

# **NORTHWEST TERRITORIES WATER BOARD**

WATER LICENCE APPLICATION QUESTIONNAIRE

FOR

OIL AND GAS EXPLORATION: DRILLING

Prepared by

Department of Indian Affairs and Northern Development  
Water Resources Division  
August 2002

## **INTRODUCTION**

The purpose of this questionnaire is to solicit supplemental information from an applicant to support their application for a Water Licence (or renewal). It is anticipated that the completion of this questionnaire will reduce the delays arising from the Northwest Territories water board having to solicit additional information after an application has been submitted. This information will be used during the environmental assessment and screening of your application, which must be undertaken prior to the approval of a Water licence.

The applicant should complete the questionnaire to the best of their ability, recognizing that some questions may not be relevant to the proposed project. For questions that do not relate to the operation, the applicant is requested to indicate “N/A” (not applicable). For information from other sources, please fully reference the material fully cited, including the title of the document and the page numbers referred to.

If any questions arise while completing the questionnaire, the applicant may wish to contact the Northwest Territories Water Board at (867) 765-0106.

Chairman  
Northwest Territories Water Board

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## SECTION 1: APPLICANT INFORMATION

1.1 Applicant: Utilities Group Facilities Inc.

Address: 540, 355 4th Avenue SW

Calgary, AB T2P 0J1

1.2 Project Name: UGFI Ikhil 2011/2012 Drilling and Facilities Tie in Program

Property Name:

Ikhil Gas Development Facility

Exploration Licence Number:

Closest Community (s):

Inuvik, NWT

Min/Max latitude of Project area:

68\* 44' 35.31710" W

Min/Max longitude of Project Area:

134\* 08' 44.62061"N

1.3 Primary Company Contact:

Colin Nikiforuk

Title:

General Manager Ikhil Joint Venture

Contact Number:

403-806-3317

Alternate Contact Numbers:

403-816-5929

Fax:

403-806-3311

1.4 Field Contact:

Lorne Hammer

Title:

Project Manager

Contact Number:

403-781-6378

Alternate Contact Numbers:

403-813-0718

Fax:

403-233-0859

**1.5** List the contractors (ie. Major, Sewage, Water) that will be involved in the project:

Company Name: Canadian Petroleum Engineering Inc.  
Primary Contact: Ed Fercho  
Title: President  
Contact Number: 403-781-6381  
Alternate Contact Numbers: 403-860-6318  
Fax: 403-233-0859

Company Name: Akita Equetak Joint Venture  
Primary Contact: John Paul  
Title: Contracts Manager, Northern Region  
Contact Number: 403-292-7979  
Alternate Contact Numbers: \_\_\_\_\_  
Fax: 403-292-7990

Company Name: \_\_\_\_\_  
Primary Contact: \_\_\_\_\_  
Title: \_\_\_\_\_  
Contact Number: \_\_\_\_\_  
Alternate Contact Numbers: \_\_\_\_\_  
Fax: \_\_\_\_\_

**1.6** List all other permits or authorizations applied for:

EISC Application for Project Screening, ILA Land Use Permit and Temporary Right of Way Permit  
National Energy Board (NEB): Environmental Screening and Operations Authorization  
NWT Dept. of Transportation - Permit for Temporary Access to a Public Highway

## SECTION 2: PRE-SITE ASSESSMENT

2.1 Please complete the following chart for those items that currently exist in the project area – a snapshot of the area before your project commences. Attach a map depicting all of the indicated items in the project area, as well as the surface drainage patterns and elevation contours.

		Description	
A. Well sites	Yes	<input checked="" type="checkbox"/>	Latitude: 68°44'43.41649"N and 68°44'35.31710"N
	No	<input type="checkbox"/>	Longitude: 134°09'25.57961"W and 134°08'44.62061"W
B. Waste dumps	Yes	<input type="checkbox"/>	Latitude:
	No	<input checked="" type="checkbox"/>	Longitude:
C. Fuel and chemical storage areas	Yes	<input checked="" type="checkbox"/>	Latitude: 68°44'43.677"N
	No	<input type="checkbox"/>	Longitude: 134°09'16.067"W
D. Sump areas	Yes	<input type="checkbox"/>	Latitude:
	No	<input checked="" type="checkbox"/>	Longitude:
E. Wastewater discharge locations	Yes	<input type="checkbox"/>	Latitude:
	No	<input checked="" type="checkbox"/>	Longitude:
F. Camps	Yes	<input checked="" type="checkbox"/>	Latitude: 68°44'43.677"N
	No	<input type="checkbox"/>	Longitude: 134°09'16.067"W
G. Transportation routes	Yes	<input checked="" type="checkbox"/>	Latitude: Commonly known as the "Blueberry Hill Alternate route"
	No	<input type="checkbox"/>	Longitude: See attached map "Figure 2"

