# NOVA CHEMICALS (CANADA) LTD. KIMBALL PIPELINE REPLACEMENT PROJECT: REVISED ENVIRONMENTAL REPORT

Prepared for:

**NOVA Chemicals (Canada) Ltd.**
P.O. Box 3060
Sarnia ON N7T 8C7

Prepared by:

**Stantec Consulting Ltd.**
1-70 Southgate Drive
Guelph ON N1G 4P5

File No. 160960940
June 24, 2015

# Table of Contents

**ACRONYMS & ABBREVIATIONS ..... I**

**1.0 INTRODUCTION ..... 1.1**
1.1 PROJECT DESCRIPTION ..... 1.1
1.2 ENVIRONMENTAL STUDY ..... 1.1
1.2.1 Objectives ..... 1.1
1.2.2 Process ..... 1.2
1.2.3 The Environmental Report ..... 1.3
1.2.4 The OEB Regulatory Process ..... 1.4
1.2.5 Additional Regulatory Processes ..... 1.4

**2.0 ROUTE EVALUATION AND SELECTION ..... 2.1**
2.1 THE PROCESS ..... 2.1
2.2 STUDY AREA ..... 2.1
2.3 STEP 1: DETERMINE ROUTE CRITERIA ..... 2.2
2.3.1 Routing Objectives ..... 2.2
2.3.2 Environmental and Socio-Economic Opportunities and Constraints ..... 2.2
2.4 STEP 2: GENERATE ROUTE OPTIONS ..... 2.3
2.5 STEP 3: ROUTE EVALUATION ..... 2.4
2.5.1 Evaluation Methodology ..... 2.4
2.5.2 Route Length ..... 2.4
2.5.3 Artificial Agricultural Drainage ..... 2.5
2.5.4 Aquatic Characteristics ..... 2.5
2.5.5 Socio-Economic Characteristics ..... 2.6
2.5.6 Terrestrial Characteristics ..... 2.6
2.5.7 Community Heritage Characteristics ..... 2.7
2.5.8 Discussion of Assessment ..... 2.7
2.6 STEP 4: INPUT ON THE PRELIMINARY PREFERRED ROUTE ..... 2.9
2.7 STEP 5: CONFIRMATION OF THE PREFERRED ROUTE ..... 2.9

**3.0 CONSULTATION PROGRAM ..... 3.1**
3.1 OBJECTIVES ..... 3.1
3.2 IDENTIFYING INTERESTED AND POTENTIALLY AFFECTED PARTIES ..... 3.1
3.3 COMMUNICATION METHODS ..... 3.2
3.3.1 Newspaper Notices ..... 3.2
3.3.2 Letters ..... 3.2
3.3.3 Project Webpage ..... 3.3
3.3.4 Display Boards and Exit Questionnaire ..... 3.3
3.4 CONSULTATION EVENTS ..... 3.3
3.4.1 Agency Meetings ..... 3.3
3.4.2 Project Information Session ..... 3.4
3.5 INPUT RECEIVED ..... 3.4

3.5.1 Public Input ..... 3.5
3.5.1.1 Input ..... 3.5
3.5.1.2 Refinements Based on Input ..... 3.5
3.5.2 Agency Input ..... 3.5
3.5.2.1 Input ..... 3.5
3.5.2.2 Refinements Based on Input ..... 3.6
3.5.3 Interest Group Input ..... 3.7
3.5.3.1 Input ..... 3.7
3.5.3.2 Refinements Based on Input ..... 3.7
3.5.4 Municipal Input ..... 3.7
3.5.4.1 Input ..... 3.7
3.5.4.2 Refinements Based on Input ..... 3.7
3.5.5 First Nations and Métis Nation Input ..... 3.8
3.5.5.1 Input ..... 3.8
3.5.5.2 Refinements Based on Input ..... 3.8
3.6 SUMMARY ..... 3.8

**4.0 IMPACT IDENTIFICATION, ASSESSMENT AND MITIGATION ..... 4.1**
4.1 METHODOLOGY ..... 4.1
4.1.1 Construction ..... 4.2
4.1.2 Operation and Maintenance ..... 4.3
4.2 PHYSICAL FEATURES ..... 4.4
4.2.1 Bedrock Geology and Drift Thickness ..... 4.4
4.2.2 Physiography & Surficial Geology ..... 4.4
4.2.3 Groundwater ..... 4.5
4.2.4 Extractive Resources ..... 4.7
4.2.5 Soil and Soil Capability ..... 4.7
4.2.6 Soybean Cyst Nematode (SCN) ..... 4.10
4.2.7 Agricultural Tile Drains ..... 4.11
4.2.8 Natural Hazards ..... 4.12
4.3 BIOPHYSICAL FEATURES ..... 4.13
4.3.1 Surficial Hydrology ..... 4.13
4.3.2 Aquatic Species and Habitat ..... 4.15
4.3.3 Designated Natural Areas and Vegetation ..... 4.17
4.3.4 Wildlife, Wildlife Habitat and Species at Risk ..... 4.20
4.4 SOCIO-ECONOMIC ENVIRONMENT ..... 4.27
4.4.1 Residents and Businesses ..... 4.27
4.4.2 Institutional Services & Facilities ..... 4.29
4.4.3 Culture, Tourism & Recreation Facilities ..... 4.30
4.4.4 Economy & Employment ..... 4.30
4.4.5 Contaminated Sites ..... 4.32
4.4.6 Waste Management ..... 4.34
4.4.7 Land Use ..... 4.35
4.4.8 Archaeological Resources ..... 4.37
4.4.9 Heritage Resources and Cultural Heritage Landscapes ..... 4.38

4.4.10 First Nations and Métis Nation Interests ..... 4.39
4.4.11 Infrastructure ..... 4.40
4.5 SUMMARY OF RECOMMENDATIONS ..... 4.41

**5.0 CUMULATIVE EFFECTS ASSESSMENT ..... 5.1**
5.1 METHODOLOGY ..... 5.1
5.2 STUDY BOUNDARIES ..... 5.1
5.3 ANALYSIS OF CUMULATIVE EFFECTS ..... 5.2
5.4 SUMMARY ..... 5.4

**6.0 MONITORING AND CONTINGENCY PLANS ..... 6.1**
6.1 MONITORING ..... 6.1
6.1.1 Exposed Soils ..... 6.1
6.1.2 Water Wells ..... 6.2
6.1.3 Watercourse Crossings ..... 6.2
6.1.4 Vegetation and Wetlands ..... 6.2
6.1.5 Wildlife ..... 6.2
6.1.6 Residents and Businesses ..... 6.2
6.1.7 Municipal Roads ..... 6.3
6.2 CONTINGENCY ..... 6.3
6.2.1 Watercourse Sedimentation ..... 6.3
6.2.2 Accidental Spills ..... 6.3
6.2.3 Unexpected Finds ..... 6.4

**7.0 CONCLUSION ..... 7.1**

**8.0 RESOURCES ..... 8.1**

**LIST OF TABLES**

Table 2.1: Route Length Summary Table ..... 2.5
Table 2.2: Agricultural Summary Table ..... 2.5
Table 2.3: Aquatics Summary Table ..... 2.6
Table 2.4: Socio-Economic Summary Table ..... 2.6
Table 2.5: Terrestrial Characteristics Summary Table ..... 2.7
Table 2.6: Community Heritage Summary Table ..... 2.7
Table 4.1: Terrestrial Species of Conservation Concern ..... 4.22
Table 4.2: Terrestrial Species at Risk ..... 4.24
Table 4.3: Economy and Employment Statistics ..... 4.30
Table 4.4: Potential Heritage Resources ..... 4.38
Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures ..... 4.42

## LIST OF FIGURES

Figure 2.1: Route Evaluation Methodology ..... 2.1
Figure 4.1: Distribution of Workforce by Percentage ..... 4.31

## LIST OF APPENDICES

**Appendix A: Route Figures**

**Appendix B: Consultation**

*Appendix B1: First Nations, Métis Nation, Agency and Third Party Utility Crossing Contact Lists*
*Appendix B2: Newspaper Notices*
*Appendix B3: Letters*
*Appendix B4: Display Boards and Exit Questionnaire*
*Appendix B5: Project Correspondence*

**Appendix C: Existing Conditions Figures**

**Appendix D: Mitigation Photomosaic**

## LIST OF ROUTE FIGURES – APPENDIX A

Figure No. 1: Route Selection Process Study Area
Figure No. 2: Alternate Routes
Figure No. 3: Preferred Route

## LIST OF EXISTING CONDITIONS FIGURES – APPENDIX C

Figure No. 1: Drift Thickness
Figure No. 2: Socio-Economic Features
Figure No. 3: Existing Infrastructure
Figure No. 4: Soil Types
Figure No. 5: Agricultural Tile Drainage
Figure No. 6: Regulation Limit
Figure No. 7: Watersheds and Drainage
Figure No. 8: Designated Natural Areas
Figure No. 9: Contaminated Sites
Figure No. 10: Potential Cultural Heritage Resources

# Acronyms & Abbreviations

| | |
|---|---|
| ATRIS | Aboriginal and Treaty Rights Information System |
| CEAA 2012 | Canadian Environmental Assessment Act, 2012 |
| CLI | Canada Land Inventory |
| COSEWIC | Committee on the Status of Endangered Wildlife in Canada |
| COSSARO | Committee on the Status of Species at Risk in Ontario |
| CEA | Cumulative Effects Assessment |
| DFO | Department of Fisheries and Oceans |
| END | Endangered |
| ER | Environmental Report |
| ERIS | Environmental Risk Information Services |
| ESA | Environmental Site Assessment |
| GIS | Geographical Information System |
| Hydro One | Hydro One Networks Inc. |
| IO | Infrastructure Ontario |
| IPZ | Intake Protection Zones |
| km | Kilometre |
| LIO | Land Information Ontario |
| m | Metre |
| MMAH | Ministry of Municipal Affairs and Housing |
| MNRF | Ministry of Natural Resources and Forestry |
| MOECC | Ministry of the Environment and Climate Change |
| MTO | Ministry of Transportation |
| MTCS | Ministry of Tourism, Culture and Sport |
| NHIC | Natural Heritage Information Centre |
| NGL | Natural Gas Liquid |
| NOVA Chemicals | NOVA Chemicals (Canada) Ltd. |
| OBBA | Ontario Breeding Bird Atlas |
| OEB | Ontario Energy Board |
| OHT | Ontario Heritage Trust |

| | |
|---|---|
| OMAFRA | Ontario Ministry of Agriculture, Food and Rural Affairs |
| OPCC | Ontario Pipeline Coordinating Committee |
| PTTW | Permit to Take Water |
| RAO | Reptiles and Amphibians of Ontario |
| RoW | Right-of-Way |
| SCRCA | St. Clair Region Conservation Authority |
| SC | Special Concern |
| Stantec | Stantec Consulting Ltd. |
| SCN | Soybean Cyst Nematode |
| TSSA | Technical Standards Safety Authority |
| THR | Threatened |
| WWR | Water Well Records |
| WHPA | Well Head Protection Area |

# 1.0 INTRODUCTION

## 1.1 PROJECT DESCRIPTION

The NOVA Chemicals (Canada) Ltd. (NOVA Chemicals) Corunna petrochemical facility, which is located at 785 Petrolia Line in the Township of St. Clair (NOVA Chemicals Corunna Site), has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the NOVA Chemicals Corunna Site, which is known as the "Kimball Pipeline Replacement Project" (the Project). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres (km) in length in an existing right-of-way (RoW). Also, a dormant 8" pipeline will be removed from the RoW as part of the Project.

The replacement pipeline will carry a mix of ethane and propane to a new valve site (New Valve Site) that will be constructed on the NOVA Chemicals Corunna Site, located at 785 Petrolia Line in St. Clair Township, Ontario. The pipeline is expected to operate at a pressure of 1000 psi. The pipeline will be connected to, and will receive NGLs from, Plains Midstream's Windsor-Sarnia Pipeline at the existing Plains Midstream NOVA Valve Site (Existing Valve Site) near Kimball Road (see Appendix A, Figure No. 1).

NOVA Chemicals hired Stantec Consulting Ltd. (Stantec) to undertake an environmental study of the construction and operation of the proposed natural gas liquids pipeline. The environmental study included a route evaluation and selection process that was designed to identify the proposed route alternative with the least potential environmental impact.

## 1.2 ENVIRONMENTAL STUDY

### 1.2.1 Objectives

A multidisciplinary team of environmental planners and scientists from Stantec conducted the environmental study. NOVA Chemicals provided environmental support and engineering expertise throughout the study, as required.

The environmental study was undertaken in accordance with the Ontario Energy Board's (OEB) *Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario, 6th Edition* (*OEB Environmental Guidelines*) (2011). The study was also undertaken to meet the requirements of relevant federal and provincial environmental guidelines and regulations.

The principal objectives of the environmental study were to confirm a preferred route from an environmental perspective for the pipeline and to outline various environmental mitigation and protection measures for the construction and operation of the Project, while meeting the intent of the *OEB Environmental Guidelines* (2011).

To meet these objectives, the environmental study was prepared to:

- undertake a route evaluation process;
- confirm a preferred route that minimizes potential environmental impacts;
- complete a detailed review of environmental features along the preferred route and assess the potential environmental impacts of the Project on these features;
- establish mitigation and protective measures that may be used to minimize or eliminate potential environmental impacts of the Project;
- develop a consultation program to receive input from interested and potentially affected parties; and
- identify any necessary supplemental studies, monitoring and contingency plans.

### 1.2.2 Process

The route evaluation was divided into the following three main phases:

- Phase I: The generation and evaluation of alternate routes;
- Phase II: Consultation on and consideration of the preliminary preferred route; and
- Phase III: Confirmation of the route and preparation of this environmental report (ER).

**Phase I: The Route Evaluation and Selection Process**

The environmental study began with the development of routing criteria, including delineating and defining the Study Area, identifying environmental and socio-economic constraints and opportunities through data collection, a detailed review of available literature and aerial photography interpretation, and generating routing alternates. A route evaluation was undertaken to identify environmentally acceptable pipeline routes, and alternate routes were identified. A quantitative and qualitative comparative evaluation of the alternate routes was then carried out in order to confirm that the route preference proposed by NOVA Chemicals was the most environmentally acceptable route.

**Phase II: Consultation on the Preliminary Preferred Route**

The consultation program provided opportunities to comment on the Project, the route evaluation and selection process, and the preliminary preferred route. Feedback was sought through agency meetings, newspaper notices, letters, and an Information Session held on January 22, 2015.

**Phase III: Confirmation of the Route; Environmental Report**

Based on feedback received during the consultation program, the preliminary preferred route was confirmed to be the environmentally preferable to the alternate routes. Phase III concluded with the preparation of this ER as well as a photomosaic to identify site-specific mitigation and protective measures that will be implemented during construction along the route (see Appendix D).

### 1.2.3 The Environmental Report

The environmental study has relied on technically sound and consistently applied procedures that are replicable and transparent. The ER, which documents the environmental study, will form the foundation for future environmental management activities related to the Project.

The ER is organized into the following sections:

**1.0** **Introduction:** provides a description of the Project and the environmental study

**2.0** **Route Evaluation and Selection**: provides an overview of the pipeline route evaluation and selection process and confirmation of the preliminary preferred route as the preferred route

**3.0** **Consultation Program:** describes the consultation program

**4.0** **Impact Identification, Assessment and Mitigation:** describes the existing conditions, predicts potential effects and impacts, recommends supplemental studies, mitigation and protective measures, and considers net impacts

**5.0** **Cumulative Effects**: provides an analysis of potential cumulative effects associated with the proposed Project

**6.0** **Monitoring and Contingency Plans**: describes monitoring and contingency plans to address potential environmental impacts of the proposed Project

**7.0** **Conclusion:** provides a discussion and consideration of the potential environmental impacts associated with the proposed Project

The ER also includes references, and appendices for documentation.

### 1.2.4 The OEB Regulatory Process

Once complete, the ER is circulated to affected municipalities, conservation authorities and to the Ontario Pipeline Coordinating Committee (OPCC) for their review and comment. The OPCC is an inter-ministerial committee that includes provincial government ministries, boards, and authorities with potential interest in the construction and operation of hydrocarbon transmission and storage facilities. The ER is also circulated to landowners, First Nations, the Métis Nation of Ontario, and other interested parties.

The ER will accompany a future NOVA Chemicals 'Leave-to-Construct' application to the OEB for the proposed Project. While the ER illustrates the general location of the preferred route, detailed design will be undertaken by NOVA Chemicals to determine the exact location of the running line. Detailed design will also be influenced by supplemental studies and site-specific requests from landowners and agencies. Information on the current state of the detailed design will be provided in the application to the OEB, along with additional required information.

Upon receiving the application, the OEB will hold a public hearing. Communication about the hearing will include notices in local newspapers and letters to directly affected landowners, both of which will outline how the general public and landowners can get involved with the hearing process. If after the public hearing the OEB finds the Project is in the public interest it will approve construction of the Project. The OEB normally attaches conditions to a Project it approves. NOVA Chemicals must comply with these conditions at all stages of the Project, including during construction and site restoration.

### 1.2.5 Additional Regulatory Processes

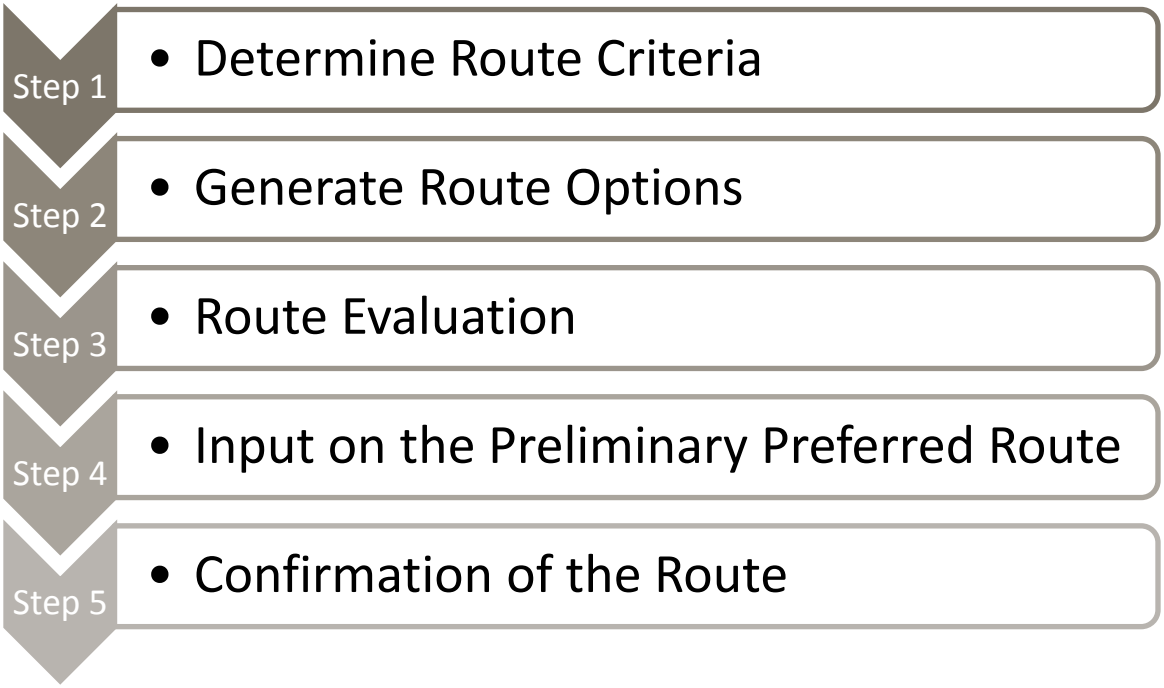
NOVA Chemicals will also be required to obtain additional approvals from agencies including the Ministry of Natural Resources and Forestry (MNRF), Ministry of Environment and Climate Change (MOECC), the Township of St. Clair, and the St. Clair Region Conservation Authority (SCRCA) as outlined in Section 4.0 of the ER. This ER will serve to support these permit and approval applications.

# 2.0 ROUTE EVALUATION AND SELECTION

## 2.1 THE PROCESS

The route evaluation process was undertaken as per the *OEB Environmental Guidelines* (2011) which identify the environmental and socio-economic features to take into consideration and the principles to be considered during the route evaluation. The preferred route for the proposed Project was confirmed through a five-step process, illustrated in Figure 2.1.

**Figure 2.1: Route Evaluation Methodology**




## 2.2 STUDY AREA

The Study Area used for the route evaluation and selection process is located in Appendix A, Figure No. 1.

The western and eastern Study Area boundaries were defined by the approximate terminal points of the proposed pipeline – east of Highway 40 on the western side of the NOVA Chemicals Corunna Site, and the west side of Kimball Road east of the Existing Valve Site. The northern and southern Study Area boundaries (the south side of Petrolia Line to the north and the north side of Rokeby Line to the south) that could be considered to identify alternate routes were determined based on the routing criteria described in Section 2.3.

A specific side of the road was selected to minimize the number of road crossings and overall distance; however, it is recognized that the final location for the pipeline would be within the road RoW determined in consultation with the Township of St. Clair.

## 2.3 STEP 1: DETERMINE ROUTE CRITERIA

### 2.3.1 Routing Objectives

The rationale for developing the routing methodology is derived through the preference of NOVA Chemicals to use the existing pipeline corridor adjacent to property lines to locate the proposed new pipeline (hereinafter referred to as Alternate C) (Appendix A, Figure No. 2). Furthermore the removal of the out-of-service pipelines provides additional room for the location of the new pipeline thus reducing the footprint of activity. Stantec's role was to confirm through qualitative and quantitative assessment that the route preference proposed by NOVA Chemicals (Alternate C) was the most environmentally acceptable route and that other alternates would not be more environmentally preferred.

The process of developing alternate routes commenced with the identification of routing objectives for creating reasonable and/or feasible alternatives to Alternate C. These include:

1. Routes should follow a reasonably direct path between end-points, thus minimizing length as well as potential for environmental and socio-economic effects.

2. Routes should avoid sensitive environmental and socio-economic features to the extent possible; where they cannot be avoided routes should be located to minimize effects.

3. Existing linear infrastructure should be utilized to the greatest extent possible in order to minimize effects to previously undisturbed land and/or constrain future land development.

4. Where new easements are required, existing lot/property lines should be followed to the extent possible within the Study Area.

### 2.3.2 Environmental and Socio-Economic Opportunities and Constraints

The route selection process was conducted as per the *OEB Environmental Guidelines* (2011). Chapter 4 of the *OEB Environmental Guidelines* (2011), 'Route or Site Selection', outlines the environmental and socio-economic features that should be considered during route evaluation.

A geographical information system (GIS)-based environmental inventory was developed to identify existing features in the Study Area considered either as pipeline routing constraints or opportunities.

Environmental constraints are existing features, such as wetlands, that meet the following criteria:

- Site-specific mitigation measures would be required to minimize potential effects.
- The feature has been selected or designated for protection.
- The feature has been recognized through local, regional, provincial, or federal policy, plan, or statute, or is otherwise valued as an environmental or socio-economic resource.

Environmental opportunities are existing features, such as property lines or existing linear infrastructure, which provide a suitable location for the alignment of a pipeline.

Existing features were identified using relevant published literature, maps and digital data, and discussions with agencies and municipalities. The location and extent of environmental and socio-economic features are illustrated in Appendix C, Figure Nos. 2, 4, 5, 6, 7, 8, and 10.

## 2.4 STEP 2: GENERATE ROUTE OPTIONS

Generation of route options was based on the routing objectives, Study Area, and environmental and socio-economic constraints and opportunities identified in Step 1. Route generation was conducted by staff of Stantec and NOVA Chemicals, using aerial photography interpretation, and mapping of existing environmental and socio-economic constraints and opportunities.

In addition to Alternate C, two alternate routes were identified to be environmentally acceptable and constructible (Appendix A, Figure No. 2) options to transport product between the start and end points. The route options follow existing linear infrastructure, and avoid to the extent possible natural and built cultural heritage features. NOVA Chemicals' preferred route (C) and the two alternate routes (A and B) are described as follows:

- Alternate Route A originates at the Existing Valve Site and travels east to Kimball Road. At Kimball Road the route travels north along the west side of Kimball Road to Petrolia Line. At Petrolia Line, the route travels west along the south side of Petrolia Line crossing Tecumseh Road and continuing to Ladysmith Road. At Ladysmith Road the route continues south along the east side of Ladysmith Road until it intercepts the existing pipeline corridor. The route then crosses Ladysmith Road and travels west and follows the existing pipeline corridor to the NOVA Chemicals Corunna Site at the New Valve Site. Although the route is located within the road allowance, it is anticipated that construction activity will require the temporary use of private property beyond the road allowance. It is recognized that the final location for the pipeline in the RoW would be determined in consultation with the Township of St. Clair.
- Alternate Route B originates at the Existing Valve Site and travels east to Kimball Road. At Kimball Road the route travels south along the west side of Kimball Road to Rokeby Line. At Rokeby Line the route travels west along the north side of Rokeby Line crossing Tecumseh and continuing to Ladysmith Road. At Ladysmith Road the route continues north along the

east side of Ladysmith Road until it intercepts the existing pipeline corridor. The route then crosses Ladysmith Road and travels west and follows the existing pipeline corridor to the NOVA Chemicals Corunna Site at the New Valve Site. Although the route is located within the road allowance it is anticipated that construction activity will require the temporary use of private property beyond the road allowance. It is recognized that the final location for the pipeline in the RoW would be determined in consultation with the Township of St. Clair.

- Alternate Route C originates at the Existing Valve Site and travels west within the existing pipeline corridor, across Tecumseh Road and Ladysmith Road, to the New Valve Site on the NOVA Chemicals Corunna Site .

## 2.5 STEP 3: ROUTE EVALUATION

### 2.5.1 Evaluation Methodology

The three alternate routes were subject to a comparative evaluation. The goal of the comparative evaluation was to determine the potential environmental and socio-economic effects of constructing and operating each route, to aid in determining which was preferred from an environmental perspective.

The three route options were evaluated by intersecting each with select environmental and socio-economic base data acquired from relevant published literature, maps and digital data. Categories of assessed features, listed alphabetically, include:

- **Agricultural**: Canada Land Inventory Classification for Agriculture, and Artificial Agricultural Drainage.
- **Aquatic**: Watercourse Crossings, Water Wells.
- **Community Heritage**: Built and Cultural Heritage Features.
- **Route Length:** Length.
- **Socio-Economic**: Homes/Farm Operations and Commercial Businesses.
- **Terrestrial**: Potential for Species at Risk and their Habitats, Designated Natural Areas (Conservation Areas, Wetlands, Woodlots, etc.).

### 2.5.2 Route Length

Comparing the total length of alternate routes is appropriate as a broad scoping tool that yields a measurement relating to total disturbed area (Table 2.1). Typically shorter routes impact fewer environmental features. As displayed in Appendix A, Figure No. 2, the two longest pipeline alternate routes are Alternate A (7624 metres (m)) and Alternate B (7654 m). The shortest pipeline route of the three is Alternate C (3712 m).

**Table 2.1: Route Length Summary Table**

| Alternate Route | Route Length (m) |
|---|---|
| A | 7624 |
| B | 7654 |
| C | 3712 |

### 2.5.3 Artificial Agricultural Drainage

The soils along the three potential routes are mapped in the Lambton County Soil survey as either Caistor Clay or Brookston Clay. These soils are typically heavy textured and poorly drained. As a result agricultural fields in this area are often drained by random and systematic agricultural drainage. This allows lands to be accessed earlier and later in the year allowing farm operator's greater flexibility in crop type and planting and harvesting times. Damage to agricultural drains as a result of construction can have significant impacts to farm operations. The length of artificial drainage was assessed by assessing the length of pipeline construction that could potentially intersect artificial drainage and is summarised in Table 2.2. Mapping of artificial drainage is available from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). Soil type and the location of artificial agricultural drainage are depicted in Appendix C, Figure Nos. 4 and 5.

**Table 2.2: Agricultural Summary Table**

| Alternate Route | Length of Artificial Agricultural Drainage Crossed (m) |
|---|---|
| A | 2393 |
| B | 4949 |
| C | 473 |

### 2.5.4 Aquatic Characteristics

It is understood that the Study Area is serviced with municipal water and assumed that houses are on the municipal services. Under the presumption that some of the rural properties utilize existing water wells for livestock or irrigation of gardens etc., the numbers of water wells within 100 m of the route were compared.

Generally, minimizing the number of watercourse crossings along the preferred route helps to minimize the impacts of pipeline construction. The numbers of watercourses, including municipal drains, were compared along the three route alternates. Locations of water wells and watercourse crossings are depicted in Appendix C, Figure Nos. 2 and 7. A summary of the alternate route comparison is provided in Table 2.3.

**Table 2.3: Aquatics Summary Table**

| Alternate Route | Watercourses | Water Wells |
|---|---|---|
| A | 4 | 22 |
| B | 2 | 7 |
| C | 2 | 2 |

### 2.5.5 Socio-Economic Characteristics

To assess the alternate routes with respect to minimizing the socio-economic effects, the number of houses and/or farm operations and commercial businesses along each route were counted and compared (Table 2.4). Locations of houses/farms and other structures are depicted in Appendix C, Figure No. 2.

**Table 2.4: Socio-Economic Summary Table**

| Alternate Route | Houses/Farm Operations | Commercial Businesses |
|---|---|---|
| A | 18 | 0 |
| B | 12 | 0 |
| C | 0 | 0 |

### 2.5.6 Terrestrial Characteristics

In order to determine what terrestrial features might become identified as constraints to the Project, desktop and field investigations of published information were conducted on each of the three alternate routes to confirm information gathered during the records review and to assess the potential for encountering protected species or habitats.

It is understood that areas regulated by conservation authorities, evaluated/unevaluated wetlands and woodlots described above are the primary lands in which Species at Risk and their habitat may be found in the Study Area. Therefore, minimizing impact to these features would also minimize potential impact to any endangered species or their habitat along the route. Locations of regulated areas and woodlots are depicted in Appendix C, Figure Nos. 6 and 8. A summary of the distance traversed by the alternate routes through the features is provided in Table 2.5.

**Table 2.5: Terrestrial Characteristics Summary Table**

| Alternate Route | Wetlands (MNRF Evaluated/Unevaluated), Traversed (m) | Woodlots Traversed (m) | Regulated Areas Traversed (m) |
|---|---|---|---|
| A | 0 | 1420 | 1,871 |
| B | 0 | 1758 | 2,788 |
| C | 0 | 3345 | 151 |

### 2.5.7 Community Heritage Characteristics

To assess the potential for Built and Cultural Heritage features along the three alternate routes, a Built and Cultural Heritage Overview was conducted on the Study Area. The natural heritage study included consultation with the Ministry of Tourism, Culture and Sport (MTCS), the Ontario Heritage Trust (OHT) and the Township of St. Clair. In addition, published mapping and data were referenced. Field work was undertaken to identify potential cultural heritage resources. Seven potential heritage resources were determined to be situated within the Study Area and are summarized in the Table 2.6 below. Locations of potential cultural heritage resources are depicted in Appendix C, Figure No. 10.

**Table 2.6: Community Heritage Summary Table**

| Alternate Route | Heritage Sites |
|---|---|
| A | 2 |
| B | 5 |
| C | 0 |

### 2.5.8 Discussion of Assessment

A review of the potential environmental and socio-economic impacts along the alternate routes was conducted on six categories of characteristics. This report section discusses the evaluation and associated weight the characteristics were given. Each of the alternate routes was ranked for the characteristics assessed. The rankings were then totalled with the highest number indicating the greatest potential impact to characteristics and the lowest number the least potential impact. The Assessment Summary Table 2.7 below shows the results of the evaluation.

**Table 2.7: Assessment Summary Table**

| Evaluation Characteristic | Ranking of Alternate A | Ranking of Alternate B | Ranking of Alternate C |
|---|---|---|---|
| Route length | 2 | 3 | 1 |
| Agricultural Infrastructure | 2 | 3 | 1 |
| Aquatic Characteristics | 3 | 2 | 1 |

**Table 2.7: Assessment Summary Table**

| Evaluation Characteristic | Ranking of Alternate A | Ranking of Alternate B | Ranking of Alternate C |
|---|---|---|---|
| Socio-Economic Characteristics | 3 | 2 | 1 |
| Terrestrial Characteristics | 1 | 3 | 2 |
| Community Heritage Characteristics | 2 | 3 | 1 |
| **TOTALS** | **13** | **16** | **7** |

Minimizing the total physical disturbed area is preferable to minimize the overall impact of the construction footprint. Based on total distance of the pipeline, Alternate C is preferred.

Alternates A and B allow for the use of existing road allowances to be considered to locate the pipe. While construction within road allowance minimizes impacts to agricultural land, temporary work room would be required outside the road allowance on agricultural land during construction potentially impacting agricultural infrastructure. Alternate C is located with an existing RoW that largely passes through non-agricultural land. As a result, the impact to agricultural operations is minimal as there is very little land under agricultural production. Based on the agricultural infrastructure characteristics, Alternate C is preferred.

The number of water wells and number of watercourse crossings were compared among the alternate routes. The water wells identified in the vicinity of Alternate C are not for domestic use; however, in the event that active wells are identified during construction, a water well monitoring program may be recommended to ensure that there are no impacts to water quality and quantity as a result of the construction activities. The number of watercourse crossings, while a mitigatable effect, was an important route selection feature due to the potential impact on water quality and potential fish habitat. Based on the aquatic characteristics assessed, Alternate C is preferred.

Socio-economic effects to local residents and businesses were assessed with respect to the potential for disturbance during construction. In that, the number of homes/ farms, business and industrial lands were counted. Based on the socio-economic characteristics assessed, the preferred route from a socio-economic perspective is Alternate C due to the lack of road frontage thus precluding temporary disruption of access and dust and noise inconveniences.

Alternate C traverses more wooded area than the other routes. However, due to the use of the existing RoW and trench to install the new pipeline precluding the need to remove trees, Alternate C would impact wooded areas the least. Alternates A and B, though traversing a shorter distance of wooded area, would require construction of new RoW through wooded areas adjacent to Kimball Road likely requiring the permanent removal of trees for the purposes of construction.

Based on the amount of woodlot trees to be cut and the potential for encountering Species at Risk or their protected habitats, Alternate C is preferred from the terrestrial features perspective. Alternate C also traverses the least distance of lands regulated by the SCRCA.

The most effective mitigation method for preserving community heritage features is avoidance. Based on the study conducted, Alternate C is preferred to avoid the potential for encountering built and cultural heritage features.

From an environmental and socio-economic perspective based on the above assessment, Alternate C is the preliminary preferred route for the Project.

## 2.6 STEP 4: INPUT ON THE PRELIMINARY PREFERRED ROUTE

An Information Session was held on January 22, 2015 at the Royal Canadian Legion in Corunna, Township of St. Clair to provide details on the Project and to receive feedback on the route evaluation and preliminary preferred route. Consultation meetings also occurred with staff from Township of St. Clair on February 5, 2015, where the preferred running line was reviewed in detail and comments were received. Discussion took place regarding the plan for removal of the existing pipelines and installation of the new line at road and drain crossings.

## 2.7 STEP 5: CONFIRMATION OF THE PREFERRED ROUTE

Following the comparative evaluation (Section 2.5) and based on input received (Section 2.6) the preliminary preferred route was confirmed as the preferred route. The location of the preferred route is shown in Appendix A, Figure No. 3.

The preferred route is currently illustrated within a general location; detailed design will be undertaken by NOVA Chemicals to determine the exact location of the running line within the RoW. Detailed design will also be influenced by supplemental studies (including environmental studies) and site-specific requests from landowners and agencies; this will help micro siting of the pipeline to occur in the most environmentally sensitive manner possible. NOVA Chemicals has also committed to refine the method of installation of the proposed pipeline through natural areas during detailed design to minimize the disturbance area to the extent possible (see Section 4.3 of the ER for more details). Information on the current state of the detailed design will be provided in the application to the OEB, along with any additional required information as appropriate.

# 3.0 CONSULTATION PROGRAM

## 3.1 OBJECTIVES

Consultation is an essential requirement of the *OEB Environmental Guidelines* (2011). Consultation is the process of identifying interested and potentially affected parties and informing them about the Project, soliciting information about their values and local environmental and socio-economic circumstances, and receiving advice about key Project decisions before those decisions are finalized.

The consultation program for this Project included the following objectives:

- Identify interested and potentially affected parties early in the process;
- Inform and educate interested parties about the nature of the Project, potential impacts, proposed mitigation measures and how to participate in the consultation program in a clear, concise, relevant and timely manner;
- Provide a forum for the identification of issues;
- Identify how input will be used in the planning stages of the Project;
- Summarize issues for resolution, and resolve as many issues as feasible;
- Revise the program to meet the needs of those being consulted, as feasible; and
- Develop a framework for ongoing communication during the construction and operation phase of the Project.

## 3.2 IDENTIFYING INTERESTED AND POTENTIALLY AFFECTED PARTIES

The identification of interested and potentially affected parties was undertaken using a variety of sources, including the OEB's OPCC Members List, the Ministry of the Environment and Climate Change (MOECC) Environmental Assessment Government Review Team Master Distribution List, and the experience of NOVA Chemicals and Stantec.

In addition, the categories listed below were among those considered when identifying the initial stakeholder contact list:

- Federal and provincial agencies and authorities, including the SCRCA, and members of the OPCC;
- Municipal personnel, including elected officials;
- Directly affected landowners and adjacent landowners;
- Special interest groups; and
- First Nation communities and the Métis Nation of Ontario.

The initial contact list was updated as the environmental study progressed because of changes in personnel, correspondence received and attendees at meetings. The final First Nations, Métis Nation and Agency Contact List are located in Appendix B1.

Directly affected landowners, including adjacent landowners were identified through a search of municipal tax rolls and a review of records at the Lambton County Registry Office and were tracked in a Landowner Contact List. NOVA Chemicals also undertook direct consultation with third party utility providers as the RoW is located on land that is owned by these third parties in which NOVA Chemicals has easement rights. Consultation with Third Parties was tracked in a Third Party Utility Crossing List which is provided in Appendix B1. Members of the public who provided feedback or who attended an Information Session were tracked in a Public Contact List.

## 3.3 COMMUNICATION METHODS

### 3.3.1 Newspaper Notices

A Notice of Project Commencement was published on December 4, 2014 in *Sarnia and Lambton County This Week, Sarnia Observer, Wallaceburg Courier Press* and *The Independent*. The Notice described the Project and the environmental study process, provided a map showing the general location of the proposed pipeline route, and listed Project contact information.

A Notice of Information Session was published on January 8, 2015 in the *Sarnia and Lambton County This Week, Sarnia Observer, Wallaceburg Courier Press* and *The Independent*. The Notice described the Project, provided a map showing the general location of the proposed pipeline route and information on the format, time and location of the Information Session, and listed Project contact information. The Notice also made reference to other NOVA Chemicals projects known as NOVA 2020 Projects, as both projects are located in the Township of St. Clair; therefore, NOVA Chemicals decided to hold one Information Session at the same time and venue.

Copies of the Project commencement and Information Session notices are located in Appendix B2.

### 3.3.2 Letters

On November 27, 2014, letters were sent by NOVA Chemicals via courier to eight First Nations and the Métis Nation of Ontario, and by regular mail to landowners and third party utility companies on November 28, 2014. Additionally, letters were sent to the Agency Contact List by email on November 28, 2014, and by regular mail on December 2, 2014.

The purpose of these letters was to inform them of the commencement of the Project, provide a map of the Project location, and solicit information on planning principles or guidelines that may affect the Project, background environmental and socio-economic information, and other developments proposed in the area. The letter to First Nations and the Métis Nation of Ontario also requested information on adverse impacts that the Project may have on constitutionally protected aboriginal or treaty rights and measures for mitigating those adverse impacts.

Additional letters were sent by NOVA Chemicals via courier to the First Nations and Métis Nation of Ontario on January 5, 2015, and by regular mail to the landowners and third party utility companies on January 6, 2015. Letters were also sent to the Agency Contact List by email on January 7 2015 and by regular mail on January 8, 2015. The letters provided information on the Project, and details regarding the Information Session. Appended to the letters was a copy of the newspaper notice.

Generic copies of the letters are located in Appendix B3.

### 3.3.3 Project Webpage

The Notice of Information Session provided the address for a Project webpage (novachem.com/pages/sarnia-lambton/sarnia-lambton) which contained information on the Project, consultation, the environment, safety and a map of the general Project location.

### 3.3.4 Display Boards and Exit Questionnaire

Display boards were developed for the Information Session. The display boards provided information on the Project, the regulatory process, the preliminary route selection process and preliminary preferred route, NOVA Chemicals and mitigation commitments.

An exit questionnaire was also provided to Information Session attendees. The exit questionnaire requested feedback on environmental features within the Study Area, potential impacts, any other questions/concerns about the Project, and the content of the Session.

Copies of the display boards and exit questionnaire are located in Appendix B4.

## 3.4 CONSULTATION EVENTS

### 3.4.1 Agency Meetings

An agency meeting was held on December 4, 2014, at the Ontario Energy Board office and via teleconference. Representatives were present from NOVA Chemicals, Stantec and the Ontario Energy Board. NOVA Chemicals provided an overview of the Project. A discussion followed regarding routing, the Ontario Energy Board's filing timelines, and regulatory requirements for the Project.

On January 27, 2015, an agency meeting was held at the Technical Standards Safety Authority (TSSA) office. Representatives were present from NOVA Chemicals, Stantec and the TSSA. The meeting involved a discussion about typical safety practices and protocols for pipeline design and adhering to TSSA requirements.

Additional meetings will be held with agency and municipal personnel as the Project progresses towards detailed design and construction.

### 3.4.2 Project Information Session

An Information Session was held for the Project on January 22, 2015 from 4:30 p.m. to 7:30 p.m. at the Royal Canadian Legion in Corunna, Township of St. Clair.

The purpose of the Information Session was to provide attendees an opportunity to:

- view information about the Project;
- ask questions and comment on the planning process followed; and
- comment on the preliminary preferred route.

At the Information Session, NOVA Chemicals and Stantec representatives were present to provide information, answer questions and receive comments. Display boards and reference material (e.g. the *OEB Environmental Guidelines* (2011)) were provided to inform attendees about the Project and the regulatory process followed. An exit questionnaire was also provided to encourage feedback (see Section 3.3.4). No exit questionnaires were returned.

The number of attendees was recorded for the Information Session. The Information Session registered 31 attendees. Attendees included municipal personnel, First Nations representatives, landowners and members of the public. Attendees who registered their attendance had their contact information added to applicable contact lists to receive future Project notices.

## 3.5 INPUT RECEIVED

The consultation program allowed interested or potentially affected parties to provide input into the Project. Input was evaluated and integrated into the Project. A comment-response summary table, and copies of all written correspondence and responses, are located in Appendix B5.

### 3.5.1 Public Input

#### 3.5.1.1 Input

Eleven instances of public input were received at the time of this ER. The main areas of comments and questions were:

- Requests for Project details and maps;
- Inquiry regarding other infrastructure within the RoW;
- Comment regarding existing issues concerning drainage, compaction, and flooding impact to adjacent properties;
- Questions regarding Project components; and
- Questions regarding the alternate route options and evaluation process.

#### 3.5.1.2 Refinements Based on Input

Questions were addressed at the Information Session. No refinements to the Project or recommended mitigation or protective measures were necessary as a result of public input.

### 3.5.2 Agency Input

#### 3.5.2.1 Input

Three instances of federal agency input and eighteen instances of provincial agency input were received at the time of this ER. A summary of the correspondence is provided below.

**Federal Agencies**

- Aboriginal Affairs and Northern Development Canada noted that they should only be contacted when a project intersects with reserve land. The agency provided a link to the Aboriginal and Treaty Rights Information System (ATRIS) for information on the location and nature of established and potential Aboriginal and Treaty rights.
- Canadian Environmental Assessment Agency noted that the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) applies to projects in the *Regulations Designating Physical Activities* (the Regulations). The agency requested NOVA Chemicals review the Regulations to confirm applicability to the Project including section 1 (a), which relates to federally designated wildlife area and migratory bird sanctuaries.
- Transport Canada provided a link to the Directory of Federal Real Property to determine if the Project will potentially interact with any federal property. The agency also provided links to Acts that they administer or assist in administering that may apply to the Project.

**Provincial Agencies and Authorities**

- The SCRCA noted that the western portion of the subject lands are regulated under SCRCA's Ontario Regulation 171/06, "Development, Interference with Wetlands and Alterations to Shorelines and Watercourses", including any wetlands that are identified and meet the criteria of this regulation during the study. The SCRCA provided links to the 2013 SCRCA Watershed Report Card and the Sydenham River Conservation Action Plan for natural heritage principles that may affect routing, construction, and/or operation.
- Infrastructure Ontario (IO) outlined potential negative effects on IO managed lands and potential triggers related to their Class Environmental Assessment, should IO managed lands be present.
- Hydro One Networks Inc. (Hydro One) indicated no issues from a transmission maintenance perspective with respect to Hydro One's easement crossing. Hydro One provided general comments and mitigation for construction, design and cleanup.
- The Ministry of Municipal Affairs and Housing (MMAH) noted that all Project correspondence was sent to the Western Municipal Services Office as the Project relates to the function or responsibilities of the regional Municipal Services Offices, not the Head Office.
- The MNRF provided natural heritage information (i.e., Species at Risk, Significant Wildlife Habitat, natural heritage features, and fish and fish habitat) in the vicinity of the proposed pipeline route.
- The MOECC provided Aboriginal consultation information and resources to assist NOVA Chemicals in the procedural aspects of consultation delegated by the Crown. The Ministry of Transportation (MTO) confirmed relevant contacts within their Ministry that should be notified about the Project.
- The Technical Standards and Safety Authority (TSSA) requested technical specifications for the proposed pipeline and provided specific requirements within its regulation as it relates to hydrocarbon pipelines.

### 3.5.2.2 Refinements Based on Input

The relevant guidance documents identified by agencies were reviewed. No refinements to the Project or recommended mitigation or protective measures were necessary as a result of agency input.

## 3.5.3 Interest Group Input

### 3.5.3.1 Input

Two instances of interest group input, from two interest groups, were received at the time of this ER. A summary of the correspondence is provided below.

- Sarnia-Lambton Economic Partnership appreciated the invitation to the Notice of Information Session although unable to attend.
- Lambton Federation of Agriculture expressed appreciation to NOVA Chemicals for removing the dormant pipeline and noted it shows accountability and community respect.

### 3.5.3.2 Refinements Based on Input

No refinements to the Project or recommended mitigation or protective measures were necessary as a result of interest group input.

## 3.5.4 Municipal Input

### 3.5.4.1 Input

Four instances of municipal input, from two municipalities, were received at the time of this ER. A summary of the correspondence is provided below.

- The County of Lambton indicated that there is no objection to the proposed pipeline location. The County noted that tree removal should be kept to a minimum as the surrounding forested area is considered to be significant woodland in the local zoning by-law and accordingly future development should avoid further disruption of the contiguous cover.
- Township of St. Clair noted that they are unaware of any environmental issues within the pipeline easement and provided information related to municipal infrastructure (planned and existing) within the proposed alignment of the new 12" pipeline. The Township noted no concerns regarding drainage and that an encroachment agreement is required when a new pipeline is constructed within, or, crossing a municipal RoW and/or municipal drainage.

### 3.5.4.2 Refinements Based on Input

Consultation will continue with the municipalities to discuss construction details and pre-construction permits. NOVA Chemicals has committed to minimal tree removal within the existing RoW. No refinements to the Project were made as a result of municipal input.

### 3.5.5 First Nations and Métis Nation Input

#### 3.5.5.1 Input

Eight instances of input from two First Nations were received at the time of this ER: Aamjiwnaang First Nation and Chippewas of the Thames First Nation. At the January 22, 2015 Information Session, representatives of Aamjiwnaang First Nation requested an update on specific field investigations and expressed interest in participating in any environmental field surveys. Subsequently, NOVA Chemicals representatives attended the Aamjiwnaang First Nation Environment Committee meeting on April 8, 2015 to discuss the Project and provide an update on environmental studies completed to date and upcoming environmental studies. A copy of the portion of the presentation provided at that meeting which relates to the Project is located in Appendix B5. Chippewas of the Thames First Nation identified the Project as falling within their traditional territory and requested a completed copy of the ER. NOVA Chemicals is also engaging all First Nations in the contact list (Appendix B1) in the regulatory consultation process, details of which will be provided in the NOVA Chemicals' 'Leave-to-Construct' application to the OEB.

#### 3.5.5.2 Refinements Based on Input

NOVA Chemicals and the Aamjiwnaang First Nation have had initial discussions about the prospect of engaging Aboriginal monitors for archaeology and natural heritage studies. Details of issues brought forward as part of the regulatory consultation process for the Project, and the manner in which they were addressed, will be provided in the evidence that accompanies the NOVA Chemicals' 'Leave-to-Construct' application to the OEB.

## 3.6 SUMMARY

At each stage of the consultation program, input received was compiled, reviewed, and incorporated into the environmental study process. Responses were provided, as applicable, to questions and concerns received. NOVA Chemicals has committed to on-going consultation with directly-affected and interested parties through detailed design and construction, and will continue to respond to concerns through the life of the Project.

# 4.0 IMPACT IDENTIFICATION, ASSESSMENT AND MITIGATION

## 4.1 METHODOLOGY

The potential effects and impacts of the Project on physical, biophysical and socio-economic features have been assessed along the preferred route. With an understanding of pipeline construction and operation activities (see Sections 4.1.1 and 4.1.2), the assessment:

- describes the environmental and socio-economic setting along the preferred route;
- predicts the effects and associated impacts of construction and operation activities;
- recommends supplemental studies, mitigation and protective measures (including construction methods and timing, site-specific mitigation, environmental protection measures, and compensation measures); and
- outlines the net impacts that are likely to remain.

Environmental and socio-economic effects have been avoided or reduced to the extent feasible through the route selection process, or will be addressed through the methods listed above.

Predicting effects and impacts, and determining supplemental studies, mitigation and protective measures, takes into account concerns expressed through the consultation program, published information available from literature, maps and digital data, mitigation guidance documents, field assessments, and the previous pipeline development experience of NOVA Chemicals. By necessity, the analysis, integration and synthesis of the data are an iterative process since information becomes available at various stages of the study and at different mapping scales. The level of detail of data and mapping increases as the study moves from analysis of the routing Study Area, to analysis of alternate routes, and, finally, to a site-specific survey of features along the preferred route. The data available at the current stage of the environmental study were appropriate for selecting a preferred route, identifying effects, and developing mitigation and protective measures.

There are instances where field investigations are recommended along the preferred route before construction. Given the experience of Stantec in providing environmental services for hydrocarbon pipelines, and the knowledge gained of the Project location from NOVA Chemicals 2012 Genesis Pipeline Extension Project, these supplemental studies are not anticipated to change the conclusions regarding potential adverse residual impacts identified in Sections 4.2-4.4 of the ER.

The environmental and socio-economic information presented in Sections 4.2-4.4 of the ER is based on sources cited throughout.

### 4.1.1 Construction

The pipeline construction process includes various activities as described below:

1. Site Preparation: The first crew to enter the construction site is typically the survey and staking crew who delineate the boundaries of the RoW. Safety fence is installed at the edge of the construction RoW where public safety considerations are required, and aspects of the traffic management plan are implemented (i.e., signs, vehicle access). Alternative access to trails is established, where necessary. If required, pre-tiling work is completed to accommodate agricultural drainage.

2. Clearing: The clearing crew clears brush, trees and crops on the RoW to permit construction of the pipeline.

3. Grading and Stripping: Next, the grading crew prepares the RoW for access by construction equipment. At this stage, the topsoil (on agricultural lands) or the duff layer (on natural lands) is stripped by bulldozers and graders then segregated so it will not be mixed with the subsoil later removed from the trench. Existing landscaping is also removed and dewatering undertaken, where necessary.

4. Stringing: The stringing crew lays pipe on wooden skids adjacent to the trench area. In some cases, such as in agricultural areas, trenching is undertaken after stringing therefore allowing the stringing trucks to travel down the centre of the proposed trench to limit compaction.

5. Trenching: Once the RoW has been graded, a hydraulic hoe will excavate the abandoned 4" and 8" pipelines which will then be dug up, removed and disposed of in compliance with municipal and provincial regulations. Where the abandoned lines cross roadways, they will be cut off slightly beyond the road edges and backfilled with concrete and sealed. The trench will then be prepared for the installation of the new 12" pipeline. Laneways and trails are left over the trench as long as feasible where requested by the landowner. In agricultural areas, tiles that are cut during the trench excavation are flagged and repaired as quickly as practical.

6. Pipe Fabrication and Lowering: Next, the pipe is bent as required and the welding crew welds the pipe into continuous lengths. The pipe welds are x-rayed and coated then inspected before the pipeline is lowered into the trench. Crews also install pipes under obstacles such as roads or watercourses by directional drilling. The welds are global positioning system located with locations identified on the weld map along with the identification of each pipe section for future identification.

7. Backfilling: The backfilling crew backfills the originally excavated subsoil over the pipe in the trench. In shallow water table areas the pipeline may be weighted to provide negative buoyancy. Surplus backfill material will be removed from the RoW. The trench line will be crowned to allow for soil settlement. In agricultural areas, after the trench is backfilled, a tiling crew repairs disturbed or broken tiles. Landowners with tile drainage are given the opportunity to inspect tile repairs. A tile consultant is retained to oversee tile repairs and the design of a header tile system if required.

8. Hydrostatic Test: The pipeline is then tested hydrostatically. Water is drawn from the NOVA Chemicals Corunna Site and returned for processing at completion. Upon completion of the hydrostatic testing, the pipeline is dried, purged of air and prepared for delivery of the product.

9. Clean-Up and Restoration: The clean-up crew is responsible for the restoration of the RoW and other work areas. On agricultural land, this may require decompaction of the subsoil (i.e. chisel ploughing) and stone picking to maintain productivity. In natural areas the clean-up crew undertakes restoration including re-seeding of the RoW and restoring ditch banks, watercourse crossings and wetland areas, and removing erosion and sediment controls. In developed areas the clean-up crew undertakes landscaping plans developed for site restoration.

### 4.1.2 Operation and Maintenance

Upon completion of the Project, the Project components will be transferred to NOVA Chemicals' operations for inclusion in the existing Pipeline Integrity Program. NOVA Chemicals has procedures in place to inspect and maintain the pipeline, including RoW inspection, pipeline cleaning and in-line testing. NOVA Chemicals' Pipeline Integrity team has extensive technical, operational, and industry knowledge, and whose members remain current with industry practices. Detailed procedures and programs will be modified to include the new pipeline and to ensure the operation and maintenance activities for the Project comply with applicable provincial and federal legislation, regulations and guidelines.

Pipeline operation consists of monitoring and regulating the NGL flowing through or being stored in the pipeline. Mainline valves will serve to shut off and isolate the pipeline for maintenance and security purposes. Above-ground facilities at each end of the pipeline will include pig traps, metering and isolation valves at the New Valve Site and Existing Valve Site.

Pipeline inspections will include use of in-line inspection tools and cathodic protection monitoring. RoW surveillance is performed to monitor existing or potential problems on the pipeline. The RoW will be walked on a routine basis and patrolled by air on a weekly basis. The pipeline will be cleaned at regular intervals by a 'cleaning pig' to remove any accumulated water or waste.

# 4.2 PHYSICAL FEATURES

## 4.2.1 Bedrock Geology and Drift Thickness

The Paleozoic geography of the Study Area indicates that the bedrock underlying the Study Area is from the Kettle Point Formation (Hewitt, 1972). It is black fissile, bituminous shale. Drift thickness is generally found between 40-50 m below grade in the area (see Appendix C, Figure No. 1). Consequently, bedrock is not expected to be encountered during construction of the pipeline.

**Potential Impacts**

The proposed construction Project will involve excavations typically less than 10 m deep. Contact with bedrock is not expected; therefore, impacts relating to the bedrock are not expected. No significant impacts to bedrock resources are anticipated.

**Mitigative/Protective Measures**

No impacts related to bedrock are anticipated. Mitigation measures to protect bedrock are not required.

## 4.2.2 Physiography & Surficial Geology

The Study Area is located in the St. Clair Clay Plains physiographic region of Southern Ontario (Chapman and Putnam, 1984). This clay plain has developed under historical glacial lakes and contains some sandy till but is mainly the finer textured silt and clay (Barnett et al., 1991). Topography around the Study Area is level to nearly level. As discussed in Section 4.2.1, overburden deposits in the area are generally deeper than 40 to 50 m thick.

**Potential Impacts**

Due to the levelness of the Study Area, deep depth of sediments and type of sediments, significant impacts to the physiographic and surficial geologic features are not anticipated.

