

APPENDIX C

AGENCY CONSULTATION

FEDERAL



Canadian Environmental
Assessment Agency

Agence canadienne
d'évaluation environnementale

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July 12, 2010

Patrick Gillette
President and CEO
Xeneca Power Development Inc.
5160 Yonge Street, Suite 520
Toronto, Ontario
M2N 6L9

Dear Mr. Gillette,

Re: Waterpower Projects

Thank you for your letter and project overviews received on June 30, 2010 related to the ten waterpower projects, with generating stations proposed at 18 different locations. Project overviews have been received for the following waterpower projects: Allen and Struthers; Big Eddy; Ivanhoe River; Kapuskasing River; Larder and Raven; Marter Township; Serpent River; Vermillion River; Wanatango Falls; and Half Mile Rapids. From your cover letter, 19 different locations with awarded Feed-In-Tariff contracts were mentioned; however, 18 different locations resulted from the preliminary review of all the project overviews. Your clarification regarding this would be much appreciated.

The *Canadian Environmental Assessment Act* (the Act) may apply to federal authorities when they contemplate certain actions or decisions in relation to a project that would enable it to proceed in whole or in part. A federal environmental assessment may be required when a federal authority: is the proponent of a project; provides financial assistance to the proponent; makes federal lands available for the project, or issues a permit, licence or any other approval as prescribed in the *Law List Regulations*.

Based on our telephone conversation with Mark Holmes (Xeneca Power Development Inc.) on July 6, 2010, it is our understanding that the proposed waterpower project at the Half Mile Rapids site on the Petawawa River is undergoing a federal environmental assessment which is being conducted by National Defence Canada (DND). Because this project is not subject to the Ontario *Environmental Assessment Act*, the Canadian Environmental Assessment Agency does not have a role in this project. We encourage you to continue to work with DND regarding the waterpower project at Half Mile Rapids.

In the case of projects that are subject to the Ontario *Environmental Assessment Act*, if there is uncertainty as to whether the Act may also apply, the Agency can help proponents answer this question. For projects that are subject to the Act, the Agency will act as the federal environmental assessment coordinator (FEAC) and facilitate the involvement of the federal authorities in a co-ordinated assessment aimed at meeting all agencies' needs simultaneously.

In order for the Agency to undertake either of these roles, it must have a project description that can be distributed to various federal authorities to determine their interest in the project. It is recognized that at the early stages of the planning process, there may not be much detailed information to provide. However, proponents should try to provide some information on:

- the nature of the project and its location;
- federal decisions which may be made in relation to the project;
- whether federal funding is being contemplated or federal lands are required.

To better assist proponents, the Agency has developed an Operational Policy Statement, which provides guidance in preparing project descriptions. This is available on the Agency's website at:

http://www.ceaa-acee.gc.ca/013/0002/ops_ppd_e.htm

If your purpose in sending us notification of your project is to determine whether the *Canadian Environmental Assessment Act* applies, please be aware that simple notification will not be sufficient. A project description will be required for the above listed projects except for the waterpower project at Half Mile Rapids on the Petawawa River.

Important Note: Please be aware that release of documents to the public may be part of the EA process. Information provided by you related to the EA for these projects will be part of the Canadian Environmental Assessment Registry and will be made available to members of the public, if requested. A package with additional information will be provided to you upon submission of the project description. Should you provide any documents that contain confidential or sensitive information that you believe should be protected from release to the public, please contact the undersigned to obtain an Exclusion Form. This Form can be used to identify the information to be considered for exclusion from the Canadian Environmental Assessment Registry and the rationale for the exclusion.

If you have any questions regarding any of the above, please contact the undersigned at 416-952-1585 or by email at amy.liu@ceaa-acee.gc.ca.

Sincerely,

Original Signed By:

Amy Liu

Project Manager

Copy: Mark Holmes, Xeneca Power Developments Inc.

Muriel Kim

From: Davis,Stephanie [CEAA] [Stephanie.Davis@ceaa-acee.gc.ca]
Sent: June 29, 2011 1:21 PM
To: pgillette@xeneca.com
Cc: Ed Laratta; Tami Sugarman; Karen Fortin; Jorgensen, Carl A; McDonald, Lisa; Scott, Caitlin; Lusk,Sheryl [Ontario]; Kitty Ma
Subject: Xeneca - Wanatango Scoping doc
Attachments: 2011-06-28 SCOPING DOCUMENT FOR WANATANGO FALLS HYDROELECTRIC GENERATING STATION, FREDERICK HOUSE RIVER NEATS 28912.pdf

Patrick,

Please find attached the scoping document for the federal screening of the proposed Wanatango hydroelectric generating station. This document establishes the scope of project and scope of factors to be taken into consideration pursuant to sections 15 and 16 of Canadian Environmental Assessment Act. It has been prepared to provide direction to Xeneca on federal EA requirements.

The document has been reviewed and approved by all Federal Authorities with the exception of Department of Fisheries and Oceans (DFO) who, due to competing priorities, have not yet completed their review. They have agreed to the release of the document under the proviso that if they have comments at a later date they can be incorporated. If this happens, we will issue you a revised document.

Similar to the other Xeneca scoping documents, this document has been written to provide some flexibility for uncertainty in the project description. The document indicates that updated project description information must be provided as it becomes available (prior to the Responsible Authorities making a CEAA determination), and that project changes could result in changes to the scope and guidance provided in this document.

Kind Regards,
Stephanie

<<2011-06-28 SCOPING DOCUMENT FOR WANATANGO FALLS HYDROELECTRIC GENERATING STATION, FREDERICK HOUSE RIVER NEATS 28912.pdf>>

Stephanie Davis, BEng, CEnv, LEED AP

Project Manager | Gestionnaire de projets

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Scoping Document for the Federal Screening of the
Wanatango Falls Hydroelectric Generating Station Project
on the Frederick House River

Prepared by the
Federal Environmental Assessment Team
June 2011

1.0 INTRODUCTION

1.1. PROJECT SUMMARY

Xeneca Power Development Inc. is proposing to construct and operate a hydroelectric generating station on the Frederick House River, located in Mann Township, 26 km northwest of Iroquois Falls and 22 km south of Cochrane. The site is approximately 10 km downstream of the existing Frederick House Lake Control Dam and approximately 600 m upstream of Zevery's Road.

The proposed facility will have a generating capacity of 4.67 MW and will operate based on the natural run-of-water upstream of the facility, with some daily flow modifications. Water would be directed from the Frederick House River through a 110 m open approach channel on the west shore of the river to the powerhouse and tailrace. Two 50 m long embankment dams will flank the 14 m x 14 m powerhouse. The headwork structure would involve the construction of a 35 m long fill embankment, 40 m long control dam, 215 m long overflow dam and a 35 m long concrete spill way.

The proposed project would capture a surveyed gross head of either 7.5 m or 9.0 m, and would result in the flooding of approximately 7.8 ha or 64.8 ha of riparian lands, respectively, up to 0.5 km or 8.2 km upstream of the spillway dam, respectively. The final proposed surveyed gross head and the area of inundation will depend on Xeneca's negotiations with potentially affected private land owners upstream of the development site.

The proposed project would connect to the electrical grid via a new 42 km, 27.6 kV feeder connection to the Hoyle Transformer Station. The power line would be supported by wooden poles along its entire length. The required right-of-way for the power line corridor would extend from 10-30 m, depending on site characteristics. One pad mount transformer would be required adjacent to the powerhouse.

Access to the proposed site would require a combination of road upgrades and construction of new roads. Construction of a new approximately 870 m road on the west side of the river would be required to access the powerhouse. A new 170 m long road located on the east side of the river would be required to access the dam.

1.2. FEDERAL REGULATORY REQUIREMENTS

The *Navigable Waters Protection Act (NWP)*, administered by Transport Canada (TC), prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. The proposed dam and related infrastructure may cause a significant interference to navigation and therefore requires an approval under section 5(1)(2) of the *NWPA*.

Fisheries and Oceans Canada (DFO) is responsible for the administration of the habitat provisions of the *Fisheries Act*. This act prohibits the harmful alteration, disruption or destruction of fish habitat (Section 35), the destruction of fish by means other than fishing (Section 32), and requires sufficient flow of water over and below an obstruction for the safety of fish (Section 22). The dam itself will result in the destruction of fish habitat and, without properly installed measures, obstruction of safe upstream and downstream fish migration. Dam operation may also result in the alteration of flows and therefore has the potential to impact spawning, nursery and rearing fish habitats both upstream and downstream. As such, an authorization(s) under subsection 35(2) of the *Fisheries Act* will be required. Furthermore, the possible use of explosives and other construction-related impacts, as well as the ability of fish to enter turbines during operation, can potentially destroy fish by means other than fishing and therefore an authorization(s) under Section 32 of the *Fisheries Act* may be required.

Regarding the alteration of flows, it is a requirement of the *Fisheries Act* subsection 22(1) that sufficient flow of water be provided over the dam spillway or crest, with connecting sluices into the river below, to permit the safe and unimpeded descent of fish. It is also a requirement under subsection 22(3) that water be permitted to escape to the river-bed below the dam for the safety of fish and the flooding of spawning grounds to such depth as necessary for the safety of ova deposited thereon. In addition, Section 20 addresses obstructions and requires, where necessary, that a fish-pass be provided and maintained by the owner of the obstruction, to permit the free passage of fish through it.

1.3. CANADIAN ENVIRONMENTAL ASSESSMENT ACT

The *Canadian Environmental Assessment Act* (CEAA) applies when federal authorities contemplate certain actions or decisions in relation to a project that would enable the project to proceed in whole or in part. An environmental assessment (EA) pursuant to CEAA may be required when a federal authority:

- a. is the proponent of a project;
- b. provides financial assistance to the proponent;
- c. sells, leases or otherwise disposes of federal lands; or
- d. issues a permit, license or any other approval as prescribed in the *Law List Regulation*

The aforementioned regulatory approvals required under the NWPA and *Fisheries Act* are *Law List Regulation* triggers under CEAA. As such, TC and DFO have confirmed that they will require a screening-level EA be completed for the project.

The federal review team (FRT) for the Wanatango Falls Hydroelectric Generating Station project is as follows:

Responsible Authorities (RAs)

Federal authorities requiring an EA of the project

- Transport Canada
- Fisheries and Oceans Canada

Expert Federal Authorities (FAs)

Federal authorities in possession of specialist or expert information that may assist in the EA

- Environment Canada
- Health Canada
- Natural Resources Canada

Federal Environmental Assessment Coordinator (FEAC)

Responsible for coordinating review activities of RAs and FAs in accordance with Section 12 of CEAA

- Canadian Environmental Assessment Agency (the Agency)

Contact information for the FRT is provided in Appendix A.

Based on the authority provided in subsection 17(1) of CEAA, the RAs for the Wanatango Falls Hydroelectric Generating Station project are delegating the responsibility of preparing the EA screening report, including technical studies required to support the report, to Xeneca Power Development Inc. and/or their qualified consultant(s). In order to complete the CEAA process, the EA screening report must be submitted for review and approval by the RAs. The screening report must contain enough information to be clear and understandable as a stand-alone document and which will constitute the basis for the RAs decision under section 20 of CEAA.

The proponent is requested to submit the screening report and all supporting technical studies to the Agency in its capacity as FEAC. The Agency will distribute the screening report and supporting documentation to the FRT for review and comment. Based on content received, the RAs may request revisions to the screening report. Once the screening report is complete to the satisfaction of the RAs, the RAs will use the information contained in the screening report to make a determination on the significance of environmental effects.

1.4. FEDERAL/PROVINCIAL COORDINATION

The Wanatango Falls Hydroelectric Generating Station proposal is also subject to an environmental screening process in accordance with the Ontario Waterpower Association Class Environmental Assessment (Class EA) for Waterpower Projects. As such, in accordance with the *Canada-Ontario Agreement on Environmental Assessment Coordination (November 2004)*, the proponent should aim towards preparing a single EA screening report that meets both federal and provincial EA requirements.

The proponent should ensure that they understand the differences between the provincial and federal EA processes, and should ensure that all CEAA requirements are fulfilled prior to releasing the screening report for final review as part of the provincial EA process. Should the proponent decide to proceed to the Notice of Completion stage of the provincial EA process prior to satisfying CEAA requirements, it could result in significant delays to the EA process. Questions regarding the coordination of the federal and provincial processes should be directed to the Canadian Environmental Assessment Agency.

2.0 SCOPE OF ASSESSMENT

When an EA is triggered under CEAA, RAs are required to establish the scope of project and scope of factors to be taken into consideration pursuant to sections 15 and 16 of CEAA. Scoping establishes the boundaries of an EA and focuses the assessment on relevant issues and concerns.

The RAs have prepared this Scoping Document to provide direction to the proponent on the issues that must be addressed in the screening report. Please note, however, that the information contained in this document does not limit the RAs from requesting additional information or details as they see fit.

The FRT understands that the proposed project description, as described in Section 1.1 above, may be refined following the results of additional field investigations and consultations by Xeneca. Updated project description information must be provided to the FRT by Xeneca as it becomes available and prior to the RAs making a s.20 CEAA determination. Changes to the project description could result in changes to the scope of assessment required by the RAs and changes to the guidance provided in this document. In order to prevent unnecessary delays, it is imperative that Xeneca advise the FRT of any changes to the project description as soon as possible.

2.1. SCOPE OF PROJECT

In accordance with section 15(1) of CEAA, the scope of project for the Wanatango Falls Hydroelectric Generating Station project has been identified as: *all physical works and activities associated with the construction and operation of the proposed hydroelectric generating facility, including the headwork structure (fill embankments, control dam, overflow dam and spillway), intake channel, powerhouse and tailrace, associated storage sites, working areas, platforms, new transmission line and associated structures, new access roads, upgrades to existing access roads and any other works or undertakings directly associated with the hydroelectric project, including those that are temporary.*

The RAs have not included "decommissioning" of the new Wanatango Falls development as part of the scope of the project since the proponent has not proposed any decommissioning works for the new development. It is anticipated that the structure will have an approximate life span of 50 to 100 years and, as such, details regarding decommissioning works are not available at this time. If and when decommissioning is required, such works will be subject to an EA as per regulations current to that time.

The screening report must provide a complete description of all proposed project components, and the associated physical works and activities, with an approximate schedule (timing, frequency, duration). The report must also clearly state who is responsible for the ownership, construction and operation of each work or activity. The level of detail should be appropriate to the scale and complexity of the project and to the sensitivity of its location. Reference maps and/or site plans should be attached to indicate the project location and/or its key features.

2.2. SCOPE OF FACTORS

CEAA defines "environment" as the components of the Earth, including:

- a) land, water and air, including all layers of the atmosphere;
- b) all organic and inorganic matter and living organisms; and
- c) the interacting natural systems that include components referred to in paragraphs (a) and (b).

In respect of a project, pursuant to CEAA "environmental effect" means:

- a) any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the *Species at Risk Act*,
- b) any effect of any such change referred to in paragraph (a) on
 - i. human health and socio-economic conditions,
 - ii. physical and cultural heritage,
 - iii. the current use of lands and resources for traditional purposes by aboriginal persons, or
 - iv. any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or
- c) any change to the project that may be caused by the environment.

Section 16 (1) of CEAA requires the following factors be considered in a screening-level EA:

- a) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
- b) the significance of the effects referred to in paragraph (a);
- c) comments from the public that are received in accordance with the Act and the regulations;
- d) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and
- e) any other matter relevant to the screening that the responsible authority may require be considered.

In accordance with section 16(3) of CEAA, sections 2.2.1 – 2.2.10 of this Scoping Document outline the scope of factors that will be taken into consideration pursuant to CEAA section 16(1) requirements. Consistent with the overall scoping guidance provided in this document, the RAs may revise the scope of factors and/or identify additional factors as the EA progresses.

2.2.1. Spatial and Temporal Boundaries

The spatial boundaries of the EA are the geographical area within which an environmental component is likely to be affected by the project during construction and/or the operational phases (i.e. zone of influence), and for each component where a measurable effect is predicted for the cumulative effects assessment. The temporal boundaries of the EA are the timeframe over which an environmental component could be impacted by the project.

2.2.2. Environmental Components

Potential interactions between project components and environmental components must be identified and considered as part of the screening. The scope of factors to be considered in the assessment should include, but may not necessarily be limited to, potential effects (including cumulative effects) on the following environmental components:

- surface geology and soils
- surface water quality and quantity
- ground water quality and quantity
- air quality and climate change
- fish and fish habitat
- vegetation and wetlands
- wildlife and wildlife habitat – including migratory birds
- species at risk – including those species listed under the *Species at Risk Act*

In keeping with the definition of "environmental effect" as defined by CEAA, the scope of factors to be considered should also include the effect of any change that the project may cause in the environment on:

- human health and socio-economic conditions, including effects to navigation
- physical and cultural heritage
- the current use of lands and resources for traditional purposes by Aboriginal persons
- any structure site or thing that is of historical, archaeological, paleontological or architectural significance

Appendix B provides additional information regarding environmental components and how they should be addressed for this project.

