



AN ORDER RESPECTING CROSSING OF UTILITIES BY PIPELINES

IN THE MATTER OF the National Energy Board Act (hereinafter referred to as "the Act") and the Regulations made thereunder; and

IN THE MATTER OF General Order No. 1 issued by the National Energy Board (hereinafter referred to as "the Board") on 21 July 1961 and amended on 14 December 1978.

B E F O R E the Board on 28 July 1988.

IT IS ORDERED THAT, pursuant to section 17 of the Act, General Order No. 1, as amended, is further amended by deleting paragraph 3 and substituting the following:

"3. Leave of the Board, granted under Section 76 of the National Energy Board Act prior to the Onshore Pipeline Regulations coming into force, shall be deemed to be leave upon the conditions hereinafter set forth, which conditions shall be deemed to be included in any such Order without specific reference thereto, subject, however, to such change or variation as may have been set forth in such Order."

AND IT IS FURTHER ORDERED THAT, pursuant to subsection 76(5) of the Act, leave of the Board shall not be required to carry a pipeline across a utility if the pipeline company has obtained the written consent of the owner or authority having control over the utility and if the crossing is constructed in accordance with the applicable terms and conditions of the Onshore Pipeline Regulations.

NATIONAL ENERGY BOARD

J.S. Klenavic
Secretary

GENERAL ORDER NO. 1 RESPECTING STANDARD CONDITIONS

FOR CROSSINGS BY PIPELINES

Short Title

1. This Order may be cited as General Order No. 1.

Before the Board on Thursday, the 14th day of December, 1978.

Pursuant to the powers vested in the Board by the National Energy Board Act,

IT IS ORDERED THAT:

2. The conditions hereinafter set forth be and they are hereby made and adopted respecting the construction of a pipeline across any highway or irrigation ditch or an underground telegraph or telephone line or a line for the transmission of hydrocarbons, power or any other substance, in place and instead of the conditions set forth in General Order No. 1 issued by the Board on the 21st day of July 1961 and which is hereby revoked, except for applications made pursuant to section 76 which are received by the National Energy Board on or before the 1st day of January 1979.

3. Every Order of the Board granting leave under Section 76 of the National Energy Board Act shall be deemed to be leave upon the conditions hereinafter set forth, which conditions shall be deemed to be included in any such Order without specific reference thereto, subject, however, to such change or variation therein as may be set forth in such Order.

Interpretation

4. In this Order,

- (a) "Board" means the National Energy Board;
- (b) "highway" includes any public road, road allowance, street, lane or other public way;
- (c) "pipeline" means a line for the transmission of gas or oil connecting a province with any other or others of the provinces, or extending beyond the limits of a province, and includes all branches, extensions, tanks, reservoirs, storage facilities, pumps, racks, compressors, loading facilities, interstation systems of communication by telephone, telegraph or radio, and real and personal property and works connected therewith; and

- (d) "utility" means an irrigation ditch or an underground telegraph or telephone line or a line for the transmission of hydrocarbons, power or any other substance.

APPLICATIONS

5. Before constructing a pipeline across any highway or utility, the party proposing to do so (hereinafter called "the Applicant") shall apply to the Board for leave to carry the pipeline across such highway or utility and, upon such application, unless exempted by the Board, shall file

- (a) a description of the location of the proposed crossing including a geographical reference sufficiently detailed so that the crossing can be located on a map, and
- (b) four sets of a combined drawing of the proposed crossing, which shall include
 - (i) a location plan having a scale of 1:10 000 or other approved scale, which shall show clearly the location described in paragraph (a), the angle of the crossing and, in surveyed territory, the distance from the crossing to the nearest lot or section line measured along the centre line of the pipe or, in unsurveyed territory, the distance from the crossing to the nearest major physical feature such as a river, highway, etc., measured along the said centre line;
 - (ii) a plan having a scale of 1:1 000 or less showing all details pertinent to the crossing which shall, without limiting the generality of the foregoing, include, except in the case of overhead wire crossings, the anticipated maximum working pressure, the field test pressure and the mill test pressure of both the crossed and crossing carrier pipe or pipes together with specifications including the wall thickness and outside diameter of the carrier and casing pipe, and in the case of highway and private road crossings, the maximum wheel load allowed by the relevant authority;

(iii) detailed and dimensioned drawings of the longitudinal profiles along the centre lines of the pipelines and along the centre line of the highway, private road, railway or utility and a cross-section of the highway, private road, railway or utility at the intersection of the centre line of the highway, private road, railway or utility and of the centre line of the pipeline right-of-way, all having a scale of

1:200 horizontal 1:100 vertical, and

the drawings shall show all clearances in respect to the line or lines of the Company at the crossing.