<b>H. Pingos</b>	Yes	<input type="checkbox"/>	Latitude:	
	No	<input checked="" type="checkbox"/>	Longitude:	
<b>I. Staging areas</b>	Yes	<input type="checkbox"/>	Latitude:	
	No	<input checked="" type="checkbox"/>	Longitude:	
<b>J. Seismic lines</b>	Yes	<input type="checkbox"/>	Latitude:	
	No	<input checked="" type="checkbox"/>	Longitude:	
<b>K. Parks and/or protected areas</b>	Yes	<input type="checkbox"/>	Latitude:	
	No	<input checked="" type="checkbox"/>	Longitude:	
<b>L. Wildlife management area</b>	Yes	<input type="checkbox"/>	Latitude:	
	No	<input checked="" type="checkbox"/>	Longitude:	
<b>M. Bird sanctuaries</b>	Yes	<input type="checkbox"/>	Latitude:	
	No	<input checked="" type="checkbox"/>	Longitude:	
<b>N. Trap lines</b>	Yes	<input type="checkbox"/>	Latitude:	
	No	<input checked="" type="checkbox"/>	Longitude:	
<b>O. Other</b>	Yes	<input type="checkbox"/>	Latitude:	
	No	<input checked="" type="checkbox"/>	Longitude:	

## SECTION 3: WATER USE AND WASTE DISPOSAL

### 3.1 Water Use

Maximum quantity per day (m <sup>3</sup> ):	<u>1450 m<sup>3</sup>/day</u>
Total quantity for project (m <sup>3</sup> ):	<u>41,000 m<sup>3</sup></u>
Planned uses of water:	<u>Ice road construction, Drilling fluid make up and maintenance</u>
Operating capacity of the pump:	<u>to be determined</u>
Size of intake screen:	<small>The intake hoses will be screened according to current regulations to avoid fish entrainment (DFO 2005)</small> <u> </u>
Source of potable water:	<u>East Channel, MacKenzie River</u>

**3.1.2** Please provide information for each water source as required by the Department of Fisheries and Oceans: "Protocol for Water Withdrawal for Oil & Gas Activities in the Northwest Territories".

### 3.2 Waste Disposal

**3.2.1** Will a camp(s) be provided? Yes  No

If yes, indicate the maximum number of people that will be accommodated

Capacity: 60

Maximum Accommodated: 57 persons anticipated during most active period

**3.2.2** Will the camp remain in one place for the duration of the project, or move around? Please describe the camp type (e.g. sleigh camp) and attach diagrams of the proposed layout.

**3.2.3** What is the proposed method of sewage and greywater treatment/disposal?

During camp operations, all wastewater will be stored in a heated 62 m<sup>3</sup> sewage storage tank. On average there will be one dedicated vacuum truck per day scheduled to remove sewage from the tank and truck it to Inuvik for disposal at the Inuvik wastewater treatment facility.

Please describe the treatment process.

n/a

What is the maximum capacity per day (in m<sup>3</sup> and people) of the treatment system?

n/a



Please attach a diagram(s) of the treatment system labeling all of the major components.

n/a

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**3.2.4** describe the manner in which the treated effluent will be disposed/discharged to the environment:

Treated flocculated water from the drilling fluids system will be reused as make up water in the mud system. All sewage will be taken to Inuvik for proper disposal. At the end of the project all wastes (solid and liquid) will be taken to an approved site in Alberta or BC for disposal.

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**3.2.5** What other back-up methods are available to sewage and greywater treatment/disposal (i.e. contingency)?

See Section 7 for description

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**3.2.6** What is the proposed method of solid waste disposal?

Solid waste material will be segregated into non-hazardous waste matter, hazardous wastes, recyclable beverage containers and recyclable materials/machinery types. The waste materials will be collected, compacted and stored in wildlife proof containers and shipped for disposal at an authorized waste disposal facility.

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**3.2.7** List all hazardous materials that will be used during the project as defined under the *Transport of dangerous Goods regulations*.

See Section 7 for description

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**3.2.8** Fuel storage

Type of Fuel	Amount (L)	Method of Storage/Containment	Location
Diesel	50,000	Double walled storage tank within a self contained steel berm	at the 2J-35 well site

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**3.2.9** What is the method of hazardous waste disposal?

At the conclusion of the project, all hazardous wastes will be shipped to Ft Nelson BC or to the Swan Hills AB Treatment Centre (SHTC) or other approved disposal site. No drilling waste sumps or pits will be constructed on site.

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## SECTION 4: DRILLING PROGRAM INFORMATION

**4.1** What is the frame of this project? Will this project be carried out and completed during frozen ground conditions?

A single well (2J-35) will be drilled and tied in at Ikhil during the January to mid April winter operations season.