For each environmental component that has the potential to interact with the project, a description of the existing conditions must be provided in the screening report. Consideration should be given to details that are relevant for each environmental component. The level of detail should be appropriate to the scale and complexity of the project and to the sensitivity of its location.

2.2.3. Environmental Effects

The definition of environmental effect according to CEAA is provided in section 2.2 above, and a listing of "Environmental Components to be Assessed" is included in Appendix B. The environmental components considered in the CEAA screening should include, but not be limited to, those identified in Appendix B. For each environmental component identified as having the potential to interact with project components, the screening report must analyze and describe the likely and potential environmental effects, including cumulative effects and the effects of accidents and malfunctions.

Likely and potential environmental effects should be considered and described using the following criteria in order to facilitate significance determinations: magnitude, geographic extent, duration, frequency of occurrence, permanence or reversibility of the effects, and ecological context. Effects must be identified for all project phases that were identified in the scope of project.

2.2.4. Accidents and Malfunctions

The screening report should identify any accidents and malfunctions that may occur in connection with the project. This should include the assessment of potential environmental effects associated with accidental spills (e.g. fuel, oils, hydraulic fluids, etc.), debris clogging or icing up of flow control gates or outlet structures, dam failure, etc., as well as other accidents and malfunctions that could be expected to occur, such as power failures and pump failures. Emphasis should be placed on accidents and malfunctions that are reasonably plausible. The effects of accidents and malfunctions on each environmental component should be considered as well as the contribution to cumulative effects.

2.2.5. Cumulative Effects

The screening must consider the net (residual) environmental effects associated with the project in combination with the environmental effects of other past, present or reasonably foreseeable future projects or activities, to determine the potential for cumulative environmental effects. "Reasonably foreseeable" activities are defined as projects that have already been proposed, approved, or that are advancing through the regulatory approvals process.

Cumulative effects are to be considered for those projects and activities that have residual effects that have the potential to overlap in time and space with the environmental effects of the proposed project (construction and operation phases). Cumulative environmental effects considered must be related to a direct environmental effect of the project, but the direct effect need not be significant on its own. In conducting the analysis, consideration should be given the length of time over which the environmental effects of the project will occur, not just the period of time during which the project will be constructed.

2.2.6. Effects of the Environment on the Project

The screening should assess the environmental effects of geological, climatic and other natural phenomena on the project, including effects associated with:

- extreme drought, flooding, or rainfall, including that associated with climate change, and any associated geophysical effects (e.g. increase erosion potential, changes to bank stability in reservoir areas, abnormally elevated/depressed groundwater levels, etc.); and,
- other extreme events (e.g. ice storms, river ice formation and jamming, forest fires, tornados or earthquakes, etc.).

The proponent must demonstrate that the project design is sufficiently robust to accommodate any expected changes in extreme flows, precipitation and temperature without potential failure. Emphasis should be on environmental conditions that are reasonably plausible, but should not be limited to events that occur on a regular basis.

2.2.7. Mitigation Measures

For each potential adverse environmental effect, including cumulative effects, technically and economically feasible mitigation measures must be identified. The screening report should identify any residual effects that will persist after the implementation of mitigation measures, and those effects must be carried forward to the cumulative environmental effects assessment (CEA). Any measurable net (residual) likely adverse environmental effect that potentially affects a valued ecosystem component, or valued socio-economic component must be carried forward to the CEA. The screening report should also identify compensation measures to offset the loss of fish habitat and its monitoring program. Where mitigation cannot be fully described until the detailed design stage, the principles and criteria upon which such mitigation will be developed should be provided. The screening report must clearly state who is responsible for implementing each mitigation measure proposed.

2.2.8. Significance of Effects

CEAA requires that RAs determine whether the project is likely to cause significant adverse environmental effects, including cumulative effects. In other words, only environmental effects that are both likely and adverse must be considered in determining significance. The conclusions that are reached in this regard must be systematically documented.

While the final determination of significance rests with RAs, the information provided by the proponent in the screening report will be used to help make this decision. Conclusions on significance must be clearly supported by and traceable from the description of the existing environment, the description of project activities, the potential interactions (environmental effects) and the predicted effectiveness of the mitigation measures to be applied.

The prediction of significance should be based on such factors as: magnitude, geographic extent, duration, permanence/reversibility, and ecological context. When drawing conclusions about the significance of impacts, reference should be made to applicable federal or provincial guidelines.

2.2.9. Public Comments

The screening report must clearly describe any public and aboriginal consultation that was completed related to the proposed project. Concerns raised with respect to the proposal, including any impacts to current and traditional activities being practiced by any aboriginal peoples near the project site, must be identified. Actions taken by the proponent to address concerns raised must be discussed in detail.

Should it be determined at any stage during the screening that additional public participation is required that has not been adequately addressed through the public consultation periods conducted by the proponent, the RAs may initiate a formal public participation process according to section 18(3) of CEAA.

2.2.10. Monitoring and Follow-up

Pursuant to section 38(1) of CEAA, consideration must be given to the need for a follow-up program. The purpose of a follow-up program is to confirm predictions made during the assessment and to ensure the effectiveness of mitigation measures considered. The RAs will not be in a position to consider the need for a follow-up program until it has examined the proponent's draft screening report. In the event that an adaptive

management approach is proposed as a component of mitigation to address unresolved concerns, the need for implementing a follow up program should also be identified by the proponent in consultation with the RAs. Nevertheless, the requirement for a follow-up program will be determined as the screening proceeds.

Regardless of the requirement to complete a follow-up program pursuant to section 38(1) of CEAA, the screening should address the need for a monitoring program to ensure compliance with identified mitigation measures. In order to ensure effective implementation of the mitigation measures identified in the screening report, plans and procedures proposed for quality control and assurance should be described, including technical specifications for mitigation works, inspection activities during construction and operation; and, procedures for resolving issues and addressing unforeseen effects that may arise during construction or operation. These plans and procedures should also include, but not be limited to, environmental protection plans, emergency/contingency plans, construction environmental specifications, construction special provisions, operational maintenance plans, etc.

APPENDIX A – FEDERAL REVIEW TEAM CONTACT INFORMATION

Agency	Contact Information
Canadian Environmental Assessment Agency	Stephanie Davis, Environmental Assessment Analyst M: 55 St. Clair Avenue East, Suite 907 Toronto, ON M4T 1M2 P: 416.954.7334 E: stephanie.davis@ceaa-acee.gc.ca
Transport Canada	Lisa McDonald, Environmental Officer M: 4900 Yonge Street, 4 th Floor (PHE) North York, ON M2N 6A5 P: 416.952.0475 E: lisa.mcdonald@tc.gc.ca
Fisheries and Oceans Canada	Carl Jorgensen, Habitat Biologist M: 1500 Paris Street, Unit 11 Sudbury, ON P3E 3B8 P: 705.522.8524 E: carl.jorgensen@dfo-mpo.gc.ca
Environment Canada	Sheryl Lusk, Environmental Assessment Officer M: 4905 Dufferin Street Toronto, ON M3H 5T4 P: 416.739.5962 E: sheryl.lusk@ec.gc.ca
Health Canada	Kitty Ma, Regional Environmental Assessment Coordinator M: 180 Queen Street West, 10th Floor Toronto, Ontario M5V 3L7 P: 416.954.2206 E: kitty.ma@hc-sc.gc.ca
Natural Resources Canada	Caitlin Scott, Junior Policy Analyst M: 580 Booth Street, 3 rd Floor, Room A9-2 Ottawa, ON K1A 0E4 P: 613.995.7609 E: caitlin.scott@nrcan-rncan.gc.ca

APPENDIX B - ENVIRONMENTAL COMPONENTS TO BE ASSESSED

Surface Geology and Soils

The screening report should describe surface geology and soils in the study area, and should identify any impacts the project may have on the following factors:

- contaminated sites
- terrain and topography (e.g. excavation and fill requirements, excess/waste rock/soil transportation and disposal, proposed temporary and permanent disposal sites, site restoration, etc.)
- soil quality, including contaminated sites and spills
- sedimentation, soil erosion, shoreline or riverbank erosion processes
- hazard lands or unstable lands subject to erosion
- soil types and potential for acid rock drainage (ARD) and metal leaching (ML)

If and where the project will involve the confinement, removal or remediation of contaminated soils or sediments, information on the containment, disposal or treatment method, including the potential environmental effects and risks associated with the method, should be provided.

Surface Water Quality and Quantity

The screening report should identify the name, location and characteristics of any water bodies in the project area, and should describe the potential impact of the project on these watercourses, including impacts associated with:

- potable water uses
- recreational water uses
- head pond creation and subsequent flooding of both river and lake environments¹
- predicted changes to normal/extreme water levels, flows and movement
- predicted changes to the normal/extreme thermal/ice regime
- installation, modification or removal of watercourse crossing structures
- accidental spills, erosion and sedimentation, concreting works² and repairs³, locally generated contaminants entering waterbodies (for example fugitive dust, engine emissions, smoke, ash), etc.
- siting and management of temporary and permanent waste rock/soil disposal areas and management of excess materials from excavations
- acid rock drainage (ARD) from exposed and/or excavated bedrock (identified as having a net acid generating potential), including specific management/disposal options of any materials having a potential for ARD
- methyl mercury generated in created head pond reservoirs⁴

The analysis should describe potential effects on the water quality and quantity of receiving water bodies during both the construction and operation phases. The screening report should also indicate whether any of these watercourses are navigable, and whether approval under the *Navigable Waters Protection Act* is required.

¹ A head pond would be created by raising water levels upstream of the proposed dam, possibly flooding shorelines and increasing the normal depth of the river, potentially impacting existing aquatic and shoreline ecosystems. Any existing near shore wetlands and adjacent terrestrial habitat affected by water level changes are potentially impacted.

² Best practices pertinent to concreting near or in waterbodies should be adopted. When setting water quality targets, please refer to an applicable standards set by Ontario's Provincial Water Quality Objectives (PWQOs) and the CCME's Canadian Water Quality Objectives regarding TSS, turbidity and pH.

³ Operation and maintenance phase only

⁴ Methyl mercury formation depends on a number of factors, but is primarily related to the change in headpond water level and volume, amount of organic material present on/in flooded soils, oxygen levels and temperature. The proponent should fully characterize mercury levels in sediments, the water column (low level analysis), and fish tissue; and, evaluate potential changes in mercury levels due to the project and proposed mitigation and monitoring.

Hydrogeology, Ground Water Quality and Quantity

The screening report should provide a description of groundwater resources in the study area (including the depth of the water table), and should indicate whether the groundwater is a source of potable water. The report should identify potential impacts of the project during construction and operation phases on groundwater quality and quantity, including impacts associated with:

- potable water uses
- accidental spills and other project effluents
- acid rock drainage and methyl mercury formation
- changes to normal/extreme groundwater levels, flux and movement
- changes to normal infiltration/recharge and seepage/upwelling zones
- fluctuating water levels on groundwater elevation and resultant impacts on surrounding areas, including any potential for contaminant migration

Air Quality and Climate

The screening report should provide a description of air quality in the vicinity of the project, and should indicate the potential impact of the project on air quality. The discussion of potential effects should address the local and regional impacts associated with the construction and operation phases, such as:

- emissions of toxic substances including engine exhaust emissions
- dust and smoke emissions
- greenhouse gas emissions
- contributions to formation of local and regional smog, fog, thermal effects, icing and micro climate

The assessment of air quality effects should consider potential adverse impacts on sensitive local receptors.

Fish and Fish Habitat

In conjunction with the section on surface water, the screening report should indicate the presence of fish and fish habitat in the study area, and should identify any impacts the project may have, including impacts associated with:

- aquatic species at risk listed under the federal *Species at Risk Act* (SARA)
- changes in surface water, groundwater and surface geology and soils (see above components) that could result in effects to fish and/or fish habitat (including uptake of mercury in fish and effects on humans consuming these resources)
- barriers to safe upstream and downstream fish passage
- fish injury or mortality associated with blasting, impingement, entrainment, etc.

When drawing conclusion about the significance of impacts, consideration should be given to DFO's *Policy for the Management of Fish Habitat* (1986).

Vegetation and Wetlands

The screening report should provide a description of vegetation communities and wetlands in the study area, including any designations of importance (e.g. Environmentally Significant Areas, Areas of Natural and Scientific Interest, Provincial or locally significant wetlands, etc.). The screening report should identify any impacts the project may have on vegetation and wetlands during construction and operation phases, including impacts associated with:

- removal of vegetation

- noxious weed and vegetation control (e.g. chemical spray, mechanical)
- infilling, flooding, or de-watering of vegetation/wetland communities
- changes to wetland ecosystem and function, including changes to hydrology and hydrogeology due to head pond creation and modifications to surface drainage patterns
- effects on soils, terrestrial vegetation and wetlands due to disposal of waste rock/soils (and viability of site rehabilitation), including any effects of acid rock drainage
- plant species at risk listed under SARA

The ecological functions of any vegetation and wetland communities and wetland hydrology potentially impacted by the project should be described, and potential impacts on those functions should be noted. The screening report should indicate whether the project is located within an area where wetland loss has reached critical levels.

Wildlife and Wildlife Habitat (including Migratory Birds)

In conjunction with the section on vegetation and wetlands, the screening report should provide a description of wildlife species and their habitat that are present in the study area at any time during their life cycle, including species that may only use the study area on a seasonal basis. In particular, the proponent should consider potential impacts of the project on migratory birds. The screening report should identify any impacts the project may have on wildlife communities or their habitats during construction and operation phases, including:

- species diversity, abundance and movement
- terrestrial species at risk listed under SARA (including those species observed in the zone of influence of the project and those species with habitats ranging into the project area)
- wildlife habitat abundance, availability, diversity and function (e.g. corridors, breeding, staging and foraging areas), including seasonal uses and specialized habitats used by species at risk

Species at Risk

In conjunction with the sections on vegetation, wildlife and fish, the screening report should indicate any federally and/or provincially listed species at risk that are known to or may be expected to use the site or adjacent lands due to the presence of suitable habitat. This includes those species listed under the *Species at Risk Act* (SARA). At a minimum, the Natural Heritage Information Centre database maintained by the Ontario Ministry of Natural Resources in Peterborough should be consulted for known occurrences of species at risk. Environment Canada - Canadian Wildlife Service should also be consulted to determine if occurrences or ranges of any endangered, threatened, and special concern species⁵ overlap with the project's zone of influence.

If there is potential for species at risk to occur at a project site (i.e. previous known occurrence, species range overlap and/or known habitat preference exists), a qualified biologist should conduct a thorough biological inventory of all areas of natural habitat that may be affected by the project and have the potential to support species at risk. The screening report should indicate whether the project activities may have an adverse effect on any species at risk, and also include a substantiated professional opinion on the likelihood of the occurrence of such effects. A strategy should be developed to protect any identified species at risk, with a primary focus on avoidance.

When a federal EA is carried out on a project that may affect a listed species or its critical habitat, SARA requires that adverse environmental effects be identified, mitigation measures be taken to avoid or lessen adverse effects, and environmental effects monitoring be conducted.

⁵ A useful source of information is the Natural Heritage Information Centre database maintained by the Ontario Ministry of Natural Resources in Peterborough which should be consulted for known occurrences of species at risk. The species currently listed under SARA can be found at the following web sites: http://www.sararegistry.gc.ca/default_e.cfm and http://www.sararegistry.gc.ca/species/default_e.cfm

Environmental Changes Resulting in Effects on Other Environmental Components

The screening report should identify and address any effects of any change that the project may cause in the environment on:

- Human health and socio-economic conditions⁶ – including impacts to navigation, noise and vibrations, drinking water quality and quantity, country foods (including those harvested by hunting, trapping, fishing, gathering or small-scale farming), air quality, recreation, cottaging and tourism, game and fishery resources, electric and magnetic fields emitted by transmission lines, property flooding/flood risk to residential structures physical and cultural heritage
- the current use of lands and resources for traditional purposes by Aboriginal persons, including traditional food, water (potable and recreational) and medicines
- any structure site or thing that is of historical, archaeological, paleontological or architectural significance

⁶ For more information on how to assess noise and vibrations, drinking water quality, country foods, air quality and electric and magnetic fields emitted by transmission lines, please refer to Health Canada's *Useful Information for Environmental Assessment*. This document can be obtained from: http://www.hc-sc.gc.ca/ewh-semt/pubs/eval/enviro_n_assess-eval/index-eng.php

Muriel Kim

Subject: FW: Xeneca - Wanatango Scoping doc

From: Jorgensen, Carl A [<mailto:Carl.Jorgensen@dfo-mpo.gc.ca>]

Sent: Thursday, June 30, 2011 12:55 PM

To: Davis,Stephanie [CEAA]

Cc: Ed Laratta; Tami Sugarman; Karen Fortin; McDonald, Lisa; Scott, Caitlin; Lusk,Sheryl [Ontario]; Kitty Ma; pgillette@xeneca.com

Subject: RE: Xeneca - Wanatango Scoping doc

Thanks Stephanie.