6. The Applicant shall serve a true copy of the application and, unless exempted by the Board, a true copy of the combined crossing drawing upon the authority having control over the highway or utility to be crossed or to the owner of such utility as the case may be. Unless otherwise directed by the Board, the service required by this section may be made by prepaid registered post.

7. Any dispute between the parties as to the application of these conditions in a particular case, may be referred in writing by either party to the Chief Engineer of the Board, or to the person acting as such, whose decision may within sixteen (16) days after the date of making thereof be appealed to the Board.

CONDITIONS

Crossings of Highways and Utilities by a Pipeline

8. The following general conditions shall apply to all crossings of highways or utilities by a pipeline:

- (1) (a) In the case of both oil and gas pipelines, the carrier pipe of the pipeline at any crossing shall be made of steel or wrought iron and except as otherwise provided herein, conform with the respective specifications and requirements of the current CSA standard Z 183 and CSA standard Z 184.
- (b) The carrier pipe under highways shall in all cases be of sufficient strength to withstand safely all stresses and strains resulting from its locations and the operating conditions of the pipeline and, unless the Board approves a lesser width, shall extend at that strength, the full width of the existing right-of-way.

- (2) Pipelines shall be located so as to cross all highways at an angle as close as practicable to ninety (90) degrees but not less than forty-five (45) degrees unless otherwise permitted by the Board.
- (3) If the Applicant's pipeline at a crossing is to be placed under cathodic protection, the Applicant shall so notify in writing the authority having control over the highway or utility including structures adjacent thereto or the owners of such utilities including structures adjacent thereto, as the case may be, which may be affected by such cathodic protection so that concurrent tests may be made and remedial measures, where necessary, agreed upon.
- (4) The pipeline at all crossings, except crossings of overhead telephone, telegraph or power lines, shall be identified by markers approved by the Board. Such markers shall be placed whenever possible approximately on the limits of the highway or utility right-of-way at the crossing or at such other place as may be approved by the Board.
- (5) The Applicant's pipeline shall cross under any underground utilities unless otherwise approved by the Board and a clearance of not less than 0.3 m shall be maintained at the point of crossing between the pipeline and all underground utilities or structures.
- (6) The top of the carrier or casing pipe where casing is required shall be not less than 1.3 m below the travelled surface of the highway nor less than 0.8 m below the surveyed or planned elevation of the bottom of the highway ditches and the pipeline shall be located so that it will not obstruct drainage nor interfere with highway traffic or maintenance; provided that where it is not practicable to secure the required depth, special construction shall be necessary, which construction shall be subject to the approval of the Board.
- (7) The construction of the pipeline shall be carried out in a good and workmanlike manner as quickly as possible and with due precautions for the safety and convenience of the public.

- (8) All work in connection with the construction, maintenance, renewal and repair of the pipeline, and the continuing supervision of the same, shall be performed by the Applicant and, unless the renewal or repair is made necessary by reason of the negligence of others, all costs and expenses of such work shall be borne and paid by the Applicant, and no work at any time shall be done in such manner as unduly to interfere with, obstruct, delay or interrupt the operation of any highway or utility.
- (9) The Applicant shall at all times maintain the pipeline in good working order and condition, so that no damage is caused to any highway or utility, nor their usefulness or safety impaired, nor the full use and enjoyment thereof in any way interfered with.
- (10) Before any work of constructing, renewing or repairing the pipeline is begun, the Applicant shall give to the authority having control over the highway or utility, or to the owner of the utility, as the case may be, at least 48 hours notice thereof in writing; provided that in an emergency, the work of repairing the pipeline may be begun without giving notice, but in such case, notice shall be given so soon thereafter as is reasonably possible in order that in every case, the authority having control over the highway or utility, or the owner of the utility, as the case may be, may appoint an Inspector to ensure that the work is performed in a satisfactory manner.
- (11) The amount of the wages and expenses of an Inspector appointed under subsection (10) hereof shall be paid by the Applicant upon receipt from the said authority or said owner whose highway or utility is being crossed of a statement showing in reasonable detail the particulars of such wages and expenses.