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**4.2** Please describe the methods in which equipment will be brought to the project are and provide a list of heavy equipment that will be transported to the site.

Please refer to NEB OA Application Sec 1.8 Equipment

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**4.3** Describe any access routes and their method of construction. How many streams will be crossed? Will any streams crossings greater than 5m be required?

The ice road access to Ikhil will go from the Inuvik-Tuk winter ice road to the base of Blueberry Hill following what is known as the "Alternate Route", which is the same route used for initial construction, in 2009/2010 and in 2010/2011.

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**4.4** Please provide the name, latitude and longitude and UTM coordinates for all proposed well sites.

Name	Latitude	Longitude	UTM
UGFI Ikhil 2J-35	68*44'32.8N	134*08'37.0W	N7825704.28,E534651.41

**4.5** Indicate the total estimated volume of drilling wastes in cubic metres.

Estimated total drilling wastes = 367 m3

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**4.6** Indicate methods for the disposal of drilling wastes and attach a management plan.

- Sump
- Remote sump
- Down Hole
- On-site Treatment
- Off-site
- Other Off Site

**4.7** What is the capacity in cubic metres of the sump? Attach a drawing to scale of the layout of the proposed sump.

Not Applicable

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How will the sump berms be protected from erosion?

N/A

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Provide information on the soil type, permeability and depth of the active layer at the proposed sump location.

N/A

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How will water used for drilling be recycled/reclaimed?

A portion of the drilling fluid will be diverted to a floc tank and the resulting flocculated fluid portion reused in the mud system. The drilled solids in the floc tank will be collected and disposed of at an approved disposal facility.

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What measures are contemplated for surface drainage controls?

Storage areas will include secondary containment so that spills or ruptures remain controlled on site. Additionally an ice/snow storage berm will surround the entire wellsite to contain any spills on site.

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What are the planned abandonment procedures for sumps?

No Sump is planned for this program.

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**4.8** Mud SystemType(s): Check all that apply:

- Gelchem
- Invert
- KCL
- Other KCL Polymer

Please provide a complete list of all planned drilling mud activities.

See Section 7 for description

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**4.9** Indicate any potential for encountering artesian aquifers or lost circulation within the surface hole (to casing depth):

Three (3) wells have been drilled within 1 km of the proposed well. The Ikhil J-35 well is approximately 100 meters from the proposed well. No aquifers or lost circulation were encountered on the surrounding wells therefore we feel it unlikely that an aquifer or lost circulation or other surface hole problems will be encountered on this well.

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**4.10** Describe the surficial geologic and hydrogeologic conditions in the immediate vicinity of the well site.

See Section 7 for description

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## **SECTION 5: CONTINGENCY PLANNING, ABANDONMENT AND RESTORATION PLANNING**

- 5.1** Attach the proposed or existing contingency plan which describes course of action, mitigative measures and equipment available for use in the event of system failures and spills of hazardous materials (in compliance with NWT Water Board Guidelines for Contingency planning, 1987)
- 5.2** Outline the planned abandonment and restoration procedures.

The Ikhil gas facility produces the gas used to generate power and heat the town of Inuvik. UGFI has no plans to abandon the facility in the near future.

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## **SECTION 6: ENVIRONMENTAL ASSESMENT AND SCREENING**

- 6.1** Has this project ever undergone an initial environmental assessment, including previous owners? If yes, by whom/when:

Yes. The project approvals are discussed in the NEB OA Application in the Development Summary "Section 1". This document is attached for reference.

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- 6.2** What baseline data has been collected for the water bodies you intend t cross, or draw water from in the area? Please attach data.

All water for the project will be drawn from the Mackenzie River. We do not intend to cross any water bodies or draw any water from lakes and ponds in the area of operations.

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- 6.3** What baseline data has been collected and evaluated with respect to the biophysical components of the environment potentially affected by the project (wildlife, soils, air quality, etc.)? Please attach data.

Please see Section 9, EISC Application for Project Screening, IKHIL 2011/2012 Drilling and Facilites Tie In Program (attached).

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- 6.4** What community consultation has been done in regards to this project? Provide details of the program.

A meeting was held with the Inuvik Hunter and Trapper's Committee in August 2011 and the project was described to them. The same project presentation was made to the community of Inuvik in an open town house meeting in September 2011. All comments at both meetings were positive. The results of these meetings were submitted to the EISC as part of the EISC submission for screening.

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- 6.5** Please provide the following information:

- a) description of the environment (including known historic sites, results of any archeological assessments, wildlife, waterbodies, etc.)
- b) potential environmental impacts (including cumulative and socio-economic effects).
- c) proposed mitigation to potential environmental impacts.
- d) any follow-up or monitoring programs to be implemented to verify effectiveness of mitigation measures.