I did have time to review Section 1.2 of the scoping document and I believe it covers those areas of our regulatory (*Fisheries Act*) review at this time.

We have received additional information, and anticipate additional details, on this project which may or may not further refine our regulatory role moving forwards.

I will be posting the Notice of Commencement (NOC) on the CEAA Registry the latter half of next week or early the following week.

As on previous postings, I will provide the direct link to this distribution list.

Have a great Canada Day weekend.

Carl Jorgensen

Fish Habitat Team Leader
Northern Ontario District
Ontario - Great Lakes Area
Central and Arctic Region

705-522-8524

Chef d'équipe, Gestion de l'habitat
District du nord de l'Ontario
Secteur de l'Ontario et des Grands Lacs
Région du Centre et de l'Arctique

From: Davis,Stephanie [CEAA] [<mailto:Stephanie.Davis@ceaa-acee.gc.ca>]

Sent: June 29, 2011 1:21 PM

To: pgillette@xeneca.com

Cc: Ed Laratta; Tami Sugarman; Karen Fortin; Jorgensen, Carl A; McDonald, Lisa; Scott, Caitlin; Lusk,Sheryl [Ontario]; Kitty Ma

Subject: Xeneca - Wanatango Scoping doc

Patrick,

Please find attached the scoping document for the federal screening of the proposed Wanatango hydroelectric generating station. This document establishes the scope of project and scope of factors to be taken into consideration pursuant to sections 15 and 16 of Canadian Environmental Assessment Act. It has been prepared to provide direction to Xeneca on federal EA requirements.

The document has been reviewed and approved by all Federal Authorities with the exception of Department of Fisheries and Oceans (DFO) who, due to competing priorities, have not yet completed their review. They have agreed to the release of the document under the proviso that if they have comments at a later date they can be incorporated. If this happens, we will issue you a revised document.

Similar to the other Xeneca scoping documents, this document has been written to provide some flexibility for uncertainty in the project description. The document indicates that updated project description information must be provided as it

becomes available (prior to the Responsible Authorities making a CEEA determination), and that project changes could result in changes to the scope and guidance provided in this document.

Kind Regards,

Stephanie

<<2011-06-28 SCOPING DOCUMENT FOR WANATANGO FALLS HYDROELECTRIC GENERATING STATION,
FREDERICK HOUSE RIVER NEATS 28912.pdf>>

Stephanie Davis, BEng, CEnv, LEED AP

Project Manager | Gestionnaire de projets

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Scoping Document for the Federal Screening of the
Wanatango Falls Hydroelectric Generating Station Project
on the Frederick House River

Prepared by the
Federal Environmental Assessment Team
June 2011

1.0 INTRODUCTION

1.1. PROJECT SUMMARY

Xeneca Power Development Inc. is proposing to construct and operate a hydroelectric generating station on the Frederick House River, located in Mann Township, 26 km northwest of Iroquois Falls and 22 km south of Cochrane. The site is approximately 10 km downstream of the existing Frederick House Lake Control Dam and approximately 600 m upstream of Zevery's Road.

The proposed facility will have a generating capacity of 4.67 MW and will operate based on the natural run-of-water upstream of the facility, with some daily flow modifications. Water would be directed from the Frederick House River through a 110 m open approach channel on the west shore of the river to the powerhouse and tailrace. Two 50 m long embankment dams will flank the 14 m x 14 m powerhouse. The headwork structure would involve the construction of a 35 m long fill embankment, 40 m long control dam, 215 m long overflow dam and a 35 m long concrete spill way.

The proposed project would capture a surveyed gross head of either 7.5 m or 9.0 m, and would result in the flooding of approximately 7.8 ha or 64.8 ha of riparian lands, respectively, up to 0.5 km or 8.2 km upstream of the spillway dam, respectively. The final proposed surveyed gross head and the area of inundation will depend on Xeneca's negotiations with potentially affected private land owners upstream of the development site.

The proposed project would connect to the electrical grid via a new 42 km, 27.6 kV feeder connection to the Hoyle Transformer Station. The power line would be supported by wooden poles along its entire length. The required right-of-way for the power line corridor would extend from 10-30 m, depending on site characteristics. One pad mount transformer would be required adjacent to the powerhouse.

Access to the proposed site would require a combination of road upgrades and construction of new roads. Construction of a new approximately 870 m road on the west side of the river would be required to access the powerhouse. A new 170 m long road located on the east side of the river would be required to access the dam.

1.2. FEDERAL REGULATORY REQUIREMENTS

The *Navigable Waters Protection Act (NWP)*, administered by Transport Canada (TC), prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. The proposed dam and related infrastructure may cause a significant interference to navigation and therefore requires an approval under section 5(1)(2) of the *NWPA*.

Fisheries and Oceans Canada (DFO) is responsible for the administration of the habitat provisions of the *Fisheries Act*. This act prohibits the harmful alteration, disruption or destruction of fish habitat (Section 35), the destruction of fish by means other than fishing (Section 32), and requires sufficient flow of water over and below an obstruction for the safety of fish (Section 22). The dam itself will result in the destruction of fish habitat and, without properly installed measures, obstruction of safe upstream and downstream fish migration. Dam operation may also result in the alteration of flows and therefore has the potential to impact spawning, nursery and rearing fish habitats both upstream and downstream. As such, an authorization(s) under subsection 35(2) of the *Fisheries Act* will be required. Furthermore, the possible use of explosives and other construction-related impacts, as well as the ability of fish to enter turbines during operation, can potentially destroy fish by means other than fishing and therefore an authorization(s) under Section 32 of the *Fisheries Act* may be required.

Regarding the alteration of flows, it is a requirement of the *Fisheries Act* subsection 22(1) that sufficient flow of water be provided over the dam spillway or crest, with connecting sluices into the river below, to permit the safe and unimpeded descent of fish. It is also a requirement under subsection 22(3) that water be permitted to escape to the river-bed below the dam for the safety of fish and the flooding of spawning grounds to such depth as necessary for the safety of ova deposited thereon. In addition, Section 20 addresses obstructions and requires, where necessary, that a fish-pass be provided and maintained by the owner of the obstruction, to permit the free passage of fish through it.

1.3. CANADIAN ENVIRONMENTAL ASSESSMENT ACT

The *Canadian Environmental Assessment Act* (CEAA) applies when federal authorities contemplate certain actions or decisions in relation to a project that would enable the project to proceed in whole or in part. An environmental assessment (EA) pursuant to CEAA may be required when a federal authority:

- a. is the proponent of a project;
- b. provides financial assistance to the proponent;
- c. sells, leases or otherwise disposes of federal lands; or
- d. issues a permit, license or any other approval as prescribed in the *Law List Regulation*

The aforementioned regulatory approvals required under the NWP and *Fisheries Act* are *Law List Regulation* triggers under CEAA. As such, TC and DFO have confirmed that they will require a screening-level EA be completed for the project.

The federal review team (FRT) for the Wanatango Falls Hydroelectric Generating Station project is as follows:

Responsible Authorities (RAs)

Federal authorities requiring an EA of the project

- Transport Canada
- Fisheries and Oceans Canada

Expert Federal Authorities (FAs)

Federal authorities in possession of specialist or expert information that may assist in the EA

- Environment Canada
- Health Canada
- Natural Resources Canada

Federal Environmental Assessment Coordinator (FEAC)

Responsible for coordinating review activities of RAs and FAs in accordance with Section 12 of CEAA

- Canadian Environmental Assessment Agency (the Agency)

Contact information for the FRT is provided in Appendix A.

Based on the authority provided in subsection 17(1) of CEAA, the RAs for the Wanatango Falls Hydroelectric Generating Station project are delegating the responsibility of preparing the EA screening report, including technical studies required to support the report, to Xeneca Power Development Inc. and/or their qualified consultant(s). In order to complete the CEAA process, the EA screening report must be submitted for review and approval by the RAs. The screening report must contain enough information to be clear and understandable as a stand-alone document and which will constitute the basis for the RAs decision under section 20 of CEAA.

The proponent is requested to submit the screening report and all supporting technical studies to the Agency in its capacity as FEAC. The Agency will distribute the screening report and supporting documentation to the FRT for review and comment. Based on content received, the RAs may request revisions to the screening report. Once the screening report is complete to the satisfaction of the RAs, the RAs will use the information contained in the screening report to make a determination on the significance of environmental effects.

1.4. FEDERAL/PROVINCIAL COORDINATION

The Wanatango Falls Hydroelectric Generating Station proposal is also subject to an environmental screening process in accordance with the Ontario Waterpower Association Class Environmental Assessment (Class EA) for Waterpower Projects. As such, in accordance with the *Canada-Ontario Agreement on Environmental Assessment Coordination (November 2004)*, the proponent should aim towards preparing a single EA screening report that meets both federal and provincial EA requirements.

The proponent should ensure that they understand the differences between the provincial and federal EA processes, and should ensure that all CEAA requirements are fulfilled prior to releasing the screening report for final review as part of the provincial EA process. Should the proponent decide to proceed to the Notice of Completion stage of the provincial EA process prior to satisfying CEAA requirements, it could result in significant delays to the EA process. Questions regarding the coordination of the federal and provincial processes should be directed to the Canadian Environmental Assessment Agency.

2.0 SCOPE OF ASSESSMENT

When an EA is triggered under CEAA, RAs are required to establish the scope of project and scope of factors to be taken into consideration pursuant to sections 15 and 16 of CEAA. Scoping establishes the boundaries of an EA and focuses the assessment on relevant issues and concerns.

The RAs have prepared this Scoping Document to provide direction to the proponent on the issues that must be addressed in the screening report. Please note, however, that the information contained in this document does not limit the RAs from requesting additional information or details as they see fit.

The FRT understands that the proposed project description, as described in Section 1.1 above, may be refined following the results of additional field investigations and consultations by Xeneca. Updated project description information must be provided to the FRT by Xeneca as it becomes available and prior to the RAs making a s.20 CEAA determination. Changes to the project description could result in changes to the scope of assessment required by the RAs and changes to the guidance provided in this document. In order to prevent unnecessary delays, it is imperative that Xeneca advise the FRT of any changes to the project description as soon as possible.

2.1. SCOPE OF PROJECT

In accordance with section 15(1) of CEAA, the scope of project for the Wanatango Falls Hydroelectric Generating Station project has been identified as: *all physical works and activities associated with the construction and operation of the proposed hydroelectric generating facility, including the headwork structure (fill embankments, control dam, overflow dam and spillway), intake channel, powerhouse and tailrace, associated storage sites, working areas, platforms, new transmission line and associated structures, new access roads, upgrades to existing access roads and any other works or undertakings directly associated with the hydroelectric project, including those that are temporary.*

The RAs have not included "decommissioning" of the new Wanatango Falls development as part of the scope of the project since the proponent has not proposed any decommissioning works for the new development. It is anticipated that the structure will have an approximate life span of 50 to 100 years and, as such, details regarding decommissioning works are not available at this time. If and when decommissioning is required, such works will be subject to an EA as per regulations current to that time.

The screening report must provide a complete description of all proposed project components, and the associated physical works and activities, with an approximate schedule (timing, frequency, duration). The report must also clearly state who is responsible for the ownership, construction and operation of each work or activity. The level of detail should be appropriate to the scale and complexity of the project and to the sensitivity of its location. Reference maps and/or site plans should be attached to indicate the project location and/or its key features.

2.2. SCOPE OF FACTORS

CEAA defines "environment" as the components of the Earth, including:

- a) land, water and air, including all layers of the atmosphere;
- b) all organic and inorganic matter and living organisms; and
- c) the interacting natural systems that include components referred to in paragraphs (a) and (b).

In respect of a project, pursuant to CEAA "environmental effect" means:

- a) any change that the project may cause in the environment, including any change it may cause to a listed wildlife species, its critical habitat or the residences of individuals of that species, as those terms are defined in subsection 2(1) of the *Species at Risk Act*,
- b) any effect of any such change referred to in paragraph (a) on
 - i. human health and socio-economic conditions,
 - ii. physical and cultural heritage,
 - iii. the current use of lands and resources for traditional purposes by aboriginal persons, or
 - iv. any structure, site or thing that is of historical, archaeological, paleontological or architectural significance, or
- c) any change to the project that may be caused by the environment.

Section 16 (1) of CEAA requires the following factors be considered in a screening-level EA:

- a) the environmental effects of the project, including the environmental effects of malfunctions or accidents that may occur in connection with the project and any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out;
- b) the significance of the effects referred to in paragraph (a);
- c) comments from the public that are received in accordance with the Act and the regulations;
- d) measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project; and
- e) any other matter relevant to the screening that the responsible authority may require be considered.

In accordance with section 16(3) of CEAA, sections 2.2.1 – 2.2.10 of this Scoping Document outline the scope of factors that will be taken into consideration pursuant to CEAA section 16(1) requirements. Consistent with the overall scoping guidance provided in this document, the RAs may revise the scope of factors and/or identify additional factors as the EA progresses.

2.2.1. Spatial and Temporal Boundaries

The spatial boundaries of the EA are the geographical area within which an environmental component is likely to be affected by the project during construction and/or the operational phases (i.e. zone of influence), and for each component where a measurable effect is predicted for the cumulative effects assessment. The temporal boundaries of the EA are the timeframe over which an environmental component could be impacted by the project.

2.2.2. Environmental Components

Potential interactions between project components and environmental components must be identified and considered as part of the screening. The scope of factors to be considered in the assessment should include, but may not necessarily be limited to, potential effects (including cumulative effects) on the following environmental components:

- surface geology and soils
- surface water quality and quantity
- ground water quality and quantity
- air quality and climate change
- fish and fish habitat
- vegetation and wetlands
- wildlife and wildlife habitat – including migratory birds
- species at risk – including those species listed under the *Species at Risk Act*

In keeping with the definition of "environmental effect" as defined by CEAA, the scope of factors to be considered should also include the effect of any change that the project may cause in the environment on:

- human health and socio-economic conditions, including effects to navigation
- physical and cultural heritage
- the current use of lands and resources for traditional purposes by Aboriginal persons
- any structure site or thing that is of historical, archaeological, paleontological or architectural significance

Appendix B provides additional information regarding environmental components and how they should be addressed for this project.

For each environmental component that has the potential to interact with the project, a description of the existing conditions must be provided in the screening report. Consideration should be given to details that are relevant for each environmental component. The level of detail should be appropriate to the scale and complexity of the project and to the sensitivity of its location.

2.2.3. Environmental Effects

The definition of environmental effect according to CEAA is provided in section 2.2 above, and a listing of "Environmental Components to be Assessed" is included in Appendix B. The environmental components considered in the CEAA screening should include, but not be limited to, those identified in Appendix B. For each environmental component identified as having the potential to interact with project components, the screening report must analyze and describe the likely and potential environmental effects, including cumulative effects and the effects of accidents and malfunctions.

Likely and potential environmental effects should be considered and described using the following criteria in order to facilitate significance determinations: magnitude, geographic extent, duration, frequency of occurrence, permanence or reversibility of the effects, and ecological context. Effects must be identified for all project phases that were identified in the scope of project.

2.2.4. Accidents and Malfunctions

The screening report should identify any accidents and malfunctions that may occur in connection with the project. This should include the assessment of potential environmental effects associated with accidental spills (e.g. fuel, oils, hydraulic fluids, etc.), debris clogging or icing up of flow control gates or outlet structures, dam failure, etc., as well as other accidents and malfunctions that could be expected to occur, such as power failures and pump failures. Emphasis should be placed on accidents and malfunctions that are reasonably plausible. The effects of accidents and malfunctions on each environmental component should be considered as well as the contribution to cumulative effects.

2.2.5. Cumulative Effects

The screening must consider the net (residual) environmental effects associated with the project in combination with the environmental effects of other past, present or reasonably foreseeable future projects or activities, to determine the potential for cumulative environmental effects. "Reasonably foreseeable" activities are defined as projects that have already been proposed, approved, or that are advancing through the regulatory approvals process.