**Mitigative/Protective Measures**

Slope stabilization and erosion controls for long slopes are not anticipated to be required on the Project area. Standard erosion and sediment control measures are discussed in Section 4.2.5 and erosion and sediment controls specific to protecting watercourses, etc. from sedimentation resulting from rainfall events during construction are discussed in Section 4.3.1

### 4.2.3 Groundwater

The St. Clair Region Source Water Protection Assessment Report (2011) included a review of nearby water supply systems and aquifer conditions. The report confirmed fine grained overburden material. Bedrock groundwater quality is frequently characterized by elevated chloride and sodium.

Nearby municipal water systems obtain their water supply from surface water sources. As a result, no Well Head Protection Areas (WHPAs) are mapped in the vicinity of the Study Area. The Lambton and Wallaceburg Intake Protection Zones (IPZs) for the surface water systems do not extend to the Study Area. As such, there are no concerns with respect to WHPAs or IPZs due to the proposed Project.

The overburden within the Study Area is extensive fine grained material. Aquifer vulnerability mapping does not indicate any significant groundwater recharge areas within the Study Area.

Historically, private wells were installed at residences along Petrolia Line, Kimball Road and Rokeby Line. These residences are approximately 1 km from the proposed pipeline. A review of MOECC water well records (WWR) indicates that these wells were installed in the 1950's to 1960's and completed within the bedrock aquifer. Based on the known groundwater quality issues, it is expected that most of these residences are now connected to the municipal surface water system and that the private wells are no longer in use. The WWR include abandonment records for some of these wells. The MOECC WWR also indicate shallow test wells and monitoring wells within the NOVA Chemicals Corunna Site. These types of wells are not used for water supply.

**Potential Impacts**

Hydrostatic Testing and Dewatering/Sand-pointing

A hydrostatic test will be undertaken for the entire length of the proposed pipeline before commissioning. Water required for the test will be obtained from the NOVA Chemicals Corunna Site.

Where trenches encounter shallow groundwater conditions or following a large precipitation event, removing water from the trench (known as dewatering) may be necessary.

During trench dewatering, discharge water will be released to the environment. An uncontrolled discharge of water could cause downstream flooding, erosion, sedimentation or contamination. When the hydrostatic test is complete, the water will be returned to the NOVA Chemicals Corunna Site for processing.

Private Water Wells

There are no active private wells expected within 500 m of the proposed pipeline installation. MOECC WWR indicates historical wells within 1 km of the pipeline (see Appendix C, Figure No. 2). These wells were typically installed within the bedrock aquifer. Based on the distance to these wells, the depth of wells and the fact that they are likely no longer in use, trench dewatering is not expected to impact water well quality or quantity. No private well monitoring is required in support of the proposed pipeline.

Municipal Water Supply

There are no municipal groundwater supply wells in the vicinity of the proposed pipeline route. The Study Area does not extend through any WHPA or IPZ. No mitigation measures are required with respect to municipal supply.

**Mitigation and Protective Measures**

Hydrostatic Testing and Dewatering/Sand-pointing

A Permit to Take Water (PTTW) will be required from the MOECC should the volume withdrawn from a natural source exceed 50,000 L/day. The initial application would include an assessment of the capacity of the source to provide the required water without impacting the ecosystem and recommendations for mitigation measures such as screened water intakes to limit intake of debris and organisms.

To reduce the potential for erosion and scouring at discharge locations, energy dissipation techniques should be used. Discharge piping should be free of leaks and should be properly anchored to prevent bouncing or snaking during surging. Protective measures may include dewatering at low velocities, dissipating water energy by discharging into a filter bag or equivalent, and utilizing protective riprap or equivalent. If energy dissipation measures are found to be inadequate, the rate of dewatering should be reduced or dewatering discontinued until satisfactory mitigation measures are in place. Discharge should be monitored to make sure that no erosion or flooding occurs.

To assess the potential for introduction of contaminated water to soils or bodies of water, testing of hydrostatic discharge water and trench dewatering should be considered. Testing requirements can be influenced by the nature and quality of the source water used, any additives to the test water, the nature of the pipeline and pipeline contents. An environmental consultant should be consulted to determine what testing is necessary for the discharge water.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on groundwater are anticipated.

### 4.2.4 Extractive Resources

The Lambton County Official Plan does not identify any significant mineral aggregate resources within the Study Area or Township of St. Clair as a whole. Construction and operation of the proposed pipeline will not sterilize any mineral resources or aggregate deposits.

Aggregate resources, which may be required during construction of the proposed pipeline, are available from sand and gravel operators that supply aggregate throughout Lambton County.

It is known that the Study Area contains numerous underground natural gas storage pools and associated wells owned by Enbridge Gas Storage with interconnecting pipelines, transmission pipelines and distribution pipelines (see Appendix C, Figure No. 3). Additional information on infrastructure within the Study Area is presented in Section 4.4.11.

**Potential Impacts**

While there are no potential impacts to aggregate resources, the proposed pipeline does present the potential to contact existing natural gas pipelines crossing the RoW.

**Mitigative/Protective Measures**

In order to minimize the potential for impact to existing buried infrastructure, NOVA Chemicals will identify, locate and daylight all existing buried infrastructure crossing the RoW prior to excavation in that area.

### 4.2.5 Soil and Soil Capability

The majority of the Study Area is covered with Brookston Clay and the remainder is Caister Clay (see Appendix C, Figure No. 4). The entire proposed pipeline route is on Brookston Clay. In the Study Area, the Brookston Clay holds a Canada Land Inventory (CLI) rating of 2 and Caister Clay holds a CLI 3 rating.

**Potential Impacts**

The Project will be confined to an existing RoW where the proposed pipeline will be installed; an existing access road running from Kimball Road to the Existing Valve Site will be used for a short period of time.. The proposed infrastructure will impact a very limited amount of agricultural land, and therefore there is the potential to impact agricultural soils found onsite. Agricultural land also abuts the RoW for short distances. Excessive passes with heavy equipment can damage topsoil to the point of greatly diminished productivity. Soil characteristics relating to the potential for damage include: moisture content, texture, organic matter content.

After the Proposed Pipeline comes into service, vehicular traffic on the access road will increase slightly due to ongoing monitoring and maintenance activities conducted at the Existing Valve Site.

Clay soils can be susceptible to rutting and compaction which can severely reduce agricultural productivity. An increase in moisture levels in these soils further increases the susceptibility to compaction damage.

Additionally, careless topsoil stripping, topsoil storage and topsoil replacement can result in unnecessary mixing of topsoil and subsoil that can also reduce soil productivity.

During construction, soils with no vegetative cover are more prone to erode. This can result in soil erosion from water and wind. Soil susceptibility to water erosion depends on a number of variables, including: intensity and duration of rainfall events, antecedent soil moisture, surface soil cover, slope, soil texture, soil structure and organic matter content. Similarly, the susceptibility of soils to wind erosion depends on wind speed, surface soil cover, soil texture, soil structure and organic matter levels. Water and wind erosion both can result in a significant loss of topsoil.

**Mitigative/Protective Measures**

To avoid loss of soil, topsoil from lands directly affected by construction of the pipeline should be stripped. That topsoil should be stripped during dry soil conditions and stockpiled for use during cleanup and rehabilitation. Identification of the topsoil and subsoil interface should be carefully monitored to ensure that all topsoil with limited subsoil is stripped from the easement. To reduce construction impacts associated with wet climatic conditions, the other components of the construction are recommended to occur during dry soil conditions. If construction cannot be completed during the drier summer months when evapotranspiration is greatest, strict adherence to an Environmental Protection Plan is recommended.

As an initial stage of construction, standard erosion and sediment control methods should be implemented on all active areas. Erosion and sediment control features should be regularly inspected and maintained. Additionally, erosion and sediment control features should be improved or added to in areas requiring more protection. In locations prone to erosion, soil stockpiles should be protected with silt fencing. Soil piles should be separated by at least 1 m to avoid mixing topsoil with subsoil. On agricultural lands, subsoil should be stored on lands stripped of topsoil (subsoil on subsoil).

Following periods of excessive rainfall or saturated soil conditions, construction activities on agricultural lands should be suspended. During wet soil conditions heavy tracked and rubber-tired vehicles should be restricted from movement on agricultural soils. Usually, construction may continue from gravel work surfaces during wet soil conditions.

To the extent feasible, construction activities should occur during drier times of the year. Lands affected by heavy rainfall events and wet soil conditions should be monitored, to avoid the

potential for topsoil and subsoil mixing. Construction activities should be temporarily halted on lands where excessively wet soil conditions are encountered. NOVA Chemicals' on-site inspection team should determine when construction activities may be resumed.

If a situation develops that necessitates construction during wet soil conditions, soil protection measures should be implemented, such as: confining construction activity to the narrowest area practical, installing surface protection measures, and using wide tracked or low ground pressure vehicles.

During construction activities, weather should be monitored to identify the potential onset of high wind conditions which can cause wind erosion. In the event that high winds occur, the contractor should implement protective measures such as:

- suspend earth moving operations ;
- apply dust suppressants; and
- protect soil stockpiles with a cover, barrier or windscreen.

In conjunction with the above measures, all required materials and equipment should be readily accessible and available for use as required.

On agricultural lands, topsoil stripping, handling and storage will be independent from subsoil material to minimize mixing and compaction. Topsoil stripping on the easement should be sufficiently wide to ensure that topsoil will be stockpiled on topsoil and subsoil will be stockpiled on subsoil. Inspection staff should ensure separation between topsoil storage piles and subsoil storage piles is maintained to reduce potential for soil mixing. If topsoil is required to be imported it should be tested for soybean cyst nematode to ensure that it is not contaminated (see Section 4.2.7).

On forested land, the organic/duff layer should be stripped where feasible. Organics and subsoil should be stripped and stockpiled separately to avoid mixing.

Where agricultural land adjacent to the RoW is typically accessed by crossing the RoW alternate access to the fields will be provided for the farm operator for the short period of time during construction that access across the RoW is not possible.

If clean-up is not practical during the construction year, it should be undertaken in the year following construction, starting in May or June once the soils have sufficiently dried. Interim soil protection measures should be undertaken in sensitive areas to stabilize the RoW for over-wintering.

**Net impacts**

With adherence to the best construction practices discussed in this report, no significant adverse impacts to the capability of the soils along the pipeline route are anticipated.

### 4.2.6 Soybean Cyst Nematode (SCN)

Soybean cyst nematode (SCN) is a soil borne parasite that can significantly impact soybean yields. It is known to be present in some fields in the Study Area.

**Potential Impacts**

On agricultural fields, the potential exists for SCN to be spread from an impacted field to a non-impacted field by contaminated machinery, wind, contaminated boots, water erosion, etc. In order to minimize the risk of spreading SCN to non-impacted fields, mitigative/protective measures have been established. Since the construction will impact very little agricultural soil, the potential for the spread of SCN onto adjacent fields is negligible.

**Mitigative/Protective Measures**

Though construction will not occur on agricultural soils, agricultural lands do occur to either side of the proposed pipeline route for a short distance. As a result pre-construction soil sampling should be implemented along the proposed route to identify if the lands affected by the construction Project are already impacted with SCN as a result of past land use. In addition the field either side of the proposed route should be sampled. If a field is identified as having SCN, the following mitigation measures should be considered for farm equipment travel from one field to another across the proposed pipeline route:

- Ensure construction activity is restricted to the non-agricultural pipeline construction area
- In the event that the pipeline route or an adjacent farm field has SCN advise the farm operator to remove soil from equipment before moving to the area that has not been impacted by SCN. This may involve thorough washing of equipment before moving equipment from an impacted field to non- impacted field;
- All properties impacted with SCN should be recorded and communicated to the Contractor. Stantec will help develop best practices protocol to handle SCN.
- Any topsoil imported for cleanup activities should be analyzed for SCN by collecting a composite sample, sending it to a lab for analysis and reviewing results before any imported topsoil is placed on the easement. Imported suitable fill (not containing topsoil) or granular materials do not need to be tested for SCN.

**Net Impacts**

With implementation of these recommendations, no significant adverse impacts upon crop yields resulting from SCN are anticipated.

### 4.2.7 Agricultural Tile Drains

Artificial tile drainage is commonly implemented to achieve maximum agricultural productivity on fields in the Study Area. There is one property adjacent to the proposed pipeline route, which is mapped as containing systematic and/or random agricultural tile drains. A map of agricultural tile drains is found on Appendix C, Figure No. 5.

**Potential Impacts**

Construction activities, including trenching and the movement of heavy machinery, have the potential to crush and/or sever agricultural tile drains.

**Mitigation and Protective Measures**

NOVA Chemicals should undertake consultation with landowners of agricultural fields to confirm where systematic tile drainage is present and if it extends into the proposed pipeline route. If artificial drainage is present, standard mitigation during trenching should be implemented, including:

- the construction contractor would conduct pre-tiling, and install header tile to maintain tile system function;
- the pipeline trench would be excavated to a depth that would allow clearance between the top of the pipeline and the bottom of existing drainage systems;
- tile drains severed or crushed would be recorded and flagged;
- if a main drain, header drain, or large diameter drain is severed, a temporary repair would be made to maintain field drainage and prevent flooding of the work area and adjacent lands;
- the downstream side of severed drains that cross the trench would be capped to prevent the entry of soil, debris and rodents;
- damaged and severed drains would be repaired following construction; and
- after repair and before backfilling, the landowner would be invited to inspect and approve the repair.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on agricultural tile drains are anticipated.

### 4.2.8 Natural Hazards

Natural hazards are elements of the physical environment that have the potential to affect a project in an adverse manner. Potential natural hazards along the proposed pipeline route are limited. Natural hazards that may occur are seismic activity and flooding.

The proposed pipeline route lies within the southern Great Lakes Seismic Zone (Natural Resources Canada, 2005). This zone has a low to moderate level of seismicity when compared to the more active seismic zones to the east, along the Ottawa River and in Quebec.

Over the past 30 years, on average, 2 to 3 magnitude 2.5 or larger earthquakes have been recorded in the southern Great Lakes region. By comparison, over the same time period, the smaller region of Western Quebec experienced 15 magnitude 2.5 or greater earthquakes per year.

Three moderate sized (magnitude 5) events have occurred in the 250 years of European settlement of this region, all of them in the United States - 1929, Attica, New York, 1986, near Cleveland, Ohio, and 1998, near the Pennsylvania/Ohio border. All three of these earthquakes were widely felt in southern Ontario but caused no damage in Ontario.

A map of the regulation limit of the SCRCA is located in Appendix C, Figure No. 6.

**Potential Impacts**

The probability of significant seismic activity in the area traversed by the proposed pipeline is low; therefore, no potential effects are anticipated.

The likelihood of a flooding event interfering with pipeline construction is reduced by construction occurring outside of the spring freshet. A flooding event during construction could result in construction delays, sedimentation, and construction equipment entering a watercourse. The nature of these impacts would depend on the spatial extent, duration, and magnitude of the flooding event.

**Mitigation and Protective Measures**

If flooding necessitates a change in the construction schedule, affected landowners and regulatory agencies should be notified and construction should continue at non-affected locations. Workspaces, unless necessary for watercourse crossings, should be located above the floodplain to the extent practical. All work in the floodplains will be subject to a permit under Ontario Regulation 171/06 from the SCRCA.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts from natural hazards are anticipated.

# 4.3 BIOPHYSICAL FEATURES

## 4.3.1 Surficial Hydrology

The Study Area is within the Sydenham Watershed; however, there are no natural watercourses in the Study Area. Details on the drains within the vicinity of the proposed pipeline route are described below. Maps of watersheds and drains located within the Study Area and crossed by the proposed pipeline route are located in Appendix C, Figure No. 7.

**Surface Water Features**

Allingham Drain

Allingham Drain originates along the proposed pipeline route and flows west to Ladysmith Road. The drain zigzags through the NOVA Chemicals Corunna Site and eventually crosses Highway 40 to continue west. Within the Study Area, reaches of Allingham Drain have been classified as a Type F drain (intermittent) and 'unknown'. At the time of aquatic field survey undertaken in November 2014, the reach of Allingham Drain located upstream (east) of Ladysmith Road consisted of a shallow depression parallel to the roadside, containing leaf litter and isolated areas of standing water. The channel turns east and there is a shallow elevation drop immediately east of Ladysmith Road. West of the elevation drop, field observations indicate that Allingham Drain is a deep, trapezoidal channel that had been recently been cleaned out (i.e., dredged). Based on characteristics observed during field investigations, it is anticipated that the drain only flows in response to precipitation events. The channel is dominated by flat morphology. Channel substrates are fine-grained and the trapezoidal channel is densely lined with Phragmites during field investigations. West (downstream) of Ladysmith Road, this drain supports fish habitat, and contributes indirectly to fish habitat east of Ladysmith Road along the existing pipeline right-of-way.

Jarvis Drain

Jarvis Drain originates at the existing pipeline crossing of Tecumseh Road and flows south along the west side of the Road. It consists of a shallow flat flowing through a grassy trapezoidal channel and is functioning as fish habitat.

Drain A

Drain A is a short drain that parallels the north side of the existing pipeline RoW and flows east into Jarvis Drain at Tecumseh Road. This drain has numerous tile drainage inputs from the

adjacent fields and channel morphology is 'flat' at the confluence with Jarvis Drain. During the November 2014 field survey, standing water was present in the drain at the upstream reaches and it is likely that during higher water levels and heavy precipitation events, fish from Jarvis Drain could make use of habitat available in this drain.

Hale Drain

Hale Drain originates east of Tecumseh Road and flows parallel to the north side of the existing pipeline route. It is a tree-lined trapezoidal channel that flows west to Jarvis Drain. The morphology in this drain is 'flat' and the fine substrates of silt and clay are overlain by a layer of leaf litter. This drain is not situated on the existing RoW, but is located immediately adjacent to it. This drain likely functions as fish habitat during periods of high flow and heavy precipitation.

DeGurse Drain

DeGruse Drain is a mapped feature that flows from the Existing Valve Site at the east end of the proposed pipeline route, east to Kimball Road. Field investigations identified a shallow, grassy swale, suggesting that this feature may be piped underground and is therefore not functioning as fish habitat.

There are four drains potentially affected by the proposed pipeline route. Two drains (Jarvis Drain and Allingham Drain) will be crossed by the pipeline. Pipeline construction across watercourses and drains has the potential to affect water quality through erosion and sedimentation or accidental spills. A permanent culvert will be installed in Jarvis Drain to facilitate access to the RoW from Tecumseh Road.

**Mitigation and Protective Measures**

Various mitigation techniques will be employed during construction to reduce the risk of impacts to natural environment features. Mitigation measures for sediment erosion and dust control will be implemented to prevent sediment and dust from entering sensitive natural features. Additional recommended mitigation measures are outlined in Section 4.3.2.

When Working Near Surface Water Features

The following mitigation measures are recommended:

- Silt fencing will be used adjacent to sensitive receptors when exposed soil slopes are at risk of eroding.
- All materials requiring stockpiling (fill, topsoil, etc.) will be stabilized and kept as far away as is reasonably feasible from watercourses, natural features, drainage features and top of steep slopes. Where stockpiled material is in close proximity to watercourses it will be separated from the water course with silt fencing.

- All exposed soil areas within 200 m of a watercourse will be stabilized and re-vegetated through the placement of seed and mulching or seed and an erosion control blanket no later than October 30.
- Refueling of equipment will be carried out away from any sensitive natural features to avoid potential impacts, in the event that an accidental spill occurs. In the event that a 30m buffer is not achievable, sorbent materials and/or drip pans will be used at the fueling source and receiving equipment to intercept any leakage.
- Fuelling and lubrication of equipment should be carried out in a manner that reduces the possibility of spills. On-site fuel tanks and generators should be situated in designated contained areas.
- Refueling activities should be monitored, and vehicles should not be left unattended when being refueled. Containers, hoses and nozzles on the RoW should be free of leaks. Fuel nozzles should be equipped with functional automatic shut-off devices.
- In addition to any specified requirements, additional silt fence should be available on site, prior to grading operations, to provide a contingency supply in the event of an emergency.
- Erosion and sediment controls should be monitored regularly and properly maintained, as required. Controls are to be removed only after the soils of the construction area have been stabilized and adequately protected until cover is re-established.
- The limits of construction adjacent to all natural features to be retained will be fenced prior to construction, and monitored during construction (along with erosion and sediment control measures) to ensure the limits are maintained with respect to vehicular traffic and soil or equipment stockpiling.
- The Contractor is required to restore any disturbed natural areas to pre-construction conditions.
- Banks of watercourses disturbed during construction will be restabilized to pre-construction configuration and condition (or better) using native species, where possible.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on water quality are anticipated.

### 4.3.2 Aquatic Species and Habitat

Fish community sampling was conducted at Allingham Drain and Jarvis Drain, within the vicinity of the proposed pipeline route, and the following widely distributed warmwater small-bodied fish species were captured: Fathead Minnow (*Pimephales promelas*), Central Mudminnow (*Umbra limi*) and Brook Stickleback (*Culaea inconstans*). Additionally, the following fish species are known to occur in Marsh Creek, located downstream from Allingham Drain: Yellow Bullhead (*Ameiurus natalis*), White Sucker (*Catostomus commersonii*), Common Carp (*Cyprinus carpio*),

Pumpkinseed (*Lepomis gibbosus*), Sand Shiner (*Notropis stramineus*), Bluntnose Minnow (*Pimephales notatus*), Fathead Minnow and Green Sunfish (*Lepomis cyanellus*) (MNRF, 2015).

According to the MNRFs' Natural Heritage Information Centre (NHIC) (MNRF, 2014), and Department of Fisheries and Oceans (DFO's) aquatic Species at Risk mapping (2014) there are no aquatic Species at Risk in the vicinity of the proposed pipeline route.

**Potential Impacts**

Construction has the potential to affect fish through impacts on water quality (erosion, sedimentation, and accidental spills), disruption/harassment (vibration and noise) and loss of habitat. Other impacts may include restrictions to habitat use and fish passage, changes to habitat such as substrate, increased erosion potential, loss of in stream cover and riparian shading.

**Mitigation and Protective Measures**

General erosion and sediment control measures were discussed in Section 4.2.5. Erosion and sediment specific to watercourse crossings were discussed in Sections 4.3.1. The following additional mitigation and protective measures should also be employed during construction to reduce the risk of impacts to fish and fish habitat:

<u>In-water timing windows</u>

Works adjacent to aquatic resources that provide fish habitat, or have the potential to support fish habitat, are often restricted to certain periods to avoid construction-related impacts to fish species during their most sensitive/vulnerable life cycles (i.e., during reproduction and early development stages of eggs and larvae).

Based on the warmwater fish community in Jarvis and Allingham Drain, in-water works in the Study Area are prohibited between March 15 and June 30.

<u>Flow Diversion/Dewatering</u>

Wherever in-water works are required, the work area will be isolated from the remainder of the surface water feature. Maintenance of downstream flow will avoid potential upstream flooding and desiccation of downstream aquatic habitat and organisms. Downstream flows will be maintained at crossing locations using dam and pump techniques. All dewatering operations will be managed to prevent erosion and/or release of sediment laden or contaminated water to the waterbody (e.g. settling basin, filter bag, energy dispersion measures). An isolation/contamination plan will be designed and implemented to isolate temporary in-water work zones to maintain clean flow to downstream/around the work zone at all times.

Fish rescue plan

Any fish in the construction area will be transferred away from it using capture, handling, and release techniques to minimize harm and stress. The intakes of pumping hoses will be equipped with an appropriate device to avoid entraining and impinging fish (see Measures to Avoid Causing Harm to Fish and Fish Habitat (2013) at the following DFO website http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html ). Plans will be developed on a site specific basis and implemented by qualified professionals with the appropriate permitting in place.

Site restoration and Riparian Planting

Following construction, the bed and banks of the crossing locations will be restored to pre-construction conditions to the extent possible. Bank slopes will be restored to match existing grades; however, alterations may be made to maintain slope stability and limit future erosion. Exposed banks will be re-vegetated with native shrubs and grasses to provide riparian cover and aid in erosion and sediment control. Stream beds will be restored to maintain slopes and tie in with existing grades. Bed material will be replaced to match pre-construction conditions.

Permitting

The proposed pipeline will be located within the regulated boundary of SCRCA. Permits under O. Reg. 171/06 will be required prior to construction activities in the regulated boundary. Crossing methods and details will be determined following geotechnical investigations.

Once the final crossing method has been determined, a self-assessment will be completed to determine whether or not DFO review is required.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on aquatic species or habitat are anticipated.

### 4.3.3 Designated Natural Areas and Vegetation

Known and potential designated natural areas within 120 m of the proposed pipeline route are wetlands and significant woodlands.

A map of designated natural areas within 120 m of proposed pipeline route and within the Study Area is located in Appendix C, Figure No. 8.

Wetlands

The Ontario Wetland Evaluation System is used to identify Provincially Significant Wetlands. An evaluated wetland may be one contiguous unit or may be a series of smaller wetlands functioning as a whole. Evaluated wetlands that do not qualify as provincially significant may be designated locally significant and may be protected through local planning and policy measures. There may also be unevaluated wetlands in an area.

A review of MNRF Land Information Ontario (LIO) mapping (MNRF, 2015) did not identify any provincially or locally significant or unevaluated wetlands within the Study Area.

However, field studies conducted in 2014 by Stantec identified the majority of the wooded area adjacent to the proposed pipeline route as treed wetlands.

Significant Woodlands

A woodland is defined as a treed area, woodlot or forested area. The Natural Heritage Reference Manual notes that the local planning authority has a responsibility for designating significant woodlands, using criteria that include size, ecological function, uncommon characteristics and economic and social functional values (MNRF, 2010).

In Lambton County and Township of St. Clair, significant woodlots are those located in Primary Corridor or Significant Natural Area designations, or any contiguous forested area that is 4 hectares, or greater in size. The proposed pipeline route crosses within woodlands that meet the size criterion for significance.

Species of Conservation Concern

A review of the MNRFs' Natural Heritage Information Centre (MNRF, 2014) identified six plant species of conservation concern occurring in the vicinity of the proposed pipeline route (Table 4.1). Stantec's 2014 field surveys did not identify these, or any other, species of conservation concern within or adjacent to the existing easement. 2015 field surveys will continue to search for rare species.

**Potential Impacts**

The proposed pipeline route falls within an existing easement that traverses through significant woodlands. Field surveys conducted in 2014 identified the majority of RoW and adjacent habitat as treed wetland. As noted above in Section 4.3.3, these wetlands were not identified by MNRF in their LIO mapping and are currently not designated as provincially or locally significant or unevaluated wetlands. Ecological Land Classification and botanical surveys will be conducted in spring 2015 to supplement the summer and fall surveys conducted in 2014 to assess the significance and boundaries of vegetation communities, woodlands and to identify vascular plant species. Results of the 2014 and 2015 field monitoring programs will be provided in a

subsequent report, including any additional appropriate mitigation or protection measures, and shared with appropriate agencies for their review and comment.

Where there is natural vegetation within or adjacent to the proposed pipeline route, potential impacts include the removal of native vegetation, introduction or spread of invasive species, and indirect effects such as dust, erosion, and accidental spills.

**Mitigation and Protective Measures**

Mitigation and protective measures are outlined in Section 4.2.5 for dust and erosion, and Section 4.3.1 for accidental spills.

Environmental mitigation and protective measures during construction will include the following:

- Minimize clearing and disturbance to natural areas to the extent possible, including sensitive areas such as unstable soils, wetlands, and areas of significant groundwater recharge or discharge;
- NOVA Chemicals intends to continue their current clearing program through natural areas, which includes periodic mowing of the existing RoW (typically once per annum);
- The limits of clearing should be surveyed and staked in the field;
- Clearing should be done during frozen or dry soil conditions to the extent practical to limit disturbance to vegetation and terrain;
- Tree cutting should be done in consideration of the Lambton County Woodlands Conservation By-law (No. 4 of 2012);
- The limits of the construction footprint should be identified in the field, to allow for the protection of off-site natural areas and vegetation;
- An invasive species management plan should be developed, as measures (e.g., equipment washing before site access) may be necessary to mitigate the spread of invasive species;
- A screening field program of wetlands and riparian areas should be undertaken prior to construction. The following recommendations for work within wetlands are recommended:
  - Remove vegetation at ground level, leaving existing root systems. Limit tree stump removal and grading activities;
  - Install water control swales, as required, to facilitate cross easement water movements
  - Establish travel areas by installing swamp mats
  - Strip the top 0.15 – 0.30 m of topsoil/muck separately from the subsoil in the area disturbed by trenching
  - Regularly inspect the off-easement water regime, monitoring for possible off-easement ponding

  - Storage areas for hazardous materials, chemicals, fuels and lubricating oils should be located at least 100 m outside of wetland boundaries and should be situated in designated contained areas
  - Construction equipment should be refueled at least 50 m outside of wetland boundaries
  - Construction equipment traffic in wetland areas should be kept to the minimum necessary to complete the pipeline construction; and
  - Post-construction, replace any small ephemeral ponds and seasonal depressions;
- A re-vegetation program appropriate to the land use should be initiated for all work areas. NOVA Chemicals should consult with landowners and SCRCA to confirm replanting plans which will emphasize natural re-generation;
- In the event that trees are required to be removed, NOVA Chemicals should undertake a tree replacement program satisfactory to the landowner, and consistent with any municipal requirements; and
- One year following construction, planted vegetation should be inspected for survival, in areas of severe dieback, dead or diseased planted vegetation should be replaced.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on designated natural areas and vegetation are anticipated.

### 4.3.4 Wildlife, Wildlife Habitat and Species at Risk

Wildlife habitat is defined as an area where plants, animals and other organisms live, including areas where species concentrate at a vulnerable point in their life cycle, and areas that are important to migratory and non-migratory species (MNRF, 2000). Significant wildlife habitats are grouped into four categories:

1. Seasonal concentration areas;

2. Animal movement corridors;

3. Rare vegetation communities or specialized habitats; and

4. Habitats of species of conservation concern.

**Seasonal Concentration Areas**

Seasonal concentration areas are those sites where large numbers of a species gather together at one time of the year, or where several species congregate. No seasonal concentration areas have been identified in MNRF mapping (MNRF, 2014) within 120 m of the proposed pipeline route.

Field surveys conducted in 2014 have not identified any seasonal concentration areas within the Study Area, to be confirmed by supplemental site investigations in 2015.

**Animal Movement Corridors**

Animal movement corridors are elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another (MNRF, 2000). The wooded habitat surrounding the proposed pipeline route provides a maintained RoW corridor and wooded cover from the NOVA Chemicals Corunna Site to east of Kimball Road through which animals (e.g., deer, turkeys, snakes) are moving between habitats contained within. This forested habitat is designated as a secondary corridor by the Lambton County Official Plan Appendix A (shown on Figure No. 8, Appendix C of this ER).

Hedgerows can also serve as small linkages (MNRF, 2000). A review of aerial photography indicates the presence of linear hedgerows radiating north-south from the wooded areas but not within 120 m of the proposed pipeline route.

Based on the background information and incidental wildlife observations from 2014, it is expected that the existing easement and adjacent wooded habitat are providing corridor functions.

**Rare Vegetation Communities or Specialized Habitats**

Rare or specialized habitats are two separate components. Rare habitats are those with vegetation communities that are considered rare in the province. SRANKS are rarity rankings applied to species at the "state", or in Canada at the provincial level, and are part of a system developed under the auspices of the Nature Conservancy. Generally, community types with SRANKS of S1 to S3 (i.e., extremely rare to rare – uncommon in Ontario), as defined by the NHIC, could qualify. It is assumed that these habitats are at risk and that they are also likely to support additional wildlife species that are considered significant.

Specialized habitats are microhabitats that are critical to some wildlife species. The Draft Eco-regional Criteria (MNRF, 2012) identifies seven potential specialized habitats (Cliffs and Talus Slopes, Sand Barren, Alvar, Old Growth Forest, Savannah, Tallgrass Prairie, Other Rare Vegetation Communities) associated within eco-region 7E of Ontario, where the proposed pipeline route is located.

**Habitat for Species of Conservation Concern**

There are four types of species of conservation concern: those which are rare, those whose populations are significantly declining, those which have been identified as being at risk from certain common activities and those with relatively large populations in Ontario compared to the remainder of the globe.

Rare species are considered at five levels: globally rare, federally rare (with designations by COSEWIC), provincially rare (with designations by COSSARO), regionally rare (at the Site Region level), and locally rare (in the municipality or Site District). This is also the order of priority that should be assigned to the importance of maintaining species. Some species have been identified as being susceptible to certain practices, and their presence may result in an area being designated significant wildlife habitat. Examples include species vulnerable to habitat loss and species such as woodland raptors that may be vulnerable to forest management or human disturbance. The final group of species of conservation concern includes species that have a high proportion of their global population in Ontario. Although they may be common in Ontario, they are found in low numbers in other jurisdictions.

The NHIC database was searched to obtain historic records of species of conservation concern in the vicinity of the proposed pipeline route. The Ontario Breeding Bird Atlas was also consulted for bird records in the Study Area (Region 3, square 17LH84) which (Cadman et al., 2007), as well as the Ontario Reptile and Amphibian Atlas (Ontario Nature, 2013) and the Ontario Mammal Atlas (Dobbyn, 1994). Based on a review of background information, 10 species of conservation concern are known to occur in the vicinity of the Study Area, including 6 species of plants, 1 species of reptiles, 2 species of breeding birds and 1 species of mammal, as shown in Table 4.1.

Exact location of species occurrences are not available from these atlases and, instead, are recorded within 1 x 1 km or 10 x 10 km squares. The potential for species to be present will be limited by habitat suitability and availability. Therefore, the identified species recorded from these databases may not occur in the Study Area.

**Table 4.1: Terrestrial Species of Conservation Concern**

| Common Name | Scientific Name | SRANK | Provincial Status (COSSARO) | National Status (COSEWIC) | Source |
|---|---|---|---|---|---|
| **Plants** | | | | | |
| Carolina Whitlow-grass | *Draba reptans* | S3 | - | - | NHIC |
| Mead's Sedge | *Carex meadii* | S2 | - | - | NHIC |
| Rigid Sedge | Carex tetanica | S3 | - | - | |
| Texas Stiff Yellow Flax | *Linum medium var. texanum* | S1 | - | - | NHIC |
| White-haired Panicgrass | *Dichanthelium praecocius* | S3 | - | - | NHIC |
| Woodland Pinedrops | *Pterospora andromedea* | S2 | - | - | NHIC |
| **Reptiles** | | | | | |
| Snapping Turtle | *Chelydra serpentina* | S3 | SC | SC | RAO |
| **Birds** | | | | | |
| Eastern Wood-Pewee | *Contopus virens* | S4B | SC | SC | OBBA |
| Wood Thrush | *Hylocichla mustelina* | S4B | SC | THR-NS | OBBA |

**Table 4.1: Terrestrial Species of Conservation Concern**

| Common Name | Scientific Name | SRANK | Provincial Status (COSSARO) | National Status (COSEWIC) | Source |
|---|---|---|---|---|---|
| **Mammals** | | | | | |
| Tri-colored Bat | *Perimyotis subflavus* | S3? | - | END-NS | COSEWIC* |

NOTES:
END: Endangered - a species facing imminent extinction or extirpation
NHIC: Natural Heritage Information Centre
OBBA: Ontario Breeding Bird Atlas
RAO: Reptiles and Amphibians of Ontario
COSSARO: Committee on the Status of Species at Risk in Ontario
COSEWIC: Committee on the Status of Endangered Wildlife in Canada
*2013 COSEWIC Assessment and Status Report on the Little Brown Myotis, Northern Myotis, and Tri-colored Bat in Canada
THR: Threatened - a species that is at risk of becoming endangered
SC: Special Concern - a species with characteristics that make it sensitive to human activities or natural events
S1:Critically Imperiled - Critically imperiled in the province (often 5 or fewer occurrences)
S2: Imperiled - Imperiled in the province, few populations (often 20 or fewer)
S3: Vulnerable - Vulnerable in the province, relatively few populations (often 80 or fewer)
S4: Apparently Secure - Uncommon but not rare
S?: Rank Uncertain
SH: Possibly Extirpated (Historical)
S#B: Breeding status rank
NS: No schedule – not yet on a Species at Risk Act schedule

### Species at Risk

Species at Risk are identified as endangered or threatened by federal (COSEWIC) and/or provincial legislation (COSSARO).

The NHIC database was searched to obtain historic records of Species at Risk in the vicinity of the proposed pipeline route. The Ontario Breeding Bird Atlas was also consulted for bird records in Region 3 (square 17LH84) (Cadman et al., 2007), as well as the Ontario Reptile and Amphibian Atlas (Ontario Nature, 2013) and the Ontario Mammal Atlas (Dobbyn, 1994). Based on a review of background information, Species at Risk are known to occur in the vicinity of the Study Area.

Exact location of species occurrences are not available from these atlases and, instead, are recorded within 1 x 1 km or 10 x 10 km squares. The potential for species to be present will be limited by habitat suitability and availability. Therefore the identified species recorded from these databases may not occur in the Study Area. Based on a review of background information, 8 Species at Risk are known to occur in the vicinity of the Study Area, including 2 species of plants, 1 species of reptiles, 3 species of breeding birds and 2 species of mammal, as shown in Table 4.2.

## Table 4.2: Terrestrial Species at Risk

| Common Name | Scientific Name | SRANK | Provincial Status (COSSARO) | National Status (COSEWIC) | Source |
|---|---|---|---|---|---|
| **Plants** | | | | | |
| American Columbo | *Frasera caroliniensis* | S2 | END | END | NHIC |
| Dense Blazing Star | *Liatris spicata* | S2 | THR | THR | NHIC |
| **Reptiles** | | | | | |
| Butler's Gartersnake | *Thamnophis butleri* | S3 | END | THR | RAO |
| **Birds** | | | | | |
| Barn Swallow | *Hirundo rustica* | S4B | THR | THR-NS | OBBA |
| Bobolink | *Dolichonyx oryzivorus* | S4B | THR | THR-NS | NHIC |
| Eastern Meadowlark | *Sturnella magna* | S4B | THR | THR-NS | OBBA, NHIC |
| **Mammals** | | | | | |
| Little Brown Myotis | *Myotis lucifugus* | S5 | END | END | COSEWIC* |
| Northern Myotis | *Myotis septentrionalis* | S3? | END | END | COSEWIC* |

NOTES:
END: Endangered - a species facing imminent extinction or extirpation
NHIC: Natural Heritage Information Centre
OBBA: Ontario Breeding Bird Atlas
RAO: Reptiles and Amphibians of Ontario
COSSARO: Committee on the Status of Species at Risk in Ontario
COSEWIC: Committee on the Status of Endangered Wildlife in Canada
*2013 COSEWIC Assessment and Status Report on the Little Brown Myotis, Northern Myotis, and Tri-colored Bat in Canada
THR: Threatened - a species that is at risk of becoming endangered
SC: Special Concern - a species with characteristics that make it sensitive to human activities or natural events
S1: Critically Imperiled - Critically imperiled in the province (often 5 or fewer occurrences)
S2: Imperiled - Imperiled in the province, few populations (often 20 or fewer)
S3: Vulnerable - Vulnerable in the province, relatively few populations (often 80 or fewer)
S4: Apparently Secure - Uncommon but not rare
S5: Secure - Common, widespread, and abundant in the province
S?: Rank Uncertain
SH: Possibly Extirpated (Historical)
S#B: Breeding status rank
NS: No schedule – not yet on a Species at Risk Act schedule

Two plant Species at Risk were identified as potentially occurring within the Study Area. American Columbo occurs in a variety of habitats. It is most commonly associated with dry open forested slopes but can be found in clearings and thickets as well as swampy areas. Its long life span may allow for persistence in sub-optimal habitats (COSEWIC, 2006).

Dense Blazing Star is typically a species of fresh to moist tall grass prairie habitats. Moisture regime may range from dry-mesic to very moist, and may be found in openings in oak savannahs, dune woodlands, interdune meadows, and along linear corridors such as roadside ditches, railways and hydro corridors (COSEWIC, 2010).

Habitat for both American Columbo and Dense Blazing Star within the Study Area is considered sub-optimal and to date neither of these species has been identified during surveys conducted in 2014. Supplemental surveys in 2015 will continue to search for plant and all other Species at Risk.

Butler's Gartersnakes are primarily associated with tall-grass prairie habitats, also found in successional lands, meadows, herbaceous forest edges and along drainage swales and small bodies of water. In the Windsor-Sarnia area, this species is often found in highly modified habitats (e.g., junkyards, vacant lots, gravel pits). Forest edge habitat is abundant along the existing RoW. Targeted coverboard surveys along the western portion of the proposed pipeline route did not identify any Butler's Gartersnakes. However, due to the secretive nature and lack of mobility of this species during their active season, mitigation measures are recommended below to be conservative.

Barn Swallows nest on walls or ledges of barns as well as on other human-made structures such as bridges, culverts or other buildings. Barn Swallows are generally considered grassland species, foraging over meadows, hay, pasture or even mown lawn. Suitable nesting habitat is available along structures associated with the NOVA Chemicals Corunna Site and the Existing Valve Site at the east end of the proposed pipeline route; however, no structures are proposed for removal as part of the Project.

The Bobolink is generally referred to as a "grassland species". It nests primarily in forage crops with a mixture of grasses and broad-leaved forbs, predominantly hayfields and pastures. Preferred ground cover species include grasses such as Timothy and Kentucky bluegrass and forbs such as clover and dandelion (COSEWIC 2010). Bobolink is an area-sensitive species, with reported lower reproductive success in small habitat fragments (Kuehl and Clark 2002; Winter et al. 2004). Grassland habitat assessments during surveys in 2014 did not identify suitably contiguous habitat. However, supplemental bird surveys in 2015 will further assess presence/absence of Bobolink.

Eastern Meadowlarks are ground nesting birds which are often associated with human-modified habitats where they sing from prominent perches such as roadside wires, trees, and fence posts. As a grassland species, the Eastern Meadowlark typically occurs in meadows, hayfields and pastures. Grassland bird breeding habitat is restricted to a single alfalfa field along the existing RoW.

Until recently, the Little Brown Myotis and Northern Myotis were considered common, and the recent change in status is due to significant declines in recent years attributed to a condition referred to as White-nose Syndrome. The Little Brown Myotis is a bat species commonly found near waterbodies in buildings, attics, roof crevices and loose bark on trees or under bridges (Eder, 2002). The Northern Myotis is a resident bat of upland forests, typically foraging for aerial insects in the forest understory. Maternity roosts are located under bark or in buildings with young born in June and July while hibernating colonies typically reside in cave crevices (Reid, 2006).

Anthropogenic structures are lacking from the Study Area and limited tree removal (restricted to the RoW) is expected during pre-construction or construction.

**Potential Impacts**

Because of the presence of woodlots, drainage ditches and wetlands in proximity to the proposed pipeline route, opportunities for amphibian, reptile, mammal or bird habitat exist. A full suite of surveys will be completed by the end of June 2015, including surveys for amphibians, breeding birds (grassland, woodland and wetland, crepuscular), and all incidental wildlife observations. The results of all surveys, including any additional appropriate mitigation or protection measures, will be summarized in a report and shared with appropriate agencies for their review and comment.

Potential impacts on wildlife and wildlife habitat from construction include direct mortality from construction vehicles, habitat destruction through vegetation removal, habitat degradation through spills and sensory disturbance of wildlife during construction.

**Mitigation and Protective Measures**

Mitigation and protective measures are outlined in Section 4.3.3 for vegetation removal and Section 4.3.1 for accidental spills.

Environmental mitigation and protective measures during construction include the following:

- Detailed design of the pipeline should be reviewed to avoid and minimize impact upon wildlife habitat to the extent possible, and in particular habitats of endangered, rare, special concern, and threatened species;
- Consultation with MNRF regarding the potential need for a permit under the *Endangered Species Act* (2007) is currently underway. To date, no Species at Risk have been identified during site investigations along the proposed pipeline route. Further mitigation will be

developed in consultation with the MNRF. In the event that a Species at Risk is discovered during construction, NOVA Chemicals will undertake further consultation with MNRF.

- Construction activities with the potential to remove migratory bird habitat, such as vegetation clearing, should be avoided to the extent possible during the breeding season which is generally from April 1- August 31 in southern Ontario (Environment Canada, 2014). Should vegetation clearing activities be unavoidable during this window, a program should be implemented to reduce and avoid impacts to migratory birds and their nests. This program should include preventative and mitigation measures but may also include avoidance of clearing during key sensitive periods and in key locations;
- Trench operations should be followed as closely as practical with backfill operations, to facilitate the movement of wildlife across the trench;
- The contractor should inform their personnel not to threaten, harass or injure wildlife;
- Where practical avoid construction in the vicinity of wetland communities during the amphibian breeding season (March 1 – June 30);
- All brush and trees felled should be removed immediately from the Project footprint to discourage use of these features by snakes; and
- Precautionary mitigation measures to be implemented in the unlikely event that a wildlife encounter occurs include:
  - Speed limits should be lowered along the entire construction right-of-way for snake specific wildlife concerns;
  - Equipment and vehicles are to yield the right-of-way to wildlife; and
  - If wildlife are encountered during construction, personnel are required to move away from the animal and wait for the animal to move off the construction site.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on wildlife, wildlife habitat and Species at Risk are anticipated.

# 4.4 SOCIO-ECONOMIC ENVIRONMENT

## 4.4.1 Residents and Businesses

The Study Area and proposed pipeline route are located east of residential properties in the community of Corunna. Numerous rural residential properties (including agricultural operations) are also located north (along Petrolia Line), south (along Rokeby Line), and east (along Kimball Road) of the route. The only known non-agricultural businesses within the Study Area are the NOVA Chemicals Corunna Site (at the western end of the proposed pipeline route), Vesuvius Canada, and Invenergy St. Clair Power, both of which are located north west of the proposed

pipeline route (Lambton County, 2015, and Google Earth), and Enbridge Gas Distribution's gas storage, located within the Study Area.

**Potential Impacts**

Residential and business properties may experience noise, dust and equipment exhaust associated with construction activity. An existing access road from Kimball Road will be utilised to access the Existing Valve Site. Use of this road is anticipated to be of fairly short duration to complete construction activities at the Existing Valve Site. Construction activities will temporarily affect the aesthetic landscape of the construction area, and could impede property access. Potential safety concerns also exist at locations where properties, residents and vehicles come in proximity to construction activities.

**Mitigation and Protective Measures**

During construction, motorized construction equipment should be equipped with mufflers and silencers as available. Company and construction personnel should avoid idling of vehicles; vehicles or equipment should be turned off when not in use unless required for operation of the vehicle or equipment. To the greatest extent practical activities that could create noise should be restricted to daylight hours and adhere to local noise by-laws. Sources of continuous noise, such as portable generators, should be shielded or located so as to reduce disturbance to residents and businesses. Where pipeline installation will take an extended time period to complete, such as watercourse and road crossings, an assessment should be undertaken to determine the suitability and effectiveness of temporary noise barriers adjacent to residential or business properties.

The contractor should implement site practices during construction that are in line with the Environment Canada document 'Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities' (Environment Canada, 2005), which may include:

- maintaining equipment in compliance with regulatory requirements;
- protecting stockpiles of friable material with a barrier or windscreen in the event of dry conditions and dust;
- dust suppression of source areas; and
- covering loads of friable materials during transport.

Watering for dust control must not result in the formation of puddles, rutting by equipment or vehicles, the tracking of mud onto roads or the siltation of watercourses.

Additional consultation with residents and businesses adjacent to the proposed pipeline route will be held in advance of construction commencement. NOVA Chemicals will also distribute a newsletter to surrounding landowners reminding those that may use the pipeline corridor for recreational use that it will be fenced off for safety during the duration of construction. Contact

information for a designated NOVA Chemicals representative will be available prior to and during construction to address questions and concerns.

While pipeline construction activities and machinery have the potential to temporarily affect the local viewscape, restoration of the construction area will leave little evidence that a pipeline exists. Construction should be conducted as expeditiously as possible, to reduce duration of activities. Vegetative buffers at watercourse and road crossings should be restored where feasible.

Access to residential properties should be maintained at all times.

Safety fence should be installed at the edge of the construction RoW where public safety considerations are required. The contractor should implement a traffic management plan for all roads affected by construction, which at a minimum outlines measures to:

- control the movement of materials and personnel to and from the construction site;
- post signs to warn oncoming motorists of construction activity;
- control traffic at road crossings;
- reduce on-road disturbance and land closures;
- store equipment as far from the edge of the road as practical; and
- install construction barricades at road crossings.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on residents or businesses are anticipated.

### 4.4.2 Institutional Services & Facilities

No libraries, schools, police services, fire services, or places of worship are located within the Study Area. Corunna Medical Clinic, the closest health facility is located outside of the Study Area, approximately 5 km northwest of the proposed pipeline from the Corunna Site. Additionally, the proposed pipeline is located approximately 4 km east from the nearest emergency services (i.e., Corunna Fire Hall and Corunna Emergency Medical Services Base (Station No.3)), outside of the Study Area.

**Potential Impacts**

Since there are no institutional services present within the vicinity of the proposed pipeline route, no impacts are expected.

**Mitigation and Protective Measures**

No impacts to institutional services and facilities are anticipated; therefore, no mitigation and protective measures are recommended.

### 4.4.3 Culture, Tourism & Recreation Facilities

No known cultural, tourism, or recreational facilities are located within the Study Area or along the proposed pipeline route. To the west of the Study Area there are several recreational facilities (i.e., parks and playgrounds, sports fields) in the community of Corunna.

**Potential Impacts**

There are no known cultural, tourism, or recreational facilities present within the vicinity of the proposed pipeline route; therefore, no impacts are expected.

**Mitigation and Protective Measures**

No impacts to cultural, tourism, or recreational facilities are anticipated; therefore, no mitigation and protective measures are recommended.

### 4.4.4 Economy & Employment

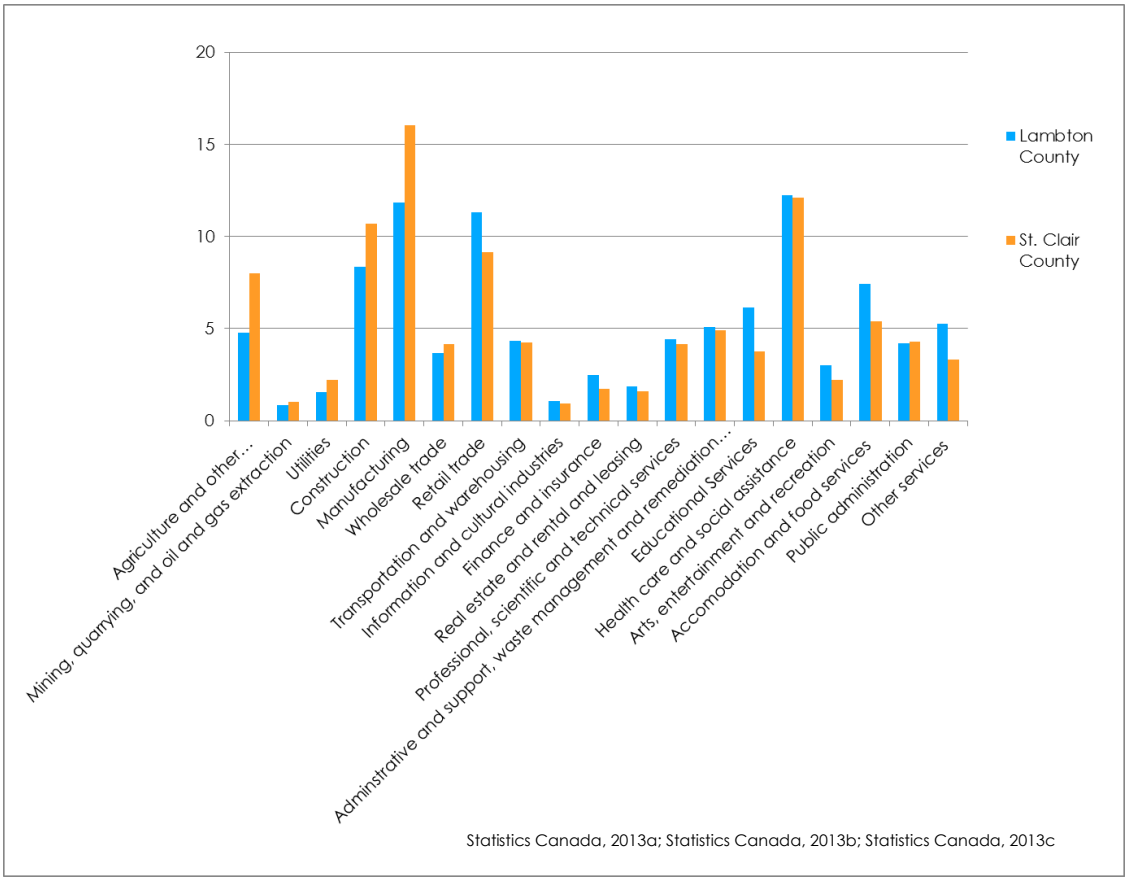
The most recent economy and employment statistics are found in the 2011 census released by Statistics Canada. Table 4.3 summarizes the unemployment rate, percentage of work force (over the age of 15) employed at the time of the census and median incomes of persons (over the age of 15 (Statistics Canada, 2013a; Statistics Canada, 2013b, Statistics, Canada 2013c).

**Table 4.3: Economy and Employment Statistics**

| | Unemployment Rate | % in labour force > 15 years | Median Income for persons > 15 years |
|---|---|---|---|
| Lambton County | 9.5% | 59.5% | $29, 989 |
| Township of St. Clair | 9.4% | 63.1% | $33,453 |
| Ontario | 8.3% | 65.5% | $30,526 |

Figure 4.1 shows the percentage of the employed population working in the most common industries in the County of Lambton and Township of St. Clair as released by Statistics Canada (2013a; 2013b; 2013c). As can be seen, employment is spread among many industries, with the most common type of employment in both municipalities being health care and social assistance.

**Figure 4.1: Distribution of Workforce by Percentage**




**Potential Impacts**

The construction and operation of the proposed pipeline route will result in direct and indirect business income, direct and indirect employment income, and an increase in tax revenues.

**Mitigation and Protective Measures**

NOVA Chemicals should make all reasonable efforts to procure services and materials from local suppliers, where services or products are available in required quantity and at competitive prices.

**Net Impacts**

With the implementation of the Project and local procurement, positive residual impacts on the economy and employment are anticipated.

### 4.4.5 Contaminated Sites

A desktop review of the potential for areas of contamination was undertaken for the Study Area. Sources utilised include:

- Federal Contaminated Sites Inventory, 2015. Treasury Board of Canada Secretariat;
- Large and Small Landfill Sites in Ontario, 2015. MOECC;
- Waste Disposal Sites – Ministry of the Environment (MOE) CA Inventory;
- Waste Disposal Sites – MOE 1991 Historical Approval Inventory;
- Landfill Inventory Management Ontario; and
- Schedule A to the Official Plan for the Township of St. Clair, 2001.

A landfill site and a waste disposal site were identified within the Study Area based on this review and are shown on Appendix C, Figure No. 2.

A more detailed review of contaminated sites was undertaken for the proposed pipeline route and a buffer of 300 m on either side of the route and eastern portion of the NOVA Chemicals Corunna Site (the Search Area). A review of historical records and documentation available for this area was completed to identify properties or areas that represented the potential for site contamination at the time of the investigation. The historical records review consisted of a review of information available from government, public and other agencies or parties. Environmental Risk Information Services (ERIS) completed a search of public and private information databases for the Search Area. Additional information was also reviewed from a Phase I Environmental Site Assessment (ESA) completed for the NOVA Chemicals Corunna Site by Stantec (2012) and Google Earth.

**Landfills**

The ERIS database searched a 300 m buffer around the proposed pipeline route and included a review of the following databases:

- Waste Disposal Sites – MOE CA Inventory;
- Waste Disposal Sites – MOE 1991 Historical Approval Inventory; and
- Landfill Inventory Management Ontario.

These reviews indicated that no active or closed landfills were present within 300 m of the proposed pipeline route.

**Contaminated Sites and Former Industrial Sites**

The 2012 Phase I Environmental Site Assessment (ESA) Stantec report mentioned above identified the following as potential sources of contamination associated with the NOVA Chemicals Corunna Site that were situated within the current proposed pipeline route:

- Liquid brine reservoir located on the NOVA Chemicals Corunna Site;
- Lake Tilman (Brine) on the NOVA Chemicals Corunna Site;
- A solution mining well on the NOVA Chemicals Corunna Site;
- A fire training facility on the NOVA Chemicals Corunna Site; and
- The occurrence of spills within the Allingham Drain.

Correspondence from NOVA Chemicals on February 23, 2014 indicated that since the 2012 Stantec Phase I ESA was completed, no environmental incidents have occurred within the Search Area. This was in agreement with the ERIS report, which did not identify any spill occurrences within the Search Area after May 24, 2012.

The ERIS report identified the above potential sources of contamination, and did not identify any further contaminated or industrial sites within the Search Area.

A review of the ERIS database search indicated that there are thirty-three records for Ontario oil and gas wells within the Search Area. The majority of these wells were indicated to be abandoned; however, approximately sixteen were reported to be active.

The locations of the potential sources of contamination outlined above are shown in Appendix C, Figure No. 9.

