affected public (those who work and live along a pipeline), excavators, local public officials, and emergency units are aware of how to recognize and avoid or respond to a pipeline emergency. EPND has also been active at the local, county, and state level in emergency response planning and joint training and exercises to prepare all potential responders to deal with emergencies. The public awareness program includes liaison with

emergency responders in communities that host EPND station facilities. EPND also provides annual employee training for field employees to ensure they are prepared to work with the public and are effective in ensuring the public is aware of activities along the pipeline.

For the public's awareness of underground pipelines, the pipeline right-of-way is marked at all public road and railway crossings, at a minimum. Additional markings are posted at valves, other pipeline facilities, and stations along the pipeline route.

Right-of-Way Maintenance

Many other maintenance activities are performed on the pipelines and related facilities. EPND has a comprehensive preventative maintenance program that meets and, in many cases exceeds, federal safety standards set forth in 49 C.F.R. Part 195. Comprehensive standards for the design and installation of new or replacement facilities are provided in both EPND procedure manuals and contract specifications. Repair pipe is pre-tested and other components used to repair the pipelines meet national standards and all applicable regulatory requirements. Other activities, such as welding procedures, movement of the pipe, coating repair, corrosion control, and tank maintenance are all guided by written procedures which have been reviewed by the Federal and MNOPS inspectors.