Cumulative effects are to be considered for those projects and activities that have residual effects that have the potential to overlap in time and space with the environmental effects of the proposed project (construction and operation phases). Cumulative environmental effects considered must be related to a direct environmental effect of the project, but the direct effect need not be significant on its own. In conducting the analysis, consideration should be given the length of time over which the environmental effects of the project will occur, not just the period of time during which the project will be constructed.

2.2.6. Effects of the Environment on the Project

The screening should assess the environmental effects of geological, climatic and other natural phenomena on the project, including effects associated with:

- extreme drought, flooding, or rainfall, including that associated with climate change, and any associated geophysical effects (e.g. increase erosion potential, changes to bank stability in reservoir areas, abnormally elevated/depressed groundwater levels, etc.); and,
- other extreme events (e.g. ice storms, river ice formation and jamming, forest fires, tornados or earthquakes, etc.).

The proponent must demonstrate that the project design is sufficiently robust to accommodate any expected changes in extreme flows, precipitation and temperature without potential failure. Emphasis should be on environmental conditions that are reasonably plausible, but should not be limited to events that occur on a regular basis.

2.2.7. Mitigation Measures

For each potential adverse environmental effect, including cumulative effects, technically and economically feasible mitigation measures must be identified. The screening report should identify any residual effects that will persist after the implementation of mitigation measures, and those effects must be carried forward to the cumulative environmental effects assessment (CEA). Any measurable net (residual) likely adverse environmental effect that potentially affects a valued ecosystem component, or valued socio-economic component must be carried forward to the CEA. The screening report should also identify compensation measures to offset the loss of fish habitat and its monitoring program. Where mitigation cannot be fully described until the detailed design stage, the principles and criteria upon which such mitigation will be developed should be provided. The screening report must clearly state who is responsible for implementing each mitigation measure proposed.

2.2.8. Significance of Effects

CEAA requires that RAs determine whether the project is likely to cause significant adverse environmental effects, including cumulative effects. In other words, only environmental effects that are both likely and adverse must be considered in determining significance. The conclusions that are reached in this regard must be systematically documented.

While the final determination of significance rests with RAs, the information provided by the proponent in the screening report will be used to help make this decision. Conclusions on significance must be clearly supported by and traceable from the description of the existing environment, the description of project activities, the potential interactions (environmental effects) and the predicted effectiveness of the mitigation measures to be applied.

The prediction of significance should be based on such factors as: magnitude, geographic extent, duration, permanence/reversibility, and ecological context. When drawing conclusions about the significance of impacts, reference should be made to applicable federal or provincial guidelines.

2.2.9. Public Comments

The screening report must clearly describe any public and aboriginal consultation that was completed related to the proposed project. Concerns raised with respect to the proposal, including any impacts to current and traditional activities being practiced by any aboriginal peoples near the project site, must be identified. Actions taken by the proponent to address concerns raised must be discussed in detail.

Should it be determined at any stage during the screening that additional public participation is required that has not been adequately addressed through the public consultation periods conducted by the proponent, the RAs may initiate a formal public participation process according to section 18(3) of CEAA.

2.2.10. Monitoring and Follow-up

Pursuant to section 38(1) of CEAA, consideration must be given to the need for a follow-up program. The purpose of a follow-up program is to confirm predictions made during the assessment and to ensure the effectiveness of mitigation measures considered. The RAs will not be in a position to consider the need for a follow-up program until it has examined the proponent's draft screening report. In the event that an adaptive

management approach is proposed as a component of mitigation to address unresolved concerns, the need for implementing a follow up program should also be identified by the proponent in consultation with the RAs. Nevertheless, the requirement for a follow-up program will be determined as the screening proceeds.

Regardless of the requirement to complete a follow-up program pursuant to section 38(1) of CEAA, the screening should address the need for a monitoring program to ensure compliance with identified mitigation measures. In order to ensure effective implementation of the mitigation measures identified in the screening report, plans and procedures proposed for quality control and assurance should be described, including technical specifications for mitigation works, inspection activities during construction and operation; and, procedures for resolving issues and addressing unforeseen effects that may arise during construction or operation. These plans and procedures should also include, but not be limited to, environmental protection plans, emergency/contingency plans, construction environmental specifications, construction special provisions, operational maintenance plans, etc.

APPENDIX A – FEDERAL REVIEW TEAM CONTACT INFORMATION

Agency	Contact Information
Canadian Environmental Assessment Agency	<p>Stephanie Davis, Environmental Assessment Analyst</p> <p>M: 55 St. Clair Avenue East, Suite 907 Toronto, ON M4T 1M2</p> <p>P: 416.954.7334</p> <p>E: stephanie.davis@ceaa-acee.gc.ca</p>
Transport Canada	<p>Lisa McDonald, Environmental Officer</p> <p>M: 4900 Yonge Street, 4th Floor (PHE) North York, ON M2N 6A5</p> <p>P: 416.952.0475</p> <p>E: lisa.mcdonald@tc.gc.ca</p>
Fisheries and Oceans Canada	<p>Carl Jorgensen, Habitat Biologist</p> <p>M: 1500 Paris Street, Unit 11 Sudbury, ON P3E 3B8</p> <p>P: 705.522.8524</p> <p>E: carl.jorgensen@dfo-mpo.gc.ca</p>
Environment Canada	<p>Sheryl Lusk, Environmental Assessment Officer</p> <p>M: 4905 Dufferin Street Toronto, ON M3H 5T4</p> <p>P: 416.739.5962</p> <p>E: sheryl.lusk@ec.gc.ca</p>
Health Canada	<p>Kitty Ma, Regional Environmental Assessment Coordinator</p> <p>M: 180 Queen Street West, 10th Floor Toronto, Ontario M5V 3L7</p> <p>P: 416.954.2206</p> <p>E: kitty.ma@hc-sc.gc.ca</p>
Natural Resources Canada	<p>Caitlin Scott, Junior Policy Analyst</p> <p>M: 580 Booth Street, 3rd Floor, Room A9-2 Ottawa, ON K1A 0E4</p> <p>P: 613.995.7609</p> <p>E: caitlin.scott@nrcan-rncan.gc.ca</p>

APPENDIX B - ENVIRONMENTAL COMPONENTS TO BE ASSESSED

Surface Geology and Soils

The screening report should describe surface geology and soils in the study area, and should identify any impacts the project may have on the following factors:

- contaminated sites
- terrain and topography (e.g. excavation and fill requirements, excess/waste rock/soil transportation and disposal, proposed temporary and permanent disposal sites, site restoration, etc.)
- soil quality, including contaminated sites and spills
- sedimentation, soil erosion, shoreline or riverbank erosion processes
- hazard lands or unstable lands subject to erosion
- soil types and potential for acid rock drainage (ARD) and metal leaching (ML)

If and where the project will involve the confinement, removal or remediation of contaminated soils or sediments, information on the containment, disposal or treatment method, including the potential environmental effects and risks associated with the method, should be provided.

Surface Water Quality and Quantity

The screening report should identify the name, location and characteristics of any water bodies in the project area, and should describe the potential impact of the project on these watercourses, including impacts associated with:

- potable water uses
- recreational water uses
- head pond creation and subsequent flooding of both river and lake environments¹
- predicted changes to normal/extreme water levels, flows and movement
- predicted changes to the normal/extreme thermal/ice regime
- installation, modification or removal of watercourse crossing structures
- accidental spills, erosion and sedimentation, concreting works² and repairs³, locally generated contaminants entering waterbodies (for example fugitive dust, engine emissions, smoke, ash), etc.
- siting and management of temporary and permanent waste rock/soil disposal areas and management of excess materials from excavations
- acid rock drainage (ARD) from exposed and/or excavated bedrock (identified as having a net acid generating potential), including specific management/disposal options of any materials having a potential for ARD
- methyl mercury generated in created head pond reservoirs⁴

The analysis should describe potential effects on the water quality and quantity of receiving water bodies during both the construction and operation phases. The screening report should also indicate whether any of these watercourses are navigable, and whether approval under the *Navigable Waters Protection Act* is required.

¹ A head pond would be created by raising water levels upstream of the proposed dam, possibly flooding shorelines and increasing the normal depth of the river, potentially impacting existing aquatic and shoreline ecosystems. Any existing near shore wetlands and adjacent terrestrial habitat affected by water level changes are potentially impacted.

² Best practices pertinent to concreting near or in waterbodies should be adopted. When setting water quality targets, please refer to an applicable standards set by Ontario's Provincial Water Quality Objectives (PWQOs) and the CCME's Canadian Water Quality Objectives regarding TSS, turbidity and pH.

³ Operation and maintenance phase only

⁴ Methyl mercury formation depends on a number of factors, but is primarily related to the change in headpond water level and volume, amount of organic material present on/in flooded soils, oxygen levels and temperature. The proponent should fully characterize mercury levels in sediments, the water column (low level analysis), and fish tissue; and, evaluate potential changes in mercury levels due to the project and proposed mitigation and monitoring.

Hydrogeology, Ground Water Quality and Quantity

The screening report should provide a description of groundwater resources in the study area (including the depth of the water table), and should indicate whether the groundwater is a source of potable water. The report should identify potential impacts of the project during construction and operation phases on groundwater quality and quantity, including impacts associated with:

- potable water uses
- accidental spills and other project effluents
- acid rock drainage and methyl mercury formation
- changes to normal/extreme groundwater levels, flux and movement
- changes to normal infiltration/recharge and seepage/upwelling zones
- fluctuating water levels on groundwater elevation and resultant impacts on surrounding areas, including any potential for contaminant migration

Air Quality and Climate

The screening report should provide a description of air quality in the vicinity of the project, and should indicate the potential impact of the project on air quality. The discussion of potential effects should address the local and regional impacts associated with the construction and operation phases, such as:

- emissions of toxic substances including engine exhaust emissions
- dust and smoke emissions
- greenhouse gas emissions
- contributions to formation of local and regional smog, fog, thermal effects, icing and micro climate

The assessment of air quality effects should consider potential adverse impacts on sensitive local receptors.

Fish and Fish Habitat

In conjunction with the section on surface water, the screening report should indicate the presence of fish and fish habitat in the study area, and should identify any impacts the project may have, including impacts associated with:

- aquatic species at risk listed under the federal *Species at Risk Act* (SARA)
- changes in surface water, groundwater and surface geology and soils (see above components) that could result in effects to fish and/or fish habitat (including uptake of mercury in fish and effects on humans consuming these resources)
- barriers to safe upstream and downstream fish passage
- fish injury or mortality associated with blasting, impingement, entrainment, etc.

When drawing conclusion about the significance of impacts, consideration should be given to DFO's *Policy for the Management of Fish Habitat* (1986).

Vegetation and Wetlands

The screening report should provide a description of vegetation communities and wetlands in the study area, including any designations of importance (e.g. Environmentally Significant Areas, Areas of Natural and Scientific Interest, Provincial or locally significant wetlands, etc.). The screening report should identify any impacts the project may have on vegetation and wetlands during construction and operation phases, including impacts associated with:

- removal of vegetation

- noxious weed and vegetation control (e.g. chemical spray, mechanical)
- infilling, flooding, or de-watering of vegetation/wetland communities
- changes to wetland ecosystem and function, including changes to hydrology and hydrogeology due to head pond creation and modifications to surface drainage patterns
- effects on soils, terrestrial vegetation and wetlands due to disposal of waste rock/soils (and viability of site rehabilitation), including any effects of acid rock drainage
- plant species at risk listed under SARA

The ecological functions of any vegetation and wetland communities and wetland hydrology potentially impacted by the project should be described, and potential impacts on those functions should be noted. The screening report should indicate whether the project is located within an area where wetland loss has reached critical levels.

Wildlife and Wildlife Habitat (including Migratory Birds)

In conjunction with the section on vegetation and wetlands, the screening report should provide a description of wildlife species and their habitat that are present in the study area at any time during their life cycle, including species that may only use the study area on a seasonal basis. In particular, the proponent should consider potential impacts of the project on migratory birds. The screening report should identify any impacts the project may have on wildlife communities or their habitats during construction and operation phases, including:

- species diversity, abundance and movement
- terrestrial species at risk listed under SARA (including those species observed in the zone of influence of the project and those species with habitats ranging into the project area)
- wildlife habitat abundance, availability, diversity and function (e.g. corridors, breeding, staging and foraging areas), including seasonal uses and specialized habitats used by species at risk

Species at Risk

In conjunction with the sections on vegetation, wildlife and fish, the screening report should indicate any federally and/or provincially listed species at risk that are known to or may be expected to use the site or adjacent lands due to the presence of suitable habitat. This includes those species listed under the *Species at Risk Act* (SARA). At a minimum, the Natural Heritage Information Centre database maintained by the Ontario Ministry of Natural Resources in Peterborough should be consulted for known occurrences of species at risk. Environment Canada - Canadian Wildlife Service should also be consulted to determine if occurrences or ranges of any endangered, threatened, and special concern species⁵ overlap with the project's zone of influence.

If there is potential for species at risk to occur at a project site (i.e. previous known occurrence, species range overlap and/or known habitat preference exists), a qualified biologist should conduct a thorough biological inventory of all areas of natural habitat that may be affected by the project and have the potential to support species at risk. The screening report should indicate whether the project activities may have an adverse effect on any species at risk, and also include a substantiated professional opinion on the likelihood of the occurrence of such effects. A strategy should be developed to protect any identified species at risk, with a primary focus on avoidance.

When a federal EA is carried out on a project that may affect a listed species or its critical habitat, SARA requires that adverse environmental effects be identified, mitigation measures be taken to avoid or lessen adverse effects, and environmental effects monitoring be conducted.

⁵ A useful source of information is the Natural Heritage Information Centre database maintained by the Ontario Ministry of Natural Resources in Peterborough which should be consulted for known occurrences of species at risk. The species currently listed under SARA can be found at the following web sites: http://www.sararegistry.gc.ca/default_e.cfm and http://www.sararegistry.gc.ca/species/default_e.cfm

Environmental Changes Resulting in Effects on Other Environmental Components

The screening report should identify and address any effects of any change that the project may cause in the environment on:

- Human health and socio-economic conditions⁶ – including impacts to navigation, noise and vibrations, drinking water quality and quantity, country foods (including those harvested by hunting, trapping, fishing, gathering or small-scale farming), air quality, recreation, cottaging and tourism, game and fishery resources, electric and magnetic fields emitted by transmission lines, property flooding/flood risk to residential structures physical and cultural heritage
- the current use of lands and resources for traditional purposes by Aboriginal persons, including traditional food, water (potable and recreational) and medicines
- any structure site or thing that is of historical, archaeological, paleontological or architectural significance

⁶ For more information on how to assess noise and vibrations, drinking water quality, country foods, air quality and electric and magnetic fields emitted by transmission lines, please refer to Health Canada's *Useful Information for Environmental Assessment*. This document can be obtained from: http://www.hc-sc.gc.ca/ewh-semt/pubs/eval/environ_assess-eval/index-eng.php

Pilar DePedro

From: Karen Fortin
Sent: June-30-11 12:57 PM
To: Pilar DePedro
Subject: FW: Xeneca - Wanatango Scoping doc

Karen Fortin - OEL-HydroSys Carp - (613) 839-1453 ext. 261

From: Jorgensen, Carl A [<mailto:Carl.Jorgensen@dfo-mpo.gc.ca>]
Sent: Thursday, June 30, 2011 12:55 PM
To: Davis,Stephanie [CEAA]
Cc: Ed Laratta; Tami Sugarman; Karen Fortin; McDonald, Lisa; Scott, Caitlin; Lusk,Sheryl [Ontario]; Kitty Ma; pgillette@xeneca.com
Subject: RE: Xeneca - Wanatango Scoping doc

Thanks Stephanie.

I did have time to review Section 1.2 of the scoping document and I believe it covers those areas of our regulatory (*Fisheries Act*) review at this time.

We have received additional information, and anticipate additional details, on this project which may or may not further refine our regulatory role moving forwards.

I will be posting the Notice of Commencement (NOC) on the CEAA Registry the latter half of next week or early the following week.

As on previous postings, I will provide the direct link to this distribution list.

Have a great Canada Day weekend.