**Potential Impacts**

The proposed pipeline route will cross lands which may have contaminants of concern, in particular in the vicinity of the NOVA Chemicals Corunna Site.

The presence of Ontario oil and gas wells within the Study Area is considered to represent a low potential source of contamination. Locations of oil and gas wells are shown Appendix C, Figure No. 3.

In addition to the above, fill material of unknown origin is expected to have been used for the purposes of development of the NOVA Chemicals Corunna Site and for road construction, and may be a potential source of contamination at the western limit of the proposed pipeline route and where existing roadways intersect the route. Further, the application of road salt for de-icing activities along the roadways intersected by the proposed pipeline route represents a potential source of contamination.

**Mitigation and Protective Measures**

Should excess fill be generated as a result of construction activities of the proposed pipeline, any soils that do not meet the Standards listed in Table 1 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act* (the MOECC Standards) may not be considered inert fill upon excavation, and off site management options for excess soils that cannot be reused within the area of the proposed construction must be considered. Subsurface investigations may be necessary to evaluate the presence or absence of soil and/or groundwater contamination. If contaminants are identified at concentrations exceeding the MOECC Standards, a soil and/or groundwater sampling, handling and remediation plan would be developed and implemented.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts from contaminated sites are anticipated.

### 4.4.6 Waste Management

**Potential Impacts**

Improper disposal of waste material generated during construction may result in contamination to soil, groundwater, and/or surface water resources on and off the construction RoW. Litter generated during construction may also become a nuisance to adjacent properties if not contained.

**Mitigation and Protective Measures**

NOVA Chemicals should undertake responsible management of excess fill. When details on excess fill volumes are known, disposal locations should be determined and appropriate permitting obtained.

The construction contractor should implement a site-specific waste collection and disposal management plan, which may include:

- Waste materials, sanitary waste and recycling transported off-site by private waste contractors licensed by the MOECC;
- Contractors required to remove their excess materials from the site;
- Labelling and storage of hazardous and liquid wastes in a secure area that would contain material in the event of a spill; and
- Implementation of a waste management program consisting of reduction, reuse, and recycling of materials.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts from waste management are anticipated.

### 4.4.7 Land Use

The Study Area and proposed pipeline route are located in land uses designated by the County of Lambton and the Township of St. Clair.

**County of Lambton**

The County of Lambton Official Plan (1982) designates the Corunna Site and a portion of the proposed pipeline route as Petrochemical Industrial lands, in-between Highway 40 and Ladysmith Road. The remainder of the proposed pipeline route is designated as Rural/Agricultural on Map 1 Growth Strategy of the Official Plan. The zoning by-laws are the responsibility of the local municipalities (see below).

Section 7 of the Official Plan outlines policies for Infrastructure; Section 7.7 is specific to Utility Corridors: Electricity/Pipelines/Communications. These Policies state that:

- Preferred routes for utility lines and corridors follow existing rights-of-way, property lines, existing easements and fence lines; avoid built- up and heavily populated areas; do not infringe on environmentally significant areas, including natural heritage corridors, and do not further fragment forested areas.
- The minimization of impacts on woodlots and agricultural lands, should be the highest priority in determining a utility line or corridor route in rural areas. Where woodlot locations cannot be avoided, tree cover removed will be replaced with twice the area of tree cover that is removed at a location specified by the affected land owner. Should the owner not have a suitable location, the County or local municipality will select it.
- Measures to mitigate impacts on agriculture during and after construction should be followed including replacement of soils with top soil layers in their original condition and order; timing of construction to minimize crop losses; stripping, treatment, and disposal of surplus materials from trenching in a manner acceptable to the land owner and the local municipality,
- Access points to existing roads should be reviewed with municipal road superintendents or the County Public Works Department, depending on the ownership of the road.
- Design, construction, site restoration and maintenance should be carried out in accordance with relevant environmental guidelines regarding watercourses, sedimentation control, environmentally significant areas, natural heritage corridors, and agricultural lands.
- Consideration will be given to ensure that above-ground facilities or structures are aesthetically pleasing.

- The design, planning, and maintenance of the corridor will consider the effects on the natural heritage corridor framework and will implement restoration techniques consistent with natural heritage policies. NOVA Chemicals will be responsible for the cost of repairing damage to municipal roads.
- Any severance required for new utility corridors must not result in fragmentation of farm land. Easements should be obtained for new utility corridors rather than creating new separate and distinct lots.
- NOVA Chemicals will maintain and be ultimately responsible for the corridor and the decommissioning and/or removal of facilities upon the abandonment of the pipeline.

**Township of St. Clair**

The proposed pipeline route crosses two zones in the Township of St. Clair's Zoning By-law 17 of 2003; Environmental Protect – Woodlot (EP-WD) and Agricultural-1 (A-1) zones. The NOVA Chemicals Coruna Site is zoned Industrial Type 3 (M3). Section 4.1.2 of the By-law states that the by-law permits the use of lands, building of structures in any zone for the provision of essential services, utilities or drainage work by the Township, County, Conservation Authority or any telephone, telegraph, cable television, natural gas, energy or electricity company provided that:

a) buildings or structures are designed and maintained in general harmony with the buildings and structures permitted within the zone in which it is located in;

b) such building or structure (not including those directly used in the movement of a public utility commodity such as a conduit) shall comply with the setback, lot coverage and open space regulations of that zone; and

c) there shall be no external outside storage of goods, materials or equipment in any residential zone.

Section 4.1.5 Pipelines states that nothing in the by-law shall prevent the use of any land for any gas, oil, brine or other liquid or gaseous product transmission or distribution pipeline and appurtenance thereto.

**Potential Impacts**

As the proposed pipeline route is in conformity with municipal planning designations, no potential impacts are anticipated.

Any buildings or structures along the proposed pipeline route or the NOVA Chemicals Corunna Site must comply with setbacks.

Construction on active agricultural lands has the potential to interrupt the operations on those lands.

Potential impacts of the Project on natural areas and mitigation and protective measures are outlined in Section 4.3.3.

**Mitigation and Protective Measures**

As per the Official Plan policies and Section 4.3.3 of this report, the design, construction, site restoration and maintenance will be carried out in accordance with relevant environmental guidelines and best practices as outlined in this report.

A replacement/compensation plan for the removal of any trees, given the Woodlot zone, should be prepared and will be the responsibility of NOVA Chemicals to carry out, should any trees need to be removed. The County of Lambton tree cutting by-law may be applicable.

Consultation will be undertaken with landowners along and adjacent to the proposed pipeline route in order to identify methods of minimizing disturbance to the agricultural operations, where applicable.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on land use are anticipated.

### 4.4.8 Archaeological Resources

**Potential Impacts**

The Project has the potential to directly affect archaeological resources during construction.

**Mitigation and Protective Measures**

Before construction, an archaeological assessment of the Project site should be completed and submitted to the Ministry of Tourism, Culture and Sport (MTCS) for their review and comment.

Should previously unknown archaeological resources be uncovered or suspected of being uncovered during construction, ground disturbance in the find location should cease immediately. MTCS and an archaeologist licensed in the Province of Ontario should be notified immediately. A site-specific response plan should then be employed following further investigation of the specific find. The response plan would indicate under which conditions the ground disturbance activity in the find location may resume.

In the event that human remains are uncovered or suspected of being uncovered during ground disturbance, the above measures should be implemented along with notifying local

police, the coroner's office and the Cemeteries Regulation Unit of the Ontario Ministry of Government and Consumer Services (1-800-889-9768).

**Net Effects**

By undertaking the above assessment, and implementing resulting mitigation measures and any necessary contingency plans, no significant adverse residual impacts on archaeological resources are anticipated.

### 4.4.9 Heritage Resources and Cultural Heritage Landscapes

A Heritage Overview has been undertaken for the Study Area through agency consultation, review of historic mapping, and a visual assessment to determine the presence of potential heritage resources and protected properties.

Completion of a site visit determined that the Study Area contains seven properties where heritage resources, either potential or protected, are situated. Of these seven properties, none were previously identified by municipalities to represent either an identified, listed, or designated property.

A map of protected and potential heritage resources crossed by the proposed pipeline route is located in Appendix C, Figure No. 10.

**Table 4.4: Potential Heritage Resources**

| Municipality | Municipal Address | Description | Site Number | Protected or Previously Identified |
|---|---|---|---|---|
| Township of St. Clair | 1371 Petrolia Line | Farmstead | 1 | N/A |
| | 1025 Petrolia Line | Farmstead | 2 | N/A |
| | 1378 Rokeby Line | Farmstead | 3 | N/A |
| | 1354 Rokeby Line | Church | 4 | N/A |
| | 1148 Rokeby Line | Farmstead | 5 | N/A |
| | 1064 Rokeby Line | Residence | 6 | N/A |
| | 944 Rokeby Line | Farmstead | 7 | N/A |

**Potential Impacts**

The Project has the potential to impact the seven heritage resources during construction.

A Heritage Assessment Report will be undertaken prior to construction. Within the Report, the potential heritage resources will be assessed, the relationship of each heritage resource to the Project described, and the impacts of the proposed undertaking on each heritage resource

analyzed. While describing the impacts of the proposed pipeline route on heritage resources, the Report will also provide recommendations pertaining to the mitigation of negative impacts to safeguard these resources during the construction and operation phases of the Project.

**Mitigation and Protective Measures**

Prior to construction, the above-referenced Heritage Assessment Report will be undertaken and submitted to the MTCS for their review and comment. The Report will contain mitigation measures for potential impacts, if required.

**Net Impacts**

Heritage resources are situated approximately 1 kilometre from anticipated Project activity. With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on heritage resources or cultural heritage landscapes are anticipated.

### 4.4.10 First Nations and Métis Nation Interests

**Potential Impacts**

The Project is not located in a First Nations community, though it may affect traditional territory of First Nations and Métis Nation of Ontario. The Study Area is within the boundary of the Southern Ontario Treaties (1764-1862) (Pre-1975 Treaty) (AANDC, 2015).

While not known to currently occur, harvesting and hunting in the construction RoW would be impeded during construction. Archaeological surveys could also result in the finding of First Nations or Métis Nation of Ontario artifacts.

**Mitigation and Protective Measures**

NOVA Chemicals has sought First Nations and Métis Nation of Ontario input into the Project (see Section 3.5.5). To date, Chippewas of the Thames First Nation has provided confirmation that the Project is within their traditional territory. Aamjiwnaang First Nation has notified NOVA Chemicals of a Traditional Land Use Study, which was prepared in August 2013 concerning a different project. NOVA Chemicals has obtained a copy of the 2013 study. No other information has been obtained by NOVA Chemicals or provided by First Nations or the Métis Nation of Ontario with regards to traditional land and resource use. NOVA Chemicals will continue engaging with First Nation communities and the Métis Nation of Ontario as the Project moves forward.

Mitigation and protective measures for archaeology are discussed in Section 4.4.8.

**Net Impacts**

By undertaking the above engagement and archaeological assessments, no significant adverse residual impacts on First Nations and Métis Nation interests are anticipated.

### 4.4.11 Infrastructure

Infrastructure identified for the purpose of this Project includes roads, hydrocarbon facilities, other buried pipelines and railways. A map of infrastructure developed from existing databases is shown in Appendix C, Figure No. 3. Other utilities such as water and communication lines that may exist along road allowances are not illustrated on the map.

**Roads**

The Study Area is bounded by four roadways. A provincially maintained controlled-access highway, Highway 40, is located on the west boundary of the Study Area and runs north to south. Three municipal roads are on the other boundaries of the Study Area. In the north, the Study Area includes Petrolia Line. The eastern extent includes Kimball Road and the south includes Rokeby Line. The proposed pipeline route traverses Ladysmith Road and Tecumseh Road.

**Hydrocarbon Facilities and Buried Pipelines**

Several oil and gas wells including natural gas underground storage wells, natural gas transmission and distribution pipelines are located in the Study Area, as discussed in Sections 4.2.4 and 4.4.5.

As shown in Appendix C, Figure No. 3, there are numerous buried pipelines on the northwest corner of the Study Area at the NOVA Chemicals Corunna Site.

**Railways**

There is one active railway within the Study Area that runs perpendicular to Highway 40 and also parallel to once it enters the NOVA Chemicals Corunna Site.

**Utilities**

A variety of buried and overhead utilities (e.g., telephone, low-voltage hydroelectric, fiber optic, watermains) are located in road RoWs. NOVA Chemicals will locate buried and overhead utilities prior to construction.

**Potential Impacts**

The proposed pipeline route has the potential to interact with roads, hydrocarbon facilities and buried and overhead utilities. Potential impacts include damage and service interruptions to the infrastructure and safety harm to personnel.

**Mitigation and Protective Measures**

Consultation has been initiated, and will continue, with municipal personnel to obtain road crossing permits. Where roads will be crossed, a traffic management plan will be developed to ensure the safety of road users during the crossing (see Section 4.4.1).

The contractor will be responsible for locating and exposing existing pipelines and utilities on lands which will be affected by trench excavation. Machine operators will be informed where electrical transmission lines are present overhead. Lines that may interfere with the operation of construction equipment will be identified with warning poles strung together with rope and suspended red flags.

**Net Impacts**

With the implementation of the above mitigation and protective measures, no significant adverse residual impacts on infrastructure are anticipated.

## 4.5 SUMMARY OF RECOMMENDATIONS

Table 4.5 provides a summary of the recommended supplemental studies, mitigation and protective measures identified in Sections 4.2-4.4.

## Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| **Physical Features** | | |
| Bedrock Geology and Drift Thickness<br>*Section 4.2.1* | • No effects anticipated | • N/A |
| Physiography & Surficial Geology<br>*Section 4.2.2* | • No effects anticipated | • Standard erosion and sediment control measures are discussed in Section 4.2.5 and erosion and sediment controls specific to protecting watercourses, etc. from sedimentation resulting from rainfall events during construction are discussed in Section 4.3.1. |
| Groundwater<br>*Section 4.2.3* | <u>Hydrostatic Testing and Dewatering/ Sand-pointing</u><br>• Downstream flooding, erosion, sedimentation or contamination may result from uncontrolled discharges of water<br><br><u>Private Water Wells</u><br>• No effects anticipated on water quality and quantity<br><br><u>Municipal Water Wells</u><br>• No effects anticipated | <u>Hydrostatic Testing and Dewatering/Sand-pointing</u><br>• A hydrostatic test will be undertaken for the entire length of the proposed pipeline before commissioning. Water required for the test will be obtained from the NOVA Chemicals Corunna Site.<br>• A Permit to Take Water will be required from the MOECC, should the volume withdrawn from a natural source exceed 50,000 L/day.<br>• To reduce the potential for erosion and scouring at dewatering points, energy dissipation techniques should be used. Discharge piping should be free of leaks and properly anchored to prevent bouncing or snaking during surging. Discharge should be monitored to make sure that no erosion or flooding occurs.<br>• Protective measures may include dewatering at low velocities, dissipating water energy by discharging into a filter bag or equivalent, and utilizing protective riprap or equivalent.<br>• If energy dissipation measures are found to be inadequate, the rate of dewatering should be reduced or dewatering discontinued until satisfactory mitigation measures are in place.<br>• To assess the potential for introduction of contaminated water to soils or bodies of water, testing of hydrostatic discharge water and trench dewatering should be considered.<br>• An environmental consultant should be consulted to determine what testing is necessary for the discharge water. |

## Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| Extractive Resources: Aggregates<br>*Section 4.2.4* | • Potential to contact existing natural gas pipelines crossing the RoW | • NOVA Chemicals will identify, locate and daylight all existing buried infrastructure crossing the RoW prior to excavation in that area. |
| Soil and Soil Capability<br>*Section 4.2.5* | • Damage to topsoil from excessive passes with heavy equipment<br>• Rutting and compaction of clay soils, as well as mixing of topsoil and subsoil may result from the movement of heavy machinery on wet soil<br>• Potential to impact a limited amount of agricultural land and agricultural soils found onsite<br>Erosion of exposed soil may result from the loss of vegetative cover | • Topsoil should be stripped during dry soil conditions and stockpiled for use during cleanup and rehabilitation.<br>• Identification of the topsoil and subsoil interface should be carefully monitored to ensure that all topsoil with limited subsoil is stripped from the easement.<br>• To reduce construction impacts associated with wet climatic conditions, the other components of the construction are recommended to occur during dry soil conditions. If construction cannot be completed during the drier summer months when evapotranspiration is greatest, strict adherence to an Environmental Protection Plan is recommended.<br>• As an initial stage of construction, standard erosion and sediment control methods should be implemented on all active areas. Erosion and sediment control features should be regularly inspected and maintained. Additionally, erosion and sediment control features should be improved or added to in areas requiring more protection.<br>• In locations prone to erosion, soil stockpiles should be protected with silt fencing. Soil piles should be separated by at least 1 m to avoid mixing topsoil with subsoil.<br>• On agricultural lands, subsoil should be stored on lands stripped of topsoil (subsoil on subsoil).<br>• Following periods of excessive rainfall or saturated soil conditions, construction activities on agricultural lands should be suspended. During wet soil conditions heavy tracked and rubber-tired vehicles should be restricted from movement on agricultural soils. Usually, construction may continue from gravel work surfaces during wet soil conditions.<br>• To the extent feasible, construction activities should occur during drier times of the year. Lands affected by heavy rainfall events and wet soil conditions should be monitored, to avoid the potential for topsoil and subsoil mixing. |

## Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | Construction activities should be temporarily halted on lands where excessively wet soil conditions are encountered. NOVA Chemicals' on-site inspection team should determine when construction activities may be resumed.<br>• If a situation develops that necessitates construction during wet soil conditions, soil protection measures should be implemented, such as: confining construction activity to the narrowest area practical, installing surface protection measures, and using wide tracked or low ground pressure vehicles.<br>• During construction activities, weather should be monitored to identify the potential onset of high wind conditions which can cause wind erosion. In the event that high winds occur, the contractor should implement protective measures such as:<br>o suspend earth moving operations ;<br>o apply dust suppressants; and<br>o protect soil stockpiles with a cover, barrier or windscreen.<br>• In conjunction with the above measures, all required materials and equipment should be readily accessible and available for use as required.<br>• On agricultural lands, topsoil stripping, handling and storage will be independent from subsoil material to minimize mixing and compaction. Topsoil stripping on the easement should be sufficiently wide to ensure that topsoil will be stockpiled on topsoil and subsoil will be stockpiled on subsoil. Inspection staff should ensure separation between topsoil storage piles and subsoil storage piles is maintained to reduce potential for soil mixing. If topsoil is required to be imported it should be tested for soybean cyst nematode to ensure that it is not contaminated (see Section 4.2.7).<br>• On forested land, the organic/duff layer should be stripped where feasible. Organics and subsoil should be stripped and stockpiled separately to avoid mixing.<br>• Where agricultural land adjacent to the RoW is typically accessed by crossing the RoW alternate access to the fields will be provided for the farm |

**Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures**

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | operator for the short period of time during construction that access across the RoW is not possible.<br>• If clean-up is not practical during the construction year, it should be undertaken in the year following construction, starting in May or June once the soils have sufficiently dried. Interim soil protection measures should be undertaken in sensitive areas to stabilize the RoW for over-wintering. |
| Soybean Cyst Nematode<br>*Section 4.2.6* | • SCN may be spread from an impacted field to a non-impacted field by contaminated machinery, wind, contaminated boots, water erosion etc. | If a field is identified as having SCN, the following mitigation measures should be considered for farm equipment travel from one field to another across the proposed pipeline route:<br>• Ensure construction activity is restricted to the non-agricultural pipeline construction area<br>• In the event that the pipeline route or an adjacent farm field is known to have SCN, advise the farm operator to remove soil from equipment before moving to the area that has not been impacted by SCN. This may involve thorough washing of equipment before moving equipment from an impacted field to non- impacted field;<br>• All properties impacted with SCN should be recorded and communicated to the Contractor.<br>• Any topsoil imported for cleanup activities should be analyzed for SCN by collecting a composite sample, sending it to a lab for analysis and reviewing results before any imported topsoil is placed on the easement. Imported suitable fill (not containing topsoil) or granular materials do not need to be tested for SCN. |
| Agricultural Tile Drains<br>*Section 4.2.7* | • Crushed and/or severed agricultural tile drains may result from trenching and the movement of heavy machinery | • NOVA Chemicals should undertake consultation with landowners of agricultural fields to confirm where systematic tile drainage is present and if it extends into the proposed pipeline route.<br>• If artificial drainage is present, standard mitigation during trenching should be implemented, including:<br>o the construction contractor would conduct pre-tiling, and install header tile to maintain tile system function;<br>o the pipeline trench would be excavated to a depth that would allow |

**Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures**

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | clearance between the top of the pipeline and the bottom of existing drainage systems;<br>o tile drains severed or crushed would be recorded and flagged;<br>o if a main drain, header drain, or large diameter drain is severed, a temporary repair would be made to maintain field drainage and prevent flooding of the work area and adjacent lands;<br>o the downstream side of severed drains that cross the trench would be capped to prevent the entry of soil, debris and rodents;<br>o damaged and severed drains would be repaired following construction; and<br>o after repair and before backfilling, the landowner would be invited to inspect and approve the repair. |
| Natural Hazards<br>*Section 4.2.8* | • Construction delays, sedimentation, and construction equipment entering a watercourse may result from flooding | • If flooding necessitates a change in the construction schedule, affected landowners and regulatory agencies should be notified and construction should continue at non-affected locations.<br>• Workspaces, unless necessary for watercourse crossings, should be located above the floodplain to the extent practical.<br>• A permit will be obtained from St. Clair Region Conservation Authority under Ontario Regulation 171/06. |
| **Biophysical Features** | | |
| Surficial Hydrology<br>*Section 4.3.1* | • Decreased water quality may result from erosion and sedimentation or accidental spills | • Mitigation measures for sediment erosion and dust control will be implemented to prevent sediment and dust from entering sensitive natural features. Additional recommended mitigation measures are outlined in Section 4.3.2.<br><u>When working near surface water features</u><br>• Silt fencing will be used adjacent to sensitive receptors when exposed soil slopes are at risk of eroding.<br>• All materials requiring stockpiling (fill, topsoil, etc.) will be stabilized and kept as far away as is reasonably feasible from watercourses, natural features, drainage features and top of steep slopes. Where stockpiled material is in |

**Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures**

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | close proximity to watercourses it will be separated from the water course with silt fencing.<br>• All exposed soil areas within 200 m of a watercourse will be stabilized and re-vegetated through the placement of seed and mulching or seed and an erosion control blanket no later than October 30.<br>• Refueling of equipment will be carried out away from any sensitive natural features to avoid potential impacts, in the event that an accidental spill occurs. In the event that a 30m buffer is not achievable, sorbent materials and/or drip pans will be used at the fueling source and receiving equipment to intercept any leakage.<br>• Fuelling and lubrication of equipment should be carried out in a manner that reduces the possibility of spills. On-site fuel tanks and generators should be situated in designated contained areas.<br>• Refueling activities should be monitored, and vehicles should not be left unattended when being refueled. Containers, hoses and nozzles on the RoW should be free of leaks. Fuel nozzles should be equipped with functional automatic shut-off devices.<br>• In addition to any specified requirements, additional silt fence should be available on site, prior to grading operations, to provide a contingency supply in the event of an emergency.<br>• Erosion and sediment controls should be monitored regularly and properly maintained, as required. Controls are to be removed only after the soils of the construction area have been stabilized and adequately protected until cover is re-established.<br>• The limits of construction adjacent to all natural features to be retained will be fenced prior to construction, and monitored during construction (along with erosion and sediment control measures) to ensure the limits are maintained with respect to vehicular traffic and soil or equipment stockpiling.<br>• The Contractor is required to restore any disturbed natural areas to pre-construction conditions.<br>• Banks of watercourses disturbed during construction will be restabilized to |

**Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures**

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | pre-construction configuration and condition (or better) using native species, where possible. |
| Aquatic Species and Habitat<br>*Section 4.3.2* | • Potential impacts may include decreased water quality (erosion, sedimentation, and accidental spills), disruption/harassment (vibration and noise) and loss of habitat<br>• Other impacts may include restrictions to habitat use and fish passage, changes to habitat such as substrate, increased erosion potential, loss of in stream cover and riparian shading<br>• | • General erosion and sediment control measures were discussed in Section 4.2.5. Erosion and sediment specific to watercourse crossings were discussed in Sections 4.3.1.<br><u>In-water timing windows</u><br>• Works adjacent to aquatic resources that provide fish habitat, or have the potential to support fish habitat, are often restricted to certain periods to avoid construction-related impacts to fish species during their most sensitive/vulnerable life cycles (i.e., during reproduction and early development stages of eggs and larvae).<br>• Based on the warmwater fish community in Jarvis and Allingham Drains, in-water works in the Study Area are prohibited between March 15 and June 30.<br><u>Flow Diversion/Dewatering</u><br>• Wherever in-water works are required, the work area will be isolated from the remainder of the surface water feature. Maintenance of downstream flow will avoid potential upstream flooding and desiccation of downstream aquatic habitat and organisms.<br>• Downstream flows will be maintained at crossing locations using damp and pump techniques.<br>• All dewatering operations will be managed to prevent erosion and/or release of sediment laden or contaminated water to the waterbody (e.g. settling basin, filter bag, energy dispersion measures).<br>• An isolation/contamination plan will be designed and implemented to isolate temporary in-water work zones to maintain clean flow to downstream/around the work zone at all times.<br><u>Fish rescue plan</u><br>• Any fish in the work area will be transferred away from the construction area using capture, handling, and release techniques to minimize harm and stress. The intakes of pumping hoses will be equipped with an appropriate device |

**Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures**

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | to avoid entraining and impinging fish (see Measures to Avoid Causing Harm to Fish and Fish Habitat (2013) at the following DFO website http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html).<br>• Plans will be developed on a site specific basis and implemented by qualified professionals with the appropriate permitting in place.<br><u>Site restoration and Riparian Planting</u><br>• Following construction, the bed and banks of the crossing locations will be restored to pre-construction conditions to the extent possible. Bank slopes will be restored to match existing grades, however alterations may be made to maintain slope stability and limit future erosion.<br>• Exposed banks will be re-vegetated with native shrubs and grasses to provide riparian cover and aid in sediment and erosion control. Stream beds will be restored to maintain slopes and tie in with existing grades. Bed material will be replaced to match pre-construction conditions.<br><u>Permitting</u><br>• Permits under O. Reg. 171/06 will be required prior to construction activities in the regulated boundary. Crossing methods and details will be determined following geotechnical investigations.<br>• Once the final crossing method has been determined, a self-assessment will be completed to determine whether or not DFO review is required. |
| Designated Natural Areas and Vegetation<br>*Section 4.3.3* | • Removal of native vegetation<br>• Introduction or spread of invasive species<br>• Indirect impacts may include dust, erosion, and accidental spills | • Mitigation and protective measures are outlined in Section 4.2.5 for dust and erosion, and Section 4.3.1 for accidental spills.<br>• Environmental mitigation and protective measures during construction will include the following:<br>o Minimize clearing and disturbance to natural areas to the extent possible, including sensitive areas such as unstable soils, wetlands, and areas of significant groundwater recharge or discharge;<br>o NOVA Chemicals intends to continue their current clearing program through natural areas, which includes periodic mowing of the existing RoW (typically once per annum); |

## Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | ○ The limits of clearing should be surveyed and staked in the field;<br>○ Clearing should be done during frozen or dry soil conditions to the extent practical to limit disturbance to vegetation and terrain;<br>○ Tree cutting should be done in consideration of the Lambton County Woodlands Conservation By-law (No. 4 of 2012);<br>○ The limits of the construction footprint should be identified in the field, to allow for the protection of off-site natural areas and vegetation;<br>○ An invasive species management plan should be developed, as measures (e.g., equipment washing before site access) may be necessary to mitigate the spread of invasive species;<br>○ A screening field program of wetlands and riparian areas should be undertaken prior to construction. The following recommendations for work within wetlands are recommended:<br>- Remove vegetation at ground level, leaving existing root systems. Limit tree stump removal and grading activities;<br>- Install water control swales, as required, to facilitate cross easement water movements<br>- Establish travel areas by installing swamp mats<br>- Strip the top 0.15 – 0.30 m of topsoil/muck separately from the subsoil in the area disturbed by trenching<br>- Regularly inspect the off-easement water regime, monitoring for possible off-easement ponding<br>- Storage areas for hazardous materials, chemicals, fuels and lubricating oils should be located at least 100 m outside of wetland boundaries and should be situated in designated contained areas<br>- Construction equipment should be refueled at least 50 m outside of wetland boundaries<br>- Construction equipment traffic in wetland areas should be kept to the minimum necessary to complete the pipeline construction; and<br>- Post-construction, replace any small ephemeral ponds and |

**Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures**

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | seasonal depressions;<br>o A re-vegetation program appropriate to the land use should be initiated for all work areas. NOVA Chemicals should consult with landowners and SCRCA to confirm replanting plans which will emphasize natural re-generation;<br>o In the event that trees are required to be removed, NOVA Chemicals should undertake a tree replacement program satisfactory to the landowner, and consistent with any municipal requirements; and<br>o One year following construction, planted vegetation should be inspected for survival, in areas of severe dieback, dead or diseased planted vegetation should be replaced. |
| Wildlife and Wildlife Habitat<br>*Section 4.3.4* | • Direct mortality may result from construction vehicles<br>• Habitat degradation or destruction may result from vegetation removal and/or accidental spills<br>• Sensory disturbance of wildlife may result from dust, noise, vibration, and vehicle exhaust | • Mitigation and protective measures are outlined in Section 4.3.3 for vegetation removal and Section 4.3.1 for accidental spills.<br>• Environmental mitigation and protective measures during construction include the following:<br>o Detailed design of the pipeline should be reviewed to avoid and minimize impact upon wildlife habitat to the extent possible, and in particular habitats of endangered, rare, special concern, and threatened species;<br>o Consultation with MNRF regarding the potential need for a permit under the Endangered Species Act (2007) is currently underway. To date, no Species at Risk have been identified during site investigations along the proposed pipeline route. Further mitigation will be developed in consultation with the MNRF. In the event that a Species at Risk is discovered during construction, NOVA Chemicals will undertake further consultation with MNRF.<br>o Construction activities with the potential to remove migratory bird habitat, such as vegetation clearing, should be avoided to the extent possible during the breeding season which is generally from April 1- August 31 in southern Ontario (Environment Canada, 2014). Should vegetation clearing activities be unavoidable during this window, a program should be implemented to reduce and avoid impacts to migratory birds and their nests. This program should include preventative and mitigation measures but may also include avoidance of clearing during key sensitive periods and in |

**Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures**

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | key locations;<br>o Trench operations should be followed as closely as practical with backfill operations, to facilitate the movement of wildlife across the trench;<br>o The contractor should inform their personnel to not threaten, harass or injure wildlife;<br>o Where practical avoid construction in the vicinity of wetland communities during the amphibian breeding season (March 1 – June 30);<br>o All brush and trees felled should be removed immediately from the Project footprint to discourage use of these features by snakes; and<br>o Precautionary mitigation measures to be implemented in the unlikely event that a wildlife encounter occurs include:<br>- Speed limits should be lowered along the entire construction right-of-way for snake specific wildlife concerns.<br>- Equipment and vehicles are to yield the right-of-way to wildlife.<br>- If wildlife are encountered during construction, personnel are required to move away from the animal and wait for the animal to move off the construction site. |
| **Socio-Economic Environment** | | |
| Residents and Businesses<br>*Section 4.4.1* | • Noise, dust and equipment exhaust may result from construction activity<br>• Temporary traffic and dust emissions from trucks during construction<br>• Aesthetics of the landscape will be temporarily affected<br>• Access to property may be temporary impeded<br>• Potential safety concerns exist where properties, residents and vehicles come in proximity to construction activities | • During construction, motorized construction equipment should be equipped with mufflers and silencers.<br>• Company and construction personnel should avoid idling of vehicles; vehicles or equipment should be turned off when not in use, unless required.<br>• Activities that create noise should be restricted to daylight hours when possible, and adhere to local noise by-laws; sources of continuous noise, such as portable generators, should be shielded or located so as to reduce disturbance to residents and businesses.<br>• Where pipeline installation will take an extended time period to complete, such as watercourse and road crossings, an assessment should be undertaken to determine the suitability and effectiveness of temporary noise barriers adjacent to residential or business properties. |

**Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures**

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | • The contractor should implement site practices during construction that are in line with the Environment Canada document 'Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities' (Environment Canada, 2005), which may include:<br>o maintaining equipment in compliance with regulatory requirements<br>o protecting stockpiles of friable material with a barrier or windscreen in the event of dry conditions and dust<br>o dust suppression of source areas<br>o covering loads of friable materials during transport<br>• Additional consultation with residents and businesses will be held before construction commences and a newsletter will be distributed to remind landowners that the pipeline corridor will be fenced off from public access during construction for safety considerations.<br>• With respect to local viewscapes, restoration of the construction area will leave little evidence that a pipeline exists.<br>• Construction should be conducted as expeditiously as possible, to reduce duration of activities.<br>• Access to residential properties should be maintained at all times.<br>• The contractor should implement a traffic management plan for all roads affected by construction, which at a minimum outlines measures to:<br>o control the movement of materials and personnel to and from the construction site<br>o post signs to warn oncoming motorists of construction activity<br>o control traffic at road crossings<br>o reduce on-road disturbance and land closures<br>o store equipment as far from the edge of the road as practical<br>o install construction barricades at road crossings |
| Institutional Services and Facilities | • No effects anticipated | • N/A |

## Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| *Section 4.4.2* | | |
| Culture, Tourism & Recreational Facilities<br>*Section 4.4.3* | • No effects anticipated | • N/A |
| Economy & Employment<br>*Section 4.4.4* | • Direct and indirect business income and employment income<br>• An increase in tax revenues | • NOVA Chemicals should make all reasonable efforts to procure services and materials from local suppliers, where services or products are available in required quantity and at competitive prices. |
| Contaminated Sites<br>*Section 4.4.5* | • Exposure to contaminants of concern, particular in the vicinity of the NOVA Chemicals Corunna Site<br>• Potential contamination may result from stockpiled fill of unknown origin and quality, presence of Ontario oil and gas wells, and road salt for de-icing activities along roadways crossed | • Should excess fill be generated as a result of construction activities of the proposed pipeline, any soils that do not meet the Standards listed in Table 1 of the Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act* (the MOECC Standards) may not be considered inert fill upon excavation, and off site management options for excess soils that cannot be reused within the area of the proposed construction must be considered.<br>• Subsurface investigations may be necessary to evaluate the presence or absence of soil and/or groundwater contamination.<br>• If contaminants are identified at concentrations exceeding the MOECC Standards, a soil and/or groundwater sampling, handling and remediation plan would be developed and implemented. |
| Waste Management<br>*Section 4.4.6* | • Potential soil, groundwater, and/or surface water contamination may result from improper disposal of waste material generated during construction<br>• Nuisance to adjacent properties may result from uncontained litter generated during construction | • NOVA Chemicals should undertake responsible management of excess fill. When details on excess fill volumes are known, disposal locations should be determined and appropriate permitting obtained.<br>• The construction contractor should implement a site-specific waste collection and disposal management plan, which may include:<br>o Waste materials, sanitary waste and recycling transported off-site by private waste contractors licensed by the MOECC<br>o Contractors required to remove their excess materials from the site<br>o Labelling and storage of hazardous and liquid wastes in a secure area that would contain material in the event of a spill<br>o Implementation of a waste management program consisting of |

**Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures**

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| | | reduction, reuse, and recycling of materials |
| Land Use<br>*Section 4.4.7* | • The proposed route is in conformity with municipal planning designations, no potential impacts are anticipated<br>• Agricultural operations may be interrupted by construction<br>• Potential impacts on natural areas, are outlined in Sections 4.3.3 | • As per the Official Plan policies and Section 4.3.3 of this report, the design, construction, site restoration and maintenance will be carried out in accordance with relevant environmental guidelines and best practices as outlined within this report.<br>• A replacement/compensation plan for the removal of any trees, given the Woodlot zone, should be prepared and will be the responsibility of NOVA Chemicals to carry out, should any trees need to be removed. The County of Lambton tree cutting by-law may be applicable.<br>• Consultation will be undertaken with landowners along and adjacent to the proposed pipeline route in order to identify methods of minimizing disturbance to their agricultural operations, where applicable. |
| Archaeological Resources<br>*Section 4.4.8* | • Damage or destruction of archaeological resources may result from excavation and construction | • Before construction, an archaeological assessment of the Project site should be completed and submitted to the MTCS for their review and comment.<br>• Should previously unknown archaeological resources be uncovered or suspected of being uncovered during construction, ground disturbance in the find location should cease immediately. MTCS and an archaeologist licensed in the Province of Ontario should be notified immediately. A site-specific response plan should then be employed following further investigation of the specific find. The response plan would indicate under which conditions the ground disturbance activity in the find location may resume.<br>• In the event that human remains are uncovered or suspected of being uncovered during ground disturbance, the above measures should be implemented along with notifying local police, the coroner's office and the Cemeteries Regulation Unit of the Ontario Ministry of Government and Consumer Services (1-800-889-9768). |
| Heritage Resources and Cultural Heritage Landscapes | • Destruction, alteration, direct or indirect obstruction, a change in land use, shadows that alter the appearance of a heritage | • Prior to construction, a Heritage Assessment Report will be prepared and submitted to the Ministry of Tourism, Culture and Sport for their review and comment. The Report will contain mitigation measures for potential impacts, if required. |

## Table 4.5: Summary of Potential Effects and Recommended Mitigation and Protective Measures

| Environmental Feature(s) | Potential Effect(s) | Mitigation and Protective Measures |
|---|---|---|
| *Section 4.4.9* | attribute or change the viability of a natural feature, and land disturbances (i.e. a change in grade that alters soils and drainage patterns) may result from excavation and construction | |
| First Nations and Métis Nation Interests<br>*Section 4.4.10* | • Potential to affect traditional territory of First Nations and Métis, and harvesting and hunting in the construction RoW during construction | • NOVA Chemicals has sought First Nations and Métis Nation of Ontario input into the Project (see Section 3.5.5). Engagement will continue as the Project moves forward.<br>• Mitigation and protective measures for archaeology are discussed in Section 4.4.8. |
| Infrastructure<br>*Section 4.4.11* | • Potential to damage and service interruptions to infrastructure and compromise the safety of workers and surrounding residents may result from interactions with roads, hydrocarbon facilities and buried and overhead utilities during construction | • Consultation has been initiated, and will continue, with municipal personnel to obtain road crossing permits. Where roads will be crossed, a traffic management plan will be developed to ensure the safety of road users during the crossing (see Section 4.4.1).<br>• The contractor will be responsible for locating and exposing existing pipelines and utilities on lands which will be affected by trench excavation.<br>• Machine operators will be informed where electrical transmission lines are present overhead. Lines that may interfere with the operation of construction equipment will be identified with warning poles strung together with rope and suspended red flags. |

# 5.0 CUMULATIVE EFFECTS ASSESSMENT

The recognition of cumulative effects assessment as a best practice is reflected in many regulatory and guidance documents. With regard to development of hydrocarbon pipelines in Ontario, the *OEB Environmental Guidelines* (2011) note that cumulative effects of pipeline construction should be identified and discussed in the ER as an integral part of the assessment.

Building upon the intent of the *OEB Environmental Guidelines* (2011), the OEB has specified that only those effects that are additive or that interact with effects that have already been identified as resulting from the Project are to be considered under cumulative effects. In such cases, it will be necessary to determine whether these effects warrant mitigation measures such as alterations in routing, timing of construction, or other measures that can address the cumulative effects. The cumulative effects assessment has been prepared with consideration of this direction from the OEB.

## 5.1 METHODOLOGY

This assessment describes the potential cumulative effects resulting from the interaction of residual effects of construction and operation with the effects of other unrelated projects. The other projects assessed are those that are either existing or approved and that have a high likelihood of proceeding.

Cumulative effects include the temporal and spatial accumulations of change that occur in an area or system because of past, present, and future activities. Change can accumulate in systems by either an additive (i.e. cumulative) or interactive (i.e. synergistic) manner. Positive residual effects, such as an increase in the supply of natural gas, employment or in property taxes, have not been assessed in the cumulative effects assessment.

The cumulative effects assessment (CEA) methodology is designed to evaluate and manage the additive and interactive effects from the following sources:

- existing infrastructure, facilities, and activities as determined from available data sets;
- the proposed Project; and
- unrelated projects.

## 5.2 STUDY BOUNDARIES

**Spatial**

The spatial study boundaries discussed in this ER were contained within the Study Area. These boundaries are considered to be appropriate when considering the surrounding land uses and

the limited length of the proposed pipeline. The CEA used the same boundaries to identify potential effects from the Project.

The Study Area boundary is beyond the zone of influence of Project construction and operation activities (e.g., dust and noise) for the proposed pipeline, and consequently, the identified effects will have diminished to background levels at the edges of the Study Area. The Study Area is also considered conservative in terms of managing both effects and risks.

**Temporal**

The temporal boundaries for the cumulative effects assessment reflect the nature and timing of Project activities, and the availability of information for unrelated projects. The Project schedule identifies three key milestone activities:

- ER and technical design – 2015
- Construction – 2017
- Operation and Maintenance - 2017 through 2067*.

**Fifty years of pipeline operation is used as an assumption, although the pipelines may be operational beyond 50 years.*

Based upon these milestone activities, two time periods were selected for evaluation: 2017 and 2022. The year 2017 was selected to represent the construction period, and the year 2022 was selected to represent the operation and maintenance period. Forecasting beyond 2022 increases the uncertainty in predicting whether projects will proceed, and the effects associated with these projects.

## 5.3 ANALYSIS OF CUMULATIVE EFFECTS

Sections 4.2-4.4 of the ER consider the potential effects of the Project on specific features and conditions, and propose mitigation and protective measures to eliminate or reduce the potential effects. The cumulative effects assessment evaluates the significance of residual effects (after mitigation) of the Project along with the effects of other unrelated projects.

**Year 2017: Construction**

The Project consultation program, and discussion with local municipalities, has to-date revealed no known instances of projects likely to overlap with pipeline construction. The only potential activities that have a high probability of proceeding just after or concurrent with Project construction are:

- upgrades to the Existing Valve Site related to the Plains Midstream Windsor Sarnia Pipeline at the eastern terminus of the proposed pipeline in 2017. The work at the Existing Valve Site for

the Plains Midstream Windsor Sarnia Pipeline will not require any expanded footprint. All work will be related to piping changes for the connection to the new NOVA Chemicals pipeline;

- plant upgrades within the NOVA Chemicals Corunna Site; and
- a crossing of the Jarvis drain in late 2017/2018 for a Lambton Area Water Supply System (LAWSS) pipeline at Tecumseh Road.

NOVA Chemicals will consult with LAWSS to determine the nature of activities that may lead to cumulative effects and to coordinate plans to reduce resultant effects. Activities specific to the valve site upgrades will be completed in concert with the proposed pipeline Project.

Provided that the restoration activities at the Existing Valve Site for the Plains Midstream Windsor Sarnia Pipeline and at the Allingham Drain and Jarvis Drain crossings implement similar mitigation and protective measures as those recommended for pipeline construction, adverse cumulative effects will be of low probability and magnitude, short duration, and reversible. Therefore, adverse residual cumulative effects, if present, are not anticipated to be significant.

The removal of the out-of-service 4" and 8" lines will be undertaken in concert with the construction of the new line. As a result adverse residual cumulative effects, if present, are not anticipated to be significant.

**Year 2021: Operation and Maintenance**

Consultation will continue with staff at Lambton County, Township of St. Clair and other utilities that intersect with the proposed pipeline to identify unrelated projects that may occur concurrently with pipeline construction. These could include road upgrade and maintenance programs and pipeline operation and maintenance activities. There is the potential that cumulative effects may occur for residual impacts as outlined in the ER related to accidental spills, erosion and sediment control and residents.

NOVA Chemicals will continue these consultations with municipal staff and other utilities as appropriate, to determine the nature of activities that may lead to cumulative effects and coordinate plans to reduce resultant effects. Provided that operational and maintenance activities implement similar mitigation and protective measures as those recommended for pipeline construction, including for accidental spills, erosion and sediment control, noise, dust, air quality, and site access, adverse cumulative effects will be of low probability and magnitude, short duration, and reversible. Therefore, adverse residual cumulative effects, if present, are not anticipated to be significant.

## 5.4 SUMMARY

The potential cumulative effects of the Project were assessed by considering development that may begin during construction or that may begin sometime in the future.

The Study Area boundary was used to assess the potential for additive and interactive effects of the Project and other developments on environmental and socio-economic features. The cumulative effects assessment determined that, provided the mitigation and protective measures are implemented, potential cumulative effects will be of low probability and magnitude, short duration, and reversible, and are therefore not anticipated to be significant.

# 6.0 MONITORING AND CONTINGENCY PLANS

## 6.1 MONITORING

The primary objective of compliance and effects monitoring is to check that mitigation and protective measures are effectively implemented and to measure the impacts of activities associated with construction on environmental and socio-economic features. Ultimately, the knowledge gained from monitoring is used to avoid or reduce issues which may arise during subsequent construction projects.

Previous pipeline construction experience and a review of post-construction monitoring reports from other projects indicate that impacts from pipeline construction are for the most part temporary. The mitigation and protective measures to eliminate or reduce impacts are well known and have been shown to be effective. With this in mind, NOVA Chemicals should adhere to the following general monitoring practices:

- Trained personnel should be on-site to monitor construction and should be responsible for checking that the mitigation and protective measures and monitoring requirements within the ER are executed. NOVA Chemicals should implement an orientation program for inspectors and contractor personnel to provide information regarding NOVA Chemicals' environmental program and commitments, as well as safety measures
- An Environmental Protection Plan (EPP) should be developed that provides site and feature specific mitigation for the construction of the Project
- The recommendations made in the ER should be incorporated into the contract with the contractor selected to construct the Project
- An inspection of the route should be done approximately one year after construction to determine whether areas require further rehabilitation

The following sections list specific environmental monitoring activities recommended for the Project.

### 6.1.1 Exposed Soils

Where soils are exposed for construction activities, potential effects may include surface soil erosion, trench slumping, and sedimentation of watercourses. The movement of heavy machinery on wet soil may cause rutting, compaction, and mixing of topsoil and subsoil. Improperly salvaged topsoil can result in topsoil and subsoil mixing, compaction, rutting and erosion, which can potentially decrease crop yields. Improper water discharge can lead to erosion and sedimentation. Monitoring of potential effects on exposed soils should occur by NOVA Chemicals' on-site inspection team.

### 6.1.2 Water Wells

Before construction, an independent hydrogeologist should review local hydrological conditions to determine the need for water wells to be monitored and develop a well monitoring program.

### 6.1.3 Watercourse Crossings

Watercourse crossings have the potential to affect fish, fish habitat, and water quality. NOVA Chemicals' on-site inspection team should oversee all watercourse crossings and confirm that work is conducted as per the conditions of relevant permits.

### 6.1.4 Vegetation and Wetlands

One year following construction, planted vegetation should be inspected for survival; in areas of severe dieback or in areas important to environmental functions (e.g. riparian or slope cover), dead or diseased vegetation should be replaced. Planted trees on private land should be guaranteed for a period of 5 years, or until the trees reach a 'free to grow' status as defined by a height of 1 m and free of adjacent brush competition.

### 6.1.5 Wildlife

Should wildlife and wildlife habitat field surveys identify the presence of species at-risk, construction monitoring will need to be undertaken. The exact nature of monitoring will be determined in consultation with the MNRF.

### 6.1.6 Residents and Businesses

Construction activities will impact directly affected and surrounding residents and businesses. During construction a designated NOVA Chemicals representative will be available to monitor and respond to requests and concerns. Landowners affected by construction will be notified in advance of construction activities in their area, as feasible. The notification will provide the contact information for a designated NOVA Chemicals representative.

NOVA Chemicals' on-site inspection team will also monitor the contractor's implementation of the traffic management plan, to see that site access to residences and businesses has been maintained and that traffic is not being unnecessarily interrupted.

While efforts will be undertaken to reduce impacts, a complaint tracking system will also be implemented. A NOVA Chemicals representative will record the time and date of calls, the nature of the concern, the corrective action taken, and the time and date of follow-up contact.

Following completion of construction, NOVA Chemicals will contact residents and businesses along the easement to continue ongoing communications where necessary. During the first two

years, particular attention will be paid to monitoring and documenting impacts associated with construction of the pipeline.

### 6.1.7 Municipal Roads

Municipal roads affected by pipeline construction should be restored to their pre-construction condition as per applicable permits. For a period of one year after construction (i.e., first year of operation), roads should be monitored following spring runoff to check if erosion, bank slumping, road subsidence or rutting has occurred as a result of construction activities. Affected roadside ditches and drains would also be monitored to check that they are functioning properly.

## 6.2 CONTINGENCY

Contingency planning is necessary to prevent a delayed or ineffective response to unexpected events or conditions that may occur during construction of the proposed pipeline. An essential element of contingency planning is the preparation of plans and procedures that can be activated if unexpected events occur. The absence of contingency plans may result in short or long term environmental impacts and possibly threaten public safety.

The following unexpected events require contingency planning during construction: adverse weather causing watercourse sedimentation, human error causing accidental spills, and the discovery of unexpected finds. Although unexpected problems are not anticipated to occur during construction, NOVA Chemicals and the pipeline contractor should be prepared to take action. Construction personnel should be made aware of and know how to implement contingency measures.

### 6.2.1 Watercourse Sedimentation

Even with properly installed erosion and sedimentation control measures, extreme runoff events could result in collapse of silt fencing, overflow or bypass of barriers, slope or trench failures, and other problems which could lead to sedimentation of watercourses.

If sedimentation of a watercourse occurs, immediate action should be taken to install temporary measures that will contain the erosion as quickly as practical. When site conditions permit, permanent protection measures should be installed on erosion susceptible surfaces. If the erosion and sedimentation results from a construction-related activity, the activity should be halted immediately until the situation is rectified.

### 6.2.2 Accidental Spills

During construction, an accidental spill of fluids may occur. The impact of the spill will depend upon the magnitude and extent of the spill, and the environmental and socio-economic conditions in which it takes place. Upon release of a hydrocarbon-based construction fluid, NOVA Chemicals should immediately determine the magnitude and extent of the spill and

rapidly take measures to contain it. Release of sediment should also be treated as a potential spill depending on the magnitude and extent. Spills should be immediately reported to NOVA Chemicals' on-site inspection team. If necessary, the MOECC Spills Action Center should be notified at 1-800-268-6060.

A Spills Response Plan should be developed by the contractor, reviewed with personnel, and posted in site trailers. Spill containment equipment should be readily available, especially near watercourses. Personnel should be trained in the use of spill containment equipment.

### 6.2.3 Unexpected Finds

Should previously unknown archaeological or heritage resources or human remains be uncovered or suspected of being uncovered during construction, see Section 4.4.8. above for mitigation and protective measures.

In the event that previously unknown contaminated soils are uncovered or suspected of being uncovered, construction in the find location should cease immediately. In such an instance, NOVA Chemicals should retain expert advice on assessing and developing a soil sampling, handling and remediation plan.

# 7.0 CONCLUSION

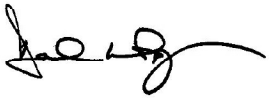
The ER investigates data on the physical, biophysical, and socio-economic environment within the Study Area and along the proposed pipeline route. In the opinion of Stantec, the recommended program of supplemental studies, mitigation, protective and contingency measures are considered appropriate to protect the features encountered. Monitoring will assess that mitigation and protective measures have been effective in both the short and long term.

With the implementation of the recommendations in the ER, on-going communication and consultation, and adherence to permit, regulatory and legislative requirements, potential adverse residual environmental and socio-economic impacts of this Project are not anticipated to be significant.

**STANTEC CONSULTING LTD.**

Prepared by _____
(signature)

**Stephanie Dryden-Cripton, MA**
Project Manager

Reviewed by  _____
(signature)

**David Wesenger, BES**
Environmental Services Managing Leader, Senior Principal

# 8.0 RESOURCES

Aboriginal Affairs and Northern Development Canada. 2015. The Aboriginal Treaty Rights Information System. Available online: http://sidait-atris.aadnc-aandc.gc.ca/atris_online/home-accueil.aspx. Accessed: January 2015.

Barnett, P.J., Cowan, W.R. and Henry, A.P.1991. Quaternary Geology of Ontario, Southern Ontario; Ontario Geological Survey, Preliminary Map 2556, scale 1:1,000,000.

Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage and A.R. Couturier (eds). 2007. Atlas of the Breeding Birds of Ontario 2001- 2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of Natural Resources, and Ontario Nature, Toronto. 706 pp.

Chapman, L.J. and D.F. Putnam. 1984. The Physiography of Southern Ontario: Third Edition. Toronto: Ministry of Natural Resources.

County of Lambton. 2015. Lambton County GIS Online web map. Available online: http://www.lambtononline.ca/home/doingbusiness/maps/Pages/default.aspx. Accessed March 2015.

County of Lambton. 1982. Official Plan. Available online: http://www.lambtononline.ca/home/residents/planninganddevelopment/Pages/OfficialPlan.aspx.

COSEWIC 2006. COSEWIC assessment and update status report on the American Columbo Frasera caroliniensis in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 21 pp. (www.sararegistry.gc.ca/status/status_e.cfm).

COSEWIC. 2010. COSEWIC assessment and status report on the Bobolink Dolichonyx oryzivorus in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. Vi + 42pp.

COSEWIC. 2010. COSEWIC assessment and status report on the Dense Blazing Star Liatris spicata in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 23 pp. (www.sararegistry.gc.ca/status/status_e.cfm).

COSEWIC 2013. COSEWIC Assessment and Status Report on the Little Brown Myotis (Myotis lucifugus), Northern Myotis (Myotis septentrionalis), and Tri-colored Bat (Perimyotis subflavus) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. Xxiv + 93 pp.

Dobbyn, J., 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists.

Draft Phase I Environmental Site Assessment, NOVA Chemicals – Corunna Site, 785 Petrolia Line, Corunna, ON, prepared by Stantec Consulting Ltd., dated November 16, 2012.

Eder, T., 2002. Mammals of Ontario. Lone Pine Publishing, Edmonton, Alberta, Canada. pp. 184.

Fisheries and Oceans Canada (DFO). 2013. Measures to Avoid Causing Harm to Fish and Fish Habitat. Available online: http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html. Accssed: January, 2015.

Fisheries and Oceans Canada (DFO). 2014. Aquatic Species at Risk Mapping. Available Online: http://www.conservation-ontario.on.ca/what-we-do/watershed-stewardship/aquatic-species-at-risk. Accessed: March 2015.

Google Earth imagery from 2005, 2009, 2010, 2011, 2013 and 2014. Google Streetview imagery. Accessed on February 2014.

Hewitt, D.F. 1972. Paleozoic Geology of Southern Ontario; Ontario Division of Mines, GR 105, 18p. Accompanied by Map 2254, scale 1 inch to 16 miles.

Kuehl, A.K., and W.R.Clark. 2002. Predator activity related to landscape features in northern Iowa.

Ministry of Environment and Climate Change. 2014. Large landfill sites in Ontario. Available online: http://www.ontario.ca/data/large-landfill-sites. Accessed: January 2015.

Ministry of Environment and Climate Change. 2014. Small landfill sites in Ontario. Available online: https://www.ontario.ca/data/small-landfill-sites. Accessed: January 2015.

Ministry of Natural Resources and Forestry (MNRF), 2000. Significant wildlife habitat technical guide. Fish Journal of Wildlife Management 66: 1224-1234.and Wildlife Branch, Wildlife Section, Science Development and Transfer Branch, South Central Sciences Branch. pp.151.

Ministry of Natural Resources and Forestry (MNRF), 2010. Natural heritage reference manual for natural heritage policies of the provincial policy statement, 2005. Second Edition. Toronto: Queen's Printer for Ontario. 248 pp.

Ministry of Natural Resources. 2012. Draft Significant Wildlife Habitat Ecoregion 7ECriterion schedule (Online). Available online: http://www.ebr.gov.on.ca/ERS-WEBExternal/displaynoticecontent.do?noticeId=MTE1ODc5&statusId=MTczNDgy&language=en.

Ministry of Natural Resources and Forestry (MNRF), 2014. Natural Heritage Information Centre (NHIC) Database. Available online: https://www.ontario.ca/environment-and-energy/natural-heritage-information-centre. Accessed: June 2014 and January 2015.

Ministry of Natural Resources and Forestry (MNRF), 2015. Land Information Ontario. Available online: http://www.mnr.gov.on.ca/en/Business/LIO/index.html.

Natural Resources Canada, 2005. Simplified Seismic Hazard Map of Canada. Available online: http://earthquakescanada.nrcan.gc.ca/hazard-alea/simphaz-eng.php. Accessed: March, 2015.

Ontario Energy Board. 2011. Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario. Sixth Edition. Available online: http://www.ontarioenergyboard.ca/OEB/Industry/Rules+and+Requirements/Rules+Codes+Guidelines+and+Forms#envguidelines.

