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May 18, 2011

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BY EMAIL AND COURIER

Ontario Energy Board
P.O. Box 2319
27th Floor
2300 Yonge Street
Toronto, ON M4P 1E4

Attention: Kirsten Walli, Board Secretary

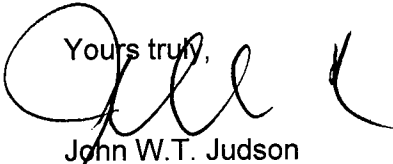
Dear Ms Walli:

Re: Union Gas Limited - London Reinforcement Project
County of Middlesex
Board File: EB-2010-0381

Please be advised that I am retained by the County of Middlesex to represent it in its intervention in this proceeding.

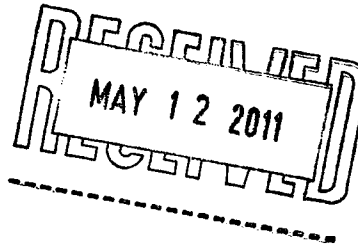
I wish to give notice that at the oral hearing scheduled for Tuesday, May 24, 2011, I will be calling the evidence of Antony Fediw, P.Eng., Manager of Transportation, AECOM Canada Ltd., and seeking leave to file his report, dated May 10, 2011, a copy of which is enclosed (attachments to follow by courier).

Yours truly,



John W.T. Judson
JWTJ/ dcv
Encl.

cc: Pat McNally, GM, Environmental and Engineering Services, City of London
cc: George Vegh, McCarthy Tetrault, counsel for Union Gas
cc: Ian Goudy and Goudy Farms Inc.
cc: C. Harold Jackson (GAPLO-Union (LRP))
cc: Chris Traini, County of Middlesex



May 10, 2011

Mr. Chris Traini
County of Middlesex
399 Ridout Street
London, ON N6A 2P1

Regarding: Review and comment on the London North Reinforcement Project Environmental Report Prepared for Union Gas, Prepared by Azimuth Environmental Consulting Inc. December 2010

Dear Mr. Traini:

AECOM was retained by the County of Middlesex to review and comment on the London North Reinforcement Project Environmental Report Prepared for Union Gas, Prepared by Azimuth Environmental Consulting Inc. December 2010, previously referred to as the Environmental Study Report (ESR).

The ESR was reviewed and compared for consistency with the Environmental Guidelines for the Location, Construction and Operations of Hydrocarbon Pipelines and Facilities in Ontario, 5th Edition May 2003, Published by the Ontario Energy Board.

Since the preparation of this report (December 2010), a 6th Edition of the Environmental Guidelines for the location, construction and operation of hydrocarbon pipelines and facilities in Ontario has been published and taken effect in January 2011.

To be consistent with the bounds of the original report the 5th Edition was used to compare the ESR to the OEB Guidelines.

Changes have been made in the new edition. An exhaustive comparison of the two editions has not been carried out. However, the general guiding principles seem to remain similar to the 5th Edition.

This review is laid out in the same order as the Ontario Energy Board (OEB document), and pulls references directly from the source document text for comparison purposes. All OEB quotes appear in an underlined italic font, All ESR quotes appear in italics only. Additional reference is made to the Municipal Franchises Act R.S.O. 1990, CHAPTER M.55 Consolidation Period: From August 1, 2003 these are displayed with italic text.

Our comments inserted to compare in normal text with summaries of significant issues appear with yellow highlighting for future references.

In my opinion, the ESR does not give significant detail or background technical information to support the conclusion that the preferred alternative is the best route. This lack of information then brings the public consultation process into question. Simply put, if the details are to be worked out later then what have agencies and the public been told?

The basic issues are:

- The technical support for the project, i.e., the "project need" or "problem statement", could have been.

"There is a technical need to deliver more natural gas to the London pressure system."

This was not explicitly noted. Without any technical context the reader is led to believe that the area of study is limited to between Ten Mile Road and Fanshawe Park Road. The reason for these terminus points is not defined. If a technical rationale requires these points, the reasons should be stated in the ESR. The only mention of this process is a statement that "Union Gas engineering staff reviewed the preferred alignment to ensure they are technical acceptable" (Note grammatical issue with tense in source document).