Carl Jorgensen

Fish Habitat Team Leader
Northern Ontario District
Ontario - Great Lakes Area
Central and Arctic Region

705-522-8524

Chef d'équipe, Gestion de l'habitat
District du nord de l'Ontario
Secteur de l'Ontario et des Grands Lacs
Région du Centre et de l'Arctique

From: Davis,Stephanie [CEAA] [<mailto:Stephanie.Davis@ceaa-acee.gc.ca>]
Sent: June 29, 2011 1:21 PM
To: pgillette@xeneca.com
Cc: Ed Laratta; Tami Sugarman; Karen Fortin; Jorgensen, Carl A; McDonald, Lisa; Scott, Caitlin; Lusk,Sheryl [Ontario]; Kitty Ma
Subject: Xeneca - Wanatango Scoping doc

Patrick,

Please find attached the scoping document for the federal screening of the proposed Wanatango hydroelectric generating station. This document establishes the scope of project and scope of factors to be taken into consideration pursuant to sections 15 and 16 of Canadian Environmental Assessment Act. It has been prepared to provide direction to Xeneca on federal EA requirements.

The document has been reviewed and approved by all Federal Authorities with the exception of Department of Fisheries and Oceans (DFO) who, due to competing priorities, have not yet completed their review. They have agreed to the release of the document under the proviso that if they have comments at a later date they can be incorporated. If this happens, we will issue you a revised document.

Similar to the other Xeneca scoping documents, this document has been written to provide some flexibility for uncertainty in the project description. The document indicates that updated project description information must be provided as it becomes available (prior to the Responsible Authorities making a CEAA determination), and that project changes could result in changes to the scope and guidance provided in this document.

Kind Regards,
Stephanie

<<2011-06-28 SCOPING DOCUMENT FOR WANATANGO FALLS HYDROELECTRIC GENERATING STATION,
FREDERICK HOUSE RIVER NEATS 28912.pdf>>

Stephanie Davis, BEng, CEnv, LEED AP

Project Manager | Gestionnaire de projets

Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale

Ontario Region | Région de l'Ontario

55 St. Clair Avenue East, Suite 907, Toronto, ON M4T 1M2 | 55, avenue St-Clair Est, pièce 907, Toronto, ON M4T 1M2

stephanie.davis@ceaa-acee.gc.ca

<http://www.ceaa-acee.gc.ca>

Telephone | Téléphone 416-954-7334

Facsimile | Télécopieur 416-952-1573

Government of Canada | Gouvernement du Canada



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Ontario – Great Lakes Area
Sudbury District Office

Secteur de l'Ontario et des Grands Lacs
Bureau de district de Sudbury

Unit 11, 1500 Paris St.
Sudbury, Ontario
P3E 3B8

Numéro 11, 1500 rue Paris
Sudbury (Ontario)
P3E 3B8

Your file *Votre référence*

Our file *Notre référence*
10-HCAA-CA4-02503

July 20, 2011

Patrick Gillette
Xeneca Power Development Inc.
520 - 5160 Yonge Street
Toronto, Ontario
M2N 6L9

Dear Mr. Gillette:

**Subject: Authorization required under the *Fisheries Act* -- Start of
environmental assessment under the *Canadian Environmental
Assessment Act***

Fisheries and Oceans Canada (DFO) has concluded that your proposal received on March 24, 2011 concerning the proposed construction of a hydroelectric generating station at Wanatango Falls on the Frederick House River will require one or more *Fisheries Act* Authorizations. To expedite future correspondence or inquiries, please refer to your referral title and file numbers when you contact us.

DFO File No.: **10-HCAA-CA4-02503**

Title: **Waterpower Generating Station, Frederick House River,
Mann Township**

Your proposal has been reviewed to determine whether it is likely to result in impacts to fish and fish habitat which are prohibited by the habitat protection provisions of the *Fisheries Act* or those prohibitions of the *Species at Risk Act* that apply to aquatic species.*

Our review consisted of:

- Project Description, Wanatango Falls Hydroelectric Generating Station, received March 24, 2011.
- Correspondence with Chris Chenier, Ontario Ministry of Natural Resources (MNR), including *Notes on Data Requirements for Wanatango Falls, April 18, 2011*.
- EA Coordination Meeting, April 20, 2011,
- Xeneca Power Development Inc. Meeting on 18 FIT Contract Projects, held in Sudbury, Ontario, on April 28 - 29, 2011.

*Those sections most relevant to the review of development proposals include 20, 22, 32 and 35 of the *Fisheries Act* and sections 32, 33 and 58 of the *Species at Risk Act*. For more information please visit www.dfo-mpo.gc.ca.

- *Proposed Operating Flows and Levels, Wanatango Falls Hydro Project*, received May 4, 2011.

We understand that you propose to:

- Construct two dams on the Frederick House River.
- Construct and operate a hydroelectric generating station at Wanatango Falls on the Frederick House River.

Based on the above information DFO has concluded that your proposal is likely to result in impacts to fish and fish habitat.

Of particular concern is the potential for your proposal to result in:

- **The harmful alteration, disruption or destruction of fish habitat, (HADD)** which is prohibited under Section 35 of the *Fisheries Act*.
- **The obstruction of safe fish passage.** Section 20 (1) of *Fisheries Act* states: Every obstruction across or in any stream where the Minister determines it to be necessary for the public interest that a fish-pass should exist shall be provided by the owner or occupier with a durable and efficient fish-way or canal around the obstruction, which shall be maintained in a good and effective condition by the owner or occupier, in such place and of such form and capacity as will in the opinion of the Minister satisfactorily permit the free passage of fish through it.
- **The obstruction of downstream passage.** Section 22(1) of the *Fisheries Act* states: At every obstruction, where the Minister determines it to be necessary, the owner or occupier thereof shall, when required by the Minister, provide a sufficient flow of water over the spill-way or crest, with connecting sluices into the river below, to permit the safe and unimpeded descent of fish.
- **Affects to downstream flows through operating with daily flow modifications.** Section 22(3) of the *Fisheries Act* states: The owner or occupier of any obstruction shall permit the escape into the river-bed below the obstruction of such quantity of water, at all times, as will, in the opinion of the Minister, be sufficient for the safety of fish and for the flooding of the spawning grounds to such depth as will, in the opinion of the Minister, be necessary for the safety of the ova deposited thereon.
- **The mortality of fish.** Section 32 of the *Fisheries Act* states: No person shall destroy fish by any means other than fishing except as authorized by the Minister or under regulations made by the Governor in Council under this Act. Further to this, Section 30 (1) of the *Fisheries Act* states: Every water intake, ditch, channel or canal in Canada constructed or adapted for conducting water from any Canadian fisheries waters for irrigating, manufacturing, power generation, domestic or other purposes shall, if the Minister deems it

necessary in the public interest, be provided at its entrance or intake with a fish guard or a screen, covering or netting so fixed as to prevent the passage of fish from any Canadian fisheries waters into the water intake, ditch, channel or canal.

In order to be in compliance with Sections 32 and 35 of the *Fisheries Act* you must obtain an authorization(s) from DFO. In most cases the issuance of *Fisheries Act* authorizations is conditional on developing habitat compensation and monitoring plans to ensure there will be no net loss in the productive capacity of fish habitat.

With respect to the remaining habitat provisions (Section 20, 22, 30) of the *Fisheries Act* listed above, these can oftentimes be addressed by relocating or redesigning elements of a proposal and/or implementing effective mitigation measures which will reduce impacts to fish and fish habitat.

Before a *Fisheries Act* authorization can be issued, DFO must ensure that an environmental assessment is conducted which meets the requirements of the *Canadian Environmental Assessment Act*. This process may involve circulating your proposal to other relevant federal departments and making information about your proposal available to the public through the Canadian Environmental Registry (CEAR).

- For more information about the CEAR please visit www.ceaa-acee.gc.ca

In order for us to continue processing your request, please:

- Complete and return the attached application form.
- Provide further information/clarification on the following items:
 - Updated Project Description and Operating Plan describing revised details of facility operation and its effects on upstream and downstream fish habitat.
 - Results of investigations undertaken in concert with the MNR with respect to existing fish community, fish habitat and fish passage.
 - Presence of aquatic species at risk (all levels of designation).
 - Fish mortality (construction and operational) and proposed mitigation.
 - Compensation plans to offset the harmful alteration, disruption or destruction of fish habitat.
 - Aboriginal consultation plan.

Please be advised that any impacts to fish and fish habitat which result from proceeding with your proposal without first obtaining a *Fisheries Act* authorization could lead to corrective action such as enforcement.

If you have any questions, please contact me at carl.jorgensen@dfo-mpo.gc.ca, at (705) 522-8524, or via fax at (705) 522-6421.

Sincerely,

Original signed by

Carl Jorgensen
Fish Habitat Biologist
A/Habitat Team Leader
Northern Ontario

Attachments:

- Application for *Fisheries Act* Authorization
- Canadian Environmental Assessment Act (CEAA) Registry s. 55
- Important Note: CEAA Registry Requirements – Release of Documents.
- CEAA Registry Exclusion Form

Copy:

Transport Canada - Lisa McDonald
Canadian Environmental Assessment Agency – Stephanie Davis
Natural Resources Canada – Caitlin Scott
Environment Canada – Sheryl Lusk
Health Canada – Kitty Ma
OEL-Hydrosys – Tami Sugarman
MNR – Chris Chenier
MOE – Paula Allen

Muriel Kim

From: McDonald, Lisa [lisa.mcdonald@tc.gc.ca]
Sent: April 20, 2011 8:32 AM
To: Environmental Assessment Information
Cc: Karen Fortin; Jorgensen, Carl A; kitty_ma@hc-sc.gc.ca; Scott, Caitlin; Lusk,Sheryl [Ontario]; Davis,Stephanie [CEAA]; Tami Sugarman
Subject: RE: Xeneca Wanatango
Attachments: NWPA APPLICATION GUIDE.PDF

Hi Pilar,

Unfortunately, I am not able to attend today's meeting. A very urgent issue has come up with another file that requires my immediate attention. I apologize for cancelling on short notice.

As detailed by Stephanie below, Transport Canada (TC) has been identified as an RA for this project. TC is responsible for the administration of the *Navigable Waters Protection Act* (NWPA), which prohibits the construction or placement of any "works" in, on, over, under, through or across navigable waters without first obtaining approval. Based on the information provided in the project description, there are project elements or activities that may cross or affect a potentially navigable waterway. As such, Xeneca must submit an NWPA application to the Navigable Waters Protection Office, as outlined in the attached Application Guide, preferably as soon as possible.

As part of the NWPA application process, the Navigable Waters Protection Office will require general arrangement drawings of the proposed facility including:

- plan view (with dimensions), showing the location (distance from dam) of the safety boom (including colour) and the portage entry, exit and signage locations; and,
- profile view (with dimensions), including normal operating water levels.

The Navigable Waters Protection Office will also require a location map, plan view and profile view for each access road and transmission line that crosses a waterway. These drawings must show water level and navigational clearance. Six copies of all maps/plans will be required.

Please note that while final plans will be required prior to completing the NWPA application process, they are not required to initiate the process. **Questions specific to the NWPA application process should be directed to the Navigable Waters Protection Office at 1-866-821-6631 or NWPontario-PENontario@tc.gc.ca.**

If you have any questions regarding TC's EA-role for this project, please phone me at 416.952.0475.

Sincerely,

Lisa McDonald

Environmental Officer
Transport Canada - Ontario Region
4900 Yonge Street, 4th Floor (PHE)
North York, ON M2N 6A5
phone: 416.952.0475
e-mail: lisa.mcdonald@tc.gc.ca

From: Environmental Assessment Information [mailto:eainfo@oel-hydrosys.ca]
Sent: Wednesday, April 20, 2011 7:30 AM
To: Davis,Stephanie [CEAA]; Tami Sugarman
Cc: Karen Fortin; Jorgensen, Carl A; McDonald, Lisa; kitty_ma@hc-sc.gc.ca; Scott, Caitlin; Lusk,Sheryl [Ontario]
Subject: RE: Xeneca Wanatango

Thank you Stephanie,

This will be noted in today's meeting.

Regards,
Pilar



Environmental Assessment Information

OEL-HydroSys Inc. — 3108 Carp Rd. - P.O. Box 430, Carp, Ontario, Canada K0A 1L0
(T) (613) 839-1453 (F) (613) 839-5376
eainfo@oel-hydrosys.ca — www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

NOTE: If you are not the intended recipient of this e-mail, please delete it immediately. Unauthorized transmission of this e-mail is prohibited.



Please consider the environment before printing this e-mail

From: Davis, Stephanie [CEAA] [mailto:Stephanie.Davis@ceaa-acee.gc.ca]
Sent: April-19-11 4:44 PM
To: Tami Sugarman
Cc: Environmental Assessment Information; Karen Fortin; Jorgensen, Carl A; McDonald, Lisa; kitty_ma@hc-sc.gc.ca; Scott, Caitlin; Lusk, Sheryl [Ontario]
Subject: Xeneca Wanatango

Hi Tami,

Further to my email yesterday to Pilar, I wanted to confirm I won't be able to make the Wanatango Falls meeting as I have a funeral to attend.

I have provided a short overview of where we are in the federal process to inform the meeting.

The FCR will be finished as of tomorrow. Triggers have been identified under the *NWP Act* and the *Fisheries Act*.

Transport Canada and Fisheries and Oceans Canada would be acting as Responsible Authorities (RAs) for the project. Natural Resources Canada, Environment Canada

and Health Canada would act as expert authorities and provide advice and information as required.

A coordination meeting will be held the first week of May. The posting on the Canadian Environmental Assessment Registry will take place shortly after.

The final contact list for the project is below for your info. I've already sent Pilar the relevant email addresses. My understanding is a number of the RAs and FAs will be calling in to the meeting.

Kind Regards,
Stephanie

Responsible Authorities

DFO – Carl Jorgensen
TC – Lisa McDonald

Expert Federal Authorities

HC – Kitty Ma
NRCan – Caitlin Scott
EC – Sheryl Lusk

Stephanie Davis, B.Eng

Environmental Assessment Analyst | Analyste d'évaluation environnementale
Canadian Environmental Assessment Agency | Agence canadienne d'évaluation environnementale
Ontario Region | Région de l'Ontario
55 St. Clair Avenue East, Suite 907, Toronto, ON M4T 1M2 | 55, avenue St-Clair Est, pièce 907, Toronto, ON M4T 1M2
stephanie.davis@ceaa-acee.gc.ca
<http://www.ceaa-acee.gc.ca>
Telephone | Téléphone 416-954-7334
Facsimile | Télécopieur 416-952-1573
Government of Canada | Gouvernement du Canada

PROVINCIAL

Ministry of
Natural Resources

Natural Resource Management Division
Lands and Waters Branch
P.O. Box 7000, 300 Water Street
Peterborough, ON K9J 8M5
Telephone: (705) 755-1240
Fax: (705) 755-1206

Ministère des
Richesses naturelles

Division de la gestion des richesses naturelles
Direction des terres et eaux
C.P. 7000, 300, rue Water
Peterborough (Ontario) K9J 8M5
Téléphone : (705) 755-1240
Télécopie : (705) 755-1206



July 18, 2007

2124716 Ontario Inc.
100 Bowood Ave
Toronto, ON M4N 1Y5

Attention: Patrick Gillette

RE: Non-Competitive Application for Waterpower
(File # WSR-2007-03)

Dear Mr. Gillette,

This letter acknowledges receipt of your Non-Competitive Site Release Application for Waterpower for the Wanatango Falls, Twp Mann site (#4MD02), on the Frederickhouse River.

Your application has been forwarded to the Cochrane District Office, where staff will review your application and then contact you to advise you of the next steps in the site release process.

Please note that MNR's acceptance of your application does not constitute an approval or commitment to approve your project. As part of this process, you will also be responsible for fulfilling all relevant environmental assessment obligations, and obtaining all necessary permits, approvals and licenses from MNR and other government agencies.

If you have any questions regarding this application, please contact Marty Blake at 705-272-7137.

Regards,

A handwritten signature in blue ink, appearing to read "KH", followed by a long horizontal flourish.