Ontario Nature. 2013. Ontario Reptile and Amphibian Atlas. Retrieved from: http://www.ontarionature.org/protect/species/herpetofaunal_atlas.php.

Reid, F. 2006. The Peterson Field Guide Series: A field guide to mammals of North America, 4th ed. Houghton Mifflin Company, New York, New York. 579 p.

Statistics Canada. 2013a. Lambton, CTY, Ontario (Code 3538) (table). National Household Survey (NHS) Profile. 2011 National Household Survey. Statistics Canada Catalogue no. 99-004-XWE. Ottawa. Released September 11, 2013. http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/prof/index.cfm?Lang=E (accessed March 3, 2015).

Statistics Canada. 2013b. St. Clair, TP, Ontario (Code 3538003) (table). National Household Survey (NHS) Profile. 2011 National Household Survey. Statistics Canada Catalogue no. 99-004-XWE. Ottawa. Released September 11, 2013. http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/prof/index.cfm?Lang=E (accessed March 3, 2015).

Statistics Canada. 2013c. Ontario (Code 35) (table). National Household Survey (NHS) Profile. 2011 National Household Survey. Statistics Canada Catalogue no. 99-004-XWE. Ottawa. Released September 11, 2013. http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/prof/index.cfm?Lang=E (accessed March 3, 2015)

Thames-Sydenham and Region Source Protection Committee, 2011. St. Clair Region Source Protection Area, Updated Assessment Report, 2.0 Watershed Characterization, Approved. Revised - November 18, 2011

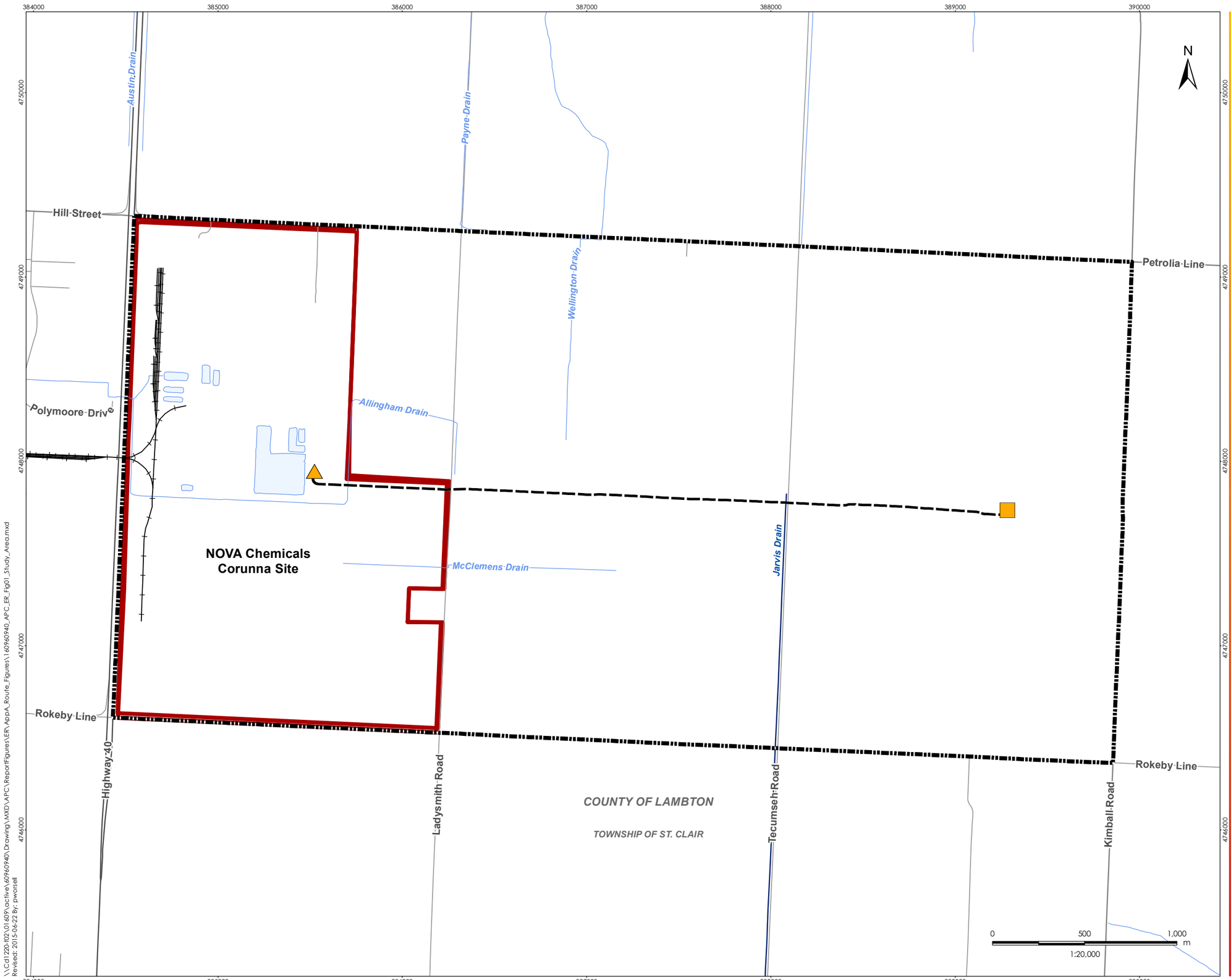
Treasury Board of Canada Secretariat. 2015. Federal Contaminated Sites Inventory. Available: http://www.tbs-sct.gc.ca/fcsi-rscf/home-accueil-eng.aspx. Accessed January 2015.

Township of St Clair. 2003. Township of St. Clair Comprehensive Zoning By-law No.17 of 2003. Available online: http://www.twp.stclair.on.ca/zoning_bylaw.pdf

Winter, M., D.H. Johnson, J.A. Shaffer, and W.D. Svedarsky. 2004. Nesting biology of three grassland passerines in the northern tallgrass prairie. Wilson Bulletin 116:211-223.

# Appendix A:

# Route Figures




Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Existing Pipeline Corridor
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.

June 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

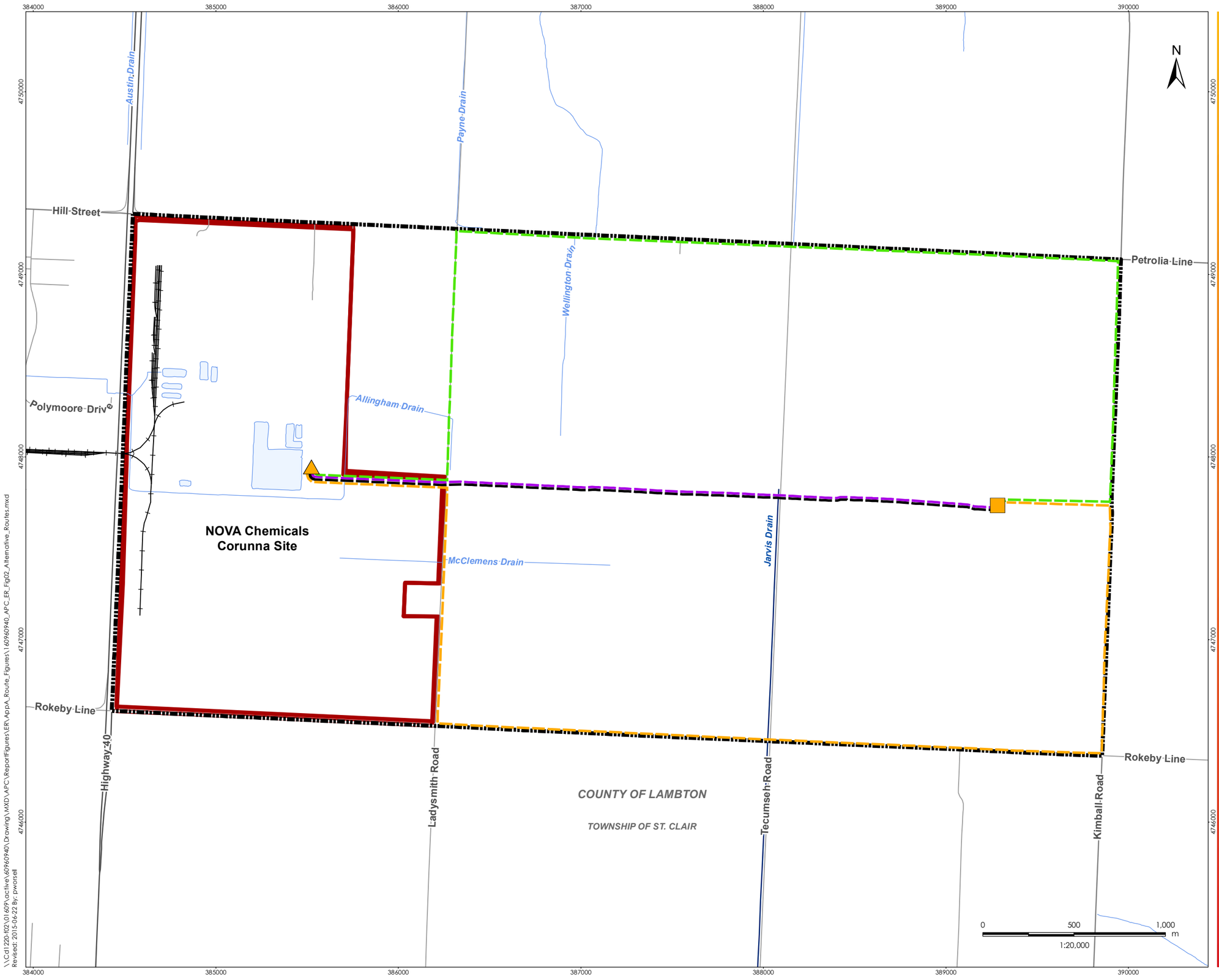
Figure No.

**1**

Title

# Route Selection Process Study Area

\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\ER_AppA_Route_Figures\160960940_APC_ER_Fig01_Study_Area.mxd
Revised: 2015-06-22 By: pworsell




Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Alternate Route A
- Alternate Route B
- Alternate Route C
- Existing Pipeline Corridor
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015; © Ontario Oil, Gas and Salt Resource Library, 2015.

June 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

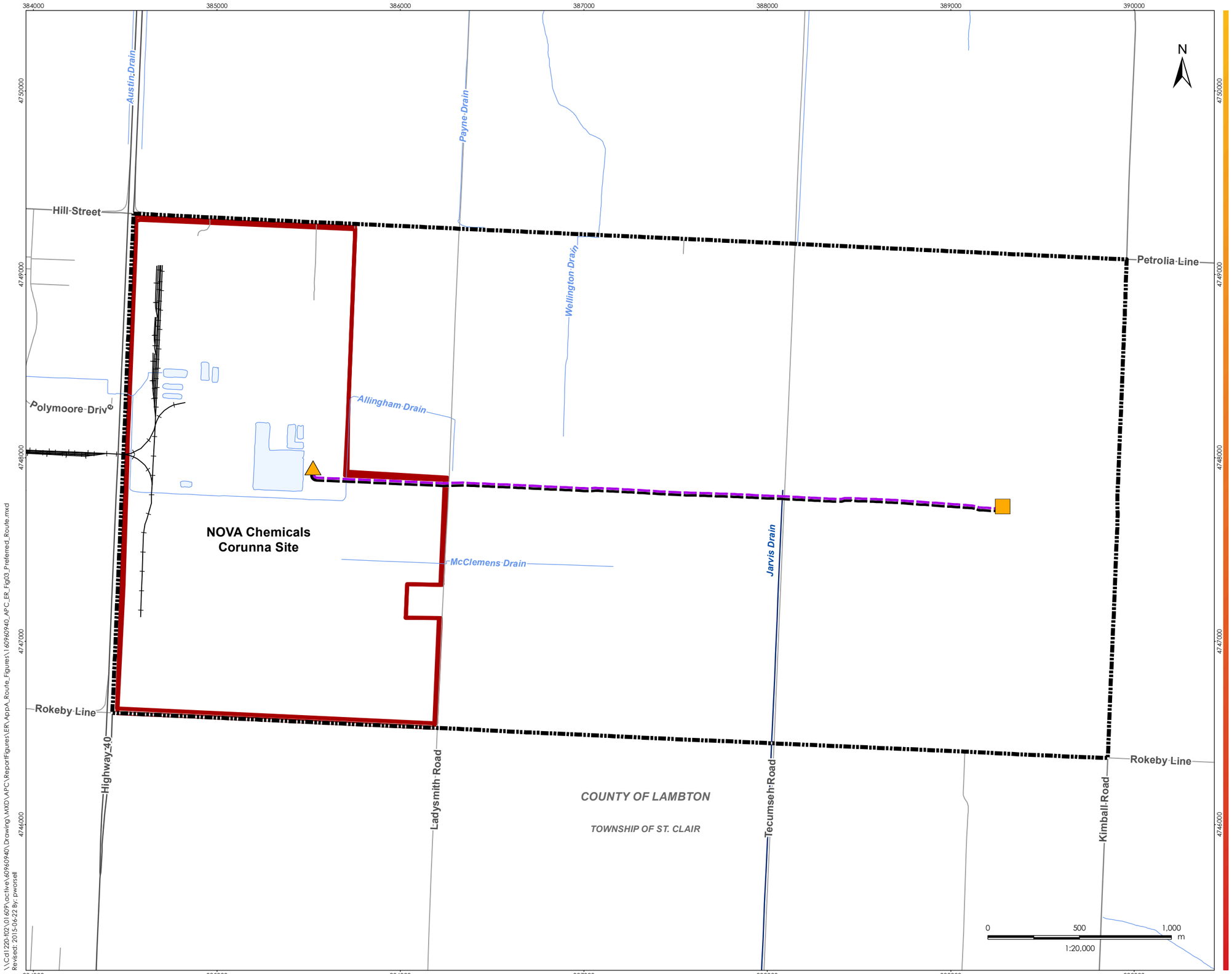
Figure No.

**2**

Title

# Alternate Routes

\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\ER\AppA_Route_Figures\160960940_APC_ER_Fig02_Alternative_Routes.mxd
Revised: 2015-06-22 By: pworsell




\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\ER_AppA_Route_Figures\160960940_APC_ER_Fig03_Preferred_Route.mxd
Revised: 2015-06-22 By: pworsell

Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- Existing Pipeline Corridor
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.

June 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

Figure No.

**3**

Title

# Preferred Route

# Appendix B:

# Consultation

# *Appendix B1:*

# *First Nations, Métis Nation, Agency and Third Party Utility Crossing Contact Lists*

| Title | First Name | Last Name | Agency | Department | Position | Address | City | Prov. | Postal | Phone | Fax | Email |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Federal Agencies** | | | | | | | | | | | | |
| Ms. | Anjala | Puvananathan | Canadian Environmental Assessment Agency | | Director (Ontario Region) | 55 St Clair Avenue East, Room 907 | Toronto | ON | M4T 1M2 | 416-952-1575 | | anjala.puvananathan@ceaa-acee.gc.ca |
| Ms. | Lisa | Patterson | Aboriginal Affairs and Northern Development Canada | Consultation and Accommodation Unit | Regional Subject Expert for Ontario | 10 Wellington Street, 8th Floor | Gatineau | QC | K1A 0H4 | 819-934-3696 | 819-934-1983 | CAU-UCA <CAU-UCA@aadnc-aandc.gc.ca> |
| Mr. | Rob | Dobos | Environment Canada | | Manager, Environmental Assessment Section | 867 Lakeshore Rd | Burlington | ON | L7R 4A6 | 905-336-4953 | 905-336-8901 | rob.dobos@ec.gc.ca |
| Mr. | Brent | Valere | Fisheries and Oceans Canada | Fisheries Protection Program | Senior Habitat Biologist | 867 Lakeshore Road | Burlington | ON | L7R 4A6 | 905-336-4914 | 905-336-4447 | FisheriesProtection@dfo-mpo.gc.ca. |
| Ms. | Debbie | Ming | Fisheries and Oceans Canada | Species at Risk Program | Team Leader, Ontario, Species at Risk | 867 Lakeshore Rd | Burlington | ON | N6E 2V2 | 905-336-4592 | 905-336-6285 | Debbie.Ming@dfo-mpo.gc.ca |
| Ms. | Monique | Mousseau | Transport Canada | Environment and Engineering | Regional Manager, Environment and Engineering | 4900 Yonge Street | North York | ON | M2N 6A5 | 416-952-0485 | | monique.mousseau@tc.gc.ca |
| To whom it may concern | | | Transport Canada | Ontario Region | Environmental Assessment Coordinator | | | | | | | EnviroOnt@tc.gc.ca |
| **Provincial Agencies and Authorities** | | | | | | | | | | | | |
| Ms. | Lisa | Myslicki | Infrastructure Ontario | Environmental Management | Environmental Advisor | 1 Dundas Street West, Suite 2000 | Toronto | ON | M5G 2L5 | 416-212-3768 | | lisa.myslicki@infrastructureontario.ca |
| Mr. | Corwin | Troje | Ministry of Aboriginal Affairs | Consultation Unit | Manager (Acting) | 160 Bloor St E, 9th Flr | Toronto | ON | M7A 2E6 | 416-325-4044 | 416-325-1066 | corwin.troje@ontario.ca |
| Mr. | David | Cooper | Ministry of Agriculture, Food and Rural Affairs | Environmental and Land Use Policy | Manager | Ontario Government Bldg 1 Stone Rd W, 3rd Flr | Guelph | ON | N1G 4Y2 | 519-826-3117 | 519-826-3109 | david.cooper@ontario.ca |
| Ms. | Michelle | Doncaster | Ministry of Agriculture, Food and Rural Affairs | Environmental and Land Use Policy | Policy Advisor | Ontario Government Bldg 1 Stone Rd W, 3rd Flr | Guelph | ON | N1G 4Y2 | 519-826-4369 | 519-826-3109 | Michele.Doncaster@ontario.ca |
| Mr. | Drew | Crinklaw | Ministry of Agriculture, Food and Rural Affairs | Environmental and Land Use Policy | Rural Planner, Southwestern Ontario | 667 Exeter Rd | London | ON | N6E 1L3 | 519-873-4085 | 519-873-4062 | drew.crinklaw@ontario.ca |
| Ms. | Andrea | Pastori | Ministry of Energy | Strategic Policy Branch | Strategic Policy Coordinator | 77 Grenville St, 6th Flr | Toronto | ON | M7A 2C1 | 416-327-7276 | | andrea.pastori@ontario.ca |
| Mr. | Mili | New | Ministry of the Environment and Climate Change | Southwest Region | Director (Acting) | 733 Exeter Rd | London | ON | N6E 1L3 | 519-873-5001 | | mili.new@ontario.ca |
| Mr. | Craig | Newton | Ministry of the Environment and | | Regional Environmental | 733 Exeter Rd | London | ON | N6E 1L3 | 519-873-5014 | | craig.newton@ontario.ca |

| Title | First Name | Last Name | Agency | Department | Position | Address | City | Prov. | Postal | Phone | Fax | Email |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Climate Change | | Planner/EA | | | | | | | |
| Mr. | Dwayne | Reid | Ministry of the Environment and Climate Change | | Senior Environmental Officer – Sarnia District Office | 1094 London Rd | Sarnia | ON | N7S 1P1 | 519-383-3787 | 519-336-4280 | dwayne.reid@ontario.ca |
| Ms. | Heather | Riddell | Ministry of Natural Resources and Forestry | Aylmer District | District Planner | 615 John St N | Aylmer | ON | N5H 2S8 | 519-773-4757 | | heather.riddell@ontario.ca |
| Ms. | Andrea | Fleischhauer | Ministry of Natural Resources and Forestry | Aylmer District | District Planner | 615 John St N | Aylmer | ON | N5H 2S8 | 519-773-4750 | 519-773-9014 | andrea.fleischhauer@ontario.ca |
| Ms. | Patricia | Hayman | St. Clair Region Conservation Authority | Planning & Regulations | Director of Planning | 205 Mill Pond Cres | Strathroy | ON | N7G 3P9 | 519-245-3710 ext. 225 | 519-245-3348 | phayman@scrca.on.ca |
| Mr. | Dallas | Cundick | St. Clair Region Conservation Authority | Planning & Regulations | Environmental Planner / Regulations Officer | 205 Mill Pond Cres | Strathroy | ON | N7G 3P9 | 519-245-3710 ext. 223 | 519-245-3348 | dcundick@scrca.on.ca |
| Mr. | Bruce | Curtis | Ministry of Municipal Affairs and Housing | Western Municipal Services Office | Manager-Community Planning and Development | 659 Exeter Road, 2nd Flr | London | ON | N6E 1L3 | 519-873-4026 | 519-873-4018 | bruce.curtis@ontario.ca |
| **OPCC Members** | | | | | | | | | | | | |
| Ms. | Zora | Crnojacki | Ontario Energy Board | Ontario Pipeline Coordinating Committee | Project Advisor, Applications & Regulatory Audit | 2300 Yonge St, 26th Floor, PO Box 2319 | Toronto | ON | M4P 1E4 | 416-440 -8104 | 416-440- 7656 | zora.crnojacki@oeb.gov.on.ca |
| Ms. | Linda | Pim | Ministry of Agriculture, Food, and Rural Affairs | Ontario Pipeline Coordinating Committee | Policy Advisor, Environmental and Land Use Policy | 1 Stone Rd W, 3rd Flt | Guelph | ON | N1G 4Y2 | 519-826-3380 | | linda.pim@ontario.ca |
| Mr. | Chris | Schiller | Ministry of Tourism, Culture and Sport | Ontario Pipeline Coordinating Committee | Manager, Corporate Services Unit | 900 Bay St, 10th Flr | Toronto | ON | M7A 2E2 | 416-327-7631 | | chris.schiller@ontario.ca |
| Mr. | Tony | Difabio | Ministry of Transportation | Ontario Pipeline Coordinating Committee | Senior Planner &Policy Advisor, Corridor Management and Property Section | 301 St. Paul St, 2nd Flr | St. Catharines | ON | L2R 7R4 | 905-704- 2656 | | tony.difabio@ontario.ca |
| Mr. | Oscar | Alonso | Technical Standards and Safety Authority | Ontario Pipeline Coordinating Committee | Fuel Safety Engineer | 3300 Bloor St W, 14th Floor | Toronto | ON | M8X 2X4 | 416-734- 3353 | 416-231- 7525 | oalonso@tssa.org |

| Title | First Name | Last Name | Agency | Department | Position | Address | City | Prov. | Postal | Phone | Fax | Email |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ms. | Sally | Renwick | Ministry of Natural Resources and Forestry | Ontario Pipeline Coordinating Committee | Team Lead, Environmental Planning Unit | 300 Water St, 5th Flr N | Peterborough | ON | K9J 3C7 | 705-755-5195 | | sally.renwick@ontario.ca |
| Mr. | Goran | Ciric | Ministry of Municipal Affairs and Housing | Ontario Pipeline Coordinating Committee | Senior Planner-Planning Innovation Section | 777 Bay St, 14th Fr | Toronto | ON | M5G 2E5 | 416-585- 6246 | 416-585- 6870 | goran.ciric@ontario.ca |
| Mr. | Dan | Dobrin | Ministry of Environment (Southwestern Regional Contact) | Ontario Pipeline Coordinating Committee | Manager, Technical Support Section | 119 King St W, 12th Flr | Hamilton | ON | L8P 4Y7 | 905-521-7720 | | dan.dobrin@ontario.ca |
| Mr. | David | Martin | Ministry of Energy | First Nation and Metis Policy and Partnerships Office | Senior Advisor | 77 Grenville St, 6th Flr | Toronto | ON | M7A 2C1 | 416-212-5416 | 416-325-7041 | david.martin@ontario.ca |
| Ms. | Marlo | Spence Lair | Ministry of Energy | Regulatory and Agency Policy Unit | Senior Policy Advisor | 77 Grenville St, 6th Flr | Toronto | ON | M7A 2C1 | 416-212-7489 | 416-325-7041 | marlo.spencelair@ontario.ca |
| **Elected Officials** | | | | | | | | | | | | |
| MPP | Robert | Bailey | Sarnia-Lambton | | | 836 Upper Canada Drive | Sarnia | ON | N7W 1A4 | 519-337-0051 | | bob.baileyco@pc.ola.org |
| MP | Patricia | Davidson | Sarnia-Lambton | | | 1000 Finch Drive, Unit 2 | Sarnia | ON | N7S 6G5 | 519-383-6600 | 519-383-0609 | pat.davidson@parl.gc.ca |
| **Municipal** | | | | | | | | | | | | |
| Mr. | Ron | Van Horne | County of Lambton | | Chief Administrative Officer | 789 Broadway Street, Box 3000 | Wyoming | ON | N0N 1T0 | 519-845-0801 ext. 5410 | | ron.vanhorne@county-lambton.on.ca |
| Mr. | David | Posliff | County of Lambton | Planning & Development Services | Manager | 789 Broadway Street, Box 3000 | Wyoming | ON | N0N 1T0 | 519-845-0801 ext. 5342 | 519-845-3817 | dave.posliff@county-lambton.on.ca |
| Mr. | William | Nywening | County of Lambton | Planning & Development Services | Planner | 789 Broadway Street, Box 3000 | Wyoming | ON | N0N 1T0 | 1-866-324-3817 | | will.nywening@county-lambton.on.ca |
| Mr. | Ezio | Nadalin | County of Lambton | Planning & Development Services | Town Planner | 789 Broadway Street, Box 3000 | Wyoming | ON | N0N 1T0 | | | enadalin@twp.stclair.on.ca |
| Mr. | Jason | Cole | County of Lambton | Public Works | Manager | 789 Broadway Street, Box 3000 | Wyoming | ON | N0N 1T0 | 519-845-0801 ext. 5370 | 519-845-3872 | jason.cole@county-lambton.on.ca |
| Mr. | Jim | Kutyba | County of Lambton | Infrastructure & Development | General Manager | 789 Broadway Street, Box 3000 | Wyoming | ON | N0N 1T0 | 519-845-5413 | 519-845-3872 | jim.kutyba@county-lambton.on.ca |

| Title | First Name | Last Name | Agency | Department | Position | Address | City | Prov. | Postal | Phone | Fax | Email |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mr. | Steve | Arnold | Township of St. Clair | | Mayor | 1156 Emily St | Mooretown | ON | N0N 1M0 | 519-381-7440 | | steve.arnold@county-lambton.on.ca |
| Mr. | Peter | Gilliland | Township of St. Clair | | Deputy Mayor | 1156 Emily St | Mooretown | ON | N0N 1M0 | 519-862-3534 | | pgilliland@twp.stclair.on.ca |
| Mr. | Matt | Deline | Township of St. Clair | | Director, Public Works | 1155 Emily St | Mooretown | ON | N0N 1M0 | 519-867-2993 | | mdeline@twp.stclair.on.ca |
| Mr. | Gary | DePooter | Township of St. Clair | Public Works | Co-ordinator of Operations (Works/Drainage) | 1155 Emily St | Mooretown | ON | N0N 1M0 | 519-867-2993 | 519-867-3886 | gdepooter@twp.stclair.on.ca |
| Ms. | Carlie | McClemens | Township of St. Clair | | Deputy Clerk/Coordinator of Planning | 1155 Emily St | Mooretown | ON | N0N 1M0 | 519-867-2021 | 519-867-5509 | cmclemens@twp.stclair.on.ca |
| **Interest Groups** | | | | | | | | | | | | |
| Mr. | Jim | Costello | Lambton Kent District School Board | | Director of Education | P.O. Box 2019, 200 Wellington Street | Sarnia | ON | N7T 7L2 | 519-336-1500 | 519-336-0992 | Jim.Costello@lkdsb.net |
| Mr. | Dan | Parr | St. Clair Catholic District School Board | | Director of Education | 420 Creek St. | Wallaceburg | ON | N8A 4C4 | 519-849-6847 | | |
| Ms. | Brooke | Leystra | Lambton Federation of Agriculture | | President | | | | | | | leystrab@gmail.com |
| Ms. | Christina | Hyatt | Lambton Federation of Agriculture | | Secretary | 2416 Courtright Line | Brigden | ON | N0N 1B0 | 519-864-4224 | | lambtonfederation@hotmail.com |
| Mr. | Peter | Jeffrey | Ontario Federation of Agriculture | | Farm Policy Researcher | 100 Stone Road West | Guelph | ON | N1G 5L3 | | | peter.jeffrey@ofa.on.ca |
| Mr. | Jake | Lozon | Rural Lambton Stewardship Network | | Land Stewardship Manager | 6890 Baseline Road | Wallaceburg | ON | N8A 2K6 | 519-809-5759 | | |
| Mr. | Dean | Edwardson | Sarnia-Lambton Environmental Association | | General Manager | 1489 London Rd | Sarnia | ON | N7S 1P6 | 519-332-2010 | 519-332-2015 | deanedwardson@slea.ca |
| Mr. | David | Moody | Sarnia-Lambton Economic Partnership | | Project Leader, Business Growth Services | 1086 Modeland Road, Building 1050, Suite 100 | Sarnia | ON | N7S 6L2 | 519-332-1820 | | david@sarnialambton.on.ca |
| Ms. | Monica | Shepley | Sarnia Lambton Chamber of Commerce | | Manager of Advocacy and Policy Development | 556 North Christina Street | Sarnia | ON | N7T 5W6 | 519-336-2400 | 519-336-2085 | mshepley@sarnialambtonchamber.com |

| Title | First Name | Last Name | First Nation or Métis Nation | Department | Position | Address | City | Prov. | Postal | Phone | Fax | Email |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chief | Chris | Plain | Aamjiwnaang First Nation | | | 978 Tashmoo Avenue | Sarnia | ON | N7T 7H5 | 519-336-8410 | 519-336-0382 | aamjiwnaang.chief@gmail.com |
| Ms. | Sharilyn | Johnston | Aamjiwnaang First Nation | Aamjiwnaang Environment | Environment Coordinator | 978 Tashmoo Avenue | Sarnia | ON | N7T 7H5 | 519-336-8410 ext. 245 | 519-336-0382 | sjohnston@aamjiwnaang.ca |
| Ms. | Christine | Rogers | Aamjiwnaang First Nation | Aamjiwnaang Environment | Environment Worker | 978 Tashmoo Avenue | Sarnia | ON | N7T 7H5 | 519-336-8410 ext. 250 | 519-336-0382 | crogers@aamjiwnaang.ca |
| Chief | Louise | Hillier | Caldwell First Nation | | | 14 Orange Street | Leamington | ON | N8H 3W3 | 519-322-1766 | 519-322-1533 | cfnchief@live.com |
| Chief | Joe | Miskokomon | Chippewas of the Thames First Nation | | | 320 Chippewa Road, R.R. #1 | Muncey | ON | N0L 1Y0 | 519-289-5555 | 519-289-2230 | chief@cottfn.com |
| Ms. | Fallon | Burch | Chippewas of the Thames First Nation | Director of Lands and Environment | | 320 Chippewa Road, R.R. #1 | Muncey | ON | N0L 1Y0 | | | fburch@cottfn.com |
| Chief | Thomas | Bressette | Chippewas of Kettle and Stony Point First Nation | | | 6247 Indian Lane | Kettle & Stony Point First Nation | ON | N0N 1J0 | 519-786-2125 | 519-786-2108 | thomas.bressette@kettlepoint.org |
| Mr. | Aly | Alibhai | Métis Nation of Ontario | | Director, Lands, Resources and Consultations | 75 Sherbourne St, Suite 311 | Toronto | ON | M5A 2P9 | 416-977-9881 | | alya@metisnation.org |
| Chief | Greg | Peters | Delaware Nation (Moravian of the Thames) | | | 14760 School House Line, RR #3 | Thamesville | ON | N0P 2K0 | 519-692-3936 | 519-692-5522 | gcpeters@xplornet.ca |
| Chief | Roger | Thomas | Munsee-Delaware First Nation | | | 289 Jubilee Road, RR#1 | Muncey | ON | N0L 1Y0 | 519-289-5396 | 519-289-5156 | chief.thomas@munsee-delaware.org |
| Chief | Sheri | Doxtator | Oneida Nation of the Thames | | | 2210 Elm Avenue | Southwold | ON | N0L 2G0 | 519-652-6161 | | Sheri.Doxtator@oneida.on.ca |
| Chief | Daniel | Miskokomon | Walpole Island First Nation | | | 117 Tahgahoning Road, R.R. #3 | Wallaceburg | ON | N8A 4K9 | 519-627-1481 | 519-627-0440 | drskoke@wifn.org |
| Mr. | Jared | MacBeth | Walpole Island First Nation | | Project Review Coordinator | | | | | 519-627-1475 ext. 108 | 519-627-1530 | jared.macbeth@wifn.org |

| Title | First Name | Last Name | Agency | Department | Position | Address | City | Prov. | Postal | Phone | Fax | Email |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mr. | John | Peters | Bell Canada | | Implementation Manager | 370 Albert Street | Strathroy | ON | N7G 4B2 | 519-245-4827/519-383-8674 | | john.peters@bell.ca |
| Mr. | Terry | Chupa | Enbridge Gas Distribution Inc. | | Land Agent/Land Contracts Manger | 3595 Tecumseh | Mooretown | ON | N0N 1M0 | 519-862-6008 | | terry.chupa@enbridge.com |
| Ms. | Roman | Dorfman | Ontario Infrastructure & Lands Corporation Hydro One | | Sr. Real Estate Coordinator | 185 Clegg Road, PO Box 4300 | Markham | ON | L6G 1B7 | 905-946-6243 | 905-946-6242 | Roman.Dorfman@HydroOne.com |
| Mr. | Greg | Wagner | Spectra Energy/Union Gas Ltd. | | Utility Service Manager | PO Box 2001 | Chatham | ON | N7M 5M1 | 519-344-3676 ext. 276 | | grwagner@uniongas.com |
| Ms. | Maha | El-Birani | Spectra Energy/Union Gas Ltd. | | District Engineer | PO Box 2001 | Chatham | ON | N7M 5M1 | 519-667-4140 | 519-495-7365 | melbirani@uniongas.com |

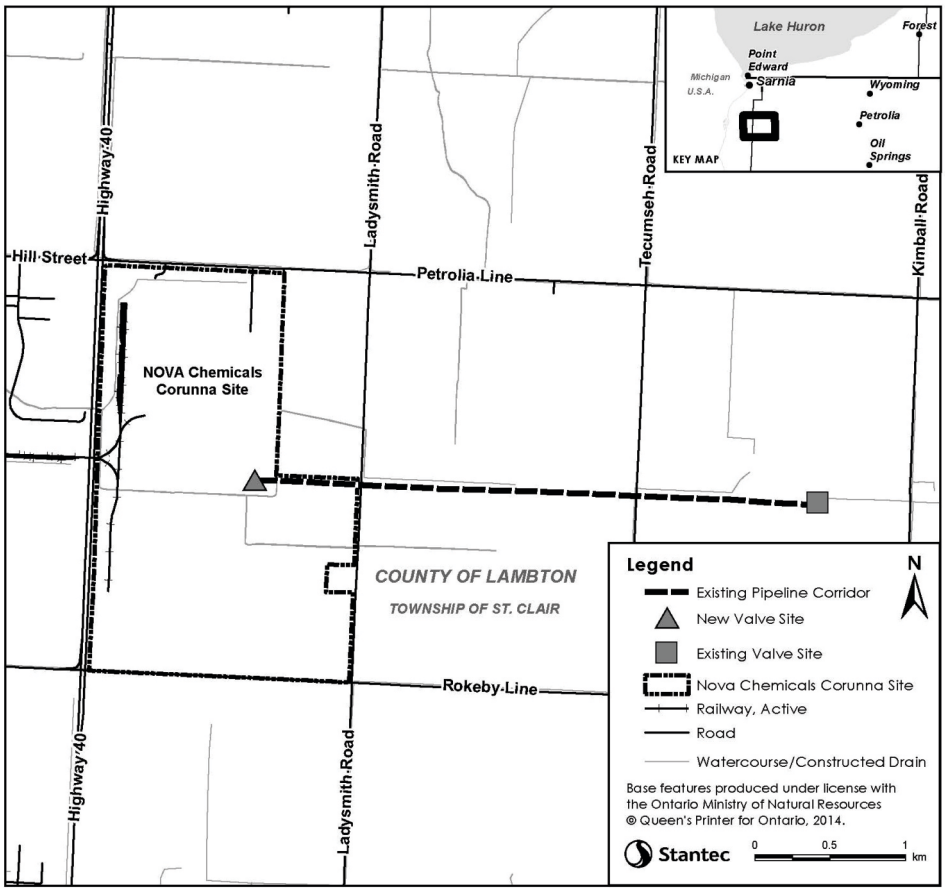
# *Appendix B2:*

# *Newspaper Notices*

# NOTICE OF PROJECT COMMENCEMENT

## NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the following map.




As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) *"Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)"*.

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the *Ontario Energy Board Act*, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

The Environmental Study process will include consultation and engagement with landowners, Aboriginal communities, government agencies and other interested persons. Public consultation will be an integral component of the Environmental Study and related report. An Information Session regarding the Project is being planned for January 2015. Notice of the session will be mailed to those on the Project mailing list, and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press and The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route and to develop site specific protection or mitigation measures for the Project.

To learn more about NOVA Chemicals and the Kimball Pipeline Replacement Project you can call the project contact line directly at 1-888-220-5880. Information is also available by visiting the 'News Room' on the NOVA Chemicals Sarnia-Lambton webpage (www.novachem.com/SarniaLambton). You can provide your comments and input through the Contact Us link on the webpage.

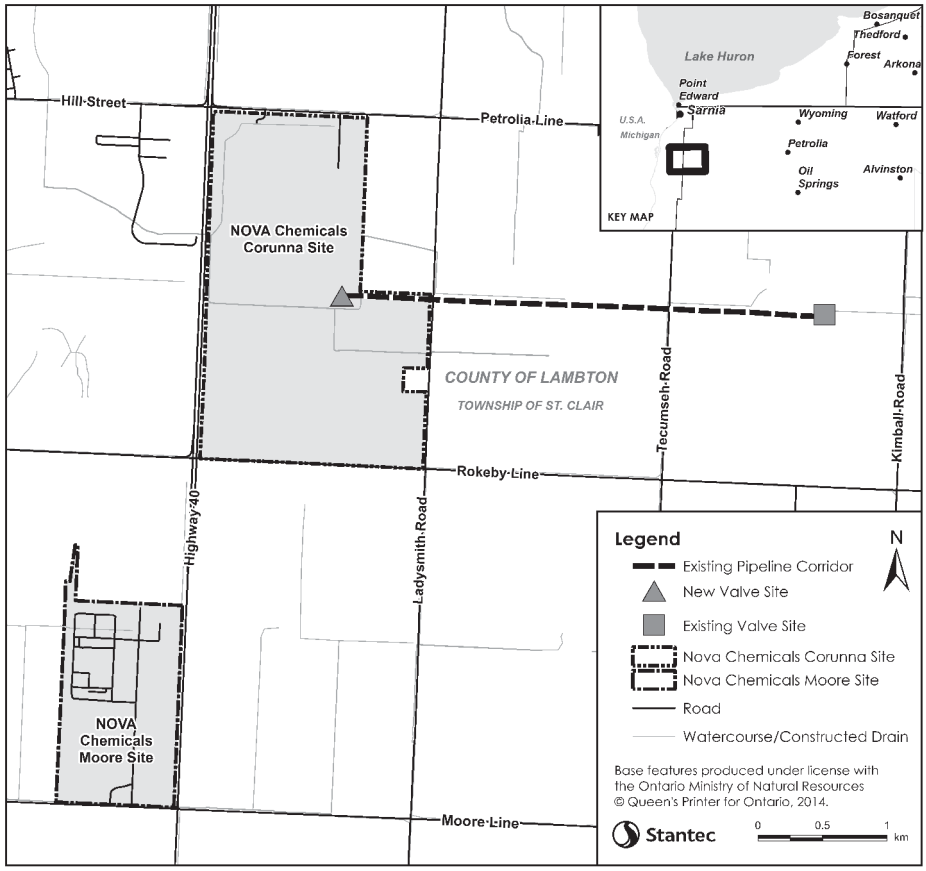
NOVA Chemicals®

# NOTICE OF INFORMATION SESSION FOR NOVA CHEMICALS (CANADA) LTD.'s

## KIMBALL PIPELINE REPLACEMENT PROJECT AND NOVA 2020 PROJECTS UPDATE

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals is inviting stakeholders and the public to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project:** NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.




**NOVA 2020 Projects:** In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans. NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects.

NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for the public to drop in, review the projects, and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have an interest in the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, we encourage you to attend. Alternatively you can call the NOVA Chemicals contact line directly at 1-888-220-5880. Information is also available by visiting the 'News Room' on the NOVA Chemicals Sarnia-Lambton webpage (www.novachem.com/SarniaLambton). You can provide your comments and input through the Contact Us link on the webpage.

NOVA Chemicals®

# *Appendix B3:*

# *Letters*

November 28, 2014

«Title» «First_Name» «Last_Name»
«Agency»
«Department»
«Address»
«City» «Prov» «Postal»

**Attention: «First_Name» «Last_Name», «Position»**

Dear «Title» «Last_Name»,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project**
**Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)*".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the *Ontario Energy Board Act*, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Stantec is presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. As an agency with jurisdiction or a potential interest in developments in that area, you are invited to provide or coordinate comments regarding the proposed pipeline. Specifically, Stantec is seeking information regarding planning principles or guidelines implemented by your agency that may affect routing, construction, and/or operation

of the proposed pipeline. Stantec is also seeking background environmental and socio-economic information that may be useful in compiling the inventory of the Environmental Study area.

Finally, we request that you provide us with information regarding other proposed developments within the Environmental Study area for incorporation into the Environmental Study and related report as a component of the cumulative effects assessment. **Please contact us to discuss the most efficient way to obtain this information.**

The Environmental Study process will include consultation and engagement with landowners, Aboriginal communities, government agencies and other interested persons. Public consultation will be an integral component of the Environmental Study and related report. An Information Session regarding the Project is being planned for January 2015. Notice of the session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route and to develop site specific protection or mitigation measures for the Project.

If you have questions or concerns regarding this proposed Project, please do not hesitate to contact the undersigned.

Regards,

**STANTEC CONSULTING LTD.**

**Stephanie Dryden-Cripton, M.A.**
Project Manager
Phone: (519) 836-6966 x206
Fax: (519) 836-2493
Stephanie.Dryden-Cripton@stantec.com

Attachment: Project Location map

c. Mac Hollingsworth, Project Lead, NOVA Chemicals (Canada) Ltd.

November 27, 2014

Aamjiwnaang First Nation
978 Tashmoo Avenue,
Sarnia, ON N7T 7H5

Sent by Courier

**Attention: Chief Chris Plain**

Dear Chief Plain:

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Aamjiwnaang First Nation is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia, ON, N7T 7H5

Sent by Courier

Attention: Sharilyn Johnston

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Aamjiwnaang First Nation is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Caldwell First Nation
14 Orange Street
Leamington, ON, N8H 3W3

Sent by Courier

**Attention: Chief Louise Hillier**

Dear Chief Louise Hillier

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Caldwell First Nation is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Chippewas of the Thames First Nation
320 Chippewa Road R.R. 1
Muncey, ON, N0L 1Y0

Sent by Courier

**Attention: Chief Joe Miskokomon**

Dear Chief Joe Miskokomon

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Chippewas of the Thames First Nation is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Chippewas of the Thames First Nation
320 Chippewa Road
Muncey, ON, N0L 1Y0

Sent by Courier

**Attention: Fallon Burch**

Dear Fallon Burch

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Chippewas of the Thames First Nation is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Delaware Nation (Moravian of the Thames)
14760 Schoolhouse Line R R # 3
Thamesville, ON N0P 2K0

Sent by Courier

**Attention: Chief Greg Peters**

Dear Chief Greg Peters

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Delaware Nation (Moravian of the Thames) is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Chippewas of Kettle and Stony Point First Nation
6247 Indian Lane
Forest, Ontario
N0N 1J0

Sent by Courier

**Attention: Chief Thomas Bressette**

Dear Chief Thomas Bressette

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Chippewas of Kettle and Stony Point First Nation is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Métis Nation of Ontario
Director, Lands, Resources and Consultations
75 Sherbourne Street #311
Toronto, Ontario M5A 2P9

Sent by Courier

**Attention: Mr. Aly Alibhai**

Dear Mr. Aly Alibhai

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Métis Nation of Ontario is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Munsee-Delaware First Nation
289 Jubilee Road R R # 1
Muncey, ON, N0L 1Y0

**Attention: Chief Roger Thomas**

Dear Chief Roger Thomas

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Munsee-Delaware First Nation is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Oneida Nation of the Thames
2212 Elm Avenue
Southwold, ON N0L 2G0

Sent by Courier

**Attention: Chief Sheri Doxtator**

Dear Chief Sheri Doxtator

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Oneida First Nation is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Walpole Island First Nation
117 Tahgahoning Road
Wallaceburg, ON, N8A 4K9

Sent by Courier

Attention: Chief Daniel Miskokomon

Dear Chief Miskokomon:

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Walpole Island First Nation is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

November 27, 2014

Walpole Island First Nation
117 Tahgahoning Road
Wallaceburg, ON, N8A 4K9

Sent by Courier

Attention: Jared MacBeth

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Walpole Island First Nation is invited to comment on the Project. Specifically, NOVA Chemicals and Stantec are seeking information about any adverse impact that the Project may have on constitutionally protected aboriginal or treaty rights and any measures for mitigating those adverse impacts.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

As part of the Environmental Study, Stantec is contacting the following agencies:

- Aboriginal Affairs and Northern Development Canada; and
- Ontario Ministry of Aboriginal Affairs.

The following Aboriginal communities with a potential interest in the Project will also be contacted:

- Caldwell First Nation;
- Chippewas of Kettle and Stony Point First Nation;
- Chippewas of the Thames First Nation;
- Métis Nation of Ontario;
- Moravian of the Thames First Nation;
- Munsee-Delaware First Nation;
- Oneida Nation of the Thames; and
- Walpole Island First Nation.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

As always, we encourage you to contact us if you have questions, comments or suggestions about any aspect of our operations. You are welcome to call me directly at 519-481-2881 or our Communications Consultant, Tracy Johnson, at 519-481-2954 during business hours.

Sincerely,

Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

Sample Landowner Notice of Project Commencement Letter

November 28, 2014

[redacted]

Attention: [redacted]

Dear [redacted]

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

Please note that part of the RoW is located on a strip of your land which is the subject of an easement granted to NOVA Chemicals in 1988. Over the next few weeks, NOVA Chemicals representatives will be surveying and staking the perimeter of the RoW. If you have any questions about this upcoming work, please contact us at the numbers provided below.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

We welcome any questions you may have at or prior to the Information Session in January. Should you wish to discuss the Project in more detail, please do not hesitate to contact Mac Hollingsworth, Project Lead, (519) 346-3412 or Tracy Johnson, Communications Consultant (519) 481-2954. They will be happy to answer any questions or discuss any concerns you may have.

Please be assured that we are committed to ongoing consultation throughout this Project, and will be sharing information and progress with you as we move forward.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

November 28, 2014

Bell Canada
370 Albert Street
Strathroy, ON
N7G 4B2

Attention: John Peters

Dear Mr. Peters:

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project - Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

Please note that part of the RoW is located on a strip of your land which is the subject of an easement granted to NOVA Chemicals in 1988. Over the next few weeks, NOVA Chemicals representatives will be surveying and staking the perimeter of the RoW. If you have any questions about this upcoming work, please contact us at the numbers provided below.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Stantec is also presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. NOVA Chemicals and Stantec would also welcome your comments or questions about the inventorying process. This includes providing any information that would assist in the collection of environmental and socio-economic data for the Environmental Study area.

An Information Session regarding the Project is being planned for January 2015. Notice of this session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route, and to develop site specific protection or mitigation measures for the Project.

We welcome any questions you may have at or prior to the Information Session in January. Should you wish to discuss the Project in more detail, please do not hesitate to contact Mac Hollingsworth, Project Lead, (519) 346-3412 or Tracy Johnson, Communications Consultant (519) 481-2954. They will be happy to answer any questions or discuss any concerns you may have.

Please be assured that we are committed to ongoing consultation throughout this Project, and will be sharing information and progress with you as we move forward.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

Stantec

January 7, 2015

«Title» «First_Name» «Last_Name»
«Agency»
«Department»
«Address»
«City» «Prov» «Postal»

**Attention: «First_Name» «Last_Name», «Position»**

Dear «Title» «Last_Name»,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals is inviting stakeholders and the public to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects. **Please note that, while the Information Sessions for these projects have been combined into one event, agencies are asked to comment only on the project in which they have a direct interest (i.e. the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects).**

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans. NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects.

NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Regards,

**STANTEC CONSULTING LTD.**

**Stephanie Dryden-Cripton, M.A.**
Project Manager
Phone: (519) 836-6966 x206
Fax: (519) 836-2493
Stephanie.Dryden-Cripton@stantec.com

Attachment: Notice of Information Session

c. Mac Hollingsworth, Project Lead, NOVA Chemicals (Canada) Ltd. (Kimball Pipeline Replacement Project)
Richard Ilves, Environment Manager, Eastern Canadian Operations (NOVA 2020 Projects)

January 5, 2015

Mr. Aly Alibhai, Director, Lands, Resources and Consultations
Metis Nation of Ontario
75 Sherbourne Street
Toronto, Ontario
M5A 2P9

Dear Mr. Aly Alibhai,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Chief Thomas Bressette
Chippewas of Kettle and Stony Point First Nation
6247 Indian Lane
Kettle & Stony Point First Nation, Ontario
N0N 1J0

Dear Chief Bressette,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Chief Daniel Miskokomon
Walpole Island First Nation
117 Tahgahoning Road RR#3
Wallaceburg, Ontario
N8A 4K9

Dear Chief Miskokomon,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Chief Sheri Doxtator
Oneida Nation of the Thames
2212 Elm Avenue
Southwald, Ontario
N0L 2G0

Dear Chief Doxtator,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Chief Louise Hillier
Caldwell First Nation
14 Orange Street
Leamington, Ontario
N8H 3W3

Dear Chief Hillier,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Chief Greg Peters
Delaware Nation (Moravian of the Thames)
14760 School House Line RR#3
Thamesville, Ontario
N0P 2K0

Dear Chief Peters,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Chief Chris Plain
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia, Ontario
N7T 7H5

Dear Chief Plain,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Chief Roger Thomas
Munsee-Delaware First Nation
289 Jubilee Road RR#1
Muncey, Ontario
N0L 1Y0

Dear Chief Thomas,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Chief Joe Miskokomon
Chippewas of the Thames First Nation
320 Chippewas Road R.R. #1
Muncey, Ontario
N0L 1Y0

Dear Chief Miskokomon,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Fallon Burch
Chippewas of the Thames First Nation
320 Chippewas Road R.R. #1
Muncey, Ontario
N0L 1Y0

Dear Fallon Burch,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Jared MacBeth
Walpole Island First Nation
117 Tahgahoning Road RR#3
Wallaceburg, Ontario
N8A 4K9

Dear Jared MacBeth,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 5, 2015

Sharilyn Johnston
Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia, Ontario
N7T 7H5

Dear Sharilyn Johnston,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact the undersigned.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

Sample Landowner Notice of Information Session Letter

January 6, 2015

[redacted]

**Attention:** [redacted]

Dear [redacted]

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact Mac Hollingsworth, Project Lead, (519) 346-3412 or Tracy Johnson, Communications Consultant (519) 481-2954. They will be happy to answer any questions or discuss any concerns you may have.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

January 6, 2015

Bell Canada
370 Albert Street
Strathroy, Ontario
N7G 4B2

**Attention: John Peters**

Dear Mr. Peters:

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update**
**Notice of Information Session**

NOVA Chemicals would like to invite you to attend an Information Session where we will provide information on our proposed Kimball Pipeline Replacement Project and an update on our NOVA 2020 Projects.

**Kimball Pipeline Replacement Project**: NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project". This project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of this project. The Ontario Energy Board's review and approval are required before this project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

**NOVA 2020 Projects**: In 2011, NOVA Chemicals announced plans for its ten-year asset strategy referred to as "NOVA 2020". NOVA 2020 projects include upgrades and modifications at our Corunna and Moore Sites using a phased approach. A series of information sessions has already been held where we presented information on our growth plans and sought stakeholder input into our development plans.

NOVA Chemicals is committed to sharing information and progress with stakeholders as we move forward, and to providing updates on our growth plans for the various phases of the NOVA 2020 Projects. NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake environmental studies as part of the planning process for the above mentioned projects and to assist in the development of our regulatory applications. An Information Session is being held for stakeholders and the public to drop in, review the projects and provide input into the planning processes. Representatives from both NOVA Chemicals and Stantec will be available to discuss these projects and respond to questions or comments. The Information Session is scheduled for:

**Thursday, January 22, 2015**
**4:30pm – 7:30pm**
**Royal Canadian Legion, Hon. Leslie Sutherland Branch #447**
**350 Albert Street at Beckwith, Corunna, Ontario**

If you have questions or concerns regarding the information session, the Kimball Pipeline Replacement Project or any of the NOVA 2020 Projects, please do not hesitate to contact Mac Hollingsworth, Project Lead, (519) 346-3412 or Tracy Johnson, Communications Consultant (519) 481-2954. They will be happy to answer any questions or discuss any concerns you may have.

Best Regards,

**NOVA Chemicals (Canada) Ltd.**
Tom Thompson, P.Eng.
Regional Manufacturing Director
thompsta@novachem.com

copy: Mac Hollingsworth

# *Appendix B4:*

# *Display Boards and Exit Questionnaire*

NOVA Chemicals®

# Welcome

## to NOVA Chemicals' Information Session on the Kimball Pipeline Replacement Project and the NOVA 2020 Projects.

Thank you for coming. We invite you to view the display boards, speak to members of NOVA Chemicals and/or Stantec Consulting Ltd. (Stantec), and complete a questionnaire providing your questions and comments.

Please sign up at the front desk to have your attendance recorded as part of the environmental study and to receive future Project updates. The following two questionnaires are available following your review of the boards:

1 - Kimball Pipeline Replacement Project

2 - NOVA 2020 Projects.

Please fill out each questionnaire before you leave.

Responsible Care®
Our commitment to sustainability.

NOVA Chemicals

NOVA 2020 Projects

# About NOVA Chemicals

NOVA Chemicals manufactures plastics and chemicals for customers worldwide who produce consumer, industrial and packaging products.

NOVA Chemicals owns and operates three petrochemical facilities in the Township of St. Clair, in Lambton County, Ontario.

The Corunna Site is the largest and is located on Petrolia Line, just east of Corunna. The main product, ethylene, is used to produce polyethylene at NOVA Chemicals' other facilities and is sold to third parties in the surrounding area. Additionally, the site produces large volumes of associated co-products which are sold to third parties locally and throughout North America.

The Moore Site located on Moore Line, near Mooretown, produces polyethylene using ethylene feedstock from the Corunna Site.

The St. Clair River Site located on Albert Street in Corunna, produces polyethylene using ethylene feedstock from the Corunna Site.

Recent upgrades include:

- 2005 through 2006 - $350M investment at Corunna Site to enhance feedstock flexibility, improve operating efficiency, and expand capacity to produce ethylene and propylene;
- 2010 - $100M investment at Moore site to modernize and expand polyethylene capacity; and
- 2012 through 2014 - $250M investment at Corunna to further convert to utilize up to 100% Natural Gas Liquids (NGL) feedstock.

Responsible Care®
Our commitment to sustainability.