- Following on from this, the City of London is approximately 20 – 23 km wide in geo-political boundary from east to west. The Study Area represents (Wonderland Road to Richmond Street) a width of approximately 2.5 km of the width, approximately 10% of the possible connectivity between two parallel pipe conduits (shown on the maps provided in the ESR). Assuming that the approach would be limited to only a perpendicular or north/south routing then there is an elimination of 90% of alternatives. This reduction in potential Study Area was not well defined in the ESR. In my opinion, it potentially represents pre-judging a solution to a narrow band of geographical area.
- Significant existing utility easements that cross through the limited Study Area defined in the ESR have been ignored for use. The Lake Huron Water Pipeline easement and the redundant (not in current use) Imperial Oil easement running along Sunningdale Road deserve mention in the report as to their potential usage.
- The impact of work is not provided in sufficient detail, limiting impact of a large excavation to the road right-of way would not be suitable for the installation of that very same road. Specifically, impacts on adjacent streams need to be mentioned in a holistic manner in order to provide direction for protection of lands and features off of the right of way during installation activity.

Stating that "No habitat for Species At Risk exist within the municipal road allowances" does not mean that Species At Risk will not be affected by the project. Connectivity of habitat may be an issue.

Additionally, the use of standard erosion control measures may not address the timing of migration of SAR.

Significant future costs associated with road widening and reconstruction may be encountered by the City of London, and the County of Middlesex due to the existence of the pipeline. Additionally, other utilities may be affected by the pipeline.

- The impact of the project on the socio-economic environment, particularly limits for potential development do not appear to have been adequately addressed. The report states that the works are not in conflict with the Official Plan of Middlesex County. This may be a true statement but does not address the potential impact of a pipeline on any desired future developments. An example of typical limitations for setbacks is provided.

1. Introduction (Section 1.1 of the OEB document)

The OEB document is not a statutory regulation or a code. It is a guideline as to best practices that shall be considered when making an application to the OEB.

Practices mentioned in the OEB document are suggested minimums and the applicant is advised that each project will likely require more detailed information, public consultation and consideration as it progresses through the planning stages.

The guideline is intended to be used to guide for the construction and expansion of hydrocarbon pipelines that are placed in new locations, or are larger in size.

2. Limitations of the OEB Document and Process (Section 1.1 of the OEB document)

From the OEB document:

The Guidelines do not cover distribution system expansions that require only a Certificate of Public Convenience and Necessity or a Franchise Agreement in accordance with sections 8, 9 and 10 of the Municipal Franchises Act, 1990, c. M 55 ("Municipal Franchises Act"). These projects shall be planned and assessed in accordance with the environmental screening principles as directed in the Board's "E.B.O. 188 Natural Gas System Expansion Report", January 30, 1998 (E.B.O. 188).

From the Municipal Franchises Act R.S.O. 1990, CHAPTER M.55 Consolidation Period: From August 1, 2003

Exceptions:

6. (1) Except where otherwise expressly provided, this Act does not apply to a by-law,

works originating in another municipality

- (a) granting the right of passing through the municipality for the purpose of continuing a line, work or system that is intended to be operated in or for the benefit of another municipality and is not used or operated in the municipality for any other purpose except that of supplying gas in a municipality to persons whose land abuts on a highway along or across which the same is carried or conveyed, or to persons whose land lies within such limits as the council by by-law passed from time to time determines should be supplied with any of such services;

Comment 1

The ESR executive summary notes that the purpose of the project is to supply residential and commercial growth within the London area. No mention of benefit of the pipe is mentioned for those abutting the pipe in Middlesex County. Given that the growth anticipated is within the City of London Exception 6.1(a) seems to apply.

On Page 4 of the ESR it is noted

The northern boundary is in proximity to Ten Mile Road. The existing pipeline that will provide the source for the natural gas for the new pipeline is located within the road allowance of Ten Mile Road

The southern boundary is defined by Fanshawe Park Road. An existing natural gas distribution pipeline along is to be used to distribute the natural gas to the customer base in the City of London

On Page 12 of the ESR it is noted

The opportunity to service adjacent rural residences was not a factor in route selection as there was no concentrations of rural residents along the concession roads that provided a significant benefit.