Kevin R. Hosler
Program Coordinator, Renewable Energy Section

cc: MNR District Manager, Cochrane, ON (Attention: Marty Blake)

Renewable Energy Coordinator, Northeast Region (Attention: Sandra Dosser)

Environment Canada – Ontario Region, Canada Centre for Inland Waters, 867
Lakeshore Road, Burlington, ON, L7R 4A6 (Attention: Rob Dobos)

Ontario-Great Lakes Area, Fisheries and Oceans Canada,
28 Waubeek Street, Parry Sound, ON P2A 1B9 (Attention: Dan Thompson)

Ministry of the Environment, Environmental Assessment and Approvals Branch
Floor 12A, 2 St. Clair Avenue West, Toronto, ON, M4V 1L5 (Attention: Marie Legrow)



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

September 24, 2009

To whom it may concern:

Patrick Gillette has authorized Xeneca Power Development Inc. ("Xeneca") to act on the Applicant's behalf on matters concerning Waterpower Site Applications in the Province of Ontario. Applicants are:

- | | |
|------------------------|----------------------|
| ➤ 2066102 Ontario Inc. | 2089281 Ontario Inc. |
| ➤ 2089282 Ontario Inc. | 2089284 Ontario Inc. |
| ➤ 2098292 Ontario Inc. | 2118964 Ontario Inc. |
| ➤ 2118966 Ontario Inc. | 2118968 Ontario Inc. |
| ➤ 2118969 Ontario Inc. | 2118970 Ontario Inc. |
| ➤ 2124716 Ontario Inc. | 2124726 Ontario Inc. |
| ➤ 2124750 Ontario Inc. | 2127580 Ontario Inc. |
| ➤ 2127613 Ontario Inc. | 2127621 Ontario Inc. |
| ➤ 6774008 Canada Inc. | 6774016 Canada Inc. |
| ➤ 6774024 Canada Inc. | 6774032 Canada Inc. |

Sites currently under consideration by the Crown are:

- 22.4 km from Mouth
- 3.2 km from Mouth (Roaring Rapids) (WSR-2007-43)
- Above Ball Lake (WSR-2007-06)
- Ahmic Lake Dam & Kneofli Rapids
- At Mouth, Jocko River
- Canyon Lake
- Derby Island Rapids (WSR-2007-42)
- Ivanhoe Lake Dam (DSR-08-05)
- Ivanhoe River 1st Falls
- Ivanhoe River 3rd Falls
- Ivanhoe River The Chute (WSR-2007-60)
- Lac Des Mille Lac Dam
- Larder Lake & Raven Falls (DSR-09-6)
- Mackenzie Lake A
- Mackenzie Lake B
- McGraw Falls
- Purgatory Chute

- Quibell: Lot 2 Con IV & Lot 6 Con V (WSR-2007-12)
- Roaring II
- Shabaqua Corners (WSR-2007-54)
- Sowden Lake at Talking Falls
- Trent Severn Waterway Dam 1
- Windy Lake Dam
- Wanatango Falls (WSR-2007-03)
- Whitefish Falls (Frood Lake)
- Wabigoon Falls (WSR-2007-05)

For clarity, Xeneca is authorized to take whatever actions it deems reasonable unless this letter is withdrawn by the Applicant in writing.

Yours very truly,



Patrick Gillette
President

2066102 Ontario Inc.
2089281 Ontario Inc.
2089282 Ontario Inc.
2089284 Ontario Inc.
2098292 Ontario Inc.
2118964 Ontario Inc.
2118966 Ontario Inc.
2118968 Ontario Inc.
2118969 Ontario Inc.
2118970 Ontario Inc.
2124716 Ontario Inc.
2124726 Ontario Inc.
2124750 Ontario Inc.
2127580 Ontario Inc.
2127613 Ontario Inc.
2127621 Ontario Inc.
6774008 Canada Inc.
6774016 Canada Inc.
6774024 Canada Inc.
6774032 Canada Inc.



Patrick W. Gillette
President & COO
Xeneca Power Development Inc.



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

January 22, 2010

Mr. Marty Blake
District Manager
Ministry of Natural Resources
Cochrane District
2 Third Avenue
Box 730
Cochrane, ON
P0L 1C0

Dear Mr. Blake,

RE: Waterpower submissions to the Ontario Power Authority's Feed In Tariff program.

We would like to make you aware of the Waterpower on Crown Land Acknowledgement Letter, issued by the Minister of Natural Resources, Donna Cansfield, concerning an MNR site in your district:

- 4MD02 (as per applicant 2124716 Ontario Inc. and Xeneca LP)

As per the direction outlined in the attached letter from Minister Cansfield, 2124716 Ontario Inc. (ie., the Applicant) along with Xeneca LP (ie., the Applicant Team) have submitted the above MNR site to the Ontario Power Authority's ("OPA") Feed In Tariff ("FIT") Launch program.

Xeneca Power Development Inc., on behalf of the Applicant, will initiate the task of scoping the environmental issues in preparation for field studies in the spring of 2010 in compliance with the Ministry of Environment's Renewable Energy Approval process (i.e., Waterpower Class EA). Field studies will commence only if the OPA issues a FIT contract. If not already done so, we request that your staff issue Site Description Packages for each site listed above and provide whatever assistance possible in order to complete this scoping task.

Attached are Letters of Authorization from the Applicants for Xeneca to act on their behalf.

We will follow-up with your office once the statuses of the FIT submissions are known.



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
Tel: 416-590-9362 Fax: 416-590-9955 www.xeneca.com

Please direct any question as it relates to the OPA's issuance of FIT contracts for all projects to myself, Vanesa Enskaitis. I have provided my contact information below.

Thank you for your kind consideration of these matters.

Yours very truly,

A handwritten signature in blue ink, appearing to read "V. Enskaitis", is written over a horizontal line.

Vanesa Enskaitis
Public Affairs Liaison

Xeneca Power Development
5160 Yonge Street
Suite 520
North York, ON
M2N 6L9

T: 416-590-9362 X 104
F: 416-590-9955
E: venskaitis@xeneca.com

February 3, 2010

Mr. Marty Blake
District Manager
Ministry of Natural Resources
Cochrane District
2 Third Avenue
Box 730
Cochrane, ON
P0L 1C0

Re: Waterpower Project Status

Dear Mr. Blake,

With respect to MNR's renewable energy site release process, we have been notified by a third party requesting the current status of our projects. Listed below is the MNR site in your District for which an application to the OPA's FIT launch program has been submitted:

- 4MD02

Please confirm the current status of each project, based on the following stages:

1. Application Fee Processed
2. MNR Provides Site Description Package
3. MNR and Applicant Scoping Meeting
4. Waterpower Application Declaration Form submitted
5. Aboriginal Community Engagement undertaken
6. a) District Manager Decision to proceed
b) District Manager Decision to delay
c) District Manager Decision to cancel
7. Public Notification undertaken
8. Applicant of Record awarded



3160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

Thank you for your prompt response to this enquiry. We look forward to hearing back from you.

Yours truly,

A handwritten signature in blue ink, appearing to read "V. Enskaitis", is written over a faint, light blue circular stamp.

Vanesa Enskaitis

Public Affairs Liaison
Xeneca Power Development
T: 416-590-9362 X 104
F: 416-590-9955
E: venskaitis@xeneca.com

Ministry of Natural Resources
Cochrane District

2-4 Highway 11 South
P.O. Box 730
Cochrane ON P0L 1C0

Telephone: 705-272-7137
Facsimile: 705-272-7183
Toll Free: 1-800-667-1940

Ministère des Richesses naturelles
District de Cochrane

2-4 route 11 sud
C.P. 730
Cochrane ON P0L 1C0

Téléphone: 705-272-7137
Télécopieur: 705-272-7183
Sans frais: 1-800-667-1940



February 17, 2010

Vanessa Enskaitis
Xeneca Power Development Inc.
5160 Yonge St., Suite 520
Toronto ON M2N 6L9

RECEIVED

FEB 23 2010

Dear Ms. Enskaitis:

Subject: Waterpower Project Status Site 4MD02 (Wanatango Falls)

Thank you for your letter of February 3, 2010, regarding the project status of waterpower site 4MD02 (Wanatango Falls).

We can confirm that the current status of this project based on the stages you listed in your letter to be Stage 1: Application Fee Processed.

Our next step is to prepare and provide the Site Description Package.

If you have any questions or require additional information, please feel free to contact Jennifer Telford at 705-272-7130.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Martin D. Blake".

Martin D. Blake
District Manager
Cochrane District – OMNR

p.c. Jennifer Telford – Resource Planner – OMNR Cochrane District

/cc



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

February 25, 2010

Martin Blake
Cochrane District MNR
2 Third Avenue, Box 730
Cochrane, ON, P0L 1C0

Dear Mr. Blake,

Thank you for the clarification of Site Status as well as your efforts on the Applicant's behalf; it's very much appreciated.

Currently Habitat Biologists are engaged to organize field work for the 2010 Spring Freshet. If an Ontario Power Authority ("OPA") FIT contract is issued, collection of field data will commence so as to:

- Prepare for the eventual progression to a Class EA.
- Identify any issues of concern that might bring the Project's viability into question.

Your office will be contacted by the consultants at HATCH with letters of authorization to begin this process; please contact Xeneca Power Development Inc. with any questions that may arise.

Applicant will complete all necessary tasks required by the MNR, but in order to meet OPA deadlines we believe this field work should be organized and completed in 2010.

Our hope is that your office will discuss the Scope of Work for field studies with the consultants as well as provide:

- Input into Scope of Work so they are as complete as possible.
- Any documentation that is available on the Site.

The consultants should have draft Scopes of Work prepared when they contact your office. Once these studies are complete, we will be happy to share the results with your office or other agency, as required.

Once we have greater clarity in terms of the OPA FIT site selections process, we should try to meet or organize a teleconference to discuss how we move forward. Overall, we anticipate this should occur sometime in the Spring of 2010, once the results of the OPA FIT process are announced.



Thank you for your kind consideration of these matters and we look forward to working with your District. Please do not hesitate to contact us with any questions.

Yours very truly,

A handwritten signature in dark ink, appearing to read "Patrick Gillette", is written over a horizontal line.

Patrick Gillette
President, COO

cc. Jim Beal
Mark Holmes
Vanessa Enskaitis

Muriel Kim

From: Robert J. Steele [steele@nrsl.on.ca]
Sent: April 12, 2010 11:48 AM
To: 'Chenier, Chris (MNR)'
Cc: 'Telford, Jennifer (MNR)'; Tami Sugarman; 'Ed Laratta'
Subject: RE: Frederick House River (Wanatango Falls) - Map, Collection Application - Walleye

From: Chenier, Chris (MNR) [mailto:chris.chenier@ontario.ca]
Sent: April 12, 2010 11:19 AM
To: steele@nrsl.on.ca
Cc: Telford, Jennifer (MNR)
Subject: FW: Frederick House River (Wanatango Falls) - Map, Collection Application - Walleye

Thanks Chris. I have responded to your comments in red below.

Rob:

A couple of quick off the top of my head points....Don't need two permits. I'll proceed with one permit for all species and all methods. However, we are rushing and this is worrisome....We can discuss any of this further at your convenience.

- Please note all tributaries must be part of this spring spawning effort.agreed You didn't identify this in the app.and other spawning etc. I will add them in to the waterbodies...
- I would advocate also sampling at seemingly substandard locations. agreedThis will better define their relative contributions and may be of larger significance wrt any compensation discussions.
- In the development of a spring program descriptive document (I presume this will follow at some point) you must describe the gear, effort and locations in more detail. Duly noted
- You don't list larval drift nets in your collection methods. The collection of larval fish is important if you ask me. It not only helps to identify spawning areas but also can help to quantify spawning success and relative contributions of areas during the study period conditions. It will be added in to the gear...Thanks, We do intend to use them but forgot to include them
- At the end of this effort I think we want to have a fairly good picture of all/most spring spawners (not just walleye and sturgeon despite them being VECs).... Wrt other species egg mats and larval drift nets will definitely help in this, trapnetting might also if you can do it close enough to a site. The large mesh sturgeon gill nets will not help much...in my experience we've only caught the odd, big redhorse. All species will be written into the permit...Duly noted
- Please note my expectations wrt sampling effort. Effort must be meaningful and repeatable. Although I acknowledge angling is an accepted method. It must be well described. There will be conditions on this...eg single, barbless hooks, artificial bait if fishing for tagging-live release specimens.agreed
- For me the preferred method for capturing sturgeon in high flows/velocities is by trotline. I would guess that you could be hard pressed to catch sturgeon using gill nets between Wanatango and Zeveryleys if levels and flows increase.agreed that lines are the way to go for initial efforts

Questions/Requests:

- By leadline do you mean trotline? I believe that we are talking about the same thing, namely a heavy fishing line with baited hooks attached at intervals using snoods.
- Will there be tagging in this spring work? There probably should be...fish passage will be an issue. You cite you'll be looking for larval walleye, but not sturgeon?will also look for larval sturgeon. What type of tagging do you mean?
- Does 10 km upstream cover the entire anticipated area of inundation? The last we saw flooding was going up beyond this (eg 11km). 10km downstream is good... had asked for 5km previously. It is my understanding the RoR facility will have re-established channel flows and the highest erosion risk downstream is well within this 5km distance. NB: Will be within our 2010 summer sturgeon study area. No new mapping is available. Please extend to encompass 15 km.
- Will you be collecting any inputs for any relevant HSIs?do not anticipate collecting HSI data as we do not expect to be modelling fish habitat response to flow change.

- Would you be willing to take clear vent pictures of any sturgeon of confirmed (through observation of expelled gametes) sex and link these photos to the individual sturgeon's data? Would you also be willing to note skin colour (black and tan, tan, grey) and lateral scute/denticle sharpness (dull or sharp)and link to individual sturgeon? These would be of help to me.**absoltuley, I will pass this on to my crews.**

Regards,
Chris
705-272-7154



NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

Memo

Project No. 1016

To: Jennifer Telford, Cochrane District MNR

From: Rob Steele, Natural Resource Solutions Inc.

Date: April 20, 2010

Re: Background Information

Natural Resource Solutions Inc. has been retained by Xeneca Power to conduct biological surveys in preparation for proposed hydroelectric development at Wanatango Falls on the Frederickhouse River.

An air photo is attached, depicting the boundaries of the study area for the project. We would like obtain information for that area plus an additional 1 km surrounding the study site.

We would like to request any information on the natural resources in the study area, such as the following:

- Fisheries assessments,
- Fish collection records and rare species,
- Drain classifications,
- Wetland evaluations,
- Areas of Natural and Scientific Interest
- Provincially Significant Wetlands
- Environmentally Sensitive Areas
- VTE species, significant wildlife habitats (i.e. raptor nesting, colonial species nests, deer yards and feeding areas)
- Any species lists relating to animals and vegetation
- Vegetation mapping, floristic inventories.

Natural Resource Solutions Inc. is currently in the field and would be pleased to meet with you to pick up any material and discuss this project. Please call if you have any questions or comments.

Muriel Kim

From: Telford, Jennifer (MNR) [jennifer.telford@ontario.ca]
Sent: April 28, 2010 3:54 PM
To: Mary Anne Seabrook; Patrick Gillette
Cc: Vanesa Enskaitis; Kai Markvorsen; Clement, Denis (MNR); Mark Holmes
Subject: RE: Site Information Package Digital copy

Thanks Mary Anne,

The district is preparing to send another letter to the FN's in the hopes of meeting with them and I just wanted to know if you've had contact with them to help with the wording of my letter. I will let you know when we send the next round of letters out and what the outcome is. We hope to be able to meet with the identified FN's sooner rather than later but that will all depend on the scheduling of the FN's.

Jennifer Telford

District Planner

Ministry of Natural Resources, Cochrane District

Phone (705) 272-7130

Fax (705) 272-7183

jennifer.telford@ontario.ca

From: Mary Anne Seabrook [mailto:mseabrook@kbm.on.ca]
Sent: April 28, 2010 3:55 PM
To: Telford, Jennifer (MNR); 'Patrick Gillette'
Cc: 'Vanesa Enskaitis'; 'Kai Markvorsen'; Clement, Denis (MNR); 'Mark Holmes'
Subject: RE: Site Information Package Digital copy

Good day everyone. On my end, I have not been in touch with any of the affected First Nations. I have only received a draft copy of a letter under the DM back in July 2009. Had this letter gone out?

If so, what was the FN response? It is my understanding that the MNR was to make the initial consultation contact. Then we would follow suit.

Mark, please advise if you had any initial contacts that I was not aware of... thanks

Mary Anne Seabrook
Coordinator, Aboriginal Communications
office - 807-345-5445 - ext 250
home - 807-767-9591

From: Telford, Jennifer (MNR) [mailto:jennifer.telford@ontario.ca]
Sent: April 28, 2010 9:38 AM
To: Patrick Gillette
Cc: Vanesa Enskaitis; mseabrook@kbm.on.ca; Kai Markvorsen; Clement, Denis (MNR)
Subject: Site Information Package Digital copy

Hi Patrick,

By now you should have received the Site Information Package for Wanatango Falls. Our bio embedded documents in the package so as promised in the cover letter here is a digital copy of the package. I have not included the map but can

if you wish. Our GIS tech is off until next week but I can provide a PDF copy of the map upon her return. I've cc'ed OEL Hydrosys as the embedded documents may be of use to them as they prepare for the EA.