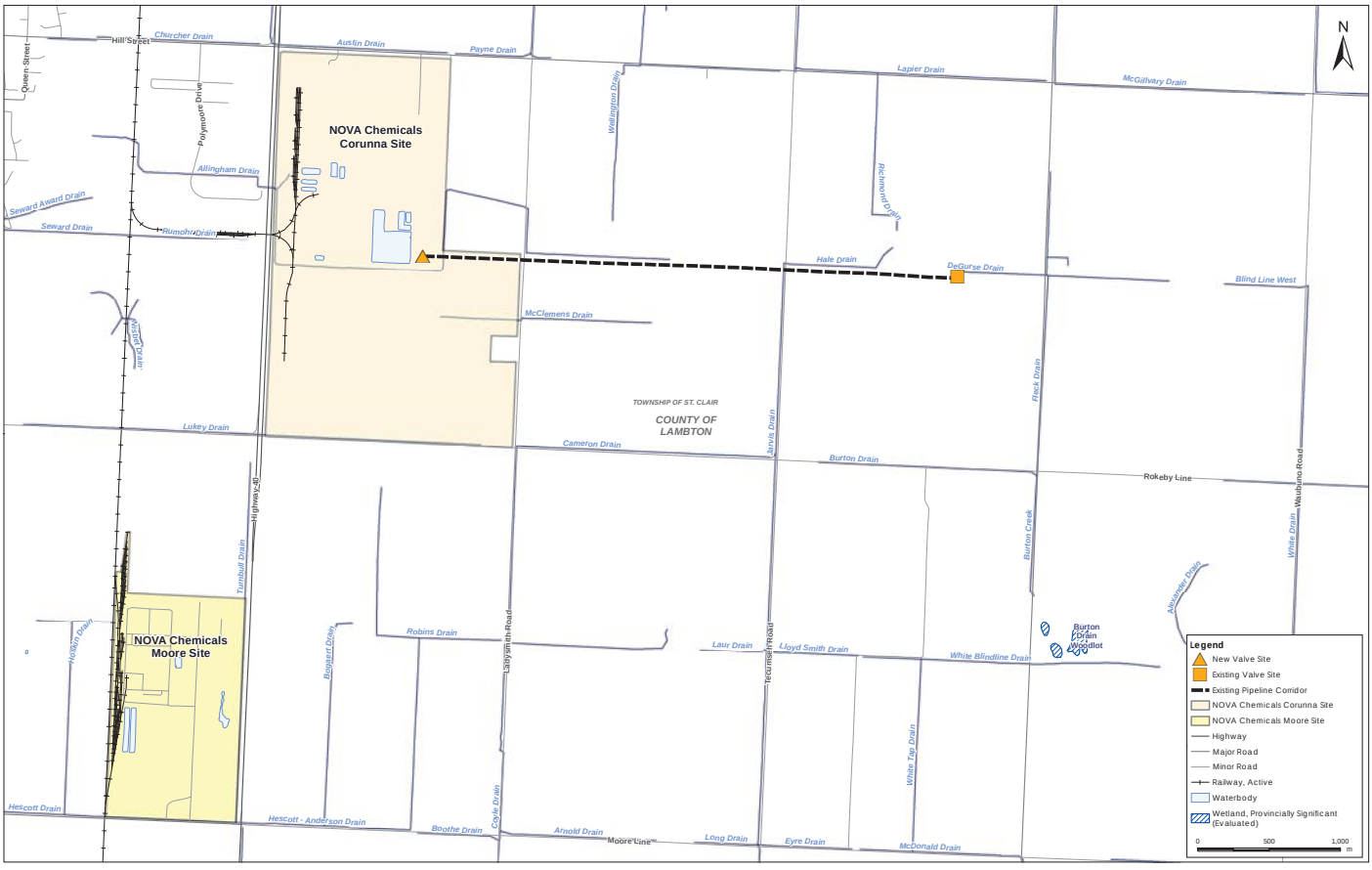
NOVA Chemicals

# Kimball Pipeline Replacement Project

## Overview of Kimball Pipeline Replacement Project

NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids(NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the Project).

The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project.




Responsible Care®
Our commitment to sustainability.

NOVA Chemicals

# Kimball Pipeline Replacement Project

## Project Needs / Benefits

Marcellus and Utica Shale Gas have changed the supply of natural gas and NGLs in the northeastern United States and eastern Canada.

They have made ethane attractive for the production of ethylene in the Sarnia area, and an important opportunity to ensure NOVA Chemicals' competitive economic viability today and into the future.

The Kimball Pipeline Replacement Project will provide the physical connection required to transport Utica ethane directly into the Corunna facility.

Pipeline transportation and storage capacity are important infrastructure components of NOVA Chemicals' NGL-feedstock supply to support existing facilities and future growth.

Preservation of existing employment with NOVA Chemicals and throughout the Sarnia cluster is important to the region.

Responsible Care®
Our commitment to sustainability.

NOVA Chemicals

Kimball Pipeline Replacement Project

# Environmental Study

The environmental study and subsequent Environmental Report for the Project will be completed according to the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)*".

The study will:

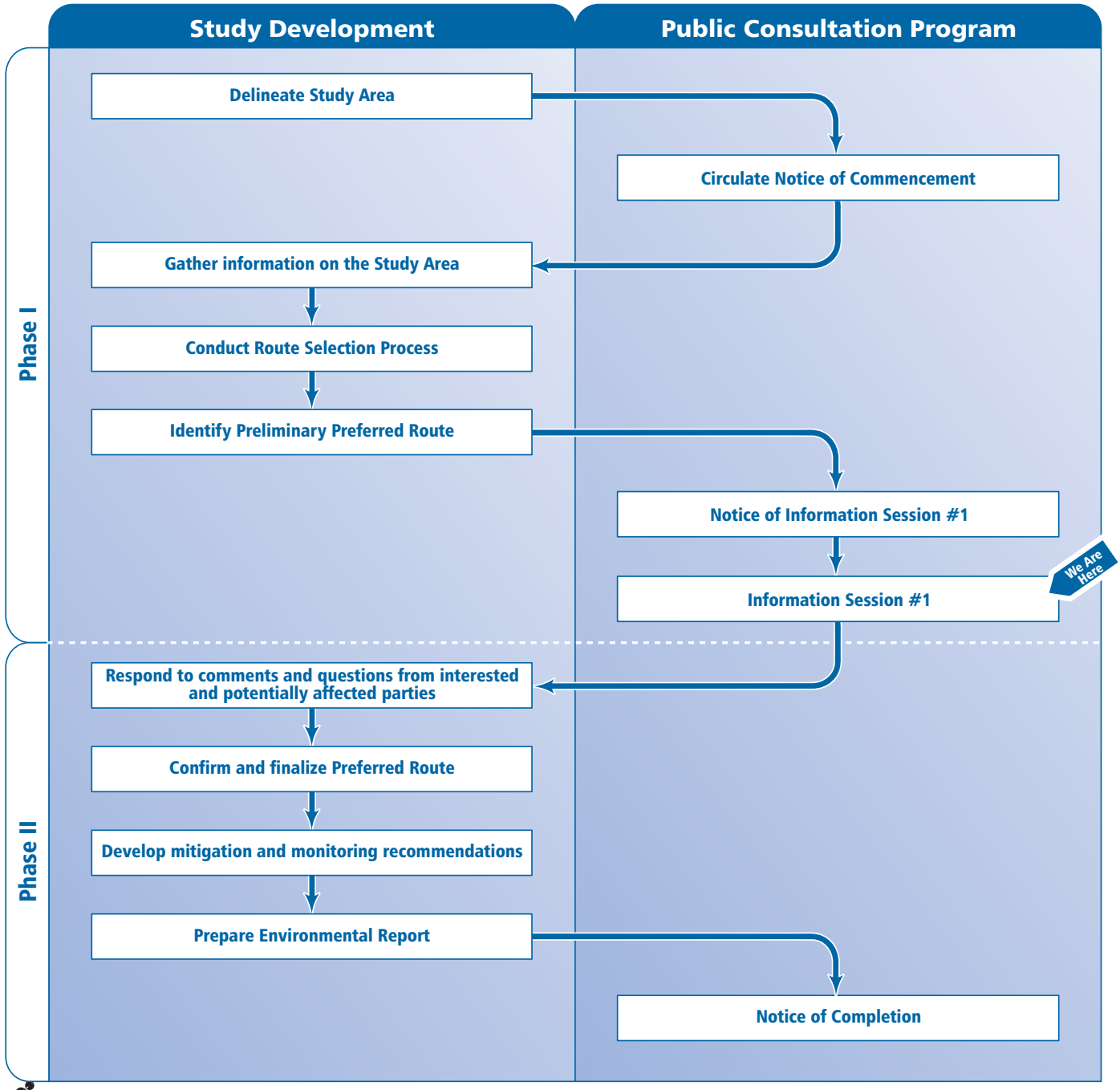
- Be undertaken during the earliest phase of the Project
- Identify potential impacts of the construction and operation of the proposed replacement NGL pipeline on environmental and socio-economic conditions
- Identify an environmentally acceptable route for the proposed pipeline
- Undertake consultation to understand the views of interested and potentially affected parties
- Assess the potential cumulative effects of the Project in conjunction with other projects that are planned for the area
- Develop mitigation and protective measures to avoid or minimize impacts
- Develop appropriate inspection, monitoring and follow-up programs for the Project, to ensure the success of mitigation and protective measures

Responsible Care®
Our commitment to sustainability.

NOVA Chemicals®

# Kimball Pipeline Replacement Project

## Environmental Study Process




Responsible Care®
Our commitment to sustainability.

NOVA Chemicals®

Kimball Pipeline Replacement Project

# Ontario Energy Board and Approval Process

The OEB regulates the natural gas industry in Ontario in the public's interest. Under Section 90 of the Ontario Energy Board Act, the OEB's review and approval are required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

NOVA Chemicals plans to complete the report for the environmental study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. This application will include comprehensive information on the Project, including: the need for the project, facility alternatives, project costs and economics, pipeline design, pipeline construction, environmental mitigation measures, land requirements, and Aboriginal consultation.

The OEB will then hold a hearing to review the Project. This will include notices in local newspapers, letters to directly affected landowners, the opportunity for the general public and landowners to ask questions and submit questions regarding the Project, and a written decision regarding the Project.

If, after this review, the OEB finds the Project is in the public interest, it will approve construction of the pipeline. If the Project is approved the OEB normally attaches conditions to its approval with which NOVA Chemicals will comply during the construction and restoration process.

NOVA Chemicals

# Kimball Pipeline Replacement Project

## Consultation

**NOVA CHEMICALS IS COMMITTED TO BROAD, OPEN AND INCLUSIVE TWO-WAY COMMUNICATION**

We have initiated consultation with agencies and Aboriginal communities and welcome any input from the public, affected landowners and all stakeholders to assist us in the evaluation of the proposed Project.

Through our Consultation Program, we will:

- identify, document and address whenever possible any potential issues or concerns related to project design, planning, construction and operations;
- work with regulatory agencies, the municipalities, and other interested stakeholders;
- meet all regulatory requirements, with an objective to support a potential 2016 construction start; and
- continue to build relationships that will support ongoing operations.

**"Your Input Is Welcome"**

We are seeking the input and views of landowners and stakeholders along the ~ 4 km segment of the Kimball pipeline prior to making application to regulatory agencies.

This Information Session is part of our Consultation Program to offer all stakeholders the opportunity to:

- learn more about this proposed pipeline project;
- discuss any concerns or suggestions you have with the Project Team; and
- provide us with your input on this or any aspect of our pipeline or manufacturing operations.

NOVA Chemicals

# Kimball Pipeline Replacement Project

## Preliminary Route Selection Process

The Preliminary Preferred Route for the proposed pipeline will be selected through a five-step process.

### Step 1

**Constraints and Opportunities**
Inventory of environmental and socio-economic features.

### Step 2

**Generate Route Options**
The generation of Route Options is influenced by the following:

- Avoidance to the extent feasible of sensitive socio-economic and environmental features such as communities, wetlands, etc.
- Avoidance to the extent feasible of areas which may present construction difficulties or the potential for long-term maintenance/remedial work.
- Utilizing to the extent feasible existing linear infrastructure, such as hydro corridors, road right-of-ways and property lines.
- The length of the pipeline and associated costs of construction and operation may influence route generation.
- Routes should follow a reasonably direct path between start and end points.

### Step 3

**Route Evaluation**
An evaluation of the Route Options was conducted based on environmental and socio-economic features.
A Preliminary Preferred Route was identified. The route is preferred from a socio-economic, cost and operations perspective.

We Are Here

### Step 4

**Input on the Preliminary Preferred Route**
The Preliminary Preferred Route is subject to input through a variety of communication and consultation activities, such as an Information Session.

### Step 5

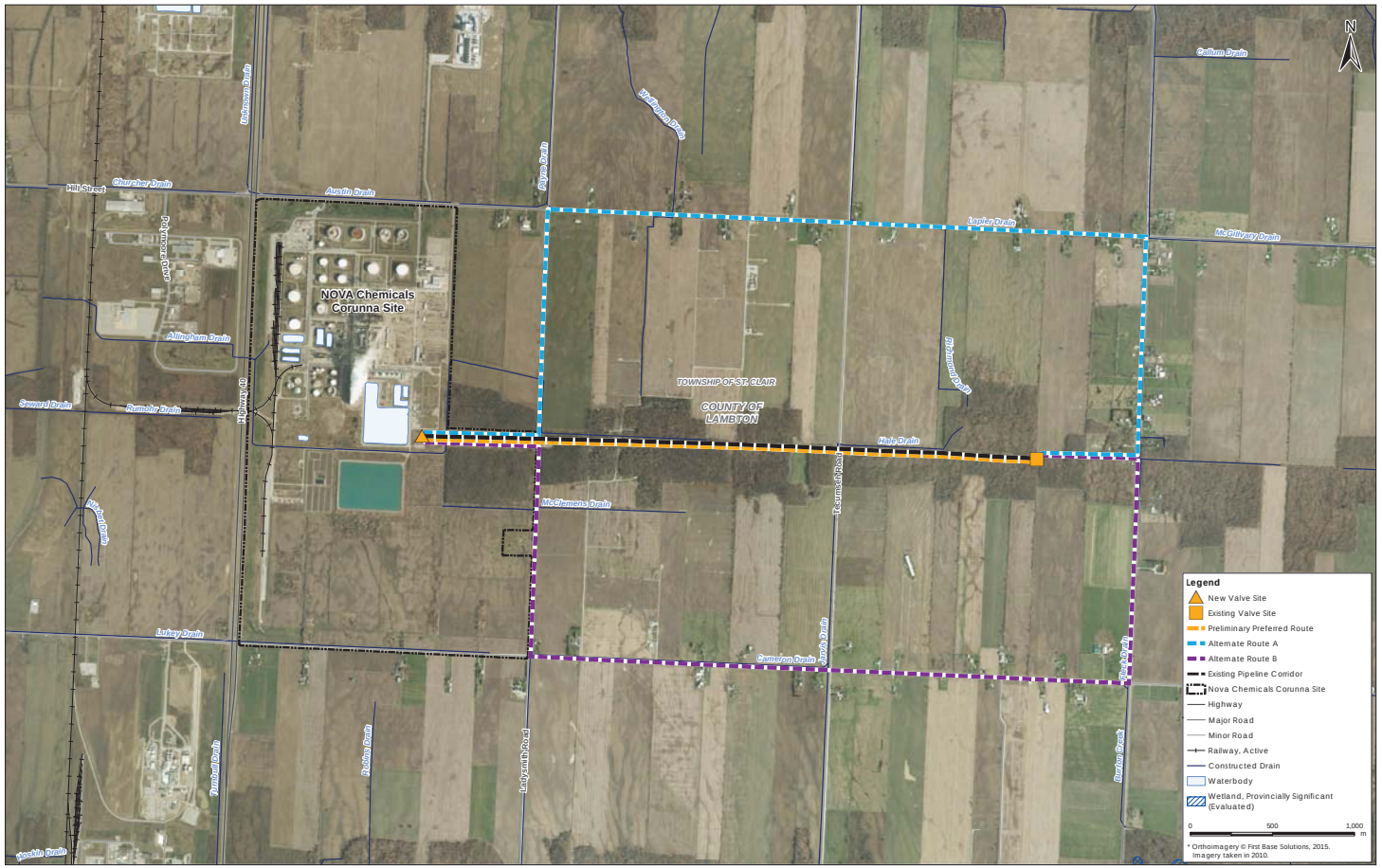
**Confirmation of the Preferred Route**
A Preferred Route will be confirmed. The Preferred Route may require micro-sitting as the project moves forward based on the results of pre-construction field investigations, landowner requests, and/or engineering considerations.

Responsible Care®
Our commitment to sustainability.

NOVA Chemicals

# Kimball Pipeline Replacement Project

## Preliminary Preferred Route




Responsible Care®
Our commitment to sustainability.

NOVA Chemicals

Kimball Pipeline Replacement Project

# Existing Features Along the Preliminary Preferred Route

Data on existing features along the Preliminary Preferred Route have been collected from a number of external sources including but not limited to agencies, aerial photography, official plan mapping and natural features mapping.

Additional data collection and agency consultation will continue after this Information Session to confirm the Preferred Route.

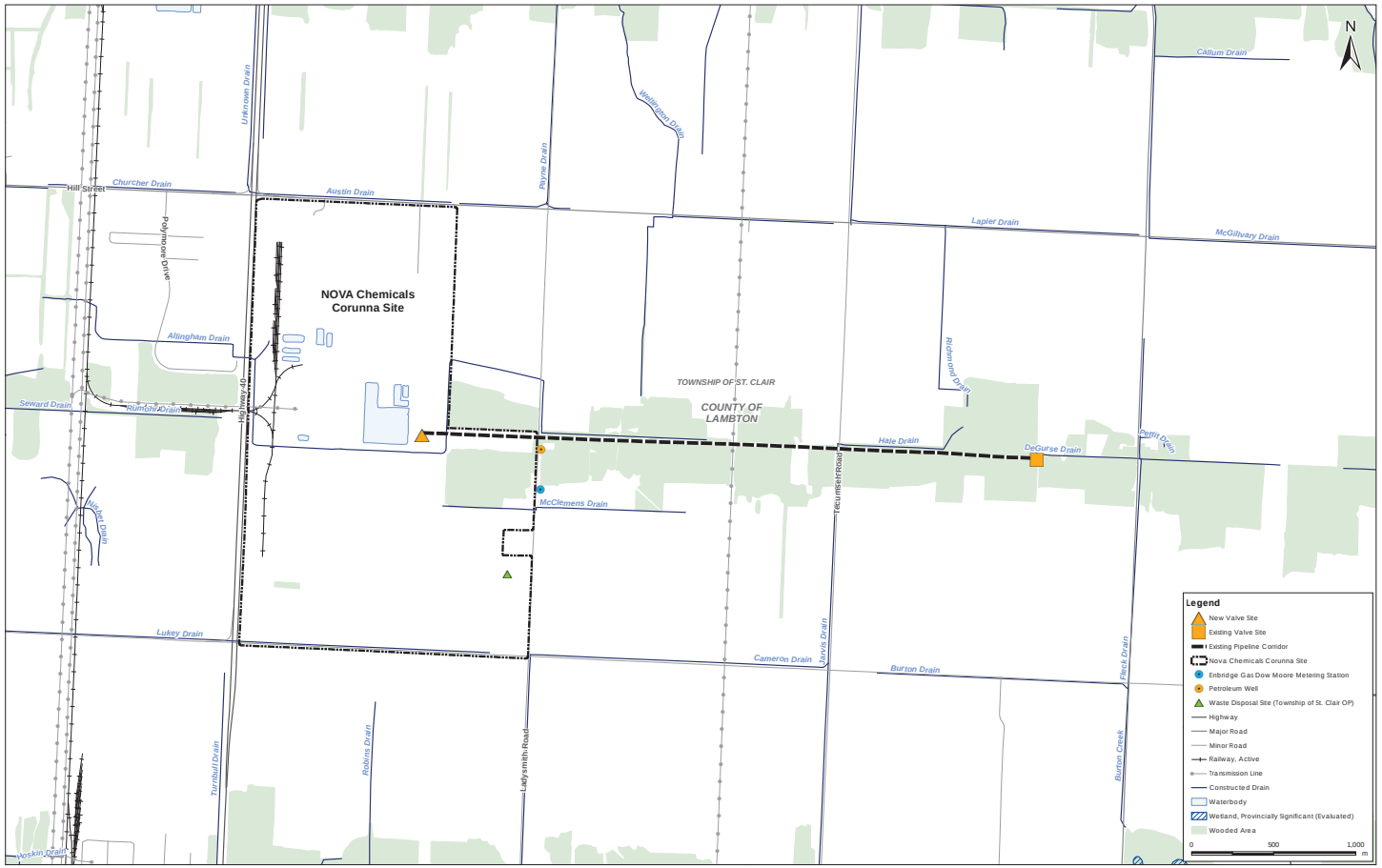
Environmental and socio-economic features relevant to pipeline planning, construction and operation are presented on the board containing the Natural and Socio-economic Environment map. The Preliminary Preferred Route avoids sensitive environmental and socio-economic features where feasible. Where features cannot be avoided, mitigation and protection measures will be employed during pipeline construction and operation.

Responsible Care®
Our commitment to sustainability.

NOVA Chemicals

# Kimball Pipeline Replacement Project

## Natural and Socio-economic Environment




Responsible Care®
Our commitment to sustainability.

NOVA Chemicals

# Kimball Pipeline Replacement Project

## Construction

**NOVA CHEMICALS IS COMMITTED TO MINIMIZING ENVIRONMENTAL IMPACTS THROUGH SOUND CONSTRUCTION PRACTICES**

Environmental management practices will be implemented to avoid or mitigate potential effects on environmental and socio-economic features from our pipeline construction practices. These practices will include:

- Pre-construction environmental planning to avoid, to the extent possible, potential environmental and socio-economic impacts
- Environmental management practices to address potential impacts to geophysical features, soil, vegetation, water, wildlife, air quality, noise and socio-economic features
- Waste Management/Minimization plan to address the generation of construction wastes and direct waste to pre-approved recycling or disposal facilities
- Contingency plans in the unlikely event of spills, fires, extreme weather conditions, unknown heritage resources and/or contaminated soils
- Post construction monitoring and follow-up

Responsible Care®
Our commitment to sustainability.

NOVA Chemicals®

# Responsible Care®

**Responsible Care…our commitment to safety, health and environment**

NOVA Chemicals is committed to being among the industry leaders in achieving and maintaining superior Responsible Care performance. Safety is critical to our business, and we work in many ways to protect people and assets. We are also committed to minimizing our impact on the environment because it is the right thing to do, and is key to the sustainability of our business.

Launched in 1985 by the Chemistry Industry Association of Canada (then Canadian Chemical Producer's Association), Responsible Care is a unique "ethic" for the safe and environmentally sound management of chemicals which has spread to more than 50 countries around the world. It is a global commitment to the responsible management of chemicals through their entire life cycle.

**Taking CAER**

Under the umbrella of Responsible Care is the Sarnia area's Community Awareness and Emergency Response (CAER) program.

Through CAER, our team of field and technical staff is focused on operating our pipelines with the utmost consideration for public safety, adjacent landowners and environmental integrity. We take a proactive approach to communicating and working with potentially impacted stakeholders.

Responsible Care®
Our commitment to sustainability.

*2014 Great Canadian Shoreline Clean-up*

Responsible Care®
Our commitment to sustainability.

NOVA Chemicals

# Kimball Pipeline Replacement Project

## Pipeline Operations

Pipelines are an important infrastructure component of the NOVA Chemicals' Sarnia-Lambton manufacturing facilities. We have safely operated our pipelines in the region for many years with dedicated resources and technical teams.

The proposed Kimball Pipeline will be an important part of the Corunna facility's infrastructure, without increasing our industrial footprint. The pipeline will be managed under our pipeline integrity program which includes continuous / real-time operation monitoring, leak detection, aerial and foot patrols of our right-of-ways.

Our pipelines are developed with inherent safe design practices and are supported by multiple layers of redundancy with administrative and mechanical controls.

We have a well established Pipeline Emergency Response Program (ERP) and will update our existing programs to provide additional information to the public as required.

We are active members in regional Public Awareness programs through Sarnia's CAER, Blue Water Community Awareness Program (BCAP), Ontario Regional Common Ground Alliance (ORCGA) and Chemical Valley Emergency Coordinating Organization (CVECO).

Responsible Care®
Our commitment to sustainability.

NOVA Chemicals

# Kimball Pipeline Replacement Project

## Next Steps

After this Information Session,we intend to pursue the following schedule of activities:

1. Analyze public and stakeholder input, respond to comments/questions received, and confirm the Preliminary Preferred Route (Feb/Mar 2015)
2. Complete Environmental Report and application to the OEB (Spring 2015)
3. Complete environmental field surveys and archaeological assessment(s) (Spring 2015)
4. OEB regulatory process (2015)
5. Pre-Construction activities (2015/2016)
    - Topographic Land Survey (2015)
    - Pipeline Design (2015)
    - Acquire Permits (2016)
6. Construction (2016 or 2017)
7. Post Construction Activities (2018)

Responsible Care®
Our commitment to sustainability.

NOVA Chemicals

# Thank You!

## Thank you for your participation

We sincerely hope this Information Session has provided you with an opportunity to:

- discuss your areas of interest related to the proposed project with representatives from NOVA Chemicals and Stantec;
- provide your input regarding the existing conditions (environmental and socio-economic features) identified within the study area; and,
- comment on the 'preliminary preferred route' and site specific protection and mitigation measures.

Input from stakeholders and Aboriginal communities will be used to confirm the existing environmental conditions and the preliminary preferred pipeline route.

If you prefer to discuss the Project privately, a NOVA Chemicals or Stantec representative will be happy to connect with you at a convenient time.

Responsible Care®
Our commitment to sustainability.

Please look over the display panels, and then take a few moments to provide your comments below. Your input is welcomed and appreciated. If you require any assistance or clarification while completing the questionnaire please speak with a NOVA Chemicals or Stantec representative.

Completed questionnaires can be returned to a Stantec representative or mailed to Stantec Consulting Ltd. by **February 5, 2015**. Postage paid, self-addressed envelopes are available at the sign-up table.

1. What is your interest in the Kimball Pipeline Replacement Project?

   ☐ Directly affected landowner
   ☐ Adjacent landowner
   ☐ Interested citizen
   ☐ Member of interest group
   ☐ Government official
   ☐ Other: _____

2. Please identify any environmental features within the Study Area which are either incorrectly mapped, omitted or that you feel are important to consider during the study (please state your reasons).

3. Considering the location of the proposed replacement natural gas liquids (NGLs) pipeline shown on the display panels, please indicate whether there are any potential effects to you, your property, or your business.

4. Do you have any other questions/concerns about the proposed Kimball Pipeline Replacement Project that you would like to bring to our attention?

5. Did the content provided at this Information Session meet your needs?

☐ Yes ☐ No

Please comment:

6. Did the organization of this Information Session meet your needs (i.e., location, date, time, format)?

☐ Yes ☐ No

Please comment:

7. Do you feel that you are receiving timely information about the project?

☐ Yes ☐ No

Please comment: _____

_____

_____

_____

_____

_____

8. Additional Comments (if necessary):

_____

_____

_____

_____

_____

_____

***Thank you for completing this questionnaire***

**If you would like someone to contact you about any items identified above please provide us with your contact information.**

Please Print Clearly

Name: _____

Address: _____

Email: _____

Phone: _____

*Thank you for your participation. Comments and information regarding this study are being collected in accordance with the Freedom of Information and Protection of Privacy Act, and solely for the purpose of informing the Kimball Pipeline Replacement Project. With the exception of personal information, all comments may become part of the public record.*

Stantec

# *Appendix B5:*

# *Project Correspondence*

## Summary of Project Correspondence

| Record | Correspondent | Type | Date | Subject Matter | Forwarded/ Date | Responder/Date | Response | Follow-up |
|---|---|---|---|---|---|---|---|---|
| **Public** | | | | | | | | |
| 1 | [redacted] | Telephone call | December 3, 2014 | • Confirmed mailing address.<br>• Inquired as to whether work was required on his property. | N/A | MIG Engineering (2011) Ltd./December 3, 2014 | • Project contact list updated.<br>• Indicated that no work is required on stakeholder property and was notified as an adjacent landowner. | N/A |
| 2 | [redacted] | Voice message | December 5, 2014 | • Requested that his call be returned to discuss the project.<br>• Questioned if one or two pipelines were being removed.<br>• Inquired as to the owner of the two pipelines being removed.<br>• Asked about NOVA Chemicals right to be able to prevent him from installing a fence post in a buffer area north of the easement on his property.<br>• Asked if the brine line was being removed further east past the Kimball compound.<br>• Confirmed that he will be attending the Information Session. | N/A | NOVA Chemicals /December 5, 2014 | • Confirmed that two pipelines will be removed as part of the project.<br>• Indicated that NOVA Chemicals owns the pipelines being removed.<br>• Committed to further investigating if NOVA Chemicals can prevent the installation of a fence post in a buffer area north of the easement.<br>• Noted that the project scope only extends from the Corunna Site to the Kimball compound. | N/A |
| 3 | [redacted] | Voice message | December 5, 2014 | • Requested that her call be returned to discuss the project.<br>• Expressed her frustration by having to go into Sarnia to the courier to pick up the letter.<br>• Indicated no objections with the project.<br>• Requested that NOVA Chemicals not send any letters by courier but hire a student to deliver the letters. | N/A | NOVA Chemicals/ December 8, 2014 | • Indicated that NOVA Chemicals would look at other methods of delivery for sending letters. | N/A |
| 4 | [redacted] | Voice message | February 4, 2015 | • Requested an update on the preliminary preferred route map requested at the Information Session. | Mac Hollingsworth (NOVA Chemicals) /February 4, 2015 | Stantec/ February 4, 2015 | • Hard copy of the preliminary preferred route map sent by regular mail on February 4, 2015. | N/A |
| 5 | [redacted] | Voice message | February 10, 2015 | • Confirmed receipt of map. | Mac Hollingsworth (NOVA Chemicals) /February 10, 2015 | N/A | • Comment noted. | N/A |

## Summary of Project Correspondence

| Record | Correspondent | Type | Date | Subject Matter | Forwarded/ Date | Responder/Date | Response | Follow-up |
|---|---|---|---|---|---|---|---|---|
| **Information Session** | | | | | | | | |
| 1 | [redacted] | Comment | January 22, 2015 | • Requested project details specifically: what pipelines are being removed; what the pipe was being connected to; and pipe wall thickness. | | NOVA Chemicals/ January 22, 2015 | • Noted that the project involves the replacement of a dormant 4" NGL pipeline with a 12" pipeline approximately 4 km in an existing RoW. The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. | N/A |
| 2 | [redacted] | Comment | January 22, 2015 | • Inquired if NOVA Chemicals was aware of the Enbridge line that was installed in NOVA Chemicals' easement just east of Ladysmith. | | NOVA Chemicals /January 22, 2015 | • Indicated that they are unaware of the Enbridge line in their easement and committed to having their Pipeline Engineer further review. | N/A |
| 3 | [redacted] | Comment | January 22, 2015 | • Concerned about drainage, compaction and noted that the pipeline route is only on agricultural field.<br>• Indicated support for the project.<br>• Questioned why alternative routes are being considered. | | Stantec/January 22, 2015 | • Explained that alternative routes needs to be considered as part of the regulatory process being followed for this project. | N/A |
| 4 | [redacted] | Comment | January 22, 2015 | • Concerned about existing flooding issues in property north of the easement, along Ladysmith. Trees have overgrown the ditch to the north of the RoW and water flows across the ditch to the property to the north.<br>• Questioned the 3 pipes in the RoW; was not aware of the Plains pipeline. | | NOVA Chemicals/ January 22, 2015 | • Comment re: existing conditions noted. | N/A |
| 5 | [redacted] | Comment | January 22, 2015 | • Requested a hard copy of the preliminary preferred route map | N/A | Stantec/ February 4, 2015 | • See Public Record 4. | N/A |
| 6 | [redacted] | Comment | January 22, 2015 | • Stakeholder questioned the alternate route options. | N/A | NOVA Chemicals/ January 22, 2015 | • Comments noted.<br>• Explained rationale for route alternates. | N/A |
| 7 | Sharilyn Johnston, Environment Coordinator, Aamjiwnaang First Nation | Comment | January 22, 2015 | • Requested that an update be provided at a planned Aamjiwnaang Environment Committee meeting on specific field investigations and noted the community's interest in attending any environmental field surveys. | N/A | N/A | • Comments noted.<br>• See First Nations & Métis Record 7. | N/A |
| 8 | Gary DePooter, Public Works St. Clair Township | Comment | January 22, 2015 | • Discussed permitting requirements for road crossings. | N/A | N/A | • NOVA Chemicals will continue to consult with the Township regarding permitting requirements. | N/A |

## Summary of Project Correspondence

| Record | Correspondent | Type | Date | Subject Matter | Forwarded/ Date | Responder/Date | Response | Follow-up |
|---|---|---|---|---|---|---|---|---|
| **Federal Agencies** | | | | | | | | |
| 1 | Anjala Puvananathan<br>Director, Ontario Region<br>Canadian Environmental Assessment Agency | Email/Letter | December 23, 2015 | • Noted that the *Canadian Environmental Assessment Act*, 2012 (CEAA 2012) applies to projects in the Regulations Designating Physical Activities (the Regulations).<br>• Requested a review of the Regulations to confirm applicability to the project including section 1 (a), which relates to federally designated wildlife area and migratory bird sanctuaries.<br>• Noted that the Responsible Authority for pipelines is the National Energy Board not the Canadian Environmental Assessment Agency.<br>• Provided links for additional information on CEAA 2012 and the National Energy Board.<br>• Indicated that if CEAA 2012 were to apply to the proposed project, the National Energy Board must be provided with a description of the proposed project, not the Canadian Environmental Assessment Agency.<br>• Requested to be removed from the project mailing list. | N/A | | • Comments noted.<br>• The Regulations were reviewed including section 1(a) regarding federally designated wildlife area and migratory bird sanctuaries.<br>• Contact list updated. | N/A |
| 2 | Environmental Assessment Coordinator, Transport Canada, Ontario Region | Email | January 7, 2015 | • Requested that all future correspondence on this project or any potential project be forwarded electronically to Environmental Assessment Coordinator at the email address provided.<br>• Provided a link to the Directory of Federal Real Property to determine if the project will potentially interact with any federal property. Also provided links to Acts that they administer or assist in administering that may apply to the project. | N/A | N/A | • Contact list updated.<br>• The resources provided by Transport Canada were reviewed to determine applicability to the project. | N/A |

**Summary of Project Correspondence**

| Record | Correspondent | Type | Date | Subject Matter | Forwarded/ Date | Responder/Date | Response | Follow-up |
|---|---|---|---|---|---|---|---|---|
| 3 | Consultation and Accommodation Unit, Aboriginal Affairs and Northern Development Canada | Email | January 20, 2015 | • Noted that they should only be contacted when a project intersects with reserve land. Therefore, requested to be removed from the mailing list for this project.<br>• Provided a link to the Aboriginal and Treaty Rights Information System (ATRIS) for information on the location and nature of established and potential Aboriginal and Treaty rights. | N/A | N/A | • Contact list updated.<br>• A review of the ATRIS was completed for information on Aboriginal groups such as established and asserted rights, within or in the vicinity of the study area. | N/A |
| **Provincial Agencies** | | | | | | | | |
| 1 | Heather Riddell, District Planner, Ministry of Natural Resources and Forestry Aylmer District | Email | November 28, 2015 | • Provided links to available resources to obtain natural heritage information of the project location.<br>• Requested that the search results be provided in the request for natural heritage information and noted that the MNRF will provide any additional information that they have at the district. | N/A | N/A | • Comments noted. | N/A |
| 2 | Zora Cronojacki, Project Advisor, Ontario Energy Board | Email | December 2014 | • Requested a meeting with NOVA Chemicals to discuss the Section 90 Leave to Construct application for the project. | N/A | OEB, NOVA Chemicals, and, Stantec/December 4, 2014 | • Meeting held December 4, 2014 to provide an overview of the project. A discussion followed regarding routing, the Ontario Energy Board's filing timelines, and regulatory requirements for the project. | N/A |
| 3 | Oscar Alonso, Fuels Safety Engineer, Technical Standards and Safety Authority | Email | December 1, 2014 | • Requested technical specifications for the proposed pipeline. | N/A | Stantec/January 13, 2015 | • See Provincial Agencies Record 8 and 9 below. | N/A |
| 4 | Craig Newton, Regional Environmental Planner/EA, Ministry of Environment and Climate Change Southwestern Region | Letter | December 8, 2014 | • Provided Aboriginal consultation information and resources to assist NOVA Chemicals in the procedural aspects of consultation delegated by the Crown.<br>• Requested to be contacted if the project may adversely affect an Aboriginal or treaty right, or if a Part II Order request is anticipated, to determine whether the Crown has a duty to consult. | N/A | Stantec/ December 9, 2014 | • Noted that it is the intent of NOVA Chemicals to engage Aboriginal groups in a manner consistent with the expectations of those groups and the Province of Ontario.<br>• Indicated that the project will not be conducted a Class Environmental Assessment process but will be completed in accordance with the requirements of the OEB Environmental Guidelines (2011). Proponents for the development of hydrocarbon pipelines and associated infrastructure are required to apply for leave to construct from | N/A |

**Summary of Project Correspondence**

| Record | Correspondent | Type | Date | Subject Matter | Forwarded/ Date | Responder/Date | Response | Follow-up |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | the OEB under sections 90, 91, 95 and 98 of the Act. Review of the ER is completed by the OPCC, which is comprised of a wide range of government agencies, and other relevant stakeholders. | |
| 5 | Lisa Myslicki, Environmental Specialist, Environmental Management Infrastructure Ontario | Email/Letter | December 22, 2014 | • Requested to be contacted if IO lands are within the study area and are proposed to be contacted.<br>• Noted that IO should be contacted if there are negative impacts to land holdings, such as the taking of developable parcels of IO managed land or fragmentation of utility or transportation corridors.<br>• Provided information on the requirements of the Ministry of Infrastructure Public Works Class Environmental Assessment (MOI PW Class EA) and associated due diligence.<br>• Noted that the purchase of MEDEI owned/IO-managed lands or disposal of rights and responsibilities for IO-managed lands triggers the Class EA process.<br>• Requested to be further contacted if the proposed undertaking directly affects all or in part any IO-managed property, to ensure that the Class EA requirements can be met through the environmental study, and a copy of the draft ER for review.<br>• Requested to be removed from the mailing list if no impacts are anticipated to MEDEI owned lands. | N/A | N/A | • Comments noted. | • To provide draft Environmental Report if there are any impacts to IO-managed property.<br>• See Provincial Agencies Records 16 & 17 below. |
| 6 | Audrey Bennett, Director, Ministry of Municipal Affairs and Housing | Letter | December 22, 2014 | • Noted that all project correspondence was sent to the Western Municipal Services Office as the project relates to the function or responsibilities of the regional Municipal Services Offices, not the Head Office. | N/A | N/A | • Comments noted.<br>• Contact list updated. | N/A |
| 7 | Heather Riddell, District Planner, Ministry of Natural Resources and Forestry Aylmer District | Email | January 12, 2015 | • Provided natural heritage information (i.e., Species at Risk, Significant Wildlife Habitat, Areas of Natural and Scientific Interest, Significant Woodlands, Significant Wetlands, Significant Valleylands, and Fish and Fish Habitat) for the general project area. | N/A | N/A | • Comments noted. | N/A |

**Summary of Project Correspondence**

| Record | Correspondent | Type | Date | Subject Matter | Forwarded/ Date | Responder/Date | Response | Follow-up |
|---|---|---|---|---|---|---|---|---|
| | | | | • Recommended that the SCRCA and DFO be contacted for up-to-date fisheries and drain information and noted that the SCRCA and Official Plans may provide natural heritage information for the study. | | | | |
| 8 | Oscar Alonso, Fuels Safety Engineer, Technical Standards and Safety Authority | Telephone call | January 13, 2015 | • Concern about the proposed replacement pipeline and noted that TSSA has more stringent requirements for natural gas pipelines and would like to discuss further.<br>• Discussed possible locations for having the meeting. | N/A | Stantec/January 13, 2015 | • Noted that NOVA Chemicals is willing to meet TSSA to discuss the project and will contact TSSA regarding possible meeting dates. | N/A |
| 9 | Oscar Alonso, Fuels Safety Engineer, Technical Standards and Safety Authority | Email | January 13, 2015 | • Provided specific requirements within their regulation as it relates to HPV pipelines.<br>• Proposed meeting dates to discuss the project. | N/A | TSSA, NOVA Chemicals AND Stantec/ January 27, 2015 | • Comments noted.<br>• Meeting held January 27, 2015 to discuss s safety practices and protocols for pipeline design and adherence to TSSA requirements.<br>• A risk assessment for the pipeline was requested at the direction of TSSA and undertaken for the project. | N/A |
| 10 | Patricia Hayman, Director of Planning, St. Clair Region Conservation Authority | Letter | January 13, 2015 | • Noted that the western portion of the subject lands are regulated under SCRCA's Ontario Regulation 171/06, "Development, Interference with Wetlands and Alterations to Shorelines and Watercourses", including any wetlands that are identified and meet the criteria of this regulation during the study.<br>• Provided links to the 2013 SCRCA Watershed Report Card and the Sydenham River Conservation Action Plan for natural heritage principles that may affect routing, construction, and/or operation. | N/A | N/A | • Comments noted.<br>• A review of the guidance documents was completed. | N/A |
| 11 | Sally Renwick, Team Lead, Environmental Planning, Ministry of Natural Resources and Forestry | Email | January 16, 2015 | • Requested to be removed from the project mailing list and add the District Planner, Aylmer District. Noted that comments will come from Aylmer District, if they have any to provide. | N/A | N/A | • Contact list updated. | N/A |
| 12 | Audrey Bennett, Director, Ministry of | Letter | January 19, 2015 | • Noted that all project correspondence was sent to the Western Municipal Services Office as the project relates to | N/A | N/A | • Comments noted. | N/A |

**Summary of Project Correspondence**

| Record | Correspondent | Type | Date | Subject Matter | Forwarded/ Date | Responder/Date | Response | Follow-up |
|---|---|---|---|---|---|---|---|---|
| | Municipal Affairs and Housing | | | the function or responsibilities of the regional Municipal Services Offices, not the Head Office. | | | | |
| 13 | Lisa Myslicki, Environmental Specialist, Environmental Management Infrastructure Ontario | Email/Letter | January 21, 2015 | • Requested to be contacted if IO lands are within the study area and are proposed to be impacted.<br>• Outlined the potential negative impacts to IO tenants and lands (environmental impacts, impacts to land holdings and cultural heritage).<br>• Provided information on the potential triggers related to the MOI PW Class EA.<br>• Requested to be removed from the project's mailing list if MOI owned lands are not anticipated to be impacted. | N/A | N/A | • Comments noted. | • See Provincial Agencies Records 4, 16 & 17. |
| 14 | Zsolt Katzirz, Corridor, Management Office, Ministry of Transportation, West Region | Email | January 28, 2015 | • Requested to be contacted to discuss the Kimball Pipeline Replacement Project and the NOVA 2020 Projects as noted in the Notice of Information Session, prior to issuing comments for MTO. | N/A | Stantec/February 3, 2015 | • See Provincial Agencies Record 15 below. | N/A |
| 15 | Zsolt Katzirz, Corridor, Management Office, Ministry of Transportation, West Region | Telephone call | February 3, 2015 | • Requested information about the project prior to MTO issuing formal comments.<br>• Asked for confirmation that the project did not cross Highway 40.<br>• Requested an email listing project contacts for both the Kimball Pipeline Replacement Project and NOVA 2020 Projects so as to ensure the appropriate agency contacts were circulated project updates. | N/A | Stantec/February 3, 2015 | • Confirmed that the project did not cross Highway 40.<br>• Noted that the Kimball Pipeline Replacement Project and the NOVA 2020 Projects were separated projects as mentioned in the Notice of Information Session.<br>• Email sent February 3, 2015 to provide a list of the MTO contacts from the project notification lists for each of the respective projects (see Provincial Agencies Record 15). | N/A |
| 16 | Zsolt Katzirz, Corridor Management Office, Ministry of Transportation, West Region | Email | February 3, 2015 | • Noted that the contact list has been updated to reflect persons within the Ministry that should be notified about both projects.<br>• Requested to be circulated on any land development and/or utility related projects that may have impacts to the highway (property) limits or are within the MTO permit control area. | N/A | N/A | • Comments noted. | N/A |

**Summary of Project Correspondence**

| Record | Correspondent | Type | Date | Subject Matter | Forwarded/ Date | Responder/Date | Response | Follow-up |
|---|---|---|---|---|---|---|---|---|
| 17 | Greg Britton, Transmission Technician, Hydro One Networks Inc. | Email | March 3, 2015 | • Indicated no issues from a transmission maintenance perspective with respect to Hydro One easement crossing.<br>• Provided general comments and mitigation for construction, design and cleanup. | N/A | MIG Engineering (2011) Ltd.//March 5, 2015 | • Indicated agreement with the comments provided.<br>• Inquired if Stantec is to follow up with IO regarding IOs Class EA process for granting of easement rights on their lands. | N/A |
| 18 | Roman Dorfman | Email | March 5, 2015 | • Noted that once all stakeholder comments are received, Hydro One will prepare an agreement for NOVA Chemicals to sign. | N/A | N/A | • Comments noted. | N/A |
| **Municipal** | | | | | | | | |
| 1 | Will Nywening, Planner, County of Lambton | Email | November 28, 2014 | • Indicated that the Notice of Project Announcement was forwarded to the Planner responsible for the St. Clair Township. | N/A | N/A | • Comments noted.<br>• Contact list updated. | N/A |
| 2 | Ezio Nadalin, Planner, County of Lambton | Email | December 19, 2014 | • Indicated no objection to the pipeline location.<br>• Provided a general comment on tree removal. | N/A | N/A | • Comments noted. | N/A |
| 3 | Paul daSilva, Coordinator of Engineering, Township of St. Clair | Letter | December 19, 2014 | • Noted that the Township is unware of any environmental issues within the pipeline easement.<br>• Provided information related to municipal infrastructure (planned and existing) within the proposed alignment of the new 12" pipeline.<br>• Noted no concerns regarding drainage and that an encroachment agreement is required when a new pipeline is constructed within, or, crossing a municipal RoW and/or municipal drainage. | N/A | N/A | • Comments noted. | N/A |
| **Interest Groups** | | | | | | | | |
| 1 | David Moody, Project Leader-Business Growth Services, Sarnia-Lambton Economic Partnership | Email | January 13, 2015 | • Appreciated the invitation to the Notice of Information Session although unable to attend. | N/A | N/A | • Comments noted. | N/A |
| 2 | Christina Hyatt, Secretary, Lambton Federation of Agriculture | Email | February 9, 2015 | • Expressed appreciation to NOVA Chemicals for removing the dormant pipeline and noted it shows accountability and community respect. | N/A | N/A | • Comments noted. | N/A |

## Summary of Project Correspondence

| Record | Correspondent | Type | Date | Subject Matter | Forwarded/ Date | Responder/Date | Response | Follow-up |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| **First Nations and Métis** | | | | | | | | |
| 1 | Fallon Burch, Consultation Coordinator, Chippewas of the Thames First Nation | Email/Letter | December 5, 2014 | • Noted that the project is located within their aboriginal rights territory which extends as far as Lake Ontario.<br>• Requested a copy of the Environmental Report to review and determine if there are any project impacts on their traditional territory. | N/A | N/A | • Comments noted. | To provide a copy of the completed Environmental Report. |
| 2 | Christine Rogers, Environment Worker, Aamjiwnaang First Nation | Email | January 8, 2015 | • Confirmed that NOVA Chemicals can discuss the project at their next Environment Committee meeting on January 20, 2015 at the community centre. | N/A | NOVA Chemicals/ January 13, 2015 | • Apologized that the meeting would have to be postponed due to lack of presentation material. Requested availability for the Committee in February. | N/A |
| 3 | Christine Rogers, Environment Worker, Aamjiwnaang First Nation | Email | January 13, 2015 | • Proposed two meeting dates (February 3rd and 24th) in February. | N/A | NOVA Chemicals/ January 13, 2015 | • Confirmed that February 24 is a suitable date and asked if the Committee would approve of NOVA presenting at this date. | N/A |
| 4 | Christine Rogers, Environment Worker, Aamjiwnaang First Nation | Email | January 14, 2015 | • Confirmed that the meeting will occur on February 24th at the community centre. | N/A | NOVA Chemicals/ January 19, 2015 | • Requested confirmation of NOVA Chemicals place on the agenda at the February 24th Environment Committee meeting to discuss the project. | N/A |
| 5 | Fallon Burch, Consultation Coordinator, Chippewas of the Thames First Nation | Email | January 14, 2015 | • Provided a map of their traditional territory.<br>• Noted that the First Nation has a settled land claim with Canada, and within the settlement have been given the opportunity to purchase land anywhere within their traditional territory. | N/A | NOVA Chemicals/ January 14, 2015 | • Noted that NOVA Chemicals will be in contact once the environmental study is complete. | Refer to First Nations & Métis Record 1. |
| 6 | Fallon Burch, Consultation Coordinator, Chippewas of the Thames First Nation | Email | January 15, 2015 | • Indicated that they look forward to reviewing the report. | N/A | N/A | • Comment noted. | N/A |
| 7 | Christine Rogers, Environment Worker, Aamjiwnaang First Nation | Email | January 19, 2015 | • Confirmed that NOVA Chemicals has been added to the agenda for the February 24th meeting. | N/A | Aamjiwnaang Environment Committee, NOVA Chemicals/April 8, 2015 | • The meeting was cancelled by Aamjiwnaang Environment Committee and eventually rescheduled for April 8, 2015.<br>• Meeting held April 8, 2015 to discuss the project and provide an update | NOVA will continue to engage in on-going discussions with Aamjiwnaang First Nation regarding the project. |

## Summary of Project Correspondence

| Record | Correspondent | Type | Date | Subject Matter | Forwarded/ Date | Responder/Date | Response | Follow-up |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | on environmental studies completed to date including upcoming environmental studies. At the meeting Aamjiwnaang requested the results of the 2014 breeding survey prior to issuing the ER. | |

Stantec

| | | | |
|---|---|---|---|
| **NAME(S):** | [redacted] | **PROJECT NO.:** | **160960940** |
| | Click here to enter name | **REPRESENTING:** | Click here to enter text. |
| **TELEPHONE:** | [redacted] | **DATE/TIME:** | **2/4/2015** |
| **RE:** | Kimball Pipeline Replacement Project | **RECORDED BY:** | Kristy Ramkissoon |

☒ **CALL RECEIVED** ☐ **CALL PLACED** ☐ **MEETING**

**NOTES:**

Voice message received from [redacted] on February 4, 2015 to follow-up on the Preliminary Preferred Route map requested at the Information Session.

| NO. | FOLLOW-UP TASK | TIMING | BY | DONE |
|---|---|---|---|---|
| 1 | To send map in mail | asap | Kristy | map sent Feb 4, 2015 in regular mail |
| | | | | |
| | | | | |

Stantec

# Transmittal

**Stantec Consulting Ltd.**
70 Southgate Drive, Suite 1
Guelph ON N1G 4P5
Tel: (519) 836-6050
Fax: (519) 836-2493

To: [redacted]
Company: N/A
Address: [redacted]
Phone:
Date: February 4, 2015
File: Preliminary Preferred Route
Delivery: Regular Mail

From: Stephanie Dryden-Cripton

- ☐ For Your Information
- ☐ For Your Approval
- ☐ For Your Review
- X As Requested

**Reference: NOVA Chemicals Canada Ltd.'s Kimball Pipeline Replacement Project – Preliminary Preferred Map**

Attachment:

| Copies | Doc Date | Pages | Description |
|---|---|---|---|
| 1 | January 2015 | 1 | Preliminary Preferred Map |

As requested at the Information Session on January 22, 2015, please find enclosed a copy of the Preliminary Preferred Route Map for the above-mentioned project.

**STANTEC CONSULTING LTD.**

Stephanie Dryden-Cripton
Project Manager
Phone: (519) 836-6966 x206
Fax: (519) 836-2493
Stephanie.Dryden-Cripton@stantec.com

c. Tracy Johnson, NOVA Chemicals Corporation

\\cd1220-f02\work_group\01609\active\160960940\Drawing\MXD\APC\InternalMaps\160960940_Preliminary_Preferred_Route.mxd
Revised: 2015-01-07 By: pworsell

Stantec

**Legend**

- New Valve Site
- Existing Valve Site
- Preliminary Preferred Route
- Alternate Route A
- Alternate Route B
- Existing Pipeline Corridor
- Nova Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Waterbody

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.
3. Orthoimagery © First Base Solutions, 2015. Imagery taken in 2010.

January 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

Figure No.

1

Title

**Preliminary Preferred Route**

Public Comment 5

Stantec

| | | | |
|---|---|---|---|
| **NAME(S):** | [redacted] | **PROJECT NO.:** | **160960940** |
| | Click here to enter name | **REPRESENTING:** | Click here to enter text. |
| **TELEPHONE:** | [redacted] | **DATE/TIME:** | **2/10/2015** |
| **RE:** | Kimball Pipeline Replacement Project | **RECORDED BY:** | Kristy Ramkissoon |

☒ **CALL RECEIVED** ☐ **CALL PLACED** ☐ **MEETING**

**NOTES:**

Voice message received from [redacted] on February 10, 2015 to confirm receipt of the Preliminary Preferred Route Map requested.

| NO. | FOLLOW-UP TASK | TIMING | BY | DONE |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| | |
|---|---|
| **From:** | Cafaro,Caitlin [CEAA] [mailto:Caitlin.Cafaro@ceaa-acee.gc.ca] |
| **Sent:** | Tuesday, December 23, 2014 9:30 AM |
| **To:** | Dryden-Cripton, Stephanie |
| **Subject:** | Email - Kimball Pipeline Replacement - Letter A - 2014-12-23 |
| **Attachments:** | Letter - Kimball Pipeline Replacement - Letter A - 2014-12-05.pdf |

**From:** Cafaro,Caitlin [CEAA] [mailto:Caitlin.Cafaro@ceaa-acee.gc.ca]
**Sent:** Tuesday, December 23, 2014 9:30 AM
**To:** Dryden-Cripton, Stephanie
**Subject:** Email - Kimball Pipeline Replacement - Letter A - 2014-12-23

Dear Ms. Dryden-Cripton,

Please see letter attached.

Kind Regards,
Caitlin Cafaro

**Caitlin Cafaro**
Environmental Assessment Officer, Ontario
Canadian Environmental Assessment Agency l
Agence canadienne d'évaluation environnementale
55 St. Clair Avenue East, Suite 907 Toronto ON M4T 1M2 l
55 avenue St. Clair Est pièce 907 Toronto ON M4T 1M2
caitlin.cafaro@ceaa-acee.gc.ca
http://www.ceaa-acee.gc.ca
Telephone l Téléphone 416-954-0734
Facsimile l Télécopieur 416-952-1573
Government of Canada | Gouvernement du Canada

**Canadian Environmental Assessment Agency**
55 St. Clair Avenue East,
Room 907
Toronto ON M4T 1M2

**Agence canadienne d'évaluation environnementale**
55, avenue St. Clair Est,
pièce 907
Toronto ON M4T 1M2

December 5, 2014 Sent by email

Stephanie Dryden-Cripton
70 Southgate Drive, Suite 1
Guelph, ON N1G4P5
Stephanie.dryden-cripton@stantec.com

Dear Ms. Dryden-Cripton:

**Re: Information on the Canadian Environmental Assessment Act, 2012**

Thank you for your correspondence of November 28, 2014 regarding the Kimball Pipeline Replacement Project.

As part of the Government of Canada's plan for Responsible Resource Development which seeks to modernize the regulatory system for project reviews, the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) came into force on July 6, 2012. CEAA 2012 focuses federal environmental reviews on projects that have the potential to cause significant adverse environmental effects in areas of federal jurisdiction.

The CEAA 2012 applies to projects described in the *Regulations Designating Physical Activities* (the Regulations). **Kindly review the Regulations to confirm applicability to your project** including section 1 (a), which relates to federally designated wildlife areas and migratory bird sanctuaries.

If your projects is in a federally designated wildlife area or migratory bird sanctuary please check section 1 of the Regulations, which details the designated projects specific to those locations. **Furthermore, the Responsible Authority for pipelines is the National Energy Board not the Canadian Environmental Assessment Agency.**

.../2

For more information on CEAA 2012, and the National Energy Board, please access the following links:

Overview of CEAA 2012
http://www.ceaa.gc.ca/default.asp?lang=En&n=16254939-1

Regulations Designating Physical Activities, and
Prescribed Information for a Description of a Designated Project Regulations
http://www.ceaa.gc.ca/default.asp?lang=En&n=9EC7CAD2-1

National Energy Board
http://www.neb-one.gc.ca/clf-nsi/index.html

**If it appears that CEAA 2012 may apply to your proposed project, you must provide the National Energy Board with a description of the proposed project,** not the Canadian Environmental Assessment Agency. **We kindly request that you remove the Canadian Environmental Assessment Agency from your distribution list.**

If you have questions, please get in touch with our office through the switchboard at 416-952-1576.

Sincerely,

Anjala Puvananathan
Director, Ontario Region
Canadian Environmental Assessment Agency

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project**
**Notice of Project Commencement**

Finally, we request that you provide us with information regarding other proposed developments within the Environmental Study area for incorporation into the Environmental Study and related report as a component of the cumulative effects assessment. **Please contact us to discuss the most efficient way to obtain this information.**

The Environmental Study process will include consultation and engagement with landowners, Aboriginal communities, government agencies and other interested persons. Public consultation will be an integral component of the Environmental Study and related report. An Information Session regarding the Project is being planned for January 2015. Notice of the session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route and to develop site specific protection or mitigation measures for the Project.

If you have questions or concerns regarding this proposed Project, please do not hesitate to contact the undersigned.

Regards,

**STANTEC CONSULTING LTD.**

Stephanie Dryden-Cripton, M.A.
Project Manager
Phone: (519) 836-6966 x206
Fax: (519) 836-2493
Stephanie.Dryden-Cripton@stantec.com

Attachment: Project Location map

c. Mac Hollingsworth, Project Lead, NOVA Chemicals (Canada) Ltd.