On Page 31 of the ESR it is noted

Reinforcing the natural gas supply within the City of London will support continued growth within the urban area, resulting in a positive socioeconomic affect on the community.

These statements reinforce the position that this pipe line is not a “need” for distribution within Middlesex County.

Thus, limiting the application of the Franchise Agreement as noted in section 6 above the route and requiring the application of the process outlined in the Environmental Guidelines for the Location, Construction and Operations of Hydrocarbon Pipelines and Facilities in Ontario, Fifth Edition May 2003 , Published by the Ontario Energy

3. Exemptions of the OEB Document and Process (Section 1.7 of the OEB document)

From the OEB document:

1.7 Exemptions

Pursuant to section 95 of the Act, the Board may exempt a hydrocarbon transmission pipeline and ancillary facilities from a hearing if it is of the opinion that special circumstances exist which warrant such exemption. The applicant must submit a request for an exemption. The request should include a description of the special circumstances that warrant an exemption. An ER should be submitted for review by the OPCC, consistent with the required contents of the report as described in these Guidelines. The level of detail in the ER should reflect the environmental issues or concerns encountered on the project.

It is expected that exemption applications will be filed only for projects with minor environmental impacts. Nonetheless, all projects, even these applying for exemption are subject to environmental review by the OPCC and the review and time allocated for the review by the OPCC are the same (i.e. 42 days) for all projects.

Comment 2

The ESR notes two creeks that pass through the Study Area, reporting on potential species in the general Study Area, but identifying that these species are not identified with in the roads allowance in the Study Area. No Inventory is provided adjacent to the road allowance.

The perceived inference being that all impacts of construction can be contained within the road allowance. This seems to not meet the intent of the OEB document. Two quotes are provided for illustration.

The Board expects an applicant to comply with these Guidelines before, during and after construction. Applicants are advised that the fact that construction will be located entirely on existing right-of-way ("ROW") may not be sufficient rationale for non-compliance with these Guidelines.

Page 2, OEB Document

Impact mitigation is the subject of Chapter 5. It describes mitigation measures to be applied for the reduction and management of construction impacts on the biophysical and socio-economic environment. This chapter calls for site specific plans and larger scale mapping for environmentally sensitive areas. It also provides the details to be included in the construction schedule and addresses safety considerations, including contingency plans in the event of accidental spills.

Comment 3

Impact of work undertaken on road allowance, may affect biophysical environments on adjacent property. Noting that the Medway Creek is a sensitive environment little consideration has been given to the use of the ROW for migration of SAR.

4. Delineation of the Study Area (Section 2 of the OEB document)

From the OEB document, Page 13

Chart 1 - Major Steps in Selecting a Preferred Route or Site

- Describe the rationale in support of the delineation of the Study Area.
- Establish criteria for the identification of the alternatives on a constraints map.
- Identify all reasonable alternative routes/sites based on the consistent application of the criteria.
- Predict the potential environmental impacts expected to occur during the construction and operation of the project, including any biophysical, socioeconomic and cumulative impacts.
- Describe all reasonable mitigation/enhancement measures and the residual or net impacts which are expected to remain after the mitigation/enhancement measures have been applied.
- Establish criteria for the evaluation of the alternative routes/sites.
- Evaluate the alternatives based on the application of the criteria.
- Describe the results of the evaluation process.
- Describe the rationale in support of the preferred route/site.

On Page 4 the ESR states that:

- *The Study Area limits should encompass reasonable opportunities for route selection without unduly increasing the community disruption or number of affected property owners.*

Further on it states:

The northern boundary is in proximity to Ten Mile Road. The existing pipeline that will provide the source for the natural gas for the new pipeline is located within the road allowance of Ten Mile Road

The southern boundary is defined by Fanshawe Park Road. An existing natural gas distribution pipeline along is to be used to distribute the natural gas to the customer base in the City of London

The easterly boundary is located along Highway 4 / Richmond Street. There is limited practicality looking for alignments further to the east of Highway 4/ Richmond Street

The westerly Study Area limit was located along Wonderland Road.