9. The following particular conditions shall also apply to the crossing by a pipeline of important highways, designated as such by the appropriate highway authority:

- (1) All pressurized welds other than factory welds of the carrier pipe between the highway right-of-way limits shall be X-rayed or tested by other equally acceptable methods before the pipe is installed in the casing.

- (2) The carrier pipe shall be encased in a metal casing pipe or conduit of sufficient strength to withstand safely all stresses and strains resulting from its location and the operating conditions of the pipeline and, unless the Board approves a lesser width, the casing pipe or conduit shall extend at that strength for the full width of the existing highway right-of-way.
- (3) Before encasement, the carrier pipe shall be coated and wrapped in accordance with normally accepted practice designed to provide proper corrosion protection for the said carrier pipe.
- (4) The ends of the casing pipe shall be properly sealed to the outside of the carrier pipe and the annular space between the pipes shall be properly vented above the ground with vent pipes not less than 50 mm in diameter and extending not less than 1.3 m above the ground surface.
- (5) Vent pipes shall be
 - (a) located on each side of the existing highway right-of-way approximately on the limits thereof;
 - (b) connected with the casing pipe approximately 0.3 m from the ends thereof;
 - (c) fitted at the top with a screened turn-down elbow or other screened capping device as approved by the Board; and
 - (d) identified by markers approved by the Board.
- (6) The casing pipe shall be of sufficient size to permit the installation of the carrier pipe therein without damage to the said carrier pipe, its coating or its wrapping.
- (7) (a) Where the diameter of the carrier pipe is less than 150 mm, the nominal outside diameter of the casing pipe shall be at least 50 mm greater than the nominal outside diameter of the carrier pipe, joints or couplings; and, where the diameter of the carrier pipe is 150 mm or more, the nominal outside diameter of the casing pipe shall be at least 100 mm greater than the said diameter of the carrier pipe, joints or couplings.

- (b) The clearance between the carrier and casing pipes shall, in all cases, be sufficient to permit the carrier pipe to be removed without disturbing the casing pipe or the structure of the highway crossed.
 - (c) The casing pipe shall be installed with an even bearing throughout its length in such a manner as to prevent formation of a waterway along it and shall be constructed so as to prevent leakage of any matter from the casing throughout the entire length thereof except through vent pipes.
 - (d) Carrier pipes having a diameter of 75 mm or more shall be held clear of the casing pipe by properly designed supports, insulators or centering devices so installed that no loads from the roadbed or traffic will be transmitted to the carrier pipe.
 - (e) The carrier pipe shall be installed so that it is centered within the casing and it shall be properly electrically insulated from the said casing.
- (8) The Applicant shall provide additional cathodic protection at the crossing if tests made by it indicate that such additional protection is required due to electrical contact between the casing and carrier pipe or other causes.
- (9) Where the open trench method of construction is used, suitable backfill shall be properly compacted in layers in order that lateral resistance may be maintained against the pipe or casing walls.
- (10) The Board may exempt an Applicant from compliance with all or any of the provisions of this Order respecting the use of casing pipes and may approve the construction of uncased crossings upon submission by the Applicant of such proper plans, details and specifications as the Board may order.

INDEMNITY

10. The Applicant, shall, from time to time and at all times hereafter, well and truly save, defend and keep harmless and fully indemnify the authority having control over the highway or utility or the owner, from time to time, of the utility, as the case may be, from and against all loss, costs, damage, injury and expense

to which the said authority or owner may at any time or times hereafter be put by reason of any damage or injury to persons or property caused by the construction, maintenance or operation of the Applicant's pipeline, as well as against any damage or injury resulting from the negligence, imprudence, neglect or want of skill of the employees or agents of the Applicant in connection with the construction, maintenance, operation, renewal or repair of the said Applicant's pipeline, unless the cause of such loss, cost, damage, injury or expense can be traced elsewhere.