Stantec

**Stantec Consulting Ltd.**
70 Southgate Drive, Suite 1, Guelph ON N1G 4P5

November 28, 2014

***SENT VIA EMAIL***

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project**
**Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)*".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the *Ontario Energy Board Act*, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Stantec is presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. As an agency with jurisdiction or a potential interest in developments in that area, you are invited to provide or coordinate comments regarding the proposed pipeline. Specifically, Stantec is seeking information regarding planning principles or guidelines implemented by your agency that may affect routing, construction, and/or operation of the proposed pipeline. Stantec is also seeking background environmental and socio-economic information that may be useful in compiling the inventory of the Environmental Study area.

Stantec
Legend
New Valve Site
Existing Valve Site
Existing Pipeline Corridor
Nova Chemicals Corunna Site
Highway
Major Road
Minor Road
Railway, Active
Municipal Boundary, Upper
Municipal Boundary, Lower
Watercourse
Waterbody
Wooded Area
Toronto
Ontario
Lake Huron
Lake Erie
Michigan
New York
Pennsylvania
Ohio
KEY MAP
Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
November 2014
1609409
Client/Project
NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project
Figure No.
1
Title
Project Location
N
0
500
1,000 m
1:20,000
Kimball Road
Patrolla Line
Tecumseh Road
Rokeby Line
Wellington Line
COUNTY OF LAMBTON
McClemens Drain
Payne Drain
Ladysmith Road
NOVA Chemicals Corunna Site
Austin Drain
Hill Street
Highway 40
Allingham Drain

**From:** EnviroOnt <EnviroOnt@tc.gc.ca>
**Sent:** Wednesday, January 07, 2015 11:45 AM
**To:** Ramkissoon, Kristy; Dryden-Cripton, Stephanie
**Subject:** RE: NOVA Chemicals (Canada) Ltd''s Kimball Pipeline Replacement Project- Notice of Project Announcement (NEATS 38823)

You have reached Transport Canada's Environmental Assessment program in Ontario.

- **Please update your distribution list**; all future correspondence on this project or any potential project should be forwarded electronically to Environmental Assessment Coordinator at EnviroOnt@tc.gc.ca (unless a project has been assigned to a specific officer).
- Information is preferred in electronic format.

---

Please note that under *the Canadian Environmental Assessment Act, 2012* (CEAA 2012), Transport Canada is required to determine the likelihood of significant adverse environmental effects of certain projects that will occur on federal lands prior to exercising a power, performing a function or duty in relation to that project. To determine if the aforementioned applies, project proponents are encouraged to:

1. Review the Directory of Federal Real Property (http://www.tbs-sct.gc.ca/dfrp-rbif/) to determine if the project will potentially interact with any federal property; and
2. Review the list of Acts (https://www.tc.gc.ca/eng/acts-regulations/acts.htm) that Transport Canada administers and assists in administering that may apply to the project.

In particular, proponents should consider whether the project requires review and approval under the following Acts:

***Navigation Protection Act (NPA)***

The NPA applies primarily to works constructed or placed in, on, over, under, through, or across scheduled navigable waters set out under the Act. The Navigation Protection Program administers the NPA through the review and authorization of works affecting scheduled navigable waters. Information about the Program, NPA and approval process is available at: http://www.tc.gc.ca/eng/programs-621.html. Enquiries can be directed to NPPONT-PPNONT@tc.gc.ca or (519) 383-1863.

***Railway Safety Act (RSA)***

The RSA provides the regulatory framework for railway safety, security, and some of the environmental impacts of railway operations in Canada. The Rail Safety Program develops and enforces regulations, rules, standards and procedures governing safe railway operations. Additional information about the Rail Safety Program is available at: https://www.tc.gc.ca/eng/railsafety/menu.htm. Enquiries can be directed to RailSafety@tc.gc.ca or (613) 998-2985.

***Transportation of Dangerous Goods Act (TDGA)***

The transportation of dangerous goods by air, marine, rail and road is regulated under the TDGA. Transport Canada, based on risks, develops safety standards and regulations, provides oversight and gives expert advice on dangerous goods to promote public safety. Additional information about the transportation of dangerous goods is available at: https://www.tc.gc.ca/eng/tdg/safety-menu.htm. Enquiries can be directed to TDG-TMDOntario@tc.gc.ca or (416) 973-1868.

***Aeronautics Act***

Transport Canada has sole jurisdiction over aeronautics, which includes aerodromes and all related buildings or services used for aviation purposes. Aviation safety in Canada is regulated under this Act and the Canadian Aviation Regulations (CARs). Elevated Structures, such as wind turbines and communication towers, would be examples of projects that must be assessed for lighting and marking requirements in accordance with the CARs.

Transport Canada also has an interest in projects that have the potential to cause an interference between wildlife and aviation activities. One example would be waste facilities, which may attract birds into commercial and recreational flight paths.

Enquires can be directed to CASO-SACO@tc.gc.ca or 1 (800) 305-2059 / (416) 952-0230.

---

Please advise if additional information is required. Please ensure any future correspondence on this project or future projects is only addressed to EnviroOnt@tc.gc.ca.

Thank you,

Environmental Assessment Coordinator | Coordinatrice d'évaluation environnementale
Transport Canada, Ontario Region | Transports Canada, Région de l'Ontario
4900 Yonge St., Toronto, ON M2N 6A5 | 4900, rue Yonge, Toronto, ON, M2N 6A5
Email | Courriel: EnviroOnt@tc.gc.ca
Telephone | Téléphone: (416) 952-0507/ Facsimile | télécopieur: (416) 952-0514
Government of Canada | Gouvernement du Canada

---

**From:** Ramkissoon, Kristy [mailto:Kristy.Ramkissoon@stantec.com]
**Sent:** Friday, November 28, 2014 12:17 PM
**Cc:** Dryden-Cripton, Stephanie; Ramkissoon, Kristy
**Subject:** NOVA Chemicals (Canada) Ltd"s Kimball Pipeline Replacement Project- Notice of Project Announcement

Sent on behalf of Ms. Stephanie Dryden-Cripton (Stantec Consulting Ltd.).

Good afternoon,

Please find attached a letter formally announcing the Kimball Pipeline Replacement Project in the Township of St. Clair, Ontario. The letter provides a general description of the proponent and the Project, and a map showing the general location of the proposed replacement NGL pipeline.

Individually addressed hard copies of this letter will be sent to your organization following this email.

Should you have any questions or require additional information regarding the above-mentioned project, please refer to the letter attached for project contact information.

Regards,

**Kristy Ramkissoon**
Environmental Planner
Stantec
70 Southgate Drive, Suite 1 Guelph ON N1G 4P5
Phone: (519) 836-6050
Cell: (519) 546-5137
Fax: (519) 836-2493
Kristy.Ramkissoon@stantec.com

**From:** CAU-UCA [mailto:CAU-UCA@aadnc-aandc.gc.ca]
**Sent:** Tuesday, January 20, 2015 11:40 AM
**To:** jleitzinger@city.windsor.on.ca; dagough@london.ca; Murray, Gordon; Caron, Maya; Mastronardi, Mike; Oxlade, Michele; Peddle, Shawna; Dryden-Cripton, Stephanie; Fairviewproject@wpd-canada.ca
**Subject:** Request for Aboriginal Consultation Information on multiple projects - Stantec Consulting Ltd. - Ontario

**The Aboriginal and Treaty Rights Information System (ATRIS) and the Consultation Information Service of Aboriginal Affairs and Northern Development Canada (AANDC)**

The Consultation Information Service of Aboriginal Affairs and Northern Development Canada (AANDC) has recently received communication regarding your project. Please note that AANDC officials *do not* participate in environmental assessments that pertain to projects off-reserve, nor does the department track how other parties carry out their EAs. Only when a project intersects with reserve land, should the Environmental Unit of AANDC be contacted. Therefore, I ask that you omit AANDC officials from your contact list for this project and any future projects.

AANDC has launched the Aboriginal and Treaty Rights Information System (ATRIS) which has become the main platform for Canada to disseminate its real or constructive knowledge of section 35 rights. This Web-based system uses a mapping interface to provide information to federal officials and other interested parties on the location and nature of established and potential Aboriginal and Treaty rights. With ATRIS bringing together information regarding Aboriginal groups such as their exact location, their established rights (through treaties and other agreements) and their asserted rights through claim processes it enables users to relate many types of AANDC corporate data within a geographical and consultation context.

You can go directly to http://sidait-atris.aadnc-aandc.gc.ca/atris_online/ and begin research in ATRIS. At the ATRIS "Help" button, there are answers to frequently asked questions, a glossary, and instructions on how to navigate the system. Please familiarize yourself with the information available there so you can carry out your research using ATRIS.

**Public webinar training will be held:**

**Tuesday January 27, 2015 - French Session: 11:00 am (EST)**
**Tuesday January 27, 2015 - English session: 1:00 pm (EST)**

**Tuesday February 24, 2015 - French Session: 11:00 am (EST)**
**Tuesday February 24, 2015 - English session: 1:00 pm (EST)**

Please keep in mind that some of the information provided by ATRIS will be contextual. Depending on your project, the information that comes up in a search may or may not pertain to Aboriginal or treaty rights in your particular project area. In most cases, therefore, the Aboriginal communities identified by ATRIS are best placed to explain their traditional use of land, their practices, or their claims that may fall under section 35 of the *Constitution Act, 1982.*

If you have specific questions on how to conduct research using ATRIS, we will endeavour to assist you if you contact the Consultation Information Service (CIS) through the e-mail address: UCA-CAU@aadnc-aandc.gc.ca. Should you have comments regarding the contents in ATRIS, please complete the "Provide Feedback" form available in the "Help" or provide them through e-mail. Your input is valuable as ATRIS is continually evolving through the addition of new information and the observations and contributions of users.

If you do not have the latest version of Adobe Flash Player this may affect the performance of your webinar. You can download the latest version of Adobe Flash Player here: https://conference.aadnc-aandc.gc.ca/common/help/en/support/downloads.htm

**To participate in a Training Session, please follow these instructions a few minutes before the session:**

**1. Click this link:** https://conference.aadnc-aandc.gc.ca/r8qrq5u7yvj/

**2. Log in:**
Select 'Enter as a Guest' and then enter your first and last name. Then click on 'Enter' to access the Webinar.

**3. Phone in:**
- To hear the instructor's voice during the conference dial 1-866-885-0884.
- Select 2 for English then Select 1 to participate in the audio conference
- Enter the 4 digit conference pass code: **4326#**

To contact ATRIS, please send email to: ATRIS-SIDAIT@aadnc-aandc.gc.ca.

ATRIS is an evolving and dynamic tool and the information housed in it changes and evolves frequently. Should you have any comments on the information presented in ATRIS or wish to share additional information on your community or organization please complete the "Provide Feedback" form available in the "Help File" of ATRIS, or contact us at UCA-CAU@aadnc-aandc.gc.ca

Consultation and Accommodation Unit
Aboriginal Affairs and Northern Development Canada
10 Wellington Street
Gatineau QC, K1A 0H4

Provincial Agency Comment 1

---

**From:** Riddell, Heather (MNRF) <Heather.Riddell@ontario.ca>
**Sent:** Friday, November 28, 2014 2:41 PM
**To:** Ramkissoon, Kristy
**Cc:** Dryden-Cripton, Stephanie
**Subject:** RE: NOVA Chemicals (Canada) Ltd''s Kimball Pipeline Replacement Project- Notice of Project Announcement
**Attachments:** let_NOVA_KPRP_NoC_agency_EMAIL_20141128_fnl.pdf

Hi Kristy,

Thank you for sending this notice of project commencement regarding NOVA Chemicals' proposed Kimball Pipeline Replacement Project in the Township of St. Clair.

If Stantec wishes to request a natural heritage screening of the project location, we ask that you first visit MNRF's Make a Map: Natural Heritage Areas tool and Land Information Ontario to gather natural heritage information on the site prior to submitting a request through MNRF.

Natural Heritage Information Centre (NHIC) compiles, maintains and distributes information on species at risk, natural species, plant communities and spaces of conservation concern in Ontario. NHIC data can be accessed through the Make a Map tool: http://www.giscoeapp.lrc.gov.on.ca/web/MNR/NHLUPS/NaturalHeritage/Viewer/Viewer.html

This is a web-based GIS map function, that you can use to zoom in on the subject lands and view recorded information. NHIC is not complete, as data always exists outside of databases, but it gives an idea of where to start.

To use the MNRF Make a Map: Natural Heritage Areas tool:

- Select the tab along the top that reads 'NHIC Data'
- Use the zoom and pan tools to find the project site
- Click on the box in the far left of the tool bar at the top that reads 'NHIC data'
- Within the box that opens to the left of the map (under the 'Data Selection' tab), click on the pointer icon under 'Choose a selection tool, and click on the map'
- On the map, click the grid cell for which information is requested
- The 'Data Results' tab will open; View all available occurrences by clicking the arrow icons
- To access other natural heritage information (such as provincially significant wetlands, woodlands etc…) click on map layers tab and select map layers and a tool bar will pop-up on the left hand side of your screen. From here you can turn different layers of data on and off.

Land Information Ontario (LIO) manages geographic information for use in maps and Geographic Information Systems (GIS). LIO has a web-accessible data warehouse that contains more than 250 different layers of geographic data. The data ranges from the location of underground wells to satellite imagery. LIO can be reached at (705) 755-1878. You can also access the general user version online at: https://www.ontario.ca/environment-and-energy/land-information-ontario.

**In your submission to the district/request for natural heritage information, please show us the information obtained from available resources and we will provide any additional information we may have at the district.**

Thank you for providing the notice of commencement for this project.

If you have any questions, please contact me.

Regards,
Heather

Heather Riddell
District Planner
Ministry of Natural Resources and Forestry

Aylmer District
615 John Street North
Aylmer, ON N5H 2S8
Tel: 519-773-4757
heather.riddell@ontario.ca

---

**From:** Ramkissoon, Kristy [mailto:Kristy.Ramkissoon@stantec.com]
**Sent:** November-28-14 12:17 PM
**Cc:** Dryden-Cripton, Stephanie; Ramkissoon, Kristy
**Subject:** NOVA Chemicals (Canada) Ltd"s Kimball Pipeline Replacement Project- Notice of Project Announcement

Sent on behalf of Ms. Stephanie Dryden-Cripton (Stantec Consulting Ltd.).

Good afternoon,

Please find attached a letter formally announcing the Kimball Pipeline Replacement Project in the Township of St. Clair, Ontario. The letter provides a general description of the proponent and the Project, and a map showing the general location of the proposed replacement NGL pipeline.

Individually addressed hard copies of this letter will be sent to your organization following this email.

Should you have any questions or require additional information regarding the above-mentioned project, please refer to the letter attached for project contact information.

Regards,

**Kristy Ramkissoon**
Environmental Planner
Stantec
70 Southgate Drive, Suite 1 Guelph ON N1G 4P5
Phone: (519) 836-6050
Cell: (519) 546-5137
Fax: (519) 836-2493
Kristy.Ramkissoon@stantec.com

**Celebrating 60 years of community, creativity, and client relationships.**

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

Provincial Agency Comment 3

**From:** Oscar Alonso <oalonso@tssa.org>
**Sent:** Monday, December 01, 2014 2:17 PM
**To:** Ramkissoon, Kristy
**Cc:** Zora Crnojacki; Kourosh Manouchehri
**Subject:** Re: NOVA Chemicals (Canada) Ltd''s Kimball Pipeline Replacement Project- Notice of Project Announcement

Dear Ms. Ramkissoon,

In order to comment further on this project, we will need the technical specifications for the pipeline. As this appears to be a HVP pipeline, please be aware that there are some specific requirements in the O. Reg. 210/01, such as:

a) The requirements of clause 4.3.4.9 of the Code Adoption Document ( FS-196-12) would be applicable,

b) Similarly, clauses 7.10.3.2 on welding and clause 10.3 as amended by the FS-196-12 would be also applicable.

Please submit to us, as soon the information is available, the technical specifications for our review.

Regards,

Oscar Alonso

On Fri, Nov 28, 2014 at 12:17 PM, Ramkissoon, Kristy <Kristy.Ramkissoon@stantec.com> wrote:

Sent on behalf of Ms. Stephanie Dryden-Cripton (Stantec Consulting Ltd.).

Good afternoon,

Please find attached a letter formally announcing the Kimball Pipeline Replacement Project in the Township of St. Clair, Ontario. The letter provides a general description of the proponent and the Project, and a map showing the general location of the proposed replacement NGL pipeline.

Individually addressed hard copies of this letter will be sent to your organization following this email.

Should you have any questions or require additional information regarding the above-mentioned project, please refer to the letter attached for project contact information.

Regards,

**Kristy Ramkissoon**

Environmental Planner
Stantec
70 Southgate Drive, Suite 1 Guelph ON N1G 4P5
Phone: (519) 836-6050
Cell: (519) 546-5137
Fax: (519) 836-2493
Kristy.Ramkissoon@stantec.com

**Celebrating 60 years of community, creativity, and client relationships.**

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

--
Oscar Alonso, P.Eng.,
Fuels Safety Engineer

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.

RECEIVED
DEC 0 8 2014

**Ministry of the Environment**
**733 Exeter Road**
**London, Onario**
**N6E 1L3**

Ontario

December 4th, 2014

Stantec Consulting Ltd
70 Southgate Drive
Suite 1
Guelph, Ontario
N1G 4P5

Attention: Ms. Stephanie Dryden-Cripton, M.A.

Re: **Notice of Study Commencement, NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project**

Ms. Stephanie Dryden-Cripton:

This letter is this ministry's response to the Notice of Study Commencement for the above noted project. This response acknowledges that NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility which is known as the "Kimball Pipeline Replacement Project". The project will reportedly replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way. The replacement pipeline will reportedly be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will reportedly be removed from the right-of-way as part of the project.

Thank you for the opportunity to comment on this project.

The Class Environmental Assessment planning process includes consultation with interested stakeholders, evaluation of alternatives, assessment of the effects of the proposed works and identification of measures to mitigate any adverse impacts. In addition to public agencies, and the general public, consultation with First Nations and Metis is required.

**Consultation with First Nation and Métis Communities**

The Crown has a duty to consult First Nation and Métis communities if there is a potential impact to Aboriginal or treaty rights. As the proponent of this project, NOVA Chemicals has a responsibility to conduct adequate consultation with First Nation and Métis communities as part of the environmental assessment process. The Crown is therefore, delegating the procedural aspects of consultation to NOVA Chemicals, as outlined in the attached document.

NOVA Chemicals must contact the Director, Environmental Approvals Branch if this project may adversely affect an Aboriginal or treaty right, or if a Part II Order request is anticipated; the Ministry will then determine whether the Crown has a duty to consult. Information and resources to assist NOVA Chemicals in fulfilling this requirement are provided as an attachment.

Please keep this office fully informed of the status of this project as in proceeds through the Class EA process.

Should you or any members of your project team have any questions regarding the above, or the Class EA process in general, please contact me at (519) 873-5014.

Yours truly,

Craig Newton
Regional Environmental Planner / EA
Ministry of the Environment
Southwestern Region
(519) 873-5014

cc. Ms. Maryjane Corda, Supervisor, MOECC, Sarnia District Office
Mr. Mike Close & Mr. Chris Hutt, Sr. Environmental Offices, MOECC Sarnia District Office
Ms. Donna Bigelow, Manager, Regional Delivery, MOECC Aboriginal Affairs Branch,

Attachment (1)

# ABORIGINAL CONSULTATION INFORMATION

***Interest-based consultation with First Nation and Métis Communities***

Proponents subject to the *Environmental Assessment Act* are required to consult with interested First Nation and Métis communities in addition to consultation with interested persons. Special effort may be required to ensure that First Nation and Métis communities are made aware of the project and are afforded an opportunity to provide comments.

Proponents are required to contact the Ministry of Aboriginal Affairs (MAA) and Aboriginal Affairs and Northern Development Canada (AANDC) to help identify which First Nation and Métis communities may be impacted by your project. **It is important to ensure that MAA and AANDC are advised of any communities identified for consultation during previous stages of the project when making this request.** For more information in this regard, refer to the Aboriginal Information Resources web page of the Ministry of the Environment's internet site at:

http://www.ene.gov.on.ca/en/eaab/aboriginal-resources.php

You are advised to provide notification directly to all of the First Nation and Métis communities who may be interested in the project.

***Rights-based consultation with First Nation and Métis Communities***

Proponents should also be aware that certain projects may affect the ability of a First Nation or Métis community to exercise their confirmed or asserted Aboriginal or treaty rights. In such cases, Ontario may have a duty to consult to ensure the protection of the potentially affected right. Activities which may restrict access to unoccupied Crown lands, or could result in a potential to impact to land or water resources, generally have the potential to impact Aboriginal or treaty rights. For assistance in determining whether your project could affect these rights, refer to the attached "Preliminary Assessment Checklist: First Nation and Métis Community Interest."

If there is an impact to Aboriginal or treaty rights, accommodation may be required to avoid or minimize the adverse impacts. Accommodation is an outcome of consultation and includes any mechanism used to avoid or minimize adverse impacts to Aboriginal or treaty rights and traditional uses. Solutions could include adjustments in the timing or geographic location of the proposed activity; accommodation does not necessarily require the provision of financial compensation.

The proponent must contact the Director, Environmental Approvals Branch if a project may **adversely affect an Aboriginal or treaty right**, or if a **Part II Order is anticipated**; the Ministry will then determine whether the Crown has a duty to consult.

The Director of the Environmental Approvals Branch can be notified either by email with the subject line "Potential Duty to Consult" to EAASIBgen@ontario.ca or by mail or fax at the address provided below:

| | |
|---|---|
| **Email:** | EAASIBgen@ontario.ca<br>Subject: Potential Duty to Consult |
| **Fax:** | 416-314-8452 |
| **Address:** | Environmental Approvals Branch<br>12A Flr<br>2 St Clair Ave W<br>Toronto ON M4V1L5 |

***Delegation of Procedural Aspects of Consultation***

Proponents, by virtue of their knowledge and participation in project activities, have an important and direct role in the consultation process to ensure both success and certainty. Where the Crown's duty to consult is triggered, **Ontario is delegating these procedural aspects of this rights-based consultation to you as the proponent of the project.**

Ontario will have an oversight role as the consultation process unfolds but will be relying on the steps undertaken and information you obtain to ensure adequate consultation has taken place. To ensure that First Nation and Métis communities have the ability to assess a project for its potential to impact on an Aboriginal or treaty right, there are certain procedural aspects of consultation that Ontario requires proponents to undertake.

The responsibilities of the proponent for procedural aspects of consultation include:

- Providing notice to the elected leadership of the First Nation and/or Métis communities (e.g., First Nation Chief) as early as possible regarding the project;
- Providing First Nation and/or Métis communities with information about the proposed project including anticipated impacts, information on timelines and your environmental assessment process;
- Following up with First Nation and/or Métis communities to ensure they received project information and that they are aware of the opportunity to express comments and concerns about the project; **if you are unable to make the appropriate contacts (e.g. are unable to contact the Chief) please contact the Ministry of the Environment for further direction.**
- Providing First Nation and/or Métis communities with opportunities to meet with appropriate representatives to discuss the project;

- Gathering information about how the project may adversely impact the Aboriginal and/or Treaty rights (for example, hunting, fishing) or sites of cultural significance (for example, burial grounds, archaeological sites);
- Considering the comments and concerns provided by First Nation and/or Métis communities and providing responses;
- Where appropriate, discussing potential mitigation strategies with First Nation and/or Métis communities;
- Bearing the reasonable costs associated with these procedural aspects of consultation.
- Maintaining a Consultation Record and upon request, providing copies of the Consultation Record to Ontario. The Consultation Record should:
    - summarize the nature of any comments and questions received from First Nation and/or Métis communities
    - describe the response to comments and how concerns were considered
    - include a communications log indicating the dates and times of all communications; and
    - document activities in relation to consultation.

Successful consultation depends, in part, on early engagement by proponents with First Nation and Métis communities. Information shared with communities must be clear, accurate and complete, and in plain language where possible. The consultation process must maintain sufficient flexibility to respond to new information, and we trust you will make all reasonable efforts to build positive relationships with all First Nation and Métis communities contacted.

## Preliminary Assessment Checklist: First Nation and Métis Community Interest

Some main concerns of First Nation and Métis communities deal with/address rights for hunting, gathering, trapping, and fishing – these activities generally occur on Crown land or water bodies. As such, projects related to Crown land or water bodies, or changes to them, may be of concern.

Where you have identified that your project may trigger rights-based consultation through the following questions, a pre-consultation meeting with the ministry and proponent will provide an early opportunity to confirm whether Ontario's duty to consult is triggered and to discuss roles and responsibilities in that event.

Please answer the following questions. A "yes" response will indicate a potential impact on Aboriginal or treaty rights.

| | YES | NO |
|---|---|---|
| 1. Are you aware of concerns from First Nation and Métis communities about your project or a similar project in the area?<br>The types of concerns can range from interested inquiries to environmental complaints, and even to land use concerns. You should consider whether the interest represents on-going, acute and/or widespread concern. | | |
| 2. Is your project occurring on Crown land, or is it close to a water body, or might it change access to either? | | |
| 3. Is the project located in an open or forested area where hunting or trapping could take place? | | |
| 4. Does the project involve the clearing of forested land? | | |
| 5. Is the project located away from developed, urban areas? | | |
| 6. Is your project close to, or adjacent to, an existing reserve?<br>Projects in areas near reserves may be of interest to your First Nation and Métis community neighbours. | | |
| 7. Will the project affect First Nations and/or Métis right of access? | | |
| 8. Is the area subject to a land claim?<br>Information about land claims filed in Ontario is available from the Ministry of Aboriginal Affairs; information about claims filed with the federal government is available from Aboriginal Affairs and Northern Development Canada. | | |
| 9. Does the project have potential to cause cumulative effects at the present time or over a long period of time (e.g. several small expansions of an urban area)? | | |
| 10. Does the project have the potential to impact any archaeological sites? | | |

Stantec

Mr. Craig Newton
Ministry of the Environment and Climate Change
733 Exeter Rd
London ON N6E 1L3

**Attention: Craig Newton, Regional Environmental Planner/EA Coordinator**

Dear Mr. Newton,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project**
**Notice of Project Commencement**

Thank you for your letter of December 4th, 2014. The information on Aboriginal Consultation is most appreciated and it is NOVA Chemicals intent to engage the requisite aboriginal groups in a manner consistent with the expectations of those groups and the Province of Ontario.

As a point of clarification this project will not be conducted under a Class Environmental Assessment process. The environmental study and Environmental Report (ER) to be completed for this project will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)*". This process is completed under the guidance of the OEB who is regulated by the *Ontario Energy Board Act, S.O. 1998 c 15 Sch B*, (the "Act"). Proponants for the development of hydrocarbon pipelines and associated infrastructure are required to apply for leave to construct from the OEB under sections 90, 91, 95 and 98 of the Act. Review of the ER is completed by the Ontario Pipeline Coodinating Committee (OPCC), which is comprised of a wide range of government agencies, as well as other relevant stakeholders.

Thank you for your intereset in the project. If you have questions or concerns regarding this proposed Project, please do not hesitate to contact the undersigned.

Regards,

**STANTEC CONSULTING LTD.**

**Stephanie Dryden-Cripton, M.A.**
Project Manager
Phone: (519) 836-6966 x206
Fax: (519) 836-2493
Stephanie.Dryden-Cripton@stantec.com

c. Mac Hollingsworth, Project Lead, NOVA Chemicals (Canada) Ltd.

Provincial Agency Comment 5

**From:** Vanderkooy, Caitlin (IO) [mailto:Caitlin.Vanderkooy@infrastructureontario.ca]
**Sent:** Monday, December 22, 2014 10:16 AM
**To:** Dryden-Cripton, Stephanie
**Subject:** NOVA Chemical's Kimball Pipeline Replacement Project - Notice of Project Commencement

To whom it may concern,

On behalf of Lisa Myslicki, please refer to attached PDF that highlights next steps only if your project impacts lands owned by Infrastructure Ontario. If your project does not impact any lands owned by IO, please remove IO from the mailing list.

Thank you,
Caitlin

**Caitlin Vanderkooy, M.Env.Sc., MBA, P.Geo.**
**Environmental Specialist**

Infrastructure Ontario
Environmental Management
1 Dundas Street West, Suite 2000
Toronto ON M5G 2L5

T: 416-327-8001
E: Caitlin.Vanderkooy@infrastructureontario.ca

This email, including any attachments, is intended for the personal and confidential use of the recipient(s) named above. If you are not the intended recipient of the email, you are hereby notified that any dissemination or copying of this email and/or any attachment files is strictly prohibited. If you have received this e-mail in error, please immediately notify the sender and arrange for the return of any and all copies and the permanent deletion of this message including any attachments, without reading it or making a copy. Thank you.

Ontario
Infrastructure Ontario

One Dundas Street West, Suite 2000, Toronto, ON M5G 2L5
1, rue Dundas Ouest, bureau 2000, Toronto, ON M5G 2L5

**December 19, 2014**

To whom it may concern,

Thank you for circulating Infrastructure Ontario (IO) on your Notice. Infrastructure Ontario is the strategic manager of the provincial government's real estate with a mandate of maintaining and optimizing value of the portfolio while ensuring real estate decisions reflect public policy objectives of the government.

**Identifying IO Managed Lands**

As you may be aware, *IO is responsible for managing property that is owned by Her Majesty the Queen in Right of Ontario as represented by the Minister of Economic Development, Employment and Infrastructure (MEDEI)* (Note as of June 2014: Ministry of Infrastructure has changed to Ministry of Economic Development, Employment and Infrastructure since). There is a potential that IO manages lands that fall within your study area. As a result, your proposal may impact IO managed properties and/or the activities of tenants present on IO-managed properties. In order to determine if IO property is within your study area, IO requires that the proponent of the project conduct a title search by reviewing parcel register(s) for adjoining lands, to determine the extent of ownership by MEDEI or its predecessor's ownership (listed below). Please contact IO if any ownership of provincial government lands are known to occur within your study area and are proposed to be impacted. IO managed land can ***include within the title but is not limited to*** variations of the following: Her Majesty the Queen/King, OLC, ORC, Public Works, Hydro One, PIR, MGS, MBS, MEDEI, MTO, MNR, MEI, MOI and MEDEI*. Please ensure that a copy of your notice is also sent to the ministry/agency on title. As an example, if the study area includes a Provincial Park, then MNR is to also to be circulated notices related to your project.

**Impacts to Land holdings**

Negative impacts to land holdings, such as the taking of developable parcels of IO managed land or fragmentation of utility or transportation corridors, should be avoided. If the potential for such impacts is present as part of this undertaking, you should contact the undersigned to discuss these issues at the earliest possible stage of your study.

*IO obligates proponents to complete all due diligence for any realty activity on IO managed lands and this should be considered for project timelines and budget.*

**The MEDEI Class EA & Associated Due Diligence**

All realty undertakings are subject to the *"Ministry of Infrastructure Public Work Class Environmental Assessment 2012 Office Consolidation*" (PW Class EA). The PW Class EA applies to a wide range of realty activities including leasing or letting, disposition, granting of easements, demolition and property maintenance/repairs.

*For details on the PW Class EA please visit the Environment and Heritage page of the IO website found at: http://www.infrastructureontario.ca/Templates/Buildings.aspx?id=2147490336&langtype=1033*

Please note that completion of an EA process does not automatically provide an approval for MEDEI's Class EA obligations. Class EA processes are developed and in place to assess undertakings associated with different types of projects*. For example, assessing the impacts of disposing of land from the public portfolio is significantly different then assessing the best location for a proposed road.* However, where an undertaking involves multiple proponents/undertakings with different class EAs, Municipalities and other proponents may work together to ensure that the EA processes for related but separate undertakings are not duplicative. That one process can be relied on by both the proponent and MEDEI to evaluate their respective undertakings and meet their respective obligations for the project. MEDEI can rely on an alternative EA process to satisfy MEDEI's obligations under the Environment Assessment Act if:

- The MEDEI lands are clearly articulated in the streamlined EA study area.
- Explicit reference to the corresponding undertaking in the MEDEI Class EA is evaluated (*e.g.,* if the proponent identifies the need to acquire land owned by MEDEI, then "acquisition of MEDEI-owned land", or similar statement, must be referenced in the EA document).
- Sufficient levels of consultation with MEDEI's/IO's specific stakeholders, such as the Ontario Ministry of Natural Resources, must be documented with the relevant information corresponding to MEDEI's/IO's undertaking and the associated maps.
- Details of appropriate mitigation measures and how the MEDEI Class EA 7 point analysis has been fulfilled. Negative environmental impacts associated with the project design and construction, such as the potential for dewatering, dust, noise and vibration impacts, impacts to natural heritage features/habitat and functions, etc should be avoided and/or appropriately mitigated in accordance with applicable regulations best practices as well as Ministry of Natural Resources (MNR) and Ministry of the Environment (MOE) standards. Avoidance and mitigation options that characterize baseline conditions and quantify the potential impacts should be present as part of the EA project file. Details of appropriate mitigation, contingency plans and triggers for implementing contingency plans should also be present.
- The proponent is required to provide to IO, in writing, how it intends to meet MEDEI's environmental obligations and report back on how it has met those obligations.

Other due diligence requirements such a Phase One Environmental Site Assessment (ESA) may also be required for the MEDEI lands proposed to be impacted.

**Cultural Heritage:**

Should the activities have the potential to impact cultural heritage features on IO managed lands, a request to examine cultural heritage features, which can include cultural landscapes, built heritage, and archaeological potential and/or sites, could be required. This may be a requirement outside of an EA process and must meet the obligations set out under the Standards and Guidelines for Provincial Heritage Properties (Ministry of Tourism, Culture and Sport 2010). All archaeological assessments must be completed by a professional archaeologist licensed by the province of Ontario and must adhere to the Standards and Guidelines for Consultant Archaeologists (Ministry of Tourism, Culture and Sport 2011).

**Duty to Consult (DTC)**

Please note that the Crown has a duty to consult under the Constitution Act. The requirement for Aboriginal consultation is determined by MEDEI and facilitated by IO. DTC may be triggered for a host of reasons: Aboriginal treaty or treaty rights, established consultation or notification protocols,

government policy and/or program decisions, archaeological potential and/or cultural heritage consultation obligations. For these types of undertakings MEDEI will need to evaluate the potential impact of an undertaking on Aboriginal and treaty rights. A proponent with an established consultation process, under their own EA process, must submit to MEDEI (via IO) their complete Aboriginal consultation documentation. This documentation will be reviewed against IO's and/or MEDEI's assessment for Aboriginal consultation based on the proposed undertaking. Additional consultation may be required to satisfy MEDEI.

**Concluding Remarks**

In summary, the purchase of MEDEI-owned/IO-managed lands or disposal of rights and responsibilities (e.g. easement) for IO-managed lands triggers the application of the MEDEI Class EA.

Deficiencies in any of these requirements could result in an inability to rely on the EA process proposed to streamline the EA approvals.

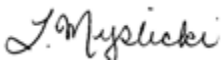
IO is providing this information so that adequate timelines and project budgets incorporate MEDEI's regulatory requirements, which may be required to support a realty activity required for the proponent's project.

If the proposed undertaking directly affects all or in part any IO-managed property, prior to finalizing the report, please contact the undersigned at your earliest convenience to ensure that all MEDEI Class EA requirements can be met through the EA study. Please send the undersigned a copy of the DRAFT EA report and allow a minimum of 30 calendar days for review.

If MEDEI owned lands are not anticipated to be impacted, please remove IO from your circulation list.

Thank you for the opportunity to provide initial comments on this undertaking. If you have any questions I can be reached at the contact information below.

Sincerely,



**Lisa Myslicki**
Environmental Specialist, Environmental Management
Infrastructure Ontario
1 Dundas Street West,
Suite 2000, Toronto, Ontario
M5G 2L5
(416) 212-3768
lisa.myslicki@infrastructureontario.ca

* Below are the acronyms for agencies/ministries listed in the above letter

(OLC) Ontario Land Corporation
(ORC) Ontario Realty Corporation
(PIR) Public Infrastructure and Renewal
(MGS) Ministry of Government Services
(MBS) Management Board and Secretariat
(MTO) Ministry of Transportation
(MNR) Ministry of Natural Resources
(MEI) Ministry of Energy and Infrastructure
(MOI) Ministry of Infrastructure
(MEDEI) Ministry of Economic Development, Employment and Infrastructure

RECEIVED
DEC 2 2 2014

**Ministry of Municipal Affairs and Housing**
Provincial Planning Policy Branch
777 Bay Street, 13th Floor
Toronto ON M5G 2E5
Tel. 416 585-6014
Fax 416 585-6870

**Ministère des Affaires municipales et du logement**
Direction des politiques provinciales d'aménagement
777, rue Bay, 13e étage
Toronto ON M5G 2E5
Tél. 416 585-6014
Téléc.416 585-6870

Ontario

Dear Sir or Madam:

We recently received correspondence from your office, a copy of which is attached. We have redirected this correspondence to the office identified below as this is a matter that relates to the functions or responsibilities of the regional Municipal Services Offices.

Future correspondence on this type of matter should be addressed to the appropriate office identified below to prevent unnecessary delay in the Ministry's response to you. The website address for further information on these offices is: http://www.mah.gov.on.ca/Page747.aspx.

☐ MUNICIPAL AFFAIRS AND HOUSING
**Central Municipal Services Office**
13th Flr , 777 Bay St
Toronto ON M5G 2E5

General Inquiry: 416-585-6226 Fax: 416-585-6882
Toll Free: 1-800-668-0230
(Dufferin, Durham, Halton, Hamilton, Muskoka, Niagara, Peel, Simcoe, Toronto, York)

☑ MUNICIPAL AFFAIRS AND HOUSING
**Western Municipal Services Office**
2nd Floor, 659 Exeter Rd
London ON N6E 1L3
Address to Bruce Curtis.
General Inquiry: 519-873-4020 Fax: 519-873-4018
Toll Free: 1-800-265-4736 (Brant, Bruce, Chatham-Kent, Elgin, Essex, Grey, Haldimand, Huron, Lambton, Middlesex, Norfolk, Wellington, Waterloo, Perth, Oxford)

☐ MUNICIPAL AFFAIRS AND HOUSING
**Northeastern Municipal Services Office**
Suite 401, 159 Cedar St
Sudbury ON P3E 6A5

General Inquiry: 705-564-0120 Fax: 705-564-6863
Toll Free: 1-800-461-1193 (Cochrane, Algoma, Manitoulin, Sudbury, Parry Sound, Nipissing, Timiskaming)

☐ MUNICIPAL AFFAIRS AND HOUSING
**Eastern Municipal Services Office**
Rockwood House, 8 Estate Lane
Kingston ON K7M 9A8

General Inquiry: 613-545-2100 (Frontenac, Leeds & Grenville, Lennox & Addington)
Toll Free:1-800-267-9438 (Ottawa, Prescott-Russell, Prince Edward, Stormont, Dundas/Glengarry, Kawartha Lakes, Renfrew, Peterborough, Haliburton, Hastings, Lanark, Northumberland)
Fax: 613-548-6822

☐ MUNICIPAL AFFAIRS AND HOUSING
**Northwestern Municipal Services Office**
Suite 223
435 James St S
Thunder Bay ON P7E 6S7

General Inquiry: 807-475-1651 Fax: 807-475-1196
Toll Free: 1-800-465-5027 (Thunder Bay, Kenora, Rainy River)

.....2

Thank you for updating your records and advising any other sections of your organization that may be involved in mailing matters such as this to the Ministry.

Sincerely,

Audrey Bennett
Director

attachment

...

Stantec

**Stantec Consulting Ltd.**
70 Southgate Drive, Suite 1, Guelph ON N1G 4P5

November 28, 2014

Mr. Goran Ciric
Ministry of Municipal Affairs and Housing
Ontario Pipeline Coordinating Committee
777 Bay St, 14th Fr
Toronto ON M5G 2E5

**Attention: Goran Ciric, Senior Planner, Planning Innovation Section**

Dear Mr. Ciric,

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project**
**Notice of Project Commencement**

NOVA Chemicals (Canada) Ltd. ("NOVA Chemicals") and its affiliates own and operate manufacturing plants and pipelines in the Sarnia, Ontario area. NOVA Chemicals' Corunna petrochemical facility has been in operation since 1977 and recently transitioned to natural gas liquids (NGLs) as its primary feedstock. In support of this transition, NOVA Chemicals is proposing to establish a second pipeline system to deliver NGLs to the Corunna facility, which is known as the "Kimball Pipeline Replacement Project" (the "Project"). The Project will replace a dormant 4" NGL pipeline with a 12" pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road. Also, a dormant 8" pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the attached map.

As part of the planning process, NOVA Chemicals has retained Stantec Consulting Ltd. ("Stantec") to undertake an environmental study of the construction and operation of the replacement pipeline (the "Environmental Study"). The Environmental Study will fulfill the requirements of the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)*".

The current schedule provides for completing the report for the Environmental Study in the spring of 2015, after which NOVA Chemicals will file an application for the proposed pipeline with the OEB. Under Section 90 of the *Ontario Energy Board Act*, the OEB's review and approval is required before the Project can proceed. If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

Stantec is presently compiling an environmental, socio-economic and archaeological inventory of the Environmental Study area. As an agency with jurisdiction or a potential interest in developments in that area, you are invited to provide or coordinate comments regarding the proposed pipeline. Specifically, Stantec is seeking information regarding planning principles or guidelines implemented by your agency that may affect routing, construction, and/or operation

**Reference: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project**
**Notice of Project Commencement**

of the proposed pipeline. Stantec is also seeking background environmental and socio-economic information that may be useful in compiling the inventory of the Environmental Study area.

Finally, we request that you provide us with information regarding other proposed developments within the Environmental Study area for incorporation into the Environmental Study and related report as a component of the cumulative effects assessment. **Please contact us to discuss the most efficient way to obtain this information.**

The Environmental Study process will include consultation and engagement with landowners, Aboriginal communities, government agencies and other interested persons. Public consultation will be an integral component of the Environmental Study and related report. An Information Session regarding the Project is being planned for January 2015. Notice of the session will be mailed to you and advertised in the following local newspapers: *Sarnia Observer, Sarnia & Lambton County This Week, Wallaceburg Courier Press* and *The Independent*.

Representatives from NOVA Chemicals and Stantec will be available to explain the Project and answer questions regarding routing, design and scheduling. Input received will be used to confirm both the existing environmental conditions and the preliminary preferred pipeline route and to develop site specific protection or mitigation measures for the Project.

If you have questions or concerns regarding this proposed Project, please do not hesitate to contact the undersigned.

Regards,

**STANTEC CONSULTING LTD.**

**Stephanie Dryden-Cripton, M.A.**
Project Manager
Phone: (519) 836-6966 x206
Fax: (519) 836-2493
Stephanie.Dryden-Cripton@stantec.com

Attachment: Project Location map

c. Mac Hollingsworth, Project Lead, NOVA Chemicals (Canada) Ltd.

**From:** Riddell, Heather (MNRF) <Heather.Riddell@ontario.ca>
**Sent:** Monday, January 12, 2015 9:52 AM
**To:** Ramkissoon, Kristy
**Cc:** Dryden-Cripton, Stephanie
**Subject:** RE: NOVA Chemicals (Canada) Ltd''s Kimball Pipeline Replacement Project- Notice of Project Announcement
**Attachments:** let_NOVA_KPRP_NoC_agency_EMAIL_20141128_fnl.pdf

Hi Kristy,

The Ministry of Natural Resources and Forestry (MNRF) understands that Stantec Consulting Ltd. is conducting an environmental study for NOVA Chemicals Ltd.'s 4 km Kimball Pipeline Replacement Project proposed from the Corunna Petrochemical Facility to the Plains Midstream's Windsor-Sarnia Pipeline valve site near Kimball Road in the Township of St. Clair, Lambton County.

MNRF provides the following natural heritage information in response to the notice sent on November 28, 2014.

**Species at Risk (SAR)**
The Species at Risk in Ontario (SARO) List (http://www.ontario.ca/environment-and-energy/species-risk-ontario-list) is Ontario Regulation 230/08 issued under the *Endangered Species Act*, *2007* (ESA). The ESA came into force on June 30, 2008, and provides both species protection (section 9) and habitat protection (section 10) to species listed as endangered or threatened on the SARO List. The current SARO List can be found on e-laws (http://www.e-laws.gov.on.ca/navigation?file=home&lang=en).

An initial SAR screening has been completed for the above-noted pipeline replacement project.

There are no known occurrences of SAR on the pipeline easement (40 m); however, there are known occurrences of SAR in the general project area, including:

- Butler's Gartersnake (Endangered) – species and general habitat protection
- Bobolink (Threatened) – species and general habitat protection
- Barn Swallow (Threatened) – species and general habitat protection
- Eastern Meadowlark (Threatened) – species and general habitat protection

Please note that this is an initial screening for SAR and the absence of an element occurrence does not indicate the absence of species. The province has not been surveyed comprehensively for the presence or absence of SAR and MNRF data relies on observers to report sightings of SAR. Field assessments by a qualified professional may be necessary if there is a high likelihood for SAR species and/or habitat to occur within the project footprint.

It is important to note the following:

- Changes may occur in both species and habitat protection which could affect whether proposed projects may have adverse effects on SAR.
- The Committee on the Status of Species at Risk in Ontario (COSSARO) meets regularly to evaluate new species for listing and/or re-evaluate species already on the SARO List. As a result, species designations may change, which could in turn change the level of protection they receive under the ESA 2007.
- Habitat protection provisions for a species may change if a species-specific habitat regulation comes into effect.

If an activity or project will result in adverse effects to endangered or threatened species and/or their habitat, additional action would need to be taken in order to remain in compliance with the ESA. Additional action could be applying for an authorization under section 17(2)(c) of the ESA, or completing an online registry for an ESA regulation, if the project is eligible (http://www.ontario.ca/environment-and-energy/natural-resources-approvals).

Please be advised that applying for an authorization does not guarantee approval and the process can take several months.

If you wish to determine whether a project may be eligible for the online registry process, please refer to MNRF's website (http://www.ontario.ca/environment-and-energy/natural-resources-approvals). Questions about the registry process should be directed to MNRF's Registry and Approval Services Centre at 1-855-613-4256 or at mnr.rasc@ontario.ca.

**Significant Wildlife Habitat (SWH)**

Significant wildlife habitat (SWH) may be present on or adjacent to the above-noted subject lands (within 120 m). Please consult the Significant Wildlife Habitat Technical Guide (SWHTG, OMNR 2000), the Natural Heritage Reference Manual (NHRM) and the Ecoregion Criteria Schedules for criteria on identifying and determining significance of wildlife habitat. SWH is identified by planning authorities using the criteria and processes recommended in the SWHTG and Ecoregion Criteria Schedules.

Link to the SWHTG: https://www.ontario.ca/environment-and-energy/guide-significant-wildlife-habitat
Link to Ecoregion 7E criteria schedule:
http://publicdocs.mnr.gov.on.ca/View.asp?Document_ID=21843&Attachment_ID=45645

MNRF completed a screening for S1-S3, SH and special concern species and the following have known occurrences in the general project area:

- Eastern Wood Pewee (Special Concern)

The habitat of provincially rare (S1-S3, SH) and Special Concern species is considered SWH under the category of 'Special Concern and Rare Wildlife Species' in the SWHTG Ecoregion Criteria Schedules. Therefore, consideration should be given to these species and whether their habitat occurs on or adjacent to the subject lands.

**Areas of Natural and Scientific Interest (ANSIs)**

There are no Provincially or Regionally Significant Earth or Life Science ANSI's within or adjacent to the proposed subject lands.

**Significant Woodlands**

There are woodlands located on and adjacent to the project area. We recommend you refer to applicable Official Plans for criteria to determine the significance of woodlands near the project locations. The NHRM also contains information and criteria for determining significant woodlands.

**Significant Wetlands**

There is no known evaluated wetland within or adjacent to the above-noted subject lands.

**It is possible for unevaluated wetlands to occur on or adjacent to the site, e.g. they could be located within or in proximity to woodlands.** Please see the attached reference sheet for a list of Ecological Land Classification (ELC) communities that could possibly be considered wetlands in Aylmer District. Site-specific investigation within the study area may find existing wetlands within such ELC communities that have not yet been evaluated or designated. Consideration and delineation of wetland areas should be determined using criteria and methodology as outlined in the Ontario Wetland Evaluation System (OWES) and submitted to MNRF for review.

**Significant Valleylands**

MNRF does not possess significant valleylands mapping. We suggest you contact the applicable conservation authorities to find out if they have information pertaining to significant valleylands. The NHRM also provides guidance on evaluation criteria for determining significant valleylands.

**Fish and Fish Habitat**

There appear to be watercourses within and adjacent to the project area, however, no information on fish and fish habitat is available. Work in water is restricted here from 15 March to 30 June.

MNRF recommends you contact the appropriate conservation authority and Fisheries and Oceans Canada for up-to-date fisheries and drain information.

Conservation Authorities and Official Plans may provide additional natural heritage information for this study.

If you have any questions or require additional information, please feel free to contact me.

Regards,
Heather

Heather Riddell
District Planner
Ministry of Natural Resources and Forestry
Aylmer District
615 John Street North
Aylmer, ON N5H 2S8
Tel: 519-773-4757
heather.riddell@ontario.ca

---

**From:** Riddell, Heather (MNRF)
**Sent:** November-28-14 2:41 PM
**To:** 'Ramkissoon, Kristy'
**Cc:** Dryden-Cripton, Stephanie
**Subject:** RE: NOVA Chemicals (Canada) Ltd"s Kimball Pipeline Replacement Project- Notice of Project Announcement

Hi Kristy,

Thank you for sending this notice of project commencement regarding NOVA Chemicals' proposed Kimball Pipeline Replacement Project in the Township of St. Clair.

If Stantec wishes to request a natural heritage screening of the project location, we ask that you first visit MNRF's Make a Map: Natural Heritage Areas tool and Land Information Ontario to gather natural heritage information on the site prior to submitting a request through MNRF.

Natural Heritage Information Centre (NHIC) compiles, maintains and distributes information on species at risk, natural species, plant communities and spaces of conservation concern in Ontario. NHIC data can be accessed through the Make a Map tool: http://www.giscoeapp.lrc.gov.on.ca/web/MNR/NHLUPS/NaturalHeritage/Viewer/Viewer.html

This is a web-based GIS map function, that you can use to zoom in on the subject lands and view recorded information. NHIC is not complete, as data always exists outside of databases, but it gives an idea of where to start.

To use the MNRF Make a Map: Natural Heritage Areas tool:

- Select the tab along the top that reads 'NHIC Data'
- Use the zoom and pan tools to find the project site
- Click on the box in the far left of the tool bar at the top that reads 'NHIC data'
- Within the box that opens to the left of the map (under the 'Data Selection' tab), click on the pointer icon under 'Choose a selection tool, and click on the map'
- On the map, click the grid cell for which information is requested

- The 'Data Results' tab will open; View all available occurrences by clicking the arrow icons
- To access other natural heritage information (such as provincially significant wetlands, woodlands etc…) click on map layers tab and select map layers and a tool bar will pop-up on the left hand side of your screen. From here you can turn different layers of data on and off.

Land Information Ontario (LIO) manages geographic information for use in maps and Geographic Information Systems (GIS). LIO has a web-accessible data warehouse that contains more than 250 different layers of geographic data. The data ranges from the location of underground wells to satellite imagery. LIO can be reached at (705) 755-1878. You can also access the general user version online at: https://www.ontario.ca/environment-and-energy/land-information-ontario.

**In your submission to the district/request for natural heritage information, please show us the information obtained from available resources and we will provide any additional information we may have at the district.**

Thank you for providing the notice of commencement for this project.

If you have any questions, please contact me.

Regards,
Heather

Heather Riddell
District Planner
Ministry of Natural Resources and Forestry
Aylmer District
615 John Street North
Aylmer, ON N5H 2S8
Tel: 519-773-4757
heather.riddell@ontario.ca

---

**From:** Ramkissoon, Kristy [mailto:Kristy.Ramkissoon@stantec.com]
**Sent:** November-28-14 12:17 PM
**Cc:** Dryden-Cripton, Stephanie; Ramkissoon, Kristy
**Subject:** NOVA Chemicals (Canada) Ltd"s Kimball Pipeline Replacement Project- Notice of Project Announcement

Sent on behalf of Ms. Stephanie Dryden-Cripton (Stantec Consulting Ltd.).

Good afternoon,

Please find attached a letter formally announcing the Kimball Pipeline Replacement Project in the Township of St. Clair, Ontario. The letter provides a general description of the proponent and the Project, and a map showing the general location of the proposed replacement NGL pipeline.

Individually addressed hard copies of this letter will be sent to your organization following this email.

Should you have any questions or require additional information regarding the above-mentioned project, please refer to the letter attached for project contact information.

Regards,

**Kristy Ramkissoon**
Environmental Planner
Stantec
70 Southgate Drive, Suite 1 Guelph ON N1G 4P5
Phone: (519) 836-6050
Cell: (519) 546-5137
Fax: (519) 836-2493
Kristy.Ramkissoon@stantec.com

Stantec

| | | | |
|---|---|---|---|
| **NAME(S):** | Oscar Alonso, P.Eng. | **PROJECT NO.:** | **160960940** |
| | Click here to enter name | **REPRESENTING:** | Click here to enter text. |
| **TELEPHONE:** | 519-862-1572 | **DATE/TIME:** | **1/13/2015** |
| **RE:** | Kimball Pipeline Replacement Project | **RECORDED BY:** | Stephanie Dryden-Cripton |

☒ **CALL RECEIVED** ☐ **CALL PLACED** ☐ **MEETING**

**NOTES:**

Oscar Alonso of TSSA phoned Stephanie Dryden-Cripton of Stantec in the morning on January 13, 2015 to discuss the Kimball Pipeline Replacement Project. He indicated he was concerned about the pipeline being a natural gas liquid and that TSSA has more stringent requirements for this and would like to discuss. Stephanie indicated that NOVA Chemicals will be willing to meet with TSSA to discuss the project and will get back to TSSA about a meeting date.

| NO. | FOLLOW-UP TASK | TIMING | BY | DONE |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**From:** Oscar Alonso [mailto:oalonso@tssa.org]
**Sent:** Tuesday, January 13, 2015 10:48 AM
**To:** Dryden-Cripton, Stephanie
**Cc:** Kourosh Manouchehri; Mike Davis; Zenon Fraczkowski
**Subject:** NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project

Hi Stephanie,

Further our this morning conversation on the referenced project, we will be pleased to have a meeting with you and NOVA representatives to discuss some safety issues related to this project.

As the Kimball Pipeline will be designed for NGL (typically gases that are in liquid phase under moderate pressures), some extra requirements may be applicable. This pipeline will come under the definition of High-Vapour-Pressure (HVP) pipelines under the Ontario Regulation on Oil and Gas Pipeline Systems (O. Reg. 210/01).

High-vapour-pressure (HVP) means a pipeline system — a pipeline system conveying hydrocarbons or hydrocarbon mixtures in the liquid or quasi-liquid state with a vapour pressure greater than 110 kPa absolute at 38 °C, as determined using the Reid method (see ASTM D323), as per the definition of the CSA Z662-11 adopted in Ontario by the Code Adoption Document (CAD) under the the O. Reg. 210/01.

The O. Reg. 210/01 and the CAD are available from our web site, www.tssa.org. In particular, the CAD (document FS-196-12) specify some particular requirements for HVP, some of them are:

4.3.4.11 Risk assessment
The operator shall conduct a risk assessment that follows Annex B Guidelines for risk assessment of pipelines falling within the scope of CSA Z662-11 for each covered segment. The risk assessment shall include the high consequence areas and determine if additional preventive or mitigation measures are needed.

For oil pipeline segments located in high consequence areas, the operating company shall provide the Ontario Ministry of Natural Resources (MNR) and the Ontario Ministry of Environment (MOE) an opportunity to comment on the company's contingency plan for leaks or spills and shall address any comments provided by MOE or MNR.

7.10.3.2

For HVP and for sour service pipeline systems, all butt welds shall be inspected by radiographic or ultrasonic methods, or a combination of such methods, for 100% of their circumferences, in accordance with the requirements of clause 7.10.4.

The CSA Z662-11 also have a number of specific requirements for HVP pipelines that we would like to ensure that will be adequately addresses at the time of selecting the route for the pipeline as well as for its design.

For this purpose, I will suggest a meeting for any of the following dates:

January 16, after 1:00 P.M.
January 20, 9:00 A.M.
January 22, 9:00 A.M.
January 23 or 27, any time.

Please be aware that we will charge for the time used, required to attend the meeting.

Regards,

Oscar Alonso, P.Eng.,
Fuels Safety Engineer
Tel. 416 734 3353

This electronic message and any attached documents are intended only for the named recipients. This communication from the Technical Standards and Safety Authority may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message.