Comment 4

Given that the objective is “how to get gas from Ten Mile Road to Fanshawe Park Road the Study Area to be very small. Figure 3 in the report clearly shows two parallel gas mains running along Ten Mile and Fanshawe Park Road.

Expanding the area westward has been ruled out without clear rationale, lands further east and west were due for consideration as what was effectively studied was two parallel routes, Adelaide Street and Hyde Park Road appear to be as suitable as the routes selected. If pipeline operations are an issue that prevented these routes then that criteria should have been defined in the screening document.

Equally, the rationale as to why the pipe had to link with Fanshawe Park Road and not Sunningdale Road was not covered

5. General Planning Principles and Procedures for Route or Site Selection (Section 2 of the OEB document)

From the OEB document

Chart 1, on the following page, outlines the major planning steps in choosing a preferred route, site or system plan. The ER should contain a description of the planning process that was followed including the consultative process. The planning process should be traceable, replicable and rational.

In following the planning steps, the applicant must identify a Study Area and provide the rationale for the choice. Applicants are expected to identify all reasonable alternatives within the Study Area and to compare their socio-economic and biophysical impacts systematically and consistently using appropriate impact prediction techniques and methods for evaluating alternatives

Criteria for identifying and evaluating the alternatives should be established at the outset of the study. However, the criteria may evolve as planning progresses. The relative importance and the rationale for each criterion should be described. The ER should note whether each criterion is to be treated as a constraint or as a comparative criterion. The manner in which the criteria are to be used should be clear and traceable.

The ESR lists reasons for the selection of the Preferred Route in Section 5.5 on Page 17 as being

5.5 Based on the aforementioned comparison Wonderland Road was selected as the preferred route (see Figures 4&5) for the following reasons:

- *Optimizes the use of road allowances;*
- *Provides the shortest route to the existing natural gas distribution system along Fanshawe park Road;*
- *Minimizes the number of adjacent residences potentially impacted by construction in the work area;*
- *Complies with the comments and recommendations of the Municipality of Middlesex Centre and the indirectly affected public;*
- *Crosses watercourses within the existing maintained road allowances and:*

- *Shortest length with limited potential for cost or engineering concerns*

Reviewing these reasons for selecting the proposed route the following questions become apparent.

- Why was Nine Mile Road not studied or Medway Road appear to be geometrically as feasible as the two alternatives.
- One obvious route would have been along the existing water pipeline easement. This would score higher on 4 of the 6 above criteria. Of course the first criteria does not fit as these are not on road right of ways. (suggests an element of pre-judging in the criteria).
- Additionally, an unused petro carbon easement already exists along Sunningdale Road. This could have been an excellent candidate for a new easement
- The desire to link into the existing system at Fanshawe Park Road was not well developed as gas service is available North of Fanshawe Park Road
- Table 2: Alternative Route Evaluation and Comparison, notes that an opportunity to use the road allowance will avoid creation of additional; severances. It falls to note that the Right of Way is not at a continuous width along the road and changes in standard location will be required to avoid land acquisition. This may impact future utility, or sewer routing, and be problematic for road rehabilitation and or drainage projects. This may have a negative economical impact on the County and/or City
- Page 27 of ESR states

Discussions will be held with County of Middlesex and City of London engineering staff to confirm the appropriate location for the pipeline within the road allowance in order to avoid any potential disruption to future road improvements or construction

Comment 5

This consultation should have been part of the process of this undertaking, and not left as a follow up activity.

- Page 31 of ESR states

Restoration of the road allowance surface drainage and revegetation will return the area to its pre-construction condition.

Comment 6

This restoration does not speak to potential conflicts in the right of way for future road widening or related drainage needs.

6. Public consultation(Section 3 of the OEB document)

Generally, the ESR document details the public and agency liaison in a manner that is consistent with the OEB guideline. However the document does not provide enough detail for affected parties to determine the impact upon their interests.

3.3 Affected Parties

Landowners whose property will be encroached upon by pipeline, station or well drilling construction, are directly affected by the disturbances created by construction, operation and maintenance of pipelines and related facilities. Consequently, their involvement in the planning of the route or site on their property is essential. Such persons are referred to as "directly affected landowners".