I was also wondering if you have been in contact with any of the First Nations. I don't need any specifics but a summary of who has been contacted and how they have received the project would be helpful.

Thanks,

Jennifer Telford

District Planner

Ministry of Natural Resources, Cochrane District

Phone (705) 272-7130

Fax (705) 272-7183

jennifer.telford@ontario.ca



Please consider the environment before printing this email.

May 13, 2010

Marty Blake
District Manager
Cochrane District MNR
2 Third Avenue
Box 730
Cochrane, ON P0L 1C0

Dear Mr. Blake,

I am writing concerning:

Wanatango Falls – MNR site # 4MD02

As the Applicant, we wish to outline our commitment to meet the ***WATERPOWER SITE RELEASE – CROWN LAND*** (PL 4.10.05) issued April 16, 2010. Specifically the goals as they relate to Aboriginal peoples Section 2.2:

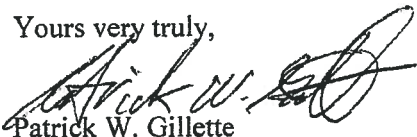
- a. *“fulfill its duty to consult with Aboriginal peoples where its actions may adversely affect an established or asserted Aboriginal or treaty right;” and*
- b. *“support creation of environmentally sustainable economic opportunities for Aboriginal communities through the disposition of Crown land for greenfield sites.”*

Applicant is prepared to support the Crown’s consultation responsibilities and request at the earliest opportunity discussions concerning what will be required during the ***Class Environmental Assessment for Waterpower Projects***.

Applicant is also prepared to enter into open-ended discussions concerning environmentally sustainable economic opportunities for Aboriginal communities. Applicant is prepared to enter into these discussions once the Ministry of Natural Resources has completed appropriate processes as they related to FIT/ECT projects.

Thank you for your kind consideration and we look forward to work with you concerning these Policy goals.

Yours very truly,



Patrick W. Gillette
President and COO

cc. Minister of Energy and Industry (Process Window).

May 13, 2010

Marty Blake
District Manager
Cochrane District MNR
2 Third Avenue
Box 730
Cochrane, ON P0L 1C0

Dear Mr. Blake,

As you may be aware, Xeneca Power Development Inc. and Xeneca LP (i.e., "the Applicant") have been awarded FIT contracts on the following sites in your District:

Wanatango Falls – MNR site # 4MD02

I want to thank your District for your assistance in making this possible.

Upon review, you may be aware the Ontario Power Authority ("OPA") schedule will prove challenging to both the Applicant and the affected government Ministries as we now have less than 60 months to bring these waterpower projects to commercial operation. This concurs with an analysis of the process by the Ontario Waterpower Association, industry experts and our consultants.

To move forward in a timely manner, we are requesting the following:

- Notifications to be issued or reissued to the First Nation's Communities as per the MNR Policy and Procedures.
- MNR consultation commence at the earliest opportunity with the First Nation Communities with a focus on bringing the parties together to discuss a business relationship. Environmental and technical issues can be discussed from a process and issue perspective, but given the project(s) are at a preliminary stage answers to these issues need to be deferred to the Class EA for Waterpower; this is aligned with the current policy.
- The Applicant be allowed to start its Business Relationship discussions at the earliest opportunity with the First Nation Communities.

To meet the Ministry of Natural Resources requirements under its Policy and Procedures, please find enclosed a Letter to the District copied to the Minister of Energy and Industry Office (i.e., the process window) outlining the Applicant's commitment to meeting the objectives outlined in ***Waterpower Site Release – Crown Land (PL.4.10.05), Section 2.2*** concerning “economic opportunities for Aboriginal communities.”

Further, the Applicant requests that, if not already provided, the ***Waterpower Applicant Declaration Form*** for the projects be provided with any information (e.g., Site Description Package) on the site as soon as possible. Applicant request to defer any further process or meetings; it has determined the site is viable and wishes to proceed and will sign-back this form in a timely manner.

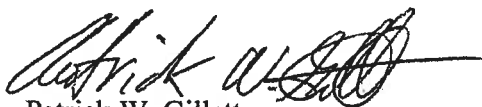
Please note the Applicant is prepared to meet with the District by teleconference to discuss any issues, but suggests this step be taken once MNR has completed its First Nation consultation and is prepared to allow the Applicant to proceed to Business to Business discussions with the First Nation Communities and initial inter agency meetings have occurred.

Applicant requests that MNR District Office participate in the inter-agency meetings in preparation to for “Notice of Commencement,” of the Waterpower Class Environmental Assessment and that the District Office expedite the issuance of any permits from the Applicant and/or its consultants in order to conduct studies on the Project; e.g., Habitat or Archeological. Applicant requests the District provide any further site information within that process once the ***Waterpower Applicant Declaration Form*** has been signed and returned.

Finally, the Applicant also requests that the District outline in a timely manner current issues that need to be addressed during the ***Class Environmental Assessment for Waterpower Projects*** and prior to issuance of Location Approval.

Please contact Xeneca Power Development Inc. with any questions or concerns.

Yours very truly,



Patrick W. Gillette
President & COO

June 10, 2010

Mr. Marty Blake
District Manager
Cochrane District MNR
2 Third Avenue, Box 730
Cochrane, ON P0L 1C0

Dear Mr. Blake,

As follow-up to our May 13th letter to your office, please find enclosed information related to waterpower development under Ontario Power Authority's ("OPA") Feed in Tariff ("FIT") Contract within the Cochrane MNR District.

The project is:

Wanatango Falls – MNR site # 4MD02

The attached map on CD will provide greater clarity on the location of the project. If required, supplementary maps are available upon request.

Further, please find attached:

- A draft Notice of Commencement for the Waterpower Class EA
- A brief project description
- Copies of correspondence to your office regarding our project.

Upon review, you may be aware the OPA schedule will prove challenging to both Xeneca and the affected government ministries, as we now have less than 60 months to bring these waterpower projects to commercial operation. This concurs with an analysis of the process by the Ontario Waterpower Association, industry experts and our consultants.

To move forward in a timely manner, we request the following:

1. Notifications to be issued or reissued to the First Nation's Communities as per the MNR Policy and Procedures.



2. MNR consultation to commence at the earliest opportunity with the First Nation Communities with a focus on bringing the parties together to discuss a business relationship. Environmental and technical issues can be discussed from a process and issue perspective, but given the project(s) are at a preliminary stage, answers to these issues need to be deferred to the Class EA for Waterpower; this is aligned with the current policy.
3. Permission granted to Xeneca to begin its Business Relationship discussions at the earliest opportunity with the First Nation Communities.

Further, we request that that MNR District Office expedite the issuance of any permits from Xeneca and/or its consultants in order to conduct studies on the Project; e.g., Habitat or Archeological. We also request the **Waterpower Applicant Declaration Form** for the projects be provided as soon as possible, along with any further site information. We ask the District to outline in a timely manner, current issues that need to be addressed during the **Class Environmental Assessment for Waterpower Projects** prior to issuance of Location Approval.

We request to defer any further processes or meetings until the site is deemed viable, approved and this form is signed in a timely manner. Please note that Xeneca is prepared to meet with the District by teleconference to discuss any issues. However, we suggest this step be taken once MNR has completed its First Nation consultation and is prepared to allow Xeneca to proceed with Business-to-Business discussions with the First Nation Communities once initial inter-agency meetings have occurred.

Please contact Xeneca Power Development Inc. with any questions or concerns.

Yours truly,

A handwritten signature in black ink, appearing to read "Patrick Gillette", is written over a horizontal line.

Patrick Gillette
President and COO
Xeneca Power Development LP

July 6, 2010

Marty Blake
District Manager
Cochrane MNR
3 Third Ave, Box 730
Cochrane, ON P0L 1C0

Dear Mr. Blake:

RE: Options to process sites awarded FIT Contracts

As outlined in previous correspondence, Xeneca Power Development Inc. has been awarded a Feed In Tariff ("FIT") Contract within your District:

- Wanatango Falls – MNR Site # 4MD02

Xeneca is also preparing Phase I of the *Class Environmental Assessment for Waterpower Projects* ("Class EA") and will need to commence with Phase II as early as possible in order to meet the Ontario Power Authority's ("OPA") deadline for project commissioning. These steps are being taken to alleviate time pressures on both Xeneca and the regulatory agencies.

At this juncture, Xeneca has 57 months to bring the projects within your District to commercial operation. Given that 24 months is required for construction, this leaves just 33 months to complete all Class EA tasks, issue the Location Approval from the District, and then complete the following:

- Design review and approval
- Tenure (Interim Waterpower Lease Agreement)
- All other permits and approvals

The District will play a crucial role in all of these stages. Xeneca recognizes that the 130 FIT contracts on Crown lands, as well as the remaining 60 in Economic Connection Test (ECT) status, will pose a challenge for MNR and for your District in regard to resources and time.

Xeneca believes the following solutions will help to alleviate some of the challenges for your District created by the FIT program timeline:

- Xeneca participation in programs that sponsor or support students/ interns working at your District Offices.
- Where possible, Xeneca would like to complete tasks that require prolonged review such as design or operation plans.
- Combining Class EA activities with other aligned objectives.

An alternative is to bypass the Site Review process and receive Conditional Applicant of Record status under the condition that a FIT Contract is issued. This would allow Xeneca to proceed into the Class EA process with a series of MNR defined tasks to be completed prior to submission for Location Approval.

As you are aware, Location Approval is the point at which the MNR, under the *Lakes and Rivers Improvement Act*, recognizes the project and begins the process of approving design and issuing approvals, permits and tenure. Given that Applicant of Record has very little meaning in the overall development process, and, given the time and resource challenges faced by all parties, the Conditional Applicant of Record may be a preferred option.

The District would still need to provide Xeneca with the names of the First Nation Communities eligible to discuss benefits in relation to the projects. First Nation benefit discussions would be a condition of the "Applicant of Record" status, or a milestone to be completed prior to the Location Approval.

Until the Class EA is completed, the actual design and operation of the waterpower plant is uncertain. This means the economic viability of the project is essentially unknown as mitigation of environmental or other issues could lead to the cancellation of the project and the subsequent request to withdraw the site. Potential effects on riparian landowners, parks or other land in proximity to the project will be clearly identified as well as the viability of the project.

We feel you will agree that environmental concerns and technical issues that have been, or will be, raised by your staff are best addressed during the Class EA where the perspectives of additional regulatory agencies, First Nations, and stakeholders are also addressed. Solutions raised prematurely during the Site Release process may be challenged in order to address the concerns raised by other parties.

With respect to the MNR's First Nations component of the Site Release process, please be advised that Xeneca is committed to developing Business Relationships with those Communities identified as affected and/or eligible for benefits. This commitment has been made in the attached letter as well as publicly (see attached from the *Globe and Mail's* [Report on Business](#)).

However, Xeneca is concerned that the provincial and federal processes are not aligned. Confusion still remains over the designation of the affected First Nations Communities and how program eligibility may be applied. Combining consultation (MNR and Applicant) with Business Relationship discussions is a natural fit, and this will provide the 1 – 2 year window we believe necessary to reach agreement with the First Nation Communities.

An advantage to both parties will be the ability to focus on the Class EA process while Site Release and other issues are addressed in parallel with no risk to the District Office in achieving alignment with overarching MNR policy. All decisions are deferred, at the applicant's risk, to the Location Approval.

In summary, we believe our recommendations will minimize duplication of the process, thereby allowing critical MNR resources to be focused on the important work of assuring all environmental, social and economic issues are addressed.

It may be noteworthy that one MNR District is moving ahead with this option, and we respectfully request you and your district colleagues consider similar action.

Thank you for your kind consideration and please call with any questions.

Yours very truly,



Patrick W. Gillette
President & COO

Xeneca Power Development Inc.
5160 Yonge Street
North York, ON
M2N 6L9
Tel: 416-590-9362
Fax: 416-590-9955



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

July 13, 2010

Mr. Marty Blake
District Manager
Cochrane District MNR
2 Third Avenue, Box 730
Cochrane, ON P0L 1C0

Dear Mr. Blake:

RE: Notice of Commencement for Waterpower Class Environmental Assessment

As outlined in previous correspondence, Xeneca Power Development Inc. has been awarded Feed In Tariff ("FIT") Contracts for the following projects within your District:

➤ **Wanatango Falls – MNR site # 4MD02**

Xeneca has completed Phase I of the *Class Environmental Assessment for Waterpower Projects* ("Class EA") and will now issue public Notices of Commencement (NoC) under the Waterpower Class EA for the above projects in your area. A draft copy of the NoC was sent to your office on June 10, 2010 (a final version of the NoC is attached to this letter). These steps are being taken in order to comply with timeline performance constraints demanded by the Ontario Power Authority ("OPA") for execution of FIT contracts. Further, to this end, we would like to engage with you in a process of sharing information, for your consideration and input, on the development of the project as it becomes available during the Class EA. We will prepare project progress updates and information packages for you on a regular basis. In addition, we will need to have regular face-to-face or teleconference progress meetings.

At this juncture, Xeneca has less than 57 months to successfully complete the EA and post-EA approval process, plan and potentially execute construction activities and arrange ordering and potential installation of equipment for each project in your District. Given that 24 months is required for construction and commissioning, this leaves just 33 months to complete all Class EA tasks, issue the Location Approval from the District, and then also complete the following:

- Design review and approval
- Tenure (Interim Waterpower Lease Agreement)
- All other post-EA permits and approvals

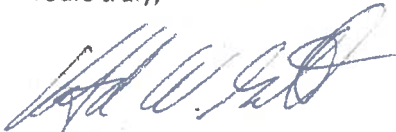
The District will play a crucial role in all of these stages. Xeneca recognizes that the 130 FIT contracts on Crown lands, as well as the remaining 60 in Economic Connection Test (ECT) status, will pose a challenge for MNR and for your District in terms of resources and time. We understand the pressure you are working under and we suggest that regular information sharing and meetings will be beneficial during the next several years of hard work for all of us on implementing these FIT contracts.

As the Class EA process unfolds, the expected design and operation of the waterpower plant will be more clearly understood as will the economic viability of the project. We feel that environmental concerns and technical issues that have been, or will be, raised by your staff are best addressed during the Class EA, as information becomes available and as we gain perspectives on our projects from other regulatory agencies, First Nations, and all stakeholders.

Further, if you have not already done so, we kindly request that you expedite issuance of the names of the First Nation Communities eligible to discuss benefits in relation to these projects in your District. First Nation benefit discussions are an important element of the development process and a milestone that needs immediate attention for it to be completed prior to Location Approval. Xeneca is committed to developing Business Relationships with the Communities you identify as affected and/or eligible for benefits.

Thank you for your kind consideration and please contact us if you have any questions.

Yours truly,



Patrick W. Gillette
President & COO
Xeneca Power Development Inc.
5160 Yonge Street
North York, On
M2N 6L9
Tel: 416-590-9362
Fax: 416-590-9955

cc. Mark Holmes, Arnold Chan, Edmond Laratta

From: Judy Leavitt
Sent: July 15, 2010 3:50 PM
To: Mike Vance; Nava Pokharel; Ed Laratta; Don Chubbuck; Uwe Roeper; Vanesa Enskaitis
Subject: FW: Wanatango Falls - Waterpower declaration form

fyi

Judy

Judy Leavitt
Manager, Office & Business Affairs
Xeneca Power Development Inc.

From: Judy Leavitt
Sent: Thursday, July 15, 2010 1:32 PM
To: 'Jennifer.telford@ontario.ca'
Cc: Mark Holmes; Arnold Chan; Patrick Gillette
Subject: RE: Wanatango Falls - Waterpower declaration form

Hi Jennifer

Here is a scan of the executed Waterpower Applicant Declaration form. I am faxing a copy to you shortly.

Judy

Judy Leavitt
Manager, Office & Business Affairs
Xeneca Power Development Inc.
5160 Yonge Street, Suite 520
Toronto, ON M2N 6L9

PH: 416-590-9362 x101
Fax: 416-590-9955
jleavitt@xeneca.com

www.xeneca.com

From: pgillette@xeneca.com [mailto:pgillette@xeneca.com]
Sent: Tuesday, July 13, 2010 2:44 PM
To: Judy Leavitt
Cc: Mark Holmes; Arnold Chan
Subject: Fw: Wanatango Falls - Waterpower declaration form

Sent from my BlackBerry device on the Rogers Wireless Network

From: "Telford, Jennifer (MNR)" <jennifer.telford@ontario.ca>
Date: Tue, 13 Jul 2010 13:38:39 -0400
To: Patrick Gillette<pgillette@xeneca.com>
Subject: Wanatango Falls - Waterpower declaration form

Hi Patrick,

I've attached the latest version of the Waterpower Applicant Declaration Form. It's the next step in the Site Release process for Wanatango Falls. You can either mail it to us or send it by fax when it's ready. Here's our mailing address: P.O. Box 730, 2-4 Highway 11 South, Cochrane, ON P0L 1C0. Our fax number is below under my phone number.