RECEIVED
JAN 13 2015

St. Clair Conservation

St. Clair Region Conservation Authority
205 Mill Pond Cres., Strathroy, ON, N7G 3P9
(519) 245-3710 (519) 245-3348 FAX
E-Mail: stclair@scrca.on.ca
Website: www.scrca.on.ca

Member Municipalities

Township of Adelaide-Metcalfe
Township of Brooke-Alvinston
Municipality of Chatham-Kent
Township of Dawn-Euphemia
Township of Enniskillen
Municipality of Lambton Shores
Township of Middlesex Centre
Village of Newbury
Village of Oil Springs
Town of Petrolia
Town of Plympton-Wyoming
Village of Point Edward
City of Sarnia
Municipality of Southwest Middlesex
Township of St. Clair
Township of Strathroy-Caradoc
Township of Warwick

19 December 2014

Stantec Consulting Ltd.
70 Southgate Drive, Suite 1
Guelph, Ontario N1G 4P5

**Attention: Stephanie Dryden-Cripton**

Dear Ms Dryden-Cripton:

**Re: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project**
**Notice of Project Commencement**

The St. Clair Region Conservation Authority (SCRCA) acknowledges receipt of your letter dated November 28, 2014 regarding NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project – Notice of Project Commencement.

The SCRCA can provide background information and review the draft Environmental Study (ES) as part of SCRCA's commenting role under the Planning Act; the Authorities delegated responsibility of representing the provincial interest on natural hazards encompassed by Section 3.1 of the Provincial Policy Statement (PPS), 2014; and SCRCA's Regulatory Authority under O. Reg 171/06, "Development, Interference with Wetlands and Alterations to Shorelines and Watercourses." Our fee for this review is $2,000.00, which includes the background information. This is as per the Board approved 2014 Fee schedule. Upon receiving your consent, an invoice will follow.

We would note that current mapping is indicating the western portion of the subject lands are regulated by the SCRCA and that should wetlands be identified and meet the criteria of the CA's Regulation through the draft ES, the wetland areas plus the adjacent lands may also be regulated. Refer to www.camaps.ca for regulation mapping based on current information.

As the notice received from your office is in respect to an Environmental Study carried out as per the requirements of the Ontario Energy Board's (OEB) "Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)," it is the Authority's assumption that the Ministry of Natural Resources and Forests will be representing the provincial interest on natural heritage encompassed by Section 2.1 of the PPS 2014.

Regarding Natural Heritage principles that may affect routing, construction, and/or operation we refer you to the 2013 SCRCA Watershed Report Card (http://www.scrca.on.ca/about-us/2013-watershed-report-cards/) for the watersheds within the study area, which are the St. Clair River Tributaries and Lower Bear Creek, which is a subwatershed of the Sydenham River. We also refer you to the Sydenham River Conservation Action Plan (Koscinski, D., S. Hodgkiss, J.V. Jalava, and the Sydenham River CAP Development Team. 2014. available from https://caroliniancanada.ca/contact ).

Yours truly,

Patricia Hayman

Patricia Hayman, MCIP, RPP
Director of Planning

Encl.
cc Heather Riddell, Ministry of Natural Resources & Forests

member of Conservation Ontario

**From:** Renwick, Sally (MNRF) <sally.renwick@ontario.ca>
**Sent:** Friday, January 16, 2015 8:47 AM
**To:** Ramkissoon, Kristy
**Cc:** Dryden-Cripton, Stephanie; Fleischhauer, Andrea (MNRF)
**Subject:** RE: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update- Notice of Information Session
**Attachments:** 201501151449.pdf

Hi Kristy,

Could you please remove me from the mailing list for this project, and add Andrea Fleischhauer, District Planner, Aylmer District? MNRF comments will come from Aylmer District, if they have any to provide.

Thanks,
Sally Renwick
Team Lead, Environmental Planning
(t) 705-755-5195

---

**From:** Ramkissoon, Kristy [mailto:Kristy.Ramkissoon@stantec.com]
**Sent:** January 7, 2015 11:51 AM
**Cc:** Dryden-Cripton, Stephanie; Frith, Lindsay
**Subject:** NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update- Notice of Information Session

Sent on behalf of Ms. Stephanie Dryden-Cripton (Stantec Consulting Ltd.).

Good afternoon,

Please find attached a letter regarding a combined Information Session for NOVA Chemicals (Canada) Ltd.'s **Kimball Pipeline Replacement Project** AND **NOVA 2020 Projects Update**. A copy of the Notice of Information Session is also attached. The letter and Notice provides a general description of both projects and details of the Information Session.

Individually addressed hard copies of this letter will be sent to your organization following this email.

Should you have any questions or require additional information regarding the above-mentioned projects, please refer to the letter and Notice attached for project contact information.

Regards,

**Kristy Ramkissoon**
Environmental Planner
Stantec
70 Southgate Drive, Suite 1 Guelph ON N1G 4P5
Phone: (519) 836-6050
Cell: (519) 546-5137
Fax: (519) 836-2493
Kristy.Ramkissoon@stantec.com

**Ministry of Municipal Affairs and Housing**
Provincial Planning Policy Branch
777 Bay Street, 13th Floor
Toronto ON M5G 2E5
Tel. 416 585-6014
Fax 416 585-6870

**Ministère des Affaires municipales et du logement**
Direction des politiques provinciales d'aménagement
777, rue Bay, 13e étage
Toronto ON M5G 2E5
Tél. 416 585-6014
Téléc.416 585-6870

RECEIVED
JAN 19 2015

Ontario

Dear Sir or Madam:

We recently received correspondence from your office, a copy of which is attached. We have redirected this correspondence to the office identified below as this is a matter that relates to the functions or responsibilities of the regional Municipal Services Offices.

Future correspondence on this type of matter should be addressed to the appropriate office identified below to prevent unnecessary delay in the Ministry's response to you. The website address for further information on these offices is: http://www.mah.gov.on.ca/Page747.aspx.

MUNICIPAL AFFAIRS AND HOUSING
**Central Municipal Services Office** ☐
13th Flr , 777 Bay St
Toronto ON M5G 2E5

General Inquiry: 416-585-6226 Fax: 416-585-6882
Toll Free: 1-800-668-0230
(Dufferin, Durham, Halton, Hamilton, Muskoka, Niagara, Peel, Simcoe, Toronto, York)

MUNICIPAL AFFAIRS AND HOUSING
**Western Municipal Services Office** ☑
2nd Floor, 659 Exeter Rd
London ON N6E 1L3

General Inquiry: 519-873-4020 Fax: 519-873-4018
Toll Free: 1-800-265-4736 (Brant, Bruce, Chatham-Kent, Elgin, Essex, Grey, Haldimand, Huron, Lambton, Middlesex, Norfolk, Wellington, Waterloo, Perth, Oxford)

MUNICIPAL AFFAIRS AND HOUSING
**Northeastern Municipal Services Office** ☐
Suite 401, 159 Cedar St
Sudbury ON P3E 6A5

General Inquiry: 705-564-0120 Fax: 705-564-6863
Toll Free: 1-800-461-1193 (Cochrane, Algoma, Manitoulin, Sudbury, Parry Sound, Nipissing, Timiskaming)

MUNICIPAL AFFAIRS AND HOUSING
**Eastern Municipal Services Office** ☐
Rockwood House, 8 Estate Lane
Kingston ON K7M 9A8

General Inquiry: 613-545-2100 (Frontenac, Leeds & Grenville, Lennox & Addington)
Toll Free:1-800-267-9438 (Ottawa, Prescott-Russell, Prince Edward, Stormont, Dundas/Glengarry, Kawartha Lakes, Renfrew, Peterborough, Haliburton, Hastings, Lanark, Northumberland)
Fax: 613-548-6822

MUNICIPAL AFFAIRS AND HOUSING
**Northwestern Municipal Services Office** ☐
Suite 223
435 James St S
Thunder Bay ON P7E 6S7

General Inquiry: 807-475-1651 Fax: 807-475-1196
Toll Free: 1-800-465-5027 (Thunder Bay, Kenora, Rainy River)

.....2

Thank you for updating your records and advising any other sections of your organization that may be involved in mailing matters such as this to the Ministry.

Sincerely,

Audrey Bennett
Director

attachment

...

**From:** Predusca, Julia (IO) [mailto:Julia.Predusca@infrastructureontario.ca]
**Sent:** Wednesday, January 21, 2015 10:25 AM
**To:** Dryden-Cripton, Stephanie
**Subject:** IO Environmental Assessment Notice

Hello,

Please see attached on behalf of Lisa Myslicki,

Thank you!

**Julia Predusca**
Environmental CO-OP Student
Infrastructure Ontario
1 Dundas St. West, Suite 2000
Toronto, Ontario M5G 2L5
(416)-327-6921

This email, including any attachments, is intended for the personal and confidential use of the recipient(s) named above. If you are not the intended recipient of the email, you are hereby notified that any dissemination or copying of this email and/or any attachment files is strictly prohibited. If you have received this e-mail in error, please immediately notify the sender and arrange for the return of any and all copies and the permanent deletion of this message including any attachments, without reading it or making a copy. Thank you.

**January 21, 2015**

To whom it may concern,

Thank you for circulating Infrastructure Ontario (IO) on your Notice. Infrastructure Ontario is the strategic manager of the provincial government's real estate with a mandate of maintaining and optimizing value of the portfolio while ensuring real estate decisions reflect public policy objectives of the government.

As you may be aware, *IO is responsible for managing property that is owned by Her Majesty the Queen in Right of Ontario as represented by the Minister of Infrastructure (MOI).* There is a potential that IO manages lands fall within your study area. As a result, your proposal may impact IO managed properties and/or the activities of tenants present on IO-managed properties. In order to determine if IO property is within your study area, IO requires that the proponent of the project conduct a title search by reviewing parcel register(s) for adjoining lands, to determine the extent of ownership by MOI or its predecessor's ownership (listed below). Please contact IO if any ownership of provincial government lands are known to occur within your study area and are proposed to be impacted. IO managed land can ***include within the title but is not limited to*** variations of the following: Her Majesty the Queen/King, OLC, ORC, Public Works, Hydro One, PIR, MGS, MBS, MOI, MTO, MNR and MEI*. Please ensure that a copy of your notice is also sent to the ministry/agency on title. As an example, if the study area includes a Provincial Park, then MNR is to also to be circulated notices related to your project.

*IO obligates proponents to complete all due diligence for any realty activity on IO managed lands and this should be incorporated into all project timelines.*

**Potential Negative Impacts to IO Tenants and Lands**

*General Impacts*
Negative environmental impacts associated with the project design and construction, such as the potential for dewatering, dust, noise and vibration impacts, impacts to natural heritage features/habitat and functions, etc should be avoided and/or appropriately mitigated in accordance with applicable regulations best practices as well as Ministry of Natural Resources (MNR) and Ministry of the Environment (MOE) standards. Avoidance and mitigation options that characterize baseline conditions and quantify the potential impacts should be present as part of the EA project file. Details of appropriate mitigation, contingency plans and triggers for implementing contingency plans should also be present.

*Impacts to Land holdings*
Negative impacts to land holdings, such as the taking of developable parcels of IO managed land or fragmentation of utility or transportation corridors, should be avoided. If the potential for such impacts is present as part of this undertaking, you should contact the undersigned to discuss these issues at the earliest possible stage of your study.

If takings are suggested as part of any alternative, these should be appropriately mapped and quantified within the EA report documentation. In addition, details of appropriate mitigation and or next steps related to compensation for any required takings should be present. IO requests circulation of the draft EA report prior to finalization if potential impacts to IO-managed lands are present as part of this study.

*Impacts to Cultural Heritage*
Should the proposed activities impact cultural heritage features on IO managed lands, a request to examine cultural heritage features, which can include cultural landscapes, built heritage, and archaeological potential and/or sites, could be required. If the potential for such impacts is present as part of this undertaking, you should contact the undersigned to discuss these issues at the earliest possible stage of your study.

**Potential Triggers Related to MOI's Class EA**
*IO is required to follow the MOI Public Work Class Environmental Assessment Process for (PW Class EA). The PW Class EA applies to a wide range of realty and planning activities including leasing or letting, planning approvals, dispostion, granting of easements, demolition and property maintenance/repair. For details on the PW Class EA please visit the Environment and Heritage page of our website found at*

*http://www.infrastructureontario.ca/Templates/Buildings.aspx?id=2147490336&langtype=1033*

*Please note that completion of any EA process does not provide an approval for MOI's Class EA obligations. Class EA processes are developed and in place to assess undertakings associated with different types of projects. For example, assessing the impacts of disposing of land from the public portfolio is significantly different then assessing the best location for a proposed road.*

IO is providing this information so that adequate timelines and project budgets can consider MOI's regulatory requirements associated with a proposed realty activity in support of a project. Some due diligences processes and studies can be streamlined. For example, prior to any disposition of land, at minimum a Phase I Environmental Site Assessment and a Stage I Archaeological Assessment and the MOI Category B Environmental Assessment should be undertaken.. Deficiencies in any of these requirements could result in substantial project delays and increased project costs.

In summary, the purchase of MOI-owned/IO-managed lands or disposal of rights and responsibilities (e.g. easement) for IO-managed lands triggers the application of the MOI Class EA. If any of these realty activities affecting IO-managed lands are being proposed as part of any alternative, please contact the Sales, Easements and Acquisitions Group through IO's main line (Phone: 416-327-3937, Toll Free: 1-877-863-9672), and also contact the undersigned at your earliest convenience to discuss next steps.

**Specific Comments**

Please remove IO from your circulation list, with respect to this project, if MOI owned lands are not anticipated to be impacted. In addition, in the future, please send only **electronic copies of notices** for any projects impacting IO managed lands to:
Keith.Noronha@infrastructureontario.ca

Thank you for the opportunity to provide initial comments on this undertaking. If you have any questions I can be reached at the contacts below.

Sincerely,

**Lisa Myslicki**
Environmental Advisor, Environmental Management
Infrastructure Ontario
1 Dundas Street West,
Suite 2000, Toronto, Ontario
M5G 2L5
(416) 212-3768
lisa.myslicki@infrastructureontario.ca

* Below are the acronyms for agencies/ministries listed in the above letter

| | |
|---|---|
| OLC | Ontario Lands Corporation |
| ORC | Ontario Realty Corporation |
| PIR | Public Infrastructure and Renewal |
| MGS | Ministry of Government Services |
| MBS | Management Board and Secretariat |
| MOI | Ministry of Infrastructure |
| MTO | Ministry of Transportation |
| MNR | Ministry of Natural Resources |
| MEI | Ministry of Energy and Infrastructure |

**From:** Katzirz, Zsolt (MTO) [mailto:Zsolt.Katzirz@ontario.ca]
**Sent:** Tuesday, February 03, 2015 12:38 PM
**To:** Dryden-Cripton, Stephanie
**Cc:** Lucente, Jodie (MTO)
**Subject:** RE: Nova Chemicals LTD.'s - Projects

Thank You Stephanie,

I have updated the contact list below. Please feel free to contact me for any additional discussion or information.

Please continue to circulate us on any land development and/or utility related projects that may have impacts to the highway (property) limits or are within the MTO permit control area.

Thank you,

**Zsolt Katzirz**
*Corridor Management Office*
*Ministry of Transportation, West Region*
659 Exeter Road
London, Ontario, N6E 1L3
Tel: 519-873-4583
*zsolt.katzirz@ontario.ca*

**From:** Dryden-Cripton, Stephanie [mailto:Stephanie.Dryden-Cripton@stantec.com]
**Sent:** February 3, 2015 11:42 AM
**To:** Katzirz, Zsolt (MTO)
**Subject:** RE: Nova Chemicals LTD.'s - Projects

Hello Zsolt,

As a follow up to our phone call today, please find below a list of the Ministry of Transportation contacts that are on our project notification list for each of the respective projects:

**NOVA Chemical's Kimball Pipeline Replacement Project**:

- Ontario Pipeline Coordinating Committee (OPCC) member; and Senior Planner &Policy Advisor, Corridor Management and Property Section (Tony Difabio)
- Manager – Engineering Office (Jennifer Graham Harkness)
- Corridor Management Senior Project Manager (David Secord)
- Corridor Management Utility Officer (Zsolt Katzirz)

- Senior Environmental Planner (Susan Wagter)
- Corridor Management Planner – West Region (Jodie Lucente)

**NOVA 2020 Projects**:

- Manager – Engineering Office (Jennifer Graham Harkness)
- Corridor Management Senior Project Manager (Ken Teasdale)
- Corridor Management Officer (Ryan Mentley)
- Senior Environmental Planner (Susan Wagter)
- Corridor Management Planner – West Region (Jodie Lucente)

The last notice that was sent out to all of the contacts listed above was related to a combined public information session to address both projects. However, each follows a separate regulatory process and I anticipate that any further project notifications will most likely be separate.

Please let me know if any of these contacts should be revised. Should you have any further questions regarding either of these projects, please do not hesitate to contact me.

Regards,

Stephanie

**Stephanie Dryden-Cripton, M.A**
Project Manager – Assessment, Permitting & Compliance
Environmental Services
Stantec
70 Southgate Drive, Suite 1 Guelph ON N1G 4P5
Phone: (519) 836-6050 ext 206
Fax: (519) 836-2493
Stephanie.Dryden-Cripton@stantec.com

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

---

**From:** Katzirz, Zsolt (MTO) [mailto:Zsolt.Katzirz@ontario.ca]
**Sent:** Wednesday, January 28, 2015 1:15 PM
**To:** Dryden-Cripton, Stephanie
**Subject:** Nova Chemicals LTD.'s - Projects

Hello Ms. Dryden-Cripton,

When you get a chance, can you please contact me to discuss the Nova Chemicals project(s)

I would like to discuss with you prior to issuing comments for the Ministry of Transportation.

Thank you,

**Zsolt Katzirz**
*Corridor Management Office*
*Ministry of Transportation, West Region*

Stantec

| | | | |
|---|---|---|---|
| **NAME(S):** | Zsolt Katzirz | **PROJECT NO.:** | **160960940** |
| | Corridor Management Office<br>Ministry of Transportation, West Region | **REPRESENTING:** | Click here to enter text. |
| **TELEPHONE:** | 519-873-4583 | **DATE/TIME:** | **2/3/2015** |
| **RE:** | Kimball Pipeline Replacement Project | **RECORDED BY:** | Stephanie Dryden-Cripton |

☒ **CALL RECEIVED** ☐ **CALL PLACED** ☐ **MEETING**

**NOTES:**

Call received in response to receipt of the notice of information session. Requested information about the project prior to Ministry of Transportation (MTO) issuing formal comments. Asked for confirmation that the project did not cross Highway 40. This was confirmed.
Also provided confirmation that Kimball Pipeline Replacement Project and NOVA 2020 Projects were separate projects (both were noted in the notice mentioned above).
Requested an email listing project contacts for each of the projects so as to ensure the appropriate agency contacts were circulated project updates.

| NO. | FOLLOW-UP TASK | TIMING | BY | DONE |
|---|---|---|---|---|

**From:** Roman.Dorfman@HydroOne.com [mailto:Roman.Dorfman@HydroOne.com]
**Sent:** March-05-15 8:38 AM
**To:** Devin Johnson
**Cc:** Gregory.Britton@HydroOne.com
**Subject:** Re: 25207 (10693.00) C2FS: Hydro One Easement

Devin, once all the stakeholder comments are received, I will incorporate all into an agreement and forward it to MIG for signing by Nova

Gregory's comments are not to be taken as Hydro Ones approvals for these works

Thank you

Roman

On Mar 5, 2015, at 7:49 AM, Devin Johnson <djohnson@migeng.com> wrote:

> Hi Greg,
>
> Thank you for the response and we are in agreement with your comments provided and we will ensure these are incorporated in the design, construction and clean-up.
>
> The one outstanding item is related to Item #6 of the checklist which states:
>
> 'ORC lands and transmission corridor lands are not to be used without **express written permission** in the form of a temporary land use permit. Hydro One Agent/Land Technician may provide permit after property lines are identified and a temporary fence is installed to our satisfaction. Note there is an extra charge for any temporary uses beyond the applied for area of lands to be leased. See also #9 below.'
>
> Our Environmental group is evaluating the environmental assessment and wanted confirmation if we are required to follow up with ORC (Infrastructure Ontario)? Can you please clarify?
>
> Thank you again for your help.
>
> **Devin Johnson, P.Eng.**
> Sr. Project Manager
>
> **MIG Engineering (2011) Ltd.**

***'engineering integrity since 1959'***
453 Christina St. N.
Sarnia, ON, Canada N7T 5W3
Office: 519.337.8000
Toll Free: 1.800.MIG.3943
Fax: 519.337.8001
Cell: 519-466-5676
Email: djohnson@migeng.com
www.migeng.com

*This e-mail transmission cannot be guaranteed to be secure or error-free and the sender does not accept liability for such errors or omissions. The e-mail and all attachments may contain confidential information that is intended solely for the addressee(s). If you received this communication in error, please reply to the sender or notify them by telephone at (519) 337-8000 and delete or destroy any copies.*

*If you would prefer not to receive these electronic messages from the sender, please respond to this message with the word "STOP" in the subject line. Otherwise, your consent to receive such messages will be taken as implied.*

---

**From:** Gregory.Britton@HydroOne.com [mailto:Gregory.Britton@HydroOne.com]
**Sent:** March-03-15 2:05 PM
**To:** Devin Johnson; Roman.Dorfman@HydroOne.com
**Cc:** doug.hudspeth@hydroone.com; Dave.DeNoble@HydroOne.com
**Subject:** FW: 25207 (10693.00) C2FS: Hydro One Easement

Devin

After reviewing the information, I do not have an issue from a transmission maintenance perspective with the proposed crossing.

- Any damage to a HONI asset during the installation or construction will be paid 100% by the proponent.
- The proponent ensures there will be no water buildup or ponding of water within the HONI right-of-way as a result of the new grading.
- The area of excavation appears to be mid span and will not encroach on HONI structures. Maintain 10m from structure where excavating
- Ensure to provide adequate protection of infrastructure for HONI to operate equipment in ROW. (refer to check list attached for specs)
- Provide signage showing where underground facilities have been buried in ROW.
- Return ROW to as found conditions. Any change to the grade elevation within the ROW corridor will require resubmission of a revised design.

Please review additional "check list PMP" attached.
If you have any questions or concerns please contact me
Thank-you

Greg Britton
Transmission Technician: Hydro One
Cell: 1-519-535-1792
email: gregory.britton@hydroone.com

<image002.png>

---

**From:** DORFMAN Roman
**Sent:** Monday, March 02, 2015 2:13 PM
**To:** WHITE Danny; BRITTON Gregory
**Subject:** FW: 25207 (10693.00) C2FS: Hydro One Easement

Please find attached a new proposal (PMP) from Nova Chemical for a new pipeline encroachment (crossing)

Please review and respond

Thank you

**Roman Dorfman**
Sr. Real Estate Coordinator,
Facilities and Real Estate Services

**Hydro One Networks Inc.**
185 Clegg Road
Markham, ON | L6G 1B7

Tel: 905.946.6243
Cell: 416.433.8777
Fax: 905.946.6242
Email: roman.dorfman@hydroone.com

www.HydroOne.com

---

**From:** Devin Johnson [mailto:djohnson@migeng.com]
**Sent:** Monday, March 02, 2015 10:19 AM
**To:** DORFMAN Roman
**Cc:** Doug Mathany; Mac.Hollingsworth@novachem.com; 'Dryden-Cripton, Stephanie'; Kirby Groves
**Subject:** 25207 (10693.00) C2FS: Hydro One Easement

Hi Roman,

MIG Engineering (2011) Ltd. (MIG) is currently working on behalf of NOVA Chemicals (Canada) Inc. (NOVA) for the installation of a new NPS 12 pipeline and the removal of two existing pipelines within NOVA's existing Easement. A preliminary notification letter was issued to you on Nov. 28, 2014 (attached) as the proposed work area will cross an existing Hydro One Easement. As noted in the letter, Stantec will be supporting NOVA with the Environmental Studies.

In support of the attached letter, we have attached an aerial layout of the proposed pipeline and circled the location of the Hydro One Easement crossing. In addition, we have also attached the plan and profile drawing that provides details of the Easement crossing.

All construction related activities will be completed within NOVA's existing easement and an open cut construction method through the Hydro One Easement will be used for the pipeline removal and installation.

Please let me know if you require any additional information related to this crossing.

Further communication will occur regarding this crossing, but we wanted to initiate the correspondence to ensure you are aware of the strategy.

Thank you.

**Devin Johnson, P.Eng.**
Sr. Project Manager

**MIG Engineering (2011) Ltd.**
***'engineering integrity since 1959'***
453 Christina St. N.
Sarnia, ON, Canada N7T 5W3
Office: 519.337.8000
Toll Free: 1.800.MIG.3943
Fax: 519.337.8001
Cell: 519-466-5676
Email: djohnson@migeng.com
www.migeng.com

*This e-mail transmission cannot be guaranteed to be secure or error-free and the sender does not accept liability for such errors or omissions. The e-mail and all attachments may contain confidential information that is intended solely for the addressee(s). If you received this communication in error, please reply to the sender or notify them by telephone at (519) 337-8000 and delete or destroy any copies.*

*If you would prefer not to receive these electronic messages from the sender, please respond to this message with the word "STOP" in the subject line. Otherwise, your consent to receive such messages will be taken as implied.*

Municipal Comment 1

**From:** William Nywening <William.Nywening@county-lambton.on.ca>
**Sent:** Friday, November 28, 2014 3:33 PM
**To:** Ramkissoon, Kristy
**Cc:** Dryden-Cripton, Stephanie; Ezio Nadalin
**Subject:** RE: NOVA Chemicals (Canada) Ltd''s Kimball Pipeline Replacement Project- Notice of Project Announcement

Kristy, I have forwarded your email on to Ezio Nadalin of our office who is the Planner who looks after St Clair Township.

## Will Nywening

**From:** Ramkissoon, Kristy [mailto:Kristy.Ramkissoon@stantec.com]
**Sent:** November 28, 2014 12:17 PM
**Cc:** Dryden-Cripton, Stephanie; Ramkissoon, Kristy
**Subject:** NOVA Chemicals (Canada) Ltd''s Kimball Pipeline Replacement Project- Notice of Project Announcement

Sent on behalf of Ms. Stephanie Dryden-Cripton (Stantec Consulting Ltd.).

Good afternoon,

Please find attached a letter formally announcing the Kimball Pipeline Replacement Project in the Township of St. Clair, Ontario. The letter provides a general description of the proponent and the Project, and a map showing the general location of the proposed replacement NGL pipeline.

Individually addressed hard copies of this letter will be sent to your organization following this email.

Should you have any questions or require additional information regarding the above-mentioned project, please refer to the letter attached for project contact information.

Regards,

**Kristy Ramkissoon**
Environmental Planner
Stantec
70 Southgate Drive, Suite 1 Guelph ON N1G 4P5
Phone: (519) 836-6050
Cell: (519) 546-5137
Fax: (519) 836-2493
Kristy.Ramkissoon@stantec.com

**Celebrating 60 years of community, creativity, and client relationships.**

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

please don't print this e-mail unless you really need to.

**DISCLAIMER:**
If you are not the intended recipient of this transmission, you are hereby notified that any disclosure or other action taken in reliance

Municipal Comment 2

---

**From:** Ezio Nadalin <enadalin@twp.stclair.on.ca>
**Sent:** Friday, December 19, 2014 3:01 PM
**To:** Ramkissoon, Kristy
**Cc:** Carlie McClemens
**Subject:** Municiipal & County Comments for Nova Chemical Pipeline
**Attachments:** img-Z19143440-0001 4.pdf

Hello Kristy, in responce to yout corresponence regarding the Nova Chemicals Kimball Pipeline replacement Project. It would appear from the air photos that the proposed work is occuring within an already existing corridor so removal of forest cover should be minimal. If this is indeed the case then there is no objection to the pipline location. As a standard comment tree removal should be kept to a minimum as the surrounding forested area is cosidered to be a significant woodland in the local zoning by-law and accodingly future development should avoid further disruption of the contiguos forest cover. Finally as for the Townships infrastructure comments please take note of the file attachment which includes comments from the Township Coordinator of Engineering.

Yours Sincerely,

Ezio Nadalin (Planner)

# MEMO

**DATE:** Friday, December 19, 2014

**TO:** Planner – Ezio Nadalin

**FROM:** Paul DaSilva

**RE:** **Nova Chemicals 12" Pipeline – Request for Information**

The Township is currently unaware of any environmental issues within this pipeline easement. We have reviewed the proposed alignment for the new pipeline and the Municipal infrastructure is as follows:

- **Capital Works** – there is a planned 36" diameter watermain to be installed on the west side of Tecumseh Road by The Lambton Area Water Supply System (LAWSS). The proposed depth of cover for the new watermain at this location is 1.6 metres. It is recommended that the proponent submit detailed design drawings to the Township for review, when they are available.
- **Existing Infrastructure** –No existing infrastructure is located within the proposed alignment of the new 12" pipeline.
- **Municipal Drainage** – No concerns regarding drainage.
- **Encroachment Agreement** – The Township requires an encroachment agreement when a new pipeline is constructed within, or, crossing a municipal right-of-way and/or municipal drainage. It is recommended that the proponent submit detailed design drawings to the Township for review, at which time an agreement and fee schedule can be drafted.

Paul daSilva
Coordinator of Engineering

Interest Group Comment 1

**From:** David Moody [mailto:David@sarnialambton.on.ca]
**Sent:** Tuesday, January 13, 2015 1:03 PM
**To:** Dryden-Cripton, Stephanie
**Subject:** Information session Jan. 22, 2015

Thank-you for notification of the upcoming information session. I will be out of town on vacation on that date so I will be unable to attend. Thank-you for including me in the invitation list.

**David W. Moody**
Project Leader - Business Growth Services
Sarnia-Lambton Economic Partnership
The Research Park - 1086 Modeland Rd.,
Building 1050, Ste 100
Sarnia, ON Canada N7S 6L2
Ph. 519-332-1820 Ext. 226

Discoveries That Matter
SARNIA - LAMBTON

www.sarnialambton.on.ca
www.twitter.com/SarniaLambton
www.facebook.com/SarniaLambtonEcPart
www.youtube.com/SarniaLambtonEcPart

**From:** Lambton Federation of Agriculture <lambtonfederation@hotmail.com>
**Sent:** Monday, February 09, 2015 11:44 AM
**To:** Ramkissoon, Kristy; Krista.Randall@novachem.com
**Subject:** RE: NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update- Notice of Information Session

Good Morning,

The Lambton Federation would like to thank you for this information. We appreciate the update.

The LFA would also like to take a moment and express our appreciation to Nova for removing the dormant pipeline. This is an important and noteworthy step in the proposed upgrade. We feel this is an excellent show of accountability and community respect, and we would like to express our thanks.

For the 2015 Board of Directors,
Christina Hyatt

*Christina Hyatt*
Secretary
Lambton Federation of Agriculture
2416 Courtright Line
Brigden, ON, N0N 1B0
519-864-4224
1-519-489-1445 (fax)
Hours: Tuesdays 9-4, Thursdays 9-1

**From:** Ramkissoon, Kristy [mailto:Kristy.Ramkissoon@stantec.com]
**Sent:** Wednesday, January 7, 2015 11:51 AM
**Cc:** Dryden-Cripton, Stephanie; Frith, Lindsay
**Subject:** NOVA Chemicals (Canada) Ltd.'s Kimball Pipeline Replacement Project and NOVA 2020 Projects Update- Notice of Information Session

Sent on behalf of Ms. Stephanie Dryden-Cripton (Stantec Consulting Ltd.).

Good afternoon,

Please find attached a letter regarding a combined Information Session for NOVA Chemicals (Canada) Ltd.'s **Kimball Pipeline Replacement Project** AND **NOVA 2020 Projects Update**. A copy of the Notice of Information Session is also attached. The letter and Notice provides a general description of both projects and details of the Information Session.

Individually addressed hard copies of this letter will be sent to your organization following this email.

Should you have any questions or require additional information regarding the above-mentioned projects, please refer to the letter and Notice attached for project contact information.

Regards,

**Kristy Ramkissoon**
Environmental Planner
Stantec
70 Southgate Drive, Suite 1 Guelph ON N1G 4P5
Phone: (519) 836-6050
Cell: (519) 546-5137
Fax: (519) 836-2493
Kristy.Ramkissoon@stantec.com

**Celebrating 60 years of community, creativity, and client relationships.**

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

First Nations and Métis Comment 1

**From:** Fallon Burch [mailto:fburch@cottfn.com]
**Sent:** Friday, December 05, 2014 3:37 PM
**To:** Tom Thompson
**Subject:** Kimball Pipeline Replacement Project

Good Afternoon Tom,

I have attached a response letter on behalf of Chippewa of the Thames First Nation regarding your Kimball Pipeline Replacement Project. If you have any questions, please do not hesitate to contact me.

Thanks,

*Fallon Burch*
Consultation Coordinator
Chippewa of the Thames First Nation
Lands & Environment Department
Tel. (519) 289-2662 Ext. 213
Fax. (519) 289-3117

# CHIPPEWAS OF THE THAMES FIRST NATION

December 5, 2014

Tom Thompson, P.Eng
Regional Manufacturing Director
Nova Chemicals
785 Petrolia Line
Corruna, Ontario, Canada, N0N 1G0

To: Tom Thompson, P.Eng, Regional Manufacturing Director

**RE: Nova Chemicals (Canada) Ltd. 's Kimball Pipeline Replacement Project**

We have recently received information concerning the above-mentioned project, dated **November 27, 2014**.

This project does fall within our aboriginal rights territory which extends as far as Lake Ontario.

On behalf of Chippewa of the Thames First Nation, I would like to request a completed copy of your Environmental Study, to review and determine if there are any impacts associated with your project to our traditional territory.

I look forward to continuing this open line of communication with you.

We encourage all project proponents to exercise due diligence in the area of respecting our Aboriginal and Treaty Rights, and any Consultation and Accommodation; and we look forward to any future engagement on this topic.

Thank you for notifying Chippewa of the Thames First Nation.

Sincerely,

Fallon Burch
Consultation Coordinator
Chippewas of the Thames First Nation

320 Chippewa Road, Muncey, ON, N0L 1Y0
Ph. 519-289-5555 Fax. 519-289-2230
info@cottfn.com www.cottfn.com

| | |
|---|---|
| **From:** | Tracy Johnson [mailto:Tracy.Johnson@novachem.com] |
| **Sent:** | January-13-15 10:59 AM |
| **To:** | Christine Rogers |
| **Subject:** | RE: NOVA & January 20 Environment Committee Agenda |

**From:** Tracy Johnson [mailto:Tracy.Johnson@novachem.com]
**Sent:** January-13-15 10:59 AM
**To:** Christine Rogers
**Cc:** Tracy Johnson
**Subject:** RE: NOVA & January 20 Environment Committee Agenda

Hi Christine,

I apologize, but I have been asked to put this meeting off until February. We won't have enough ready to present yet. Are you able to provide me with availability for the committee in February?

Again, sorry for the trouble.

Thank you,

Tracy Johnson
Human Resources and Communications | NOVA Chemicals Corporation
P.O. Box 3060
Sarnia, ON N7T 8C7
Phone: 519-481-2954
Mobile: 519-402-2724

NOVA Chemicals®
A Responsible Care® Company

**From:** Christine Rogers [mailto:crogers@aamjiwnaang.ca]
**Sent:** Thursday, January 08, 2015 11:27 AM
**To:** Tracy Johnson
**Subject:** RE: NOVA & January 20 Environment Committee Agenda

Hi Tracy, I really enjoyed my time off. Happy New Year to you as well.
I can add Nova to the agenda – and yes you will have 1 hr at 6 pm on January 20, 2014 this meeting will be at the Community Centre.

Christine.

**From:** Tracy Johnson [mailto:Tracy.Johnson@novachem.com]
**Sent:** January-08-15 11:12 AM
**To:** Sharilyn Johnston; Christine Rogers; Courtney Jackson
**Cc:** Tracy Johnson
**Subject:** NOVA & January 20 Environment Committee Agenda

Happy New Year! I trust each of you had an enjoyable holiday season?

I was wondering if there is time on the agenda at the January 20 Environment Committee meeting for NOVA to discuss our Kimball Pipeline Replacement and HD projects?

1 hour would be great.

Please let me know when you have a minute.

Thanks very much,

Tracy Johnson
Human Resources and Communications | NOVA Chemicals Corporation
P.O. Box 3060
Sarnia, ON N7T 8C7
Phone: 519-481-2954
Mobile: 519-402-2724

A Responsible Care® Company

**From:** Christine Rogers <crogers@aamjiwnaang.ca>
**Sent:** Tuesday, January 13, 2015 11:15 AM
**To:** Tracy Johnson
**Subject:** RE: NOVA & January 20 Environment Committee Agenda

---

**From:** Christine Rogers [mailto:crogers@aamjiwnaang.ca]
**Sent:** Tuesday, January 13, 2015 11:15 AM
**To:** Tracy Johnson
**Subject:** RE: NOVA & January 20 Environment Committee Agenda

No problem, I will confirm with you tomorrow.

---

**From:** Tracy Johnson [mailto:Tracy.Johnson@novachem.com]
**Sent:** January-13-15 11:05 AM
**To:** Christine Rogers
**Subject:** RE: NOVA & January 20 Environment Committee Agenda

I am thinking that 24th would work best if you get confirmation tonight. Would you be able to let me know tomorrow if the 24th of February is a go and we can get on the agenda at 5pm?

Thank you,

Tracy Johnson
Human Resources and Communications | NOVA Chemicals Corporation
P.O. Box 3060
Sarnia, ON N7T 8C7
Phone: 519-481-2954
Mobile: 519-402-2724

NOVA Chemicals®
A Responsible Care® Company

---

**From:** Christine Rogers [mailto:crogers@aamjiwnaang.ca]
**Sent:** Tuesday, January 13, 2015 11:03 AM
**To:** Tracy Johnson
**Subject:** RE: NOVA & January 20 Environment Committee Agenda

Hi Tracy,
I am working on the schedule for February. The 3rd is confirmed. And I will be proposing the 24th tonight. Both of these meetings will take place at the Community Centre at 5 pm.

Christine.

**From:** Christine Rogers <crogers@aamjiwnaang.ca>
**Sent:** Thursday, February 19, 2015 2:03 PM
**To:** Tracy Johnson
**Subject:** RE: NOVA Environment Committee mtg Feb 24

Hi Tracy,
I am doing well, thanks for asking. I hope you are keeping warm as well.

Yes, Nova is on the Feb 24th agenda for 5 pm.

Thank You,
Christine.

---

**From:** Tracy Johnson [mailto:Tracy.Johnson@novachem.com]
**Sent:** February-19-15 1:59 PM
**To:** Christine Rogers
**Subject:** RE: NOVA Environment Committee mtg Feb 24

Hi Christine,

I hope this note finds you well and warm ☺

I just wanted to confirm NOVA's place on the agenda at next week's Environment Committee meeting, where we will be discussing our High Density and Kimball Pipeline projects.

Please confirm that we are still on at 5pm.

Thank you,

Tracy Johnson
Human Resources and Communications | NOVA Chemicals Corporation
P.O. Box 3060
Sarnia, ON N7T 8C7
Phone: 519-481-2954
Mobile: 519-402-2724

NOVA Chemicals®
A Responsible Care® Company

---

**From:** Christine Rogers [mailto:crogers@aamjiwnaang.ca]
**Sent:** Wednesday, January 14, 2015 2:19 PM
**To:** Tracy Johnson
**Subject:** RE: NOVA & January 20 Environment Committee Agenda

Hi Tracy,
The committee confirmed last night that the 24th works for them. Nova has been added to the agenda for 5 pm. This meeting will take place at the Community Centre.

Christine

**From:** Fallon Burch <fburch@cottfn.com>
**Sent:** Thursday, January 15, 2015 1:29 PM
**To:** 'Tracy Johnson'
**Subject:** RE: Chippewas of the Thames First Nation Traditional Territory Map

Thanks Tracy, we look forward to reviewing the completed Environmental Study.

Thanks,

*Fallon Burch*
Consultation Coordinator
Chippewa of the Thames First Nation
Lands & Environment Department
Tel. (519) 289-2662 Ext. 213
Fax. (519) 289-3117

**From:** Tracy Johnson [mailto:Tracy.Johnson@novachem.com]
**Sent:** Wednesday, January 14, 2015 2:41 PM
**To:** Fallon Burch
**Subject:** RE: Chippewas of the Thames First Nation Traditional Territory Map

Hi Fallon,

Thank you very much. We will be in touch once the Environmental Study is complete.

Take care,

Tracy Johnson
Human Resources and Communications | NOVA Chemicals Corporation
P.O. Box 3060
Sarnia, ON N7T 8C7
Phone: 519-481-2954
Mobile: 519-402-2724

NOVA Chemicals®
A Responsible Care® Company

**From:** Fallon Burch [mailto:fburch@cottfn.com]
**Sent:** Wednesday, January 14, 2015 2:04 PM
**To:** Tracy Johnson
**Subject:** Chippewas of the Thames First Nation Traditional Territory Map

Good afternoon Tracy,

Following up to our phone call yesterday, attached is a map of Chippewas of the Thames First Nation Traditional Territory. As you may know from past media releases, we have settled a land claim with Canada, within the settlement we have been given the opportunity to purchase 5, 020 acres of land anywhere within our traditional territory. This is

why any projects that fall within this area are a priority to this First Nation. If you have any questions or concerns, please do not hesitate to contact me.

Thanks,

*Fallon Burch*
Consultation Coordinator
Chippewa of the Thames First Nation
Lands & Environment Department
Tel. (519) 289-2662 Ext. 213
Fax. (519) 289-3117

# Project Updates
# Moore Site HDPE Line Retrofit Project
# Kimball Pipeline Replacement Project

NOVA Chemicals®

Aamjiwnaang Environment Committee Meeting

April 08, 2015

# Agenda

1. Moore Site HDPE Line Retrofit Project

2. NOVA Kimball Pipeline Replacement Project

NOVA Chemicals®

# 2. NOVA Kimball Pipeline Replacement Project

# NOVA Kimball Pipeline Replacement Project

## Project Summary

- NOVA Chemicals is proposing to establish a pipeline system to deliver natural gas liquids (NGL) to the NOVA Corunna facility.
- The proposed pipeline will replace a dormant 4” NGL pipeline with a 12” pipeline approximately 4 kilometres in length in an existing right-of-way (RoW). The replacement pipeline will be connected to Plains Midstream's Windsor-Sarnia Pipeline at an existing valve site near Kimball Road.
- Also, a dormant 8” pipeline will be removed from the RoW as part of the Project. The general location of the proposed replacement NGL pipeline is illustrated on the following map.
- A Public Information Session regarding the proposed project was held on January 22, 2015.

# NOVA Kimball Pipeline Replacement Project

## Project Location

NOVA Chemicals®

# NOVA Kimball Pipeline Replacement Project

## Environmental Study

- The environmental study and subsequent Environmental Report for the Project will be completed according to the Ontario Energy Board's (OEB) "*Environmental Guidelines for the Location, Construction and Operation of Hydrocarbon Pipelines and Facilities in Ontario (2011)".*
- Under Section 90 of the *OEB Act*, the OEB's review and approval is needed before this project can proceed. NOVA Chemicals is planning to file an application, including the Environmental Report, for the proposed pipeline with the OEB in the summer of 2015.
- If approved, construction of the replacement pipeline is currently expected to begin no earlier than the summer of 2016.

# NOVA Kimball Pipeline Replacement Project

## Environmental Studies Completed To-Date

- Terrestrial Survey
  - Summer Breeding Bird Survey (June 2014)
  - Ecological Land Classification of vegetation communities (June 2014)
  - Fall Botanical Survey (August/September 2014)
- Aquatic Survey
  - Aquatic Habitat Assessment and Fish Community Sampling (November 2014)
- Built and Cultural Heritage
  - Cultural Heritage Overview (January 2015)

# NOVA Kimball Pipeline Replacement Project

## Upcoming Environmental Studies

- Terrestrial Survey
  - Snake Survey (in consultation with Ministry of Natural Resources and Forestry) (TBD if required)
  - Spring Botanical Survey (May 2015)
  - Spring Breeding Amphibian Survey (April – June 2015)
  - Spring Breeding Bird Survey (June 2015)
- Soil survey (for agricultural lands): Spring/Summer 2015
- Soybean Cyst Nematode survey (for agricultural lands): 2015 or 2016 (prior to construction)

# NOVA Kimball Pipeline Replacement Project

## Upcoming Environmental Studies (continued)

- Archaeological Survey
  - Stage 1 Archaeological Assessment via desktop/agency review was undertaken and recommends Stage 2 Archaeological Assessment

- Stage 2 Archaeological Assessment: Spring 2015
  - pedestrian survey on agricultural lands can be undertaken when fields are ploughed and weathered.
  - test pit survey can be undertaken when no snow is on the ground and the ground is not frozen.

# Questions?

NOVA Chemicals®

PERFORMANCE DRIVEN. CUSTOMER INSPIRED.

www.novachemicals.com

Responsible Care®
Our commitment to sustainability.

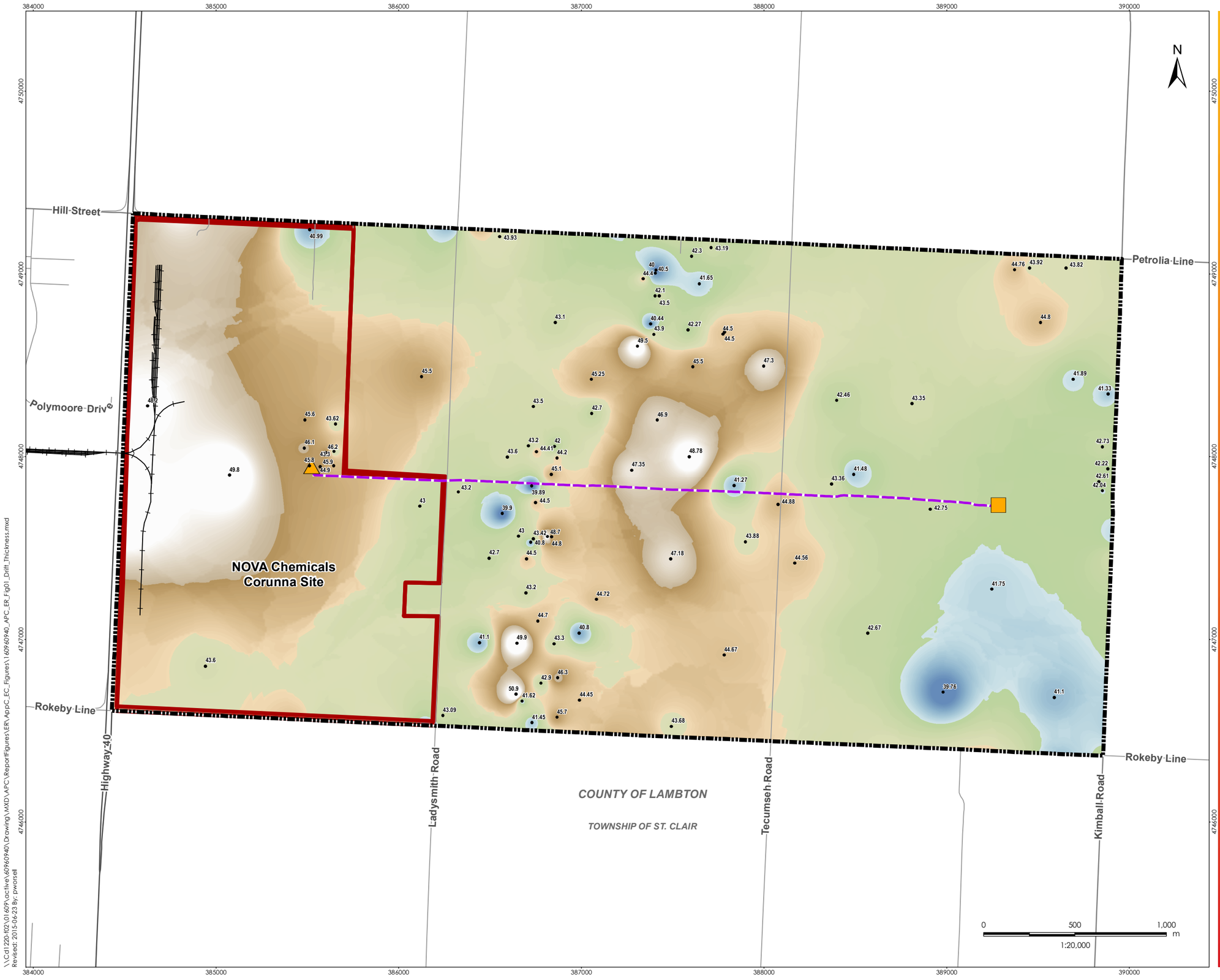
---

The information contained herein is provided for general reference purposes only. By providing the information contained herein, NOVA Chemicals makes no guaranty or warranty and does not assume any liability, with respect to the accuracy or completeness of such information, or product results in any specific instance, and hereby expressly disclaims any implied warranties of merchantability or fitness for a particular purpose or any other warranties or representations whatsoever, expressed or implied. Nothing contained herein shall be construed as a license to use the products of NOVA Chemicals in any manner that would infringe any patent. Nothing herein shall be copied, reproduced, distributed or otherwise used without the express written permission of NOVA Chemicals.

NOVA Chemicals® is a registered trademark of NOVA Brands Ltd.; authorized use.
Responsible Care® is a registered trademark of the Chemistry Industry Association of Canada (CIAC) in Canada and is a registered service mark of the American Chemistry Council (ACC) in the United States.

# Appendix C:

# Existing Conditions Figures




Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Drift Thickness Data Point (in metres)

**Drift Thickness (metres)**

- High : 50.7659
- Low : 39.7627

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.
3. Gao, C., Shirota, J., Kelly, R.I., Brunton, F.R. and van Haaften, S. 2006. Bedrock topography and overburden thickness mapping, southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 207.

June 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

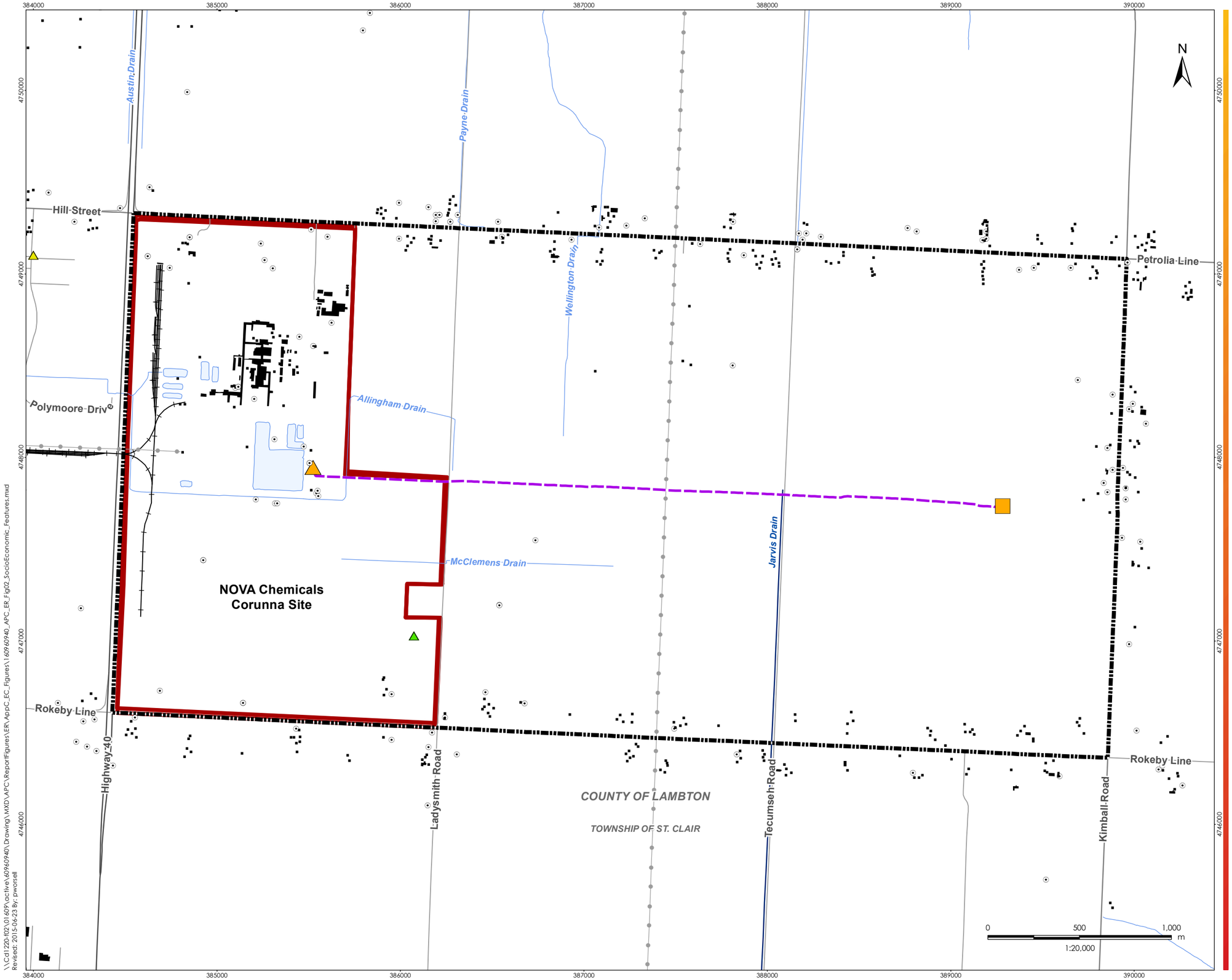
Figure No.

**1**

Title

# Drift Thickness

\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\ER\AppC_EC_Figures\160960940_APC_ER_Fig01_Drift_Thickness.mxd
Revised: 2015-06-23 By: pworsell




Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody
- Building
- Landfill - Active (Ministry of Environment and Climate Change (MOECC))
- Waste Disposal Site (Township of St. Clair Official Plan)
- MOECC Water Well Record

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015; Ontario Ministry of Environment and Climate Change © Queen's Printer for Ontario, 2015; © Township of St. Clair, 2015.

June 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

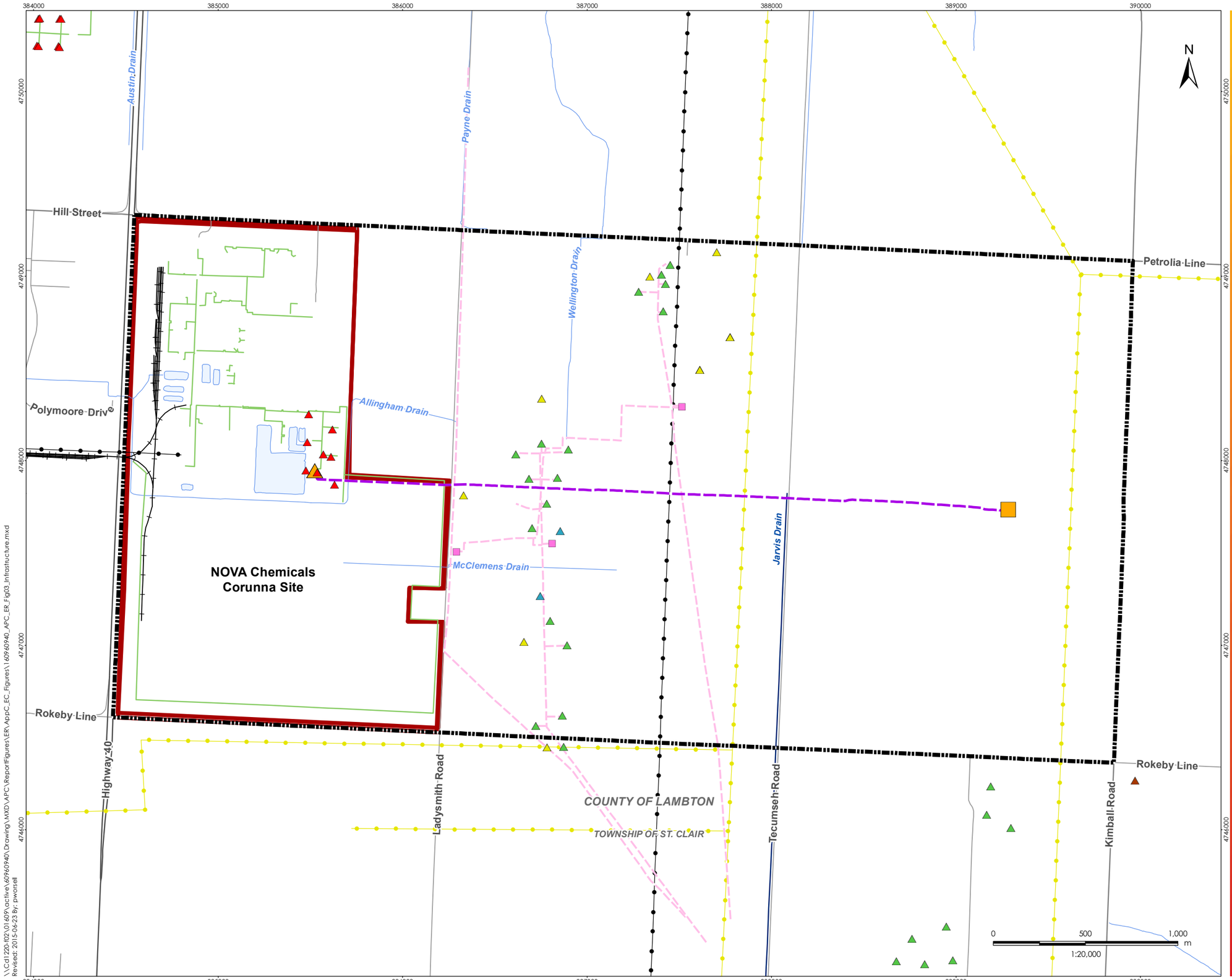
Figure No.