Landowner interviews are an important source of information to be used to "fine-tune" the preferred route or site selection. Directly affected landowners must have an opportunity to suggest route or site alternatives on their property. Existing features or planned modifications to their property may warrant deviation from the preferred route or site. Any changes in the preferred location resulting from landowner interviews, as well as the rationale for the changes, should be described in the ER

Page 18 of the OBE document

Individual interviews with directly affected landowners or their representatives should be carried out. At the interview, the landowner must be shown a map of the proposed route or site on the property and a proposed construction schedule.

Landowner interviews should address:

(a) existing and planned features (wells, buildings, subsurface drainage tiles, cropping systems, special agricultural enterprises, woodlot management plans, etc.);

features of cultural, historic or environmental significance;

(c) siting or routing preference, including mitigation and monitoring measures;

(d) potential access routes to the easement;

(e) concerns regarding previous pipeline or station construction;

(f) current farm or business operations including conservation practices;

(g) the number of occupants and any particular sensitivities those occupants may have to construction impacts such as noise and/or dust; and,

(h) any potential restrictions on the location of planned buildings or structures

It is unclear to what level of detail this was undertaken and the effectiveness if details are not provided in the ESR.

The ESR notes that

The City of London has indicated concern with the use of the Wonderland Road alignment due to the number of existing underground services in the proximity to the Wonderland / Fanshawe Park roads which are planned for 4 lane widenings. The City is willing to work with Union Gas to resolve this issue.

Comment 7

The ESR does not appear to currently accurately scope impacts on adjacent utilities and road design limitations. Any related economic impact may be then underestimated.

7. Land Use Planning (Section 4 of the OEB document)

The placement of a Hydrocarbon pipeline can have significant impact upon adjacent development. In Section 7.4 Page 27 the ESR notes that the preferred route does not conflict with the Official Plans of the City of London, Municipality of Middlesex Centre or the County of Middlesex, and that utilities are permitted though out the Study Area. The question is not about the overall permissive clauses for utilities but rather the potential impact on future development.

The ESR should have reviewed the socio-economic impact the proximity of a large distribution pipe could have on adjacent development. An example of such setbacks is appended below.

Table 1 presents a sample of some setbacks for different types of gas pipelines and population types. It is based on Dr. Charles Rhodes' "Rs" minimum safety setback⁸, the California risk documents¹⁰⁻¹¹, and the Province of Alberta's directive for setbacks. Distances may be adjusted by rural municipalities if the limited resources for emergency management warrant up-sizing the setbacks (calculations are expanded in Tables 2-5 following the population definitions).

TABLE 1
EXAMPLES OF SETBACKS BASED ON
"RHODES Rs" AND POPULATIONS
TYPE OF DEVELOPMENT

Type of gas pipeline	Population 1 Individual Residences & Farms	Population 2 Unrestricted Country Development	Population 3 Public Facility	Population 4 Private Facility	Population 5 Urban Centre
Distribution pipeline (typically "local" distribution systems) 101.6 mm (4 in) in diameter & 10 psi	Right-of-way of pipeline (if any)	Right-of-way of pipeline (if any)	Right-of-way of pipeline (if any)	Right-of-way of pipeline (if any)	Right-of-way of pipeline (if any)
Distribution pipeline 152.4 mm (6 in diameter) & 15 psi	18 meters	18 meters	18 meters	18 meters	18 meters
Distribution pipeline 304.8 mm (12 in. diameter) & 182 psi	177 meters	177 meters	177 meters (from property line) and prohibited within property	177 meters (from property line) and prohibited within property	177 meters
Distribution pipeline 406.4 mm (16 in. diameter) & 650 psi	329 meters	329 meters	329 meters (from property line) and prohibited within property	329 meters (from property line) and prohibited within property	329 meters

Comment 8

The ESR does not appear to accurately scope socioeconomic impacts on adjacent potential development.

Sincerely,
AECOM Canada Ltd.



Antony Fediw, P.Eng.
Manager of Transportation
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AF:dt