**2**

Title

# Socio-Economic Features

\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\Report\Figures\ER\AppC_EC_Figures\160960940_APC_ER_Fig02_SocioEconomic_Features.mxd
Revised: 2015-06-23 By: pworsell




\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\ER_AppC_EC_Figures\160960940_APC_ER_Fig03_Infrastructure.mxd
Revised: 2015-06-23 By: pworsell

Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody
- Cavern Storage Well
- Natural Gas Storage Well
- Oil Well/Gas Show
- Oil Well
- Oil and Gas Well
- Enbridge Valve Site
- Enbridge Buried Pipeline
- Gas Pipeline (Ontario Oil, Gas and Salt Resource Library)

**Utility Lines (Land Information Ontario/Ministry of Natural Resources and Forestry)**

- Hydro Line
- NOVA Chemicals Pipeline

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015; © Ontario Oil, Gas and Salt Resource Library, 2015.

* Locations of existing and proposed pipelines are approximate.

June 2015
160960940

Client/Project

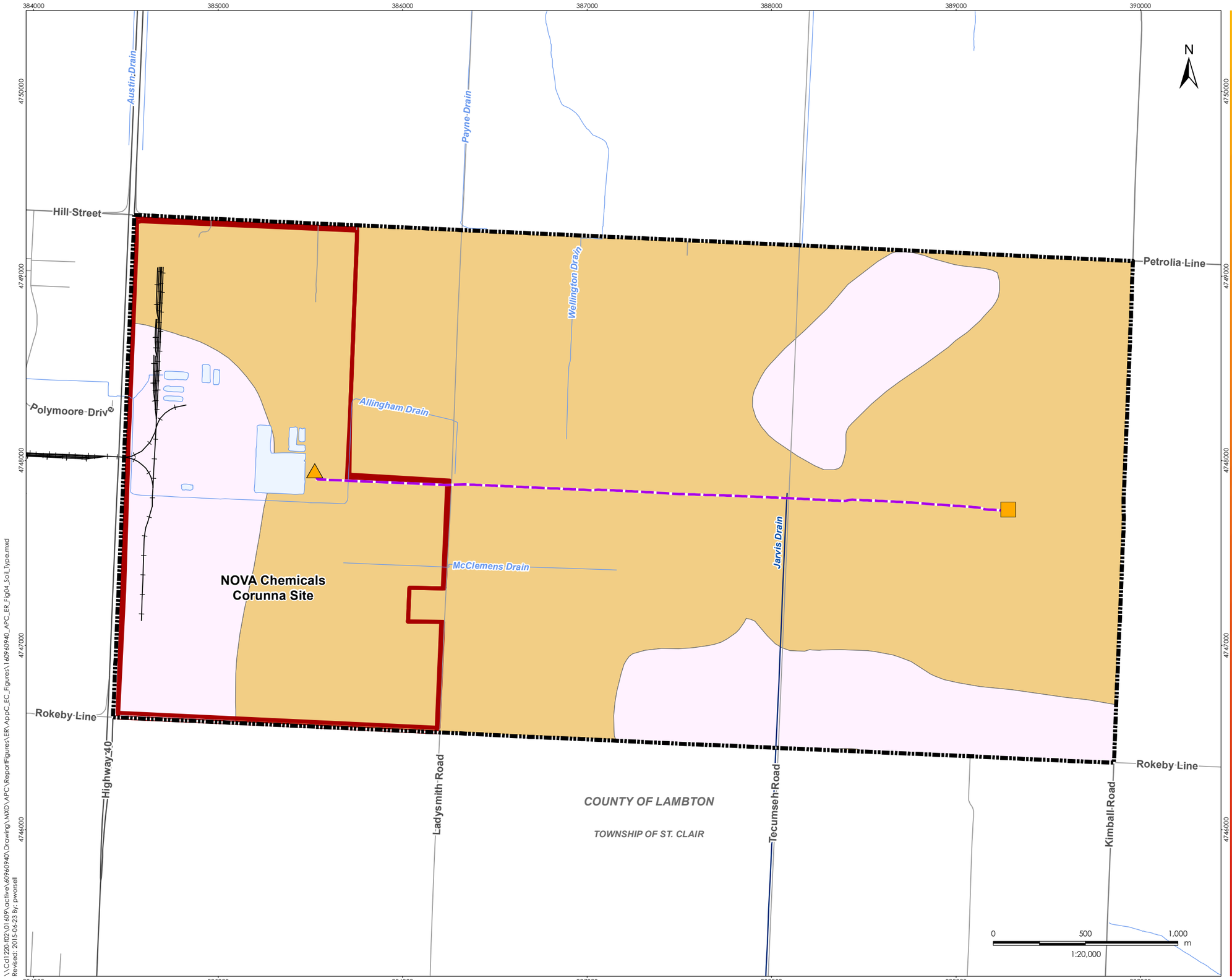
NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

Figure No.

**3**

Title

# Existing Infrastructure




Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody

**Soil Types**

- BROOKSTON CLAY
- CAISTOR CLAY

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.

June 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

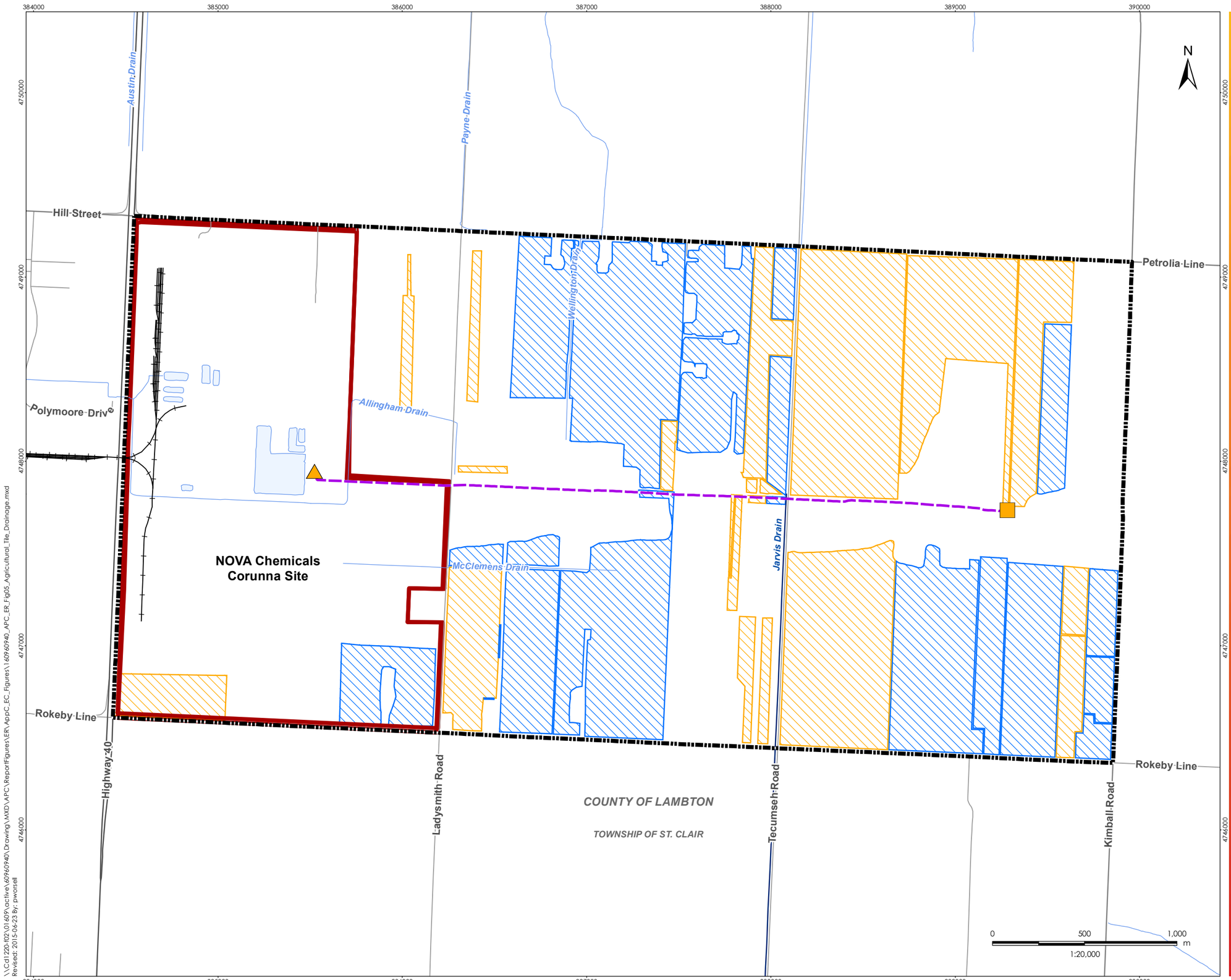
Figure No.

**4**

Title

# Soil Types

\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\ER_AppC_EC_Figures\160960940_APC_ER_Fig04_Soil_Type.mxd
Revised: 2015-06-23 By: pworsell




Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody

**Drainage Type**

- Random
- Systematic

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.

June 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

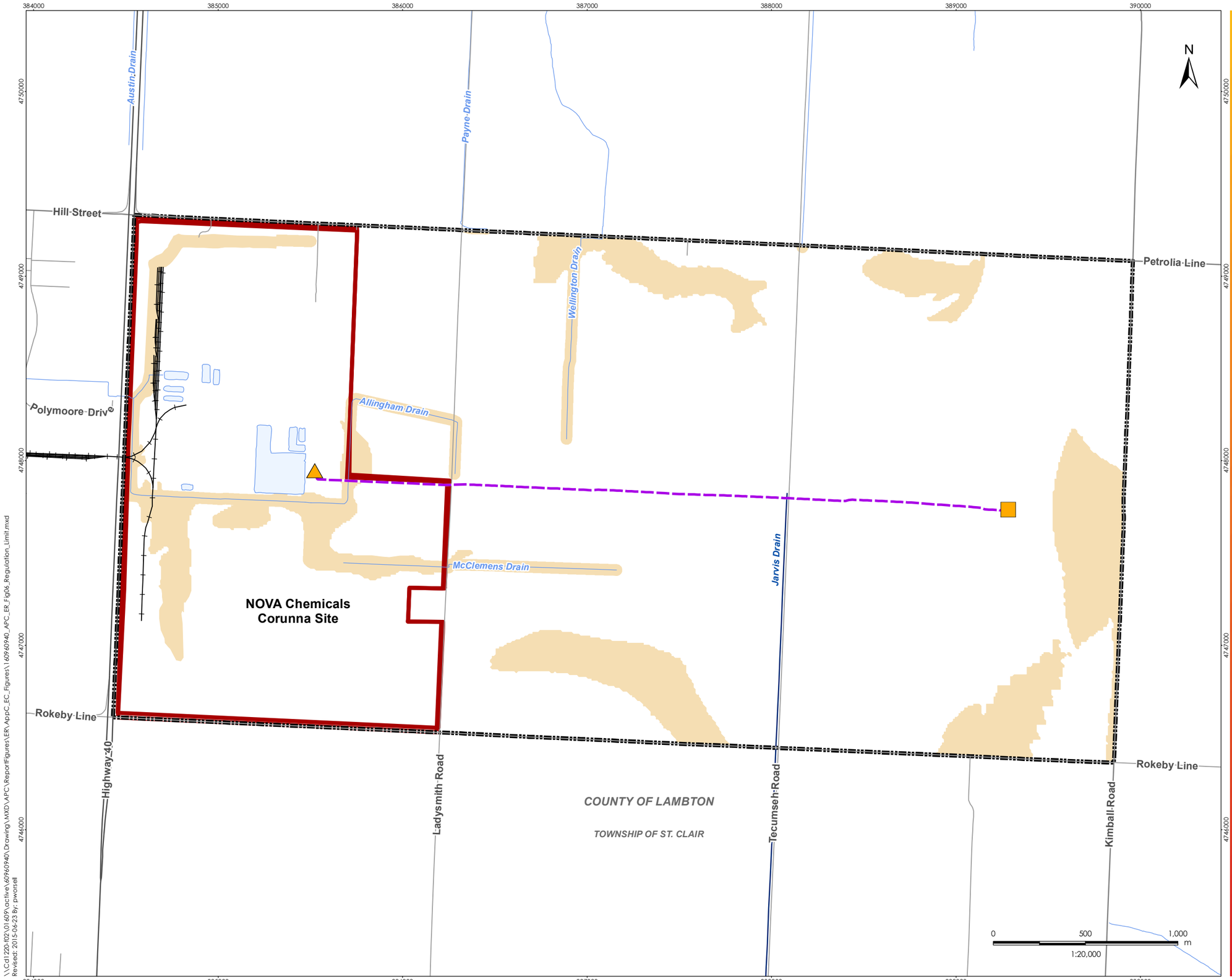
Figure No.

**5**

Title

# Agricultural Tile Drainage

\\Cd1220-f02\01.609\active\160960940\Drawing\MXD\APC\ReportFigures\ERAppC_EC_Figures\160960940_APC_ER_Fig05_Agricultural_Tile_Drainage.mxd
Revised: 2015-06-23 By: pworsell




\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\ER_AppC_EC_Figures\160960940_APC_ER_Fig06_Regulation_Limit.mxd
Revised: 2015-06-23 By: pworsell

Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody
- Regulation Limit

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015; © St. Clair Region Conservation Authority, 2015.

June 2015
160960940

Client/Project

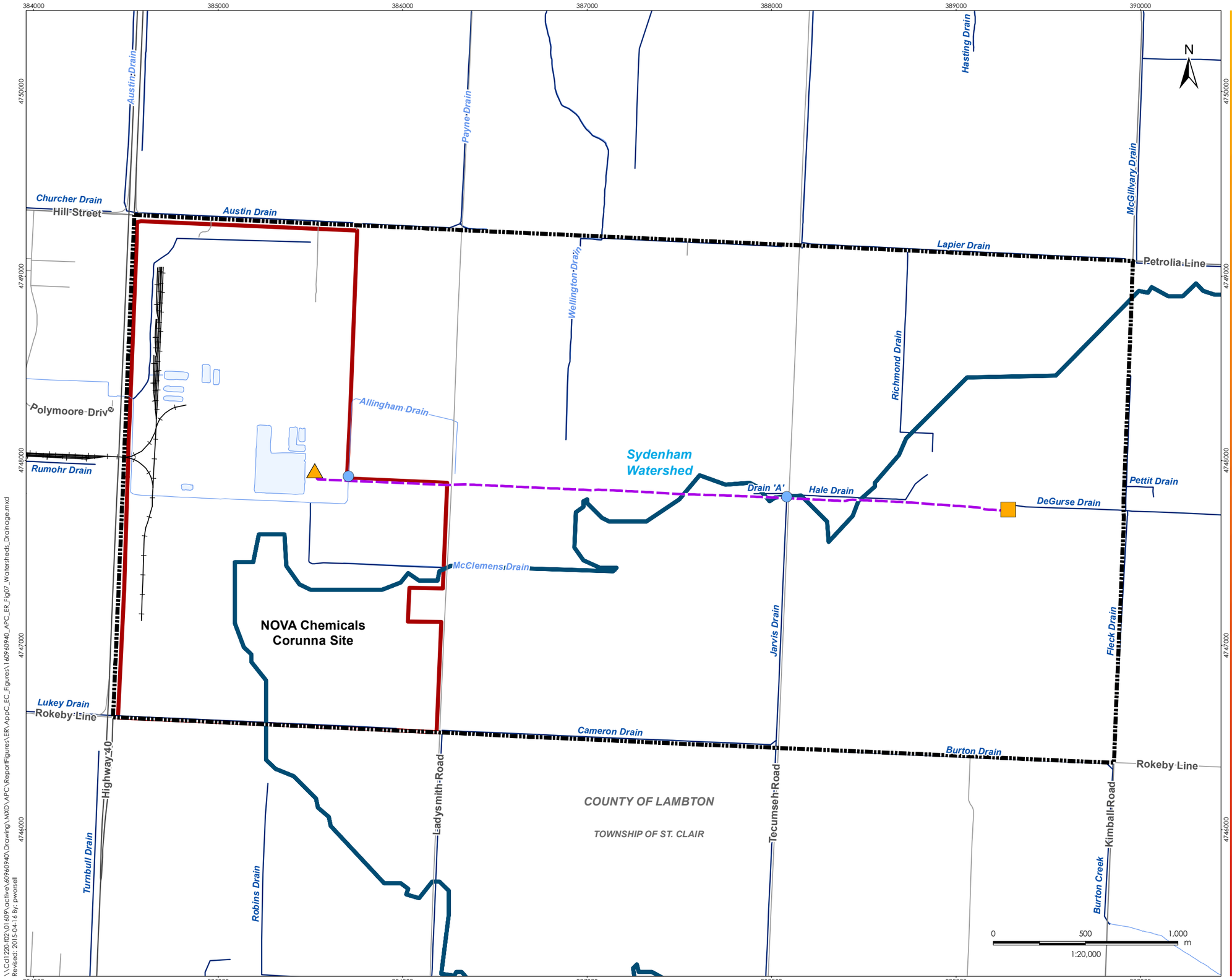
NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

Figure No.

**6**

Title

# Regulation Limit




\\Cd1220-f02\01609\active\160960940\Drawing\MXD\APC\Report\Figures\ER\AppC_EC_Figures\160960940_APC_ER_Fig07_Watersheds_Drainage.mxd
Revised: 2015-04-16 By: pworsell

Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody
- Subwatershed Boundary
- Potential Watercourse Crossing

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.

April 2015
160960940

Client/Project

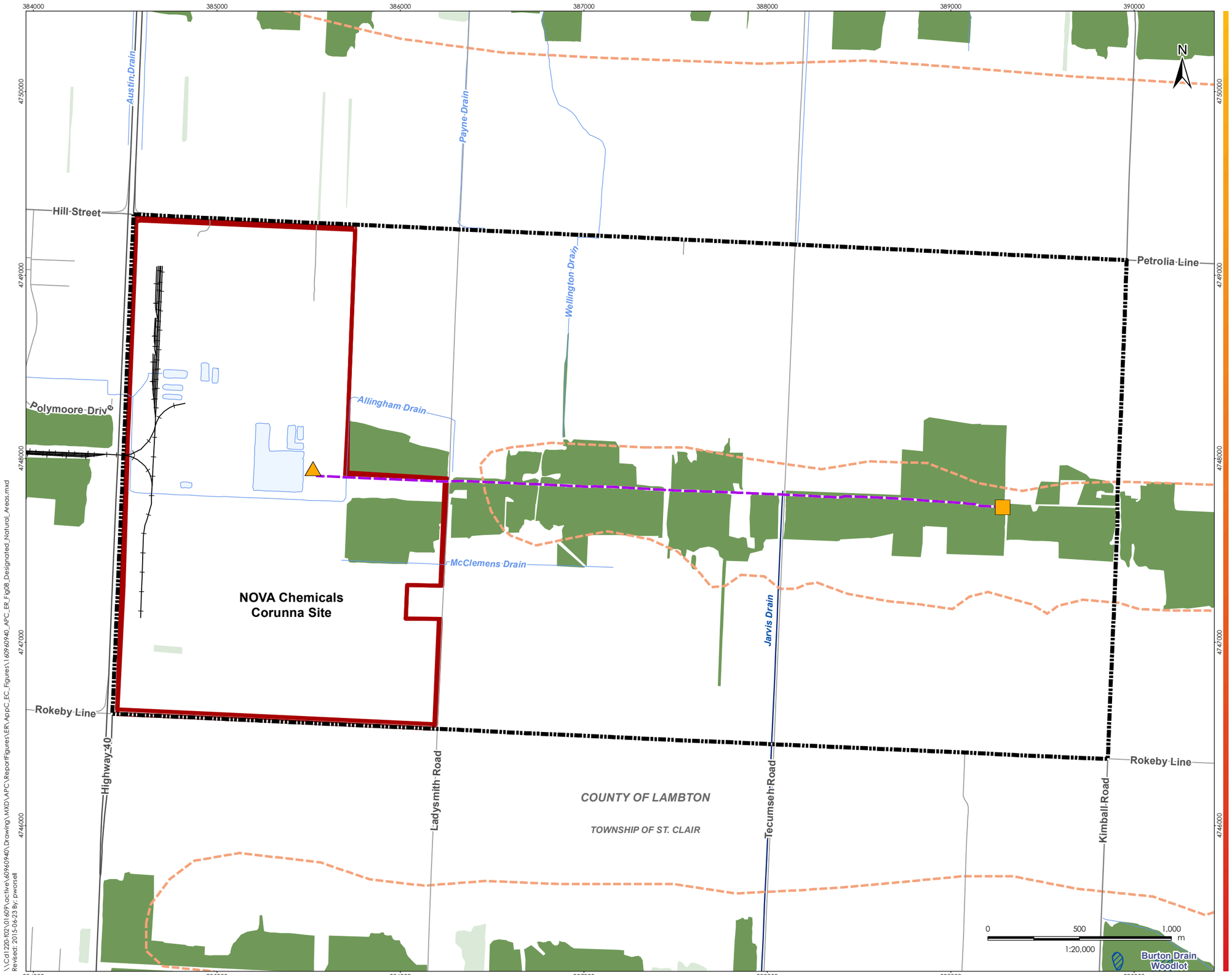
NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

Figure No.

**7**

Title

# Watersheds and Drainage




Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody
- Wooded Area
- Significant Wooded Area
- Wetland, Provincially Significant (Evaluated/Unevaluated)
- Secondary Natural Heritage

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015; © County of Lambton, 2015.

June 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

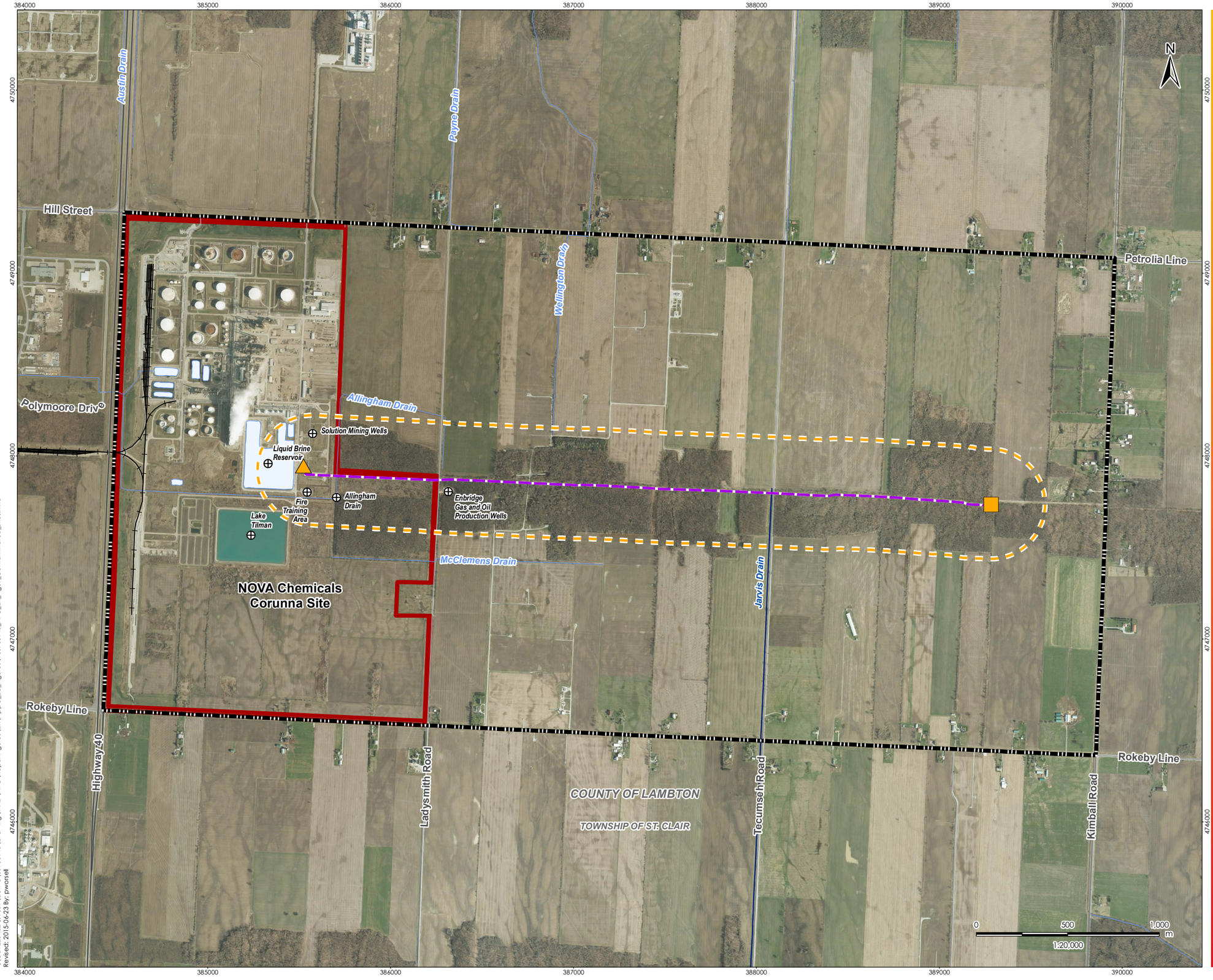
Figure No.

**8**

Title

# Designated Natural Areas

\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\ER_AppC_EC_Figures\160960940_APC_ER_Fig08_Designated_Natural_Areas.mxd
Revised: 2015-06-23 By: pworsell




Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- Preferred Route - 300m Buffer
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody
- Potentially Contaminated Site

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.
3. Orthoimagery © First Base Solutions, 2015. Imagery taken in 2010.

June 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

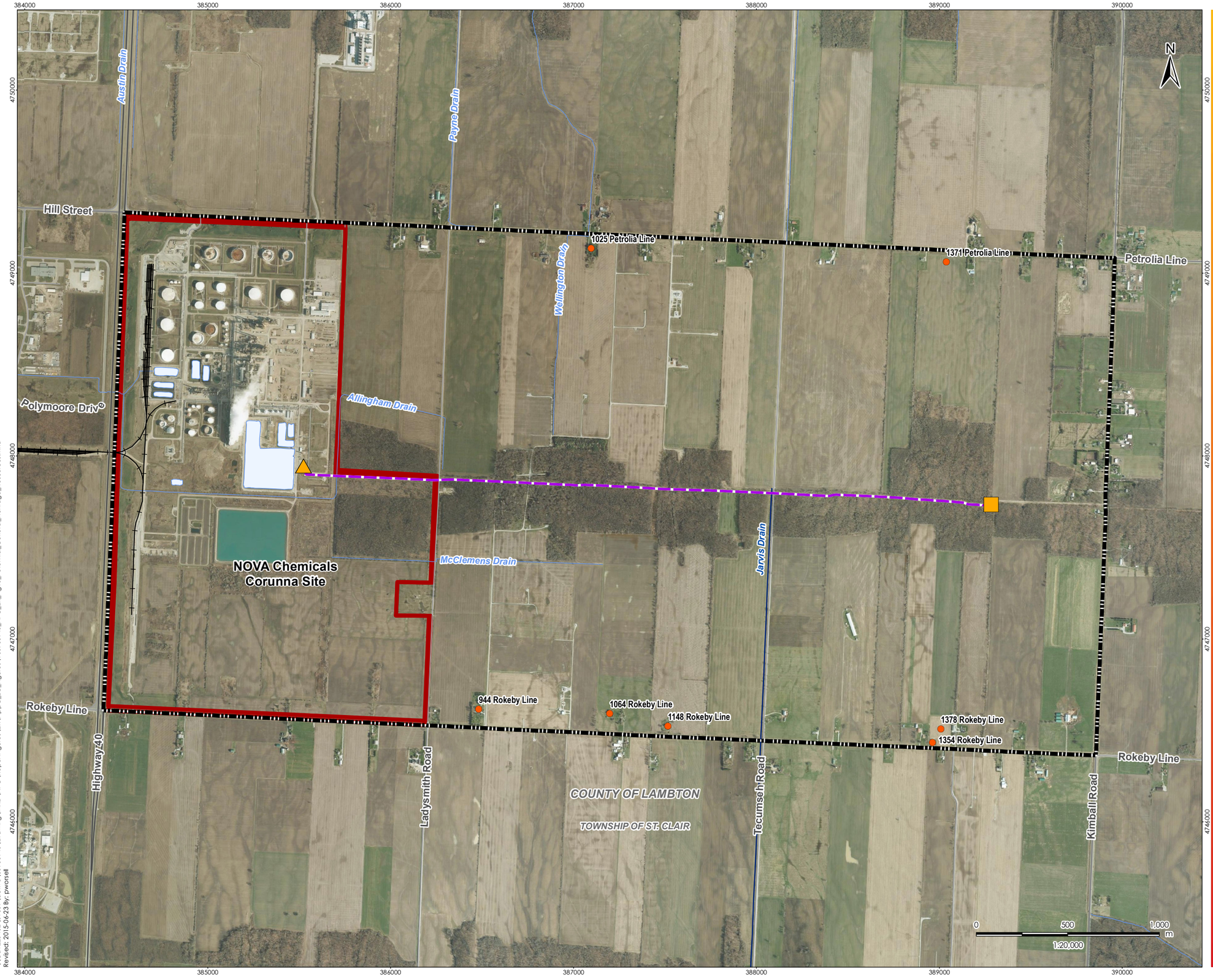
Figure No.

**9**

Title

# Contaminated Sites

\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\ER\AppC_EC_Figures\160960940_APC_ER_Fig09_Contaminated_Sites.mxd
Revised: 2015-06-23 By: pworsell




Stantec

**Legend**

- Study Area
- New Valve Site
- Existing Valve Site
- Preferred Route
- NOVA Chemicals Corunna Site
- Highway
- Major Road
- Minor Road
- Railway, Active
- Constructed Drain
- Watercourse
- Waterbody
- Potential Cultural Heritage Resource

**Notes**

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.
3. Orthoimagery © First Base Solutions, 2015. Imagery taken in 2010.

June 2015
160960940

Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

Figure No.

**10**

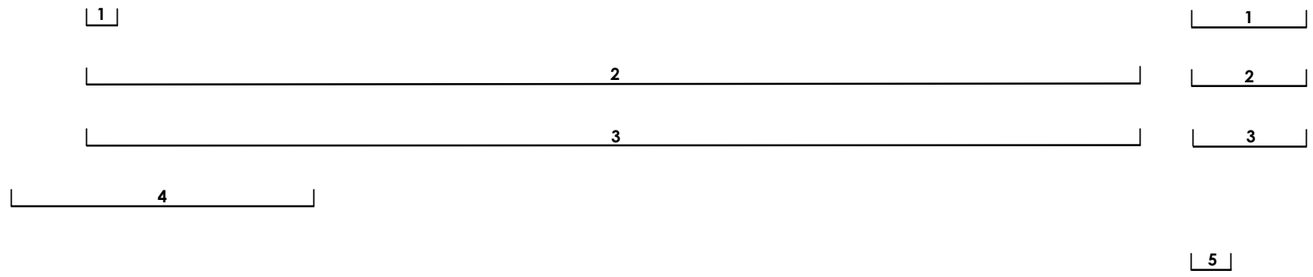
Title

**Potential Cultural Heritage Resources**

\\Cdl220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\ER\AppC_EC_Figures\160960940_APC_ER_Fig10_Potential_Cultural_Heritage_Resources.mxd
Revised: 2015-06-23 By: pworsell

# Appendix D:

# Mitigation Photomosaic




1. Water course Crossing or Construction Activity Adjacent to a Water course. Refer to section 4.3.1 (Surficial Hydrology) and 4.3.2 (Aquatic Species and Habitat) of the ER.
2. Potential for encountering wildlife. Refer to Section 4.3.4 (Wildlife, Wildlife Habitat and Species) at Risk of the ER.
3. Vegetation Removal. Refer to Section 4.3.3(Designated Natural Areas and Vegetation) of the ER.
4. SCRCA Regulated Area. Refer to Section 4.2.9 (Natural Hazards) of the ER.
5. Road Crossing. Ensure notifications and crossing completed in compliance to crossing permit from municipality. Refer to Section 4.4.11 (Infrastructure) of the ER.
6. Foreign Utility Crossing. Ensure notifications and crossing completed in compliance to crossing permit from other utility (e.g. Hydro One, Enbridge, Union Gas) as appropriate. Refer to Section 4.4.11 (Infrastructure) of the ER.
7. Agricultural Lands and Agricultural Infrastructure. Refer to section 4.2.5 (Soil and Soil Capability), 4.2.6 (Subsurface Soils), 4.2.7 Soybean Cyst Nematode (SCN) and 4.2.8 (Agricultural Tile Drains) of the ER.
8. Construction related traffic adjacent to residences. Refer to Section 4.4.1 (Residences & Businesses) of the ER.

0 75 150 m
1:3,000

\\Cd1220-f02\01609\active\60960940\Drawing\MXD\APC\ReportFigures\Alignment_Drawings\160960940_Fig01_Pipeline_Route_Alignment_Dwgs.mxd
Revised: 2015-06-10 By: pworsell

June 2015
160960940

Stantec

**Notes**

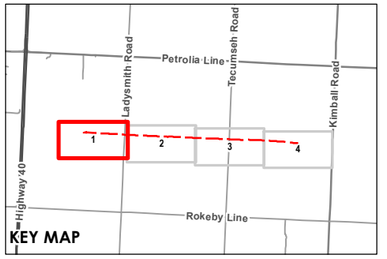
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.
3. Orthoimagery © First Base Solutions, 2015. Imagery taken in 2010.

**Legend**

**Project Components**
- Preferred Route
- Pipeline ROW

**Existing Features**
- Minor Road
- Constructed Drain
- Watercourse
- Waterbody
- Wooded Area
- Enbridge Valve Site
- Cavern Storage Well
- MOECC Water Well Record
- Enbridge Buried Pipeline
- NOVA Chemicals Pipeline
- CA Regulation Limit

**Agricultural Tile Drainage**
- Random




Client/Project
NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

Figure No.
**1.1**

Title
**Pipeline Route Alignment Sheets**

1

6

2

3

6

2

3

1. Water course Crossing or Construction Activity Adjacent to a Water course. Refer to section 4.3.1 (Surficial Hydrology) and 4.3.2 (Aquatic Species and Habitat) of the ER.
2. Potential for encountering wildlife. Refer to Section 4.3.4 (Wildlife, Wildlife Habitat and Species) at Risk of the ER.
3. Vegetation Removal. Refer to Section 4.3.3(Designated Natural Areas and Vegetation) of the ER.
4. SCRCA Regulated Area. Refer to Section 4.2.9 (Natural Hazards) of the ER.
5. Road Crossing. Ensure notifications and crossing completed in compliance to crossing permit from municipality. Refer to Section 4.4.11 (Infrastructure) of the ER.
6. Foreign Utility Crossing. Ensure notifications and crossing completed in compliance to crossing permit from other utility (e.g. Hydro One, Enbridge, Union Gas) as appropriate. Refer to Section 4.4.11 (Infrastructure) of the ER.
7. Agricultural Lands and Agricultural Infrastructure. Refer to section 4.2.5 (Soil and Soil Capability), 4.2.6 (Subsurface Soils), 4.2.7 Soybean Cyst Nematode (SCN) and 4.2.8 (Agricultural Tile Drains) of the ER.
8. Construction related traffic adjacent to residences. Refer to Section 4.4.1 (Residences & Businesses) of the ER.

0 75 150 m

1:3,000

\\Cal1220-f02\01609\active\160960940\Drawing\MXD\APC\ReportFigures\Alignment_Drawings\160960940_Fig01_Pipeline_Route_Alignment_Dwgs.mxd
Revised: 2015-06-10 By: pworsell

June 2015
160960940

Stantec

**Notes**

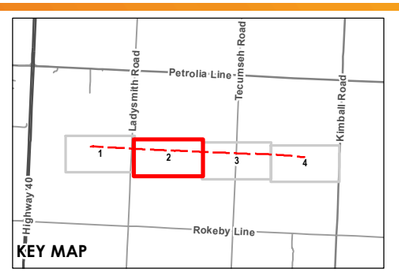
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.
3. Orthoimagery © First Base Solutions, 2015. Imagery taken in 2010.

**Legend**

**Project Components**
- Preferred Route
- Pipeline ROW

**Existing Features**
- Constructed Drain
- Watercourse
- Wooded Area
- Enbridge Valve Site
- Natural Gas Storage Well
- Oil Well/Gas Show
- Oil Well
- MOECC Water Well Record
- Enbridge Buried Pipeline
- Hydro Line
- CA Regulation Limit

**Agricultural Tile Drainage**
- Random
- Systematic




Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

Figure No.

**1.2**

Title

# Pipeline Route Alignment Sheets

6

2 2 2

3 3 3

5,1

1

7

1. Water course Crossing or Construction Activity Adjacent to a Water course. Refer to section 4.3.1 (Surficial Hydrology) and 4.3.2 (Aquatic Species and Habitat) of the ER.
2. Potential for encountering wildlife. Refer to Section 4.3.4 (Wildlife, Wildlife Habitat and Species) at Risk of the ER.
3. Vegetation Removal. Refer to Section 4.3.3(Designated Natural Areas and Vegetation) of the ER.
4. SCRCA Regulated Area. Refer to Section 4.2.9 (Natural Hazards) of the ER.
5. Road Crossing. Ensure notifications and crossing completed in compliance to crossing permit from municipality. Refer to Section 4.4.11 (Infrastructure) of the ER.
6. Foreign Utility Crossing. Ensure notifications and crossing completed in compliance to crossing permit from other utility (e.g. Hydro One, Enbridge, Union Gas) as appropriate. Refer to Section 4.4.11 (Infrastructure) of the ER.
7. Agricultural Lands and Agricultural Infrastructure. Refer to section 4.2.5 (Soil and Soil Capability), 4.2.6 (Subsurface Soils), 4.2.7 Soybean Cyst Nematode (SCN) and 4.2.8 (Agricultural Tile Drains) of the ER.
8. Construction related traffic adjacent to residences. Refer to Section 4.4.1 (Residences & Businesses) of the ER.

0 75 150 m

1:3,000

\\Cd1220-f02\01609\active\160960940\Drawing\MXD\APC\ReportFigures\Alignment_Drawings\160960940_Fig01_Pipeline_Route_Alignment_Dwgs.mxd
Revised: 2015-06-10 By: pworsell

June 2015
160960940

Stantec

**Notes**

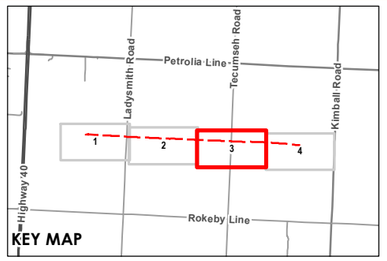
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.
3. Orthoimagery © First Base Solutions, 2015. Imagery taken in 2010.

**Legend**

**Project Components**
- Preferred Route
- Pipeline ROW

**Existing Features**
- Minor Road
- Constructed Drain
- Wooded Area
- Enbridge Buried Pipeline
- Gas Pipeline (Ontario Oil, Gas and Salt Resource Library)

**Agricultural Tile Drainage**
- Random
- Systematic




Client/Project

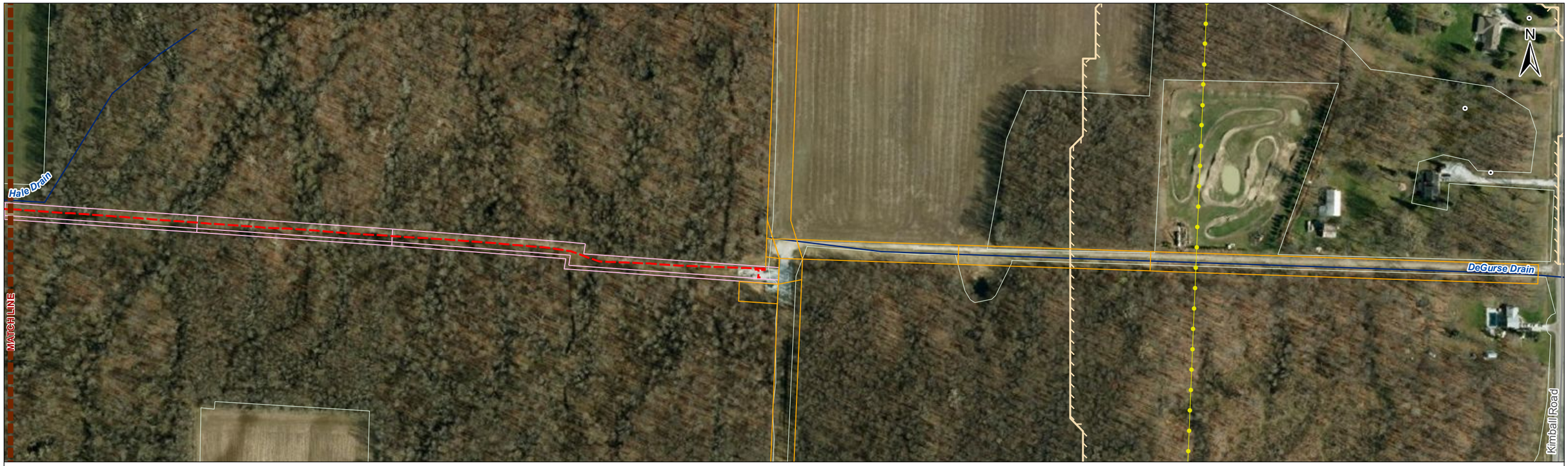
NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

Figure No.

**1.3**

Title

# Pipeline Route Alignment Sheets




1

2

3

2

8

1. Water course Crossing or Construction Activity Adjacent to a Water course. Refer to section 4.3.1 (Surficial Hydrology) and 4.3.2 (Aquatic Species and Habitat) of the ER.
2. Potential for encountering wildlife. Refer to Section 4.3.4 (Wildlife, Wildlife Habitat and Species) at Risk of the ER.
3. Vegetation Removal. Refer to Section 4.3.3(Designated Natural Areas and Vegetation) of the ER.
4. SCRCA Regulated Area. Refer to Section 4.2.9 (Natural Hazards) of the ER.
5. Road Crossing. Ensure notifications and crossing completed in compliance to crossing permit from municipality. Refer to Section 4.4.11 (Infrastructure) of the ER.
6. Foreign Utility Crossing. Ensure notifications and crossing completed in compliance to crossing permit from other utility (e.g. Hydro One, Enbridge, Union Gas) as appropriate. Refer to Section 4.4.11 (Infrastructure) of the ER.
7. Agricultural Lands and Agricultural Infrastructure. Refer to section 4.2.5 (Soil and Soil Capability), 4.2.6 (Subsurface Soils), 4.2.7 Soybean Cyst Nematode (SCN) and 4.2.8 (Agricultural Tile Drains) of the ER.
8. Construction related traffic adjacent to residences. Refer to Section 4.4.1 (Residences & Businesses) of the ER.

0 75 150 m

1:3,000

\\Cd1220-f02\01609\active\160960940\Drawing\MXD\APC\ReportFigures\Alignment_Drawings\160960940_Fig01_Pipeline_Route_Alignment_Dwgs.mxd
Revised: 2015-06-10 By: pworsell

June 2015
160960940

Stantec

**Notes**

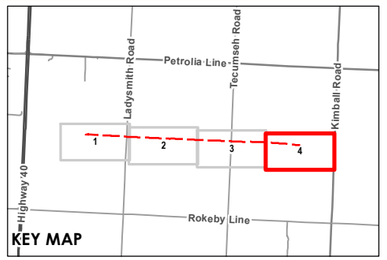
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2015.
3. Orthoimagery © First Base Solutions, 2015. Imagery taken in 2010.

**Legend**

**Project Components**
- Preferred Route
- Pipeline ROW
- Additional Easement

**Existing Features**
- Major Road
- Constructed Drain
- Wooded Area
- MOECC Water Well Record
- Gas Pipeline (Ontario Oil, Gas and Salt Resource Library)
- CA Regulation Limit

**Agricultural Tile Drainage**
- Random
- Systematic




Client/Project

NOVA Chemicals (Canada) Ltd.
Kimball Pipeline Replacement Project

Figure No.

**1.4**

Title

# Pipeline Route Alignment Sheets

Stantec

# Memo

| | | | |
|---|---|---|---|
| To: | Ms. Zora Crnojacki, Ontario Energy Board, Project Advisor, Applications and Regulatory Audit, Ontario Pipeline Coordinating Committee, Ontario Energy Board, 2300 Yonge St, 26th Floor, PO Box 2319 | From: | Rob Rowland, P.Geo., Senior Project Manager<br>Stantec Consulting Ltd<br>1-70 Southgate Drive<br>Guelph ON N1E 7B8 |
| File: | 160960940 | Date: | June 24, 2015 |

**Reference: Amendments to NOVA CHEMICALS (CANADA) LTD. KIMBALL PIPELINE REPLACEMENT PROJECT: ENVIRONMENTAL REPORT**

The following summarizes amendments made to the aforementioned document subsequent to submission of the report to the Ontario Pipeline Coordination Committee (OPCC) on May 7th, 2015.

Cover Page

- The following italicized text is to be added after the project name: "*Revised* Environmental Report".
- The date of the report to be changed to "June 24, 2015".

Section 1.1 Introduction

- The following italicized text is to be added in the first sentence of the third paragraph: "natural gas *liquids* pipeline".

Section 1.2.4 The OEB Regulatory Process

- The following text is to be removed from the second sentence of the second paragraph: "and temporary land use requirements".

Section 2.5.4 Aquatic Characteristics:

- Watercourse number for alternate route C is to be changed from 1 to 2.

Section 2.5.8 Discussion of Assessment

- Minimal impacts to agricultural operations are anticipated; therefore the fourth sentence of the third paragraph is to be changed to: "As a result, the impact to agricultural operations is minimal as there is very little land under agricultural production".

Section 2.7 Step 5: Confirmation of the Preferred Route

- The following text is to be removed from the first sentence of the second paragraph: "permanent easement and temporary land use requirements".
- The following italicized text is to be added at the end of the first sentence : "*within the RoW*".

Section 4.1.1 Construction

- The following text is to be removed from Site Preparation activity: "and temporary workers".

Section 4.2.5 Soil and Soil Capability, Potential Impacts

**Reference: Amendments to NOVA CHEMICALS (CANADA) LTD. KIMBALL PIPELINE REPLACEMENT PROJECT: ENVIRONMENTAL REPORT**

- The following line is to be removed from the first paragraph: "This infrastructure will not require construction on agricultural lands, and therefore there is little potential to impact agricultural soils found onsite".
- The following italicized text is to be added in the first sentence of the first paragraph: "The Project will be confined to an existing RoW where the proposed pipeline will be installed; *an existing access road running from Kimball Road to the Existing Valve Site will be used for a short period of time. The proposed infrastructure will impact a very limited amount of agricultural land, and therefore there is the potential to impact agricultural soils found onsite. Agricultural land also abuts the RoW for short distances*".
- The following text is to be added as a new paragraph after the first paragraph: "After the Proposed Pipeline comes into service, vehicular traffic on the access road will increase slightly due to ongoing monitoring and maintenance activities conducted at the Existing Valve Site".

Section 4.2.5 Soil and Soil Capability, Mitigative/Protective Measures

- The following text is to be added at the end of the second paragraph:

  "On agricultural lands, subsoil should be stored on lands stripped of topsoil (subsoil on subsoil).

  Following periods of excessive rainfall or saturated soil conditions, construction activities on agricultural lands should be suspended. During wet soil conditions heavy tracked and rubber-tired vehicles should be restricted from movement on agricultural soils. Usually, construction may continue from gravel work surfaces during wet soil conditions.

  To the extent feasible, construction activities should occur during drier times of the year. Lands affected by heavy rainfall events and wet soil conditions should be monitored, to avoid the potential for topsoil and subsoil mixing. Construction activities should be temporarily halted on lands where excessively wet soil conditions are encountered. NOVA Chemicals' on-site inspection team should determine when construction activities may be resumed.

  If a situation develops that necessitates construction during wet soil conditions, soil protection measures should be implemented, such as: confining construction activity to the narrowest area practical, installing surface protection measures, and using wide tracked or low ground pressure vehicles.

  During construction activities, weather should be monitored to identify the potential onset of high wind conditions which can cause wind erosion. In the event that high winds occur, the contractor should implement protective measures such as:

  - suspend earth moving operations ;
  - apply dust suppressants; and
  - protect soil stockpiles with a cover, barrier or windscreen.

**Reference: Amendments to NOVA CHEMICALS (CANADA) LTD. KIMBALL PIPELINE REPLACEMENT PROJECT: ENVIRONMENTAL REPORT**

In conjunction with the above measures, all required materials and equipment should be readily accessible and available for use as required.

On agricultural lands, topsoil stripping, handling and storage will be independent from subsoil material to minimize mixing and compaction. Topsoil stripping on the easement should be sufficiently wide to ensure that topsoil will be stockpiled on topsoil and subsoil will be stockpiled on subsoil. Inspection staff should ensure separation between topsoil storage piles and subsoil storage piles is maintained to reduce potential for soil mixing. If topsoil is required to be imported it should be tested for soybean cyst nematode to ensure that it is not contaminated (see Section 4.2.7).

On forested land, the organic/duff layer should be stripped where feasible. Organics and subsoil should be stripped and stockpiled separately to avoid mixing.

Where agricultural land adjacent to the RoW is typically accessed by crossing the RoW alternate access to the fields will be provided for the farm operator for the short period of time during construction that access across the RoW is not possible.

Section 4.2.6 Soybean Cyst Nematode (SCN)

- The following text header is to be removed directly under the section heading: "Potential Impacts".

Section 4.2.6 Soybean Cyst Nematode (SCN), Potential Impacts

- The following text is to be removed in the last sentence of the first paragraph: "not occur on". It is to be replaced with: "impact very little".
- The following text is to be removed in the last sentence of the paragraph: "soils". It is to be replaced with: "soil".

Section 4.2.8 Natural Hazards, Mitigation and Protective Measures

- The following text is to be removed in the second sentence of the first paragraph: "temporary".
- The second sentence of the first paragraph is to begin with "Workspaces".

Section 4.3.1 Surficial Hydrology, Surface Water Features, DeGurse Drain

- The following text is to be added at the end of the first sentence of the second paragraph: "Two drains (Jarvis Drain and Allingham Drain) will be crossed by the pipeline".
- The following text is to be added at the end of the second paragraph: "A permanent culvert will be installed in Jarvis Drain to facilitate access to the RoW from Tecumseh Road".

Section 4.3.2 Aquatic Species and Habitat, Mitigation and Protective Measures, In-water Timing Windows

- The following italicized text is to be added in the second paragraph: "Based on the warmwater fish community in *Jarvis Drain and* Allingham Drain, in-water works in the Study Area are prohibited between March 15 and June 30".

**Reference: Amendments to NOVA CHEMICALS (CANADA) LTD. KIMBALL PIPELINE REPLACEMENT PROJECT: ENVIRONMENTAL REPORT**

Section 4.3.3 Designated Natural Areas and Vegetation, Mitigation and Protective Measures

- The following italicized text is to be added to the ninth bullet: "A re-vegetation program *appropriate to the land use* should be initiated".
- The following text is to be removed from the ninth bullet: "temporary".

Section 4.3.4 Wildlife, Wildlife Habitat and Species at Risk, Species at Risk

- The following text is to be removed from the last paragraph: "and temporary workspace".

Section 4.4.1 Residents and Businesses, Potential Impacts

- The following text is to be added after the first sentence of the first paragraph: "An existing access road from Kimball Road will be utilised to access the Existing Valve Site. Use of this road is anticipated to be of fairly short duration to complete construction activities at the Existing Valve Site".

Table 4.5 Summary of Potential Effects and Recommended Mitigation and Protective Measures

- The following text is to be removed from the Soil and Soil Capability, Section 4.2.5, Potential Impacts, third bullet: "the agricultural productivity of the soils along the proposed pipeline route".
- The following italicized text is to be added to the Soil and Soil Capability, Section 4.2.5, Potential Impacts, third bullet: "Potential to impact *a limited amount of agricultural land and agricultural soils found onsite*".
- The following text is to be added to the Soil and Soil Capability, Section 4.2.5, Mitigation and Protective Measures, after the fifth bullet:
  - "On agricultural lands, subsoil should be stored on lands stripped of topsoil (subsoil on subsoil).
  - Following periods of excessive rainfall or saturated soil conditions, construction activities on agricultural lands should be suspended. During wet soil conditions heavy tracked and rubber-tired vehicles should be restricted from movement on agricultural soils. Usually, construction may continue from gravel work surfaces during wet soil conditions.
  - To the extent feasible, construction activities should occur during drier times of the year. Lands affected by heavy rainfall events and wet soil conditions should be monitored, to avoid the potential for topsoil and subsoil mixing. Construction activities should be temporarily halted on lands where excessively wet soil conditions are encountered. NOVA Chemicals' on-site inspection team should determine when construction activities may be resumed.
  - If a situation develops that necessitates construction during wet soil conditions, soil protection measures should be implemented, such as: confining construction activity to the narrowest area practical, installing surface protection measures, and using wide tracked or low ground pressure vehicles.
  - During construction activities, weather should be monitored to identify the potential onset of high wind conditions which can cause wind erosion. In the event that high winds occur, the contractor should implement protective measures such as:

  - suspend earth moving operations ;
  - apply dust suppressants; and
  - protect soil stockpiles with a cover, barrier or windscreen.

- In conjunction with the above measures, all required materials and equipment should be readily accessible and available for use as required.
- On agricultural lands, topsoil stripping, handling and storage will be independent from subsoil material to minimize mixing and compaction. Topsoil stripping on the easement should be sufficiently wide to ensure that topsoil will be stockpiled on topsoil and subsoil will be stockpiled on subsoil. Inspection staff should ensure separation between topsoil storage piles and subsoil storage piles is maintained to reduce potential for soil mixing. If topsoil is required to be imported it should be tested for soybean cyst nematode to ensure that it is not contaminated (see Section 4.2.7).
- On forested land, the organic/duff layer should be stripped where feasible. Organics and subsoil should be stripped and stockpiled separately to avoid mixing.
- Where agricultural land adjacent to the RoW is typically accessed by crossing the RoW alternate access to the fields will be provided for the farm operator for the short period of time during construction that access across the RoW is not possible".

- The following text is to be removed from the Natural Hazards, Section 4.2.8, Mitigation and Protective Measures, second bullet: "temporary".
- The following italicized text is to be added to the Aquatic Species and Habitat, Section 4.3.2, Mitigation and Protective Measures, In-water Timing Windows, second bullet: "Based on the warmwater fish community in *Jarvis and* Allingham Drains, in-water works in the Study Area are prohibited between March 15 and June 30".
- The following text is to be removed from the Designated Natural Areas and Vegetation, Section 4.3.3, Mitigation and Protective Measures, re-vegetation program bullet: "temporary".
- The following italicized text is to be added to the Designated Natural Areas and Vegetation, Section 4.3.3, Mitigation and Protective Measures: "A re-vegetation program *appropriate to the land use* should be initiated".
- The following text is to be added to Residents and Businesses, Section 4.4.1, Potential Impacts under the first bullet: "Temporary traffic and dust emissions from trucks during construction".

Section 5.3 Analysis of Cumulative Effects, Year 2017: Construction

- The following italicized text is to be added in the first sentence of the third paragraph: "and *at the Allingham Drain and* Jarvis Drain crossings".

Appendix A (Route Figures) and C (Existing Conditions Figures)

- Jarvis Drain has been added to the figures in Appendix A and C.

Stantec



**Reference: Amendments to NOVA CHEMICALS (CANADA) LTD. KIMBALL PIPELINE REPLACEMENT PROJECT: ENVIRONMENTAL REPORT**

Appendix D (Mitigation Mosaic)

- The temporary land use areas have been removed from pages 3 and 4.
- Mitigation text has been added for the use of the existing road west of Kimball Road.

**Stantec Consulting Limited**

Rob Rowland
Senior Project Manager
Phone: (519)780-8105
Fax: (519) 836-2493
Rob.rowland@stantec.com

Attachment: N/A

c. File