Thanks,

Jennifer Telford

District Planner

Ministry of Natural Resources, Cochrane District

Phone (705) 272-7130

Fax (705) 272-7183

jennifer.telford@ontario.ca



Please consider the environment before printing this email.

ESA Agency Discussions Xeneca Power Hydro Electric Projects

To: MNR Cochrane District

From: NRSI on Behalf of Xeneca Power

Date: August 25, 2010

Re: ESA Briefing Package

Please find attached an ESA briefing document to serve as a backgrounder for our discussions planned for September 23-24, 2010. This briefing memorandum is intended to summarize the known and potential ESA occurrences and intersections with the proposed Wanatango Falls waterpower facility on the Frederick House River within MNR Cochrane District.

Please refer to the attached map for the site location and project study area.

1.0 Wanatango Falls – Frederick House River



Project Site - Spring 2010

1.1. Review of EA/ESA Data Collected to Date

As part of the ongoing Class Environmental Assessment for the Allen and Struthers development project, NRSI field programs (2010) have consisted of eight separate site visits, listed as follows:

- 1) April 15 and 18, 2010 Walleye spawning surveys for two days of observations. Water temperatures were observed to be 7°C on April 15 and 7.8°C on April 18, 2010. Since water temperatures were higher than spawning range, NRSI spent one day (April 18) angling with no walleye captured.
- 2) May 7, 2010 two set lines and three egg mats were deployed downstream of the falls for detecting spawning activity. No capture was recorded on set lines however eggs were detected on two of the three egg mats (species to be confirmed). Water temperatures were observed to be 11°C at the time of sampling.
- 3) On May 25, 2010 four egg mats and four set lines were deployed downstream of the falls for detecting spawning activity. Eggs were observed in one of the four egg mats and numerous species of fish were captured on set lines. No Lake Sturgeon were captured and water temperatures ranged from 23°C to 24.2°C.
- 4) May 29 and 30, 2010 fish habitat characterization surveys were conducted throughout the project study area and zone of influence. Habitat mapping and anecdotal evident of habitat utilization was noted.
- 5) Two site visits were undertaken in June 2010 to conduct breeding bird surveys, map vegetation communities and complete vascular plant inventories
 - a. Vegetation polygons within 120m of the inundation area were delineated,
 - b. Species inventories were made of vegetation and breeding birds, and
 - c. Spring water quality samples were taken at upstream and downstream locations.
- 6) July Fish Community Surveys
 - a. Upstream - 10 RIN nets set (8 large, 2 small). Ten fish species and 163 individuals. Two set lines were deployed (12 hook each) and two species were captured. Electrofishing surveys were also conducted within the river near the camp access, lower bay, left bank cascade of the falls and 30m upstream from the access route for a total of 914 seconds, resulting in seven species captured.
 - b. Downstream - Two RIN nets were deployed and captured five species and 10 individuals. One Lake Sturgeon was captured and live released without incident. One trot line set completed for a total of 4 hours and 12 hooks, no catch.
- 7) Summer water quality samples were taken in July, 2010.

ESA Primary and Secondary Data Collections/Review

A letter dated July 13, 2010 from Collin Hoag, Policy Advisor for the Ontario Waterpower Association indicates the following with respect to the proposed Allan and Struthers generating station:

- "It is worth noting that there is a *Lake Sturgeon* occurrence North of MNR Site #4MD02 from 1983 on the Frederick House River, near Frederick Ontario. There is however no known intersection with the Wanatango Falls project."

The Southern James Bay / Hudson Bay population of Lake Sturgeon (*Acipenser fulvescens*) is listed as a species of Special Concern Species at Risk in Ontario (SARO). It is also listed as a species of Special Concern by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

Based on NRSI's internal review of significant species using the NHIC's Biodiversity Explorer, no significant species are known from the general vicinity (squares 17MK90 and 17MK91):

During NRSI's field programs, observations of SAR included:

- 1) A Lake Sturgeon was caught during the River Index Netting (R.I.N) sampling in July, 2010.

Muriel Kim

From: Dan Gibson [dgibson@nrsl.on.ca]
Sent: November 1, 2010 12:29 PM
To: 'Dan Gibson'; 'Chenier, Chris (MNR)'; 'Don Chubbuck'; 'Ed Laratta'; 'Brett Woodman'; Tami Sugarman; Philippa McPhee
Subject: Cochrane District ESA Final Meeting Minutes for Xenenca Power - Wanatango Falls GS
Attachments: Cochrane District ESA_Final Meeting Minutes_2010_11_01.pdf

Greetings,

In light of recent comments/notes from MNR, please find attached a revised version of the Cochrane District ESA Meeting Minutes from September 24. Chris, as mentioned on the previous minutes, could you please circulate these minutes to Jennifer Telford and Sandra Dosser.

Regards.....,



Dan Gibson, M.E.Sc.
Senior Aquatic Biologist
Natural Resource Solutions Inc.
225 Labrador Drive, Unit 1
Waterloo, ON, N2K 4M8
(p) 519.725.2227
(f) 519.725.2575
(c) 519.501.4753
(e) dgibson@nrsl.on.ca
www.nrsl.on.ca

From: Dan Gibson [mailto:dgibson@nrsl.on.ca]
Sent: Friday, October 22, 2010 2:34 PM
To: 'Dan Gibson'; 'Chenier, Chris (MNR)'; 'Don Chubbuck'; 'Ed Laratta'; 'Brett Woodman'; tsugarman@oel-hydrosys.ca; 'Philippa McPhee'
Subject: Cochrane District ESA Final Meeting Minutes for Xenenca Power - Wanatango Falls GS

Greetings,

Further to my email below please find attached the final meeting minutes from our September 24, 2010 conference call to discuss ESA/SAR at the Proposed Wanatango Falls GS. Chris, please circulate Jennifer Telford and Sandra Dosser on these minutes and provide their contact information for future use.

Regards.....,



Dan Gibson, M.E.Sc.
Senior Aquatic Biologist
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(c) 519.501.4753
(e) dgibson@nrsl.on.ca
www.nrsl.on.ca

From: Dan Gibson [mailto:dgibson@nrsl.on.ca]
Sent: Wednesday, October 06, 2010 1:51 PM
To: 'Chenier, Chris (MNR)'; 'Don Chubbuck'; 'Ed Laratta'; 'Brett Woodman'; 'Dan Gibson'; tsugarman@oel-hydrosys.ca;

'Philippa McPhee'

Subject: Cochrane District ESA Draft Meeting Minutes for Xenenca Power - Wanatango Falls GS

Greetings,

Please find attached Meeting Minutes from our conference call on September 24, 2010 for your review and comment. Please provide any comments/edits in track changes at your earliest convenience this week as I would like to finalize the minutes for the project file in one week (October 13, 2010).

Feel free to contact me should you have any questions or concerns. Chris, please include Jennifer Telford and Sandra Dosser on this correspondence also and provide their contact information for future use.

Regards.....,



Dan Gibson, M.E.Sc.

Senior Aquatic Biologist

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Meeting Minutes

Re: ESA Agency Meeting for Xeneca Projects - MNR Cochrane District

Date/Time: September 24, 2010 at 9:00am -12:00pm

Location: Conference Call
Call # (519) 433-2268
Call ID# 5871897

Dial-In Attendees:

Chris Chenier	- MNR
Jennifer Telford	- MNR
Sandra Dosser	- MNR
Don Chubbuck	- Xeneca Power
Ed Laratta	- Xeneca Power
Brett Woodman	- Natural Resource Solutions Inc
Dan Gibson	- Natural Resource Solutions Inc
Tami Sugarman	- OEL - HydroSys
Philippa McPhee	- OEL - HydroSys

Meeting Minutes

The purpose of this meeting was to discuss the known and potential ESA occurrences and intersections with the proposed Wanatango Falls waterpower facility on the Frederick House River within MNR Cochrane District.

Introductions

- Each attendee introduced themselves followed by a brief discussion on the state of the Environmental Assessment Process currently underway. Tami Sugarman noted that a Project Description will be distributed in October and an initial EA Public Information Meeting will subsequently be scheduled for late October/November 2010.
- The project critical path timeline was also discussed in adherence with the Feed in Tariff (FIT) Contract. A June 2011 date for completion of the Class EA is critical for adherence to the schedule. Furthermore, a fall 2011 date for ESA permits to construct is also critical for adherence to the schedule.

- Ed Laratta indicated that despite the contract schedule being aggressive, Xeneca is committed to providing information (i.e. site plans and concept drawings) as soon as possible throughout the process.

ESA Discussions

- Known Species at Risk (SAR) occurrences were discussed and it was determined that through background review (NHIC and Diversity Explorer), field collections conducted in 2010 and MNR SAR mapping, no confirmed SAR are known to be present in the study area. For this reason, no ESA permit to construct or agreement to operate is currently required for the project.
- Despite this point however, Lake Sturgeon (*Acipenser fulvescens*) were discussed as a species of Special Concern (COSSARO) and a Valued Ecosystem Component (VEC) on the project.
- Below Zevery's and Wanatango Falls it is estimated that a population of 117 Lake Sturgeon (± 33) currently resides between Highway 11 and Zevery's Rapids. To date, 90 individuals have been either pit tagged or radio tagged for monitoring by the MNR.
- It was indicated that Zevery's Rapids (the rapids/falls located downstream of the base of Wanatango Falls) is believed to be the limit of upstream migration for Lake Sturgeon but no studies have been conducted to confirm this. As noted by Chris Chenier (MNR), upstream migration over the falls has been observed by Sauger (*Sander Canadensis*) through telemetry studies, indicating some upstream migration over Zevery's and Wanatango Falls does occur.
- MNR indicated that another field season, conducted by the project team, is expected to take place in 2011. Partly because of the relative anomalous year that occurred in 2010. Furthermore, as a primary VEC on the project, the potential for a Lake Sturgeon telemetry study was discussed which would involved tagging Lake Sturgeon to track their migration within the Frederick House River and answer questions of migration, spawning habitat and summer and winter refuge habitat etc. Currently, five Lake Sturgeon have been tagged using radio telemetry tags and are tracked manual on an interim basis however, no base stations have been set up to track the fish year round.
- Dan Gibson discussed the possibility for the project team partnering with the MNR to support and provide greater capacity for tracking these fish (i.e. more tags and base stations).
- Tami Sugarman asked, due to the aggressive schedule of the EA, would it be acceptable to the MNR if the project team made commitments in the EA document (Baseline Conditions Report – Technical Addendum) to conduct additional studies in the 2011 field season as part of a monitoring plan and strategy to collect data that may be required in the regulatory approvals phase of project development.

- Among other items discussed was the importance of understanding the base of Wanatango Falls as it relates to the use of habitat, the contribution from upstream fish communities to downstream, as well as growth rates of the fish community in the head pond (growth rates, absolute growth etc.). It was concluded through discussion that a larval fish drift survey (spring 2011) would be beneficial in determining the head pond's contribution to the downstream reaches of the Frederick House River.

Open Discussions

- Dan Gibson noted that a full fish collection report will be delivered to the MNR before the end of 2010 (as per the scientific collectors permit) for MNR records and review.
- Chris Chenier noted that the baseline conditions report for the project is required as soon as possible in order for the MNR to make appropriate comments on the level of effort and data collected from an EA perspective. Furthermore, Chris also mentioned that he would like to see benthic invertebrate and larval fish drift data included as part of the baseline conditions study (Potentially added to the field programs for summer 2011). This data will add to the agencies confidence in the project teams understanding of the baseline conditions within the study area and on the Frederick House River.
- MNR also raised several important questions to the group. These included whether fish (Lake Sturgeon and other species) were able to migrate upstream over Wanatango Falls, and, what risk does the project pose to fur bearing animals (i.e. beavers and otters). It is expected that these would be common questions raised at any Public Information Center.
- The MNR re-iterated that a holistic view of the fish community and its ecology (in addition to detailed information on the VEC's identified), is required in order to properly predict, evaluate and mitigate the potential impacts of the project. This would include the potential for multiple species ascending Wanatango Falls for passage.
- Transmission line corridors were discussed as they relate to local plants and birds. The required field surveys for confirming habitat and species presence/absence is tentatively scheduled for the spring and summer of 2011 and will be outlined in the technical addendum to the baseline conditions report in the form of commitments to monitoring that will be undertaken before the regulatory approvals will be given.

Subject:

FW: RE: [Fwd: FW: Frederickhouse River Background Request]

----- Original Message -----

Subject:RE: [Fwd: FW: Frederickhouse River Background Request]

Date:Wed, 16 Feb 2011 11:38:38 -0500

From:Telford, Jennifer (MNR) <jennifer.telford@ontario.ca>

To:Rob Steele <rsteale@nrsl.on.ca>

CC:Robin Boles <rboles@nrsl.on.ca>, Brett Woodman <bwoodman@nrsl.on.ca>, Clement, Denis (MNR) <denis.clement@ontario.ca>

Hi Rob,

The information sources I provided have all the same information that the MNR has. The SIP is only meant to be used for the dam site as part of our site release process. All other information gathering for the Waterpower Class EA is to be done by the proponent. The level of information available for Northern Ontario is quite limited. We use the NHIC for sensitive values and the LIO has all our spatial data. There may be values that are currently unknown that will come out as part of the EA for the roads and transmission line.

Thanks,

Jennifer

From: Rob Steele [<mailto:rsteale@nrsl.on.ca>]

Sent: February 16, 2011 9:55 AM

To: Telford, Jennifer (MNR)

Cc: Robin Boles; Brett Woodman

Subject: [Fwd: FW: Frederickhouse River Background Request]

Hi Jennifer

I just wanted to clarify the purpose of our additional information request as per the email chain below. We are in possession of the SIP and have used that info where applicable. However, since the SIP was issued on the basis of a single site, on the river, we just wanted to make sure that we were not missing anything with respect to the transmission lines and access road routes which had not yet been determined when MNR issued the SIP. This was considered necessary as these routes by necessity deviate away from the dam site and river. We will follow up with the sources that you suggested but will take your response to mean that MNR Cochrane has no further information on file with respect to natural resource values along these proposed routes.

Thanks, Rob

----- Original Message -----

Subject:FW: Frederickhouse River Background Request

Date:Tue, 15 Feb 2011 16:27:06 -0500

From:Robin Boles <rboles@nrsl.on.ca>

To:Rob Steele <steale@nrsl.on.ca>



Robin A. Boles, B.Sc. (Env)
Terrestrial & Wetland Biologist
Natural Resource Solutions Inc.
225 Labrador Drive, Unit 1
Waterloo, ON, N2K 4M8
(p) 519.725.2227
(f) 519.725.2575
(e) rboles@nrsl.on.ca
www.nrsl.on.ca

From: Robin Boles [<mailto:rboles@nrsl.on.ca>]
Sent: Tuesday, February 15, 2011 1:07 PM
To: Brett Woodman
Subject: FW: Frederickhouse River Background Request

FYI, District MNR response to our request for background info for the corridor.



Robin A. Boles, B.Sc. (Env)
Terrestrial & Wetland Biologist
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(e) rboles@nrsl.on.ca
www.nrsl.on.ca

From: Telford, Jennifer (MNR) [<mailto:jennifer.telford@ontario.ca>]
Sent: Tuesday, January 25, 2011 1:37 PM
To: Robin Boles
Cc: Clement, Denis (MNR)
Subject: RE: Frederickhouse River Background Request

Hello Robin,

The previous information you had requested and received from Cochrane District as it pertains to Wanatango Falls on the Frederick House River was prepared as part of MNR's Site Release Process to satisfy our commitment to provide a Site Information Package to the proponent. The information contained in the Site Information Package was all that was required by this office to be provided to the proponent. Any information we have on the site is in the package.

I would like to refer you to some resources other proponents in the province have found useful in background reviews done as part of Environmental Assessments of other projects:

- Land Information Ontario (http://www.mnr.gov.on.ca/en/Business/LIO/2ColumnSubPage/STEL02_167950.html) is a repository of land and geospatial data related to a number of natural resources and land feature classes.
- The Species at Risk in Ontario List (SARO) List (http://www.elaws.gov.on.ca/html/regs/english/elaws_regs_080230_e.htm) is the primary source of information about the status of species at risk in Ontario.
- Natural Heritage Information Centre (NHIC) is the central provincial database for species at risk occurrence information. New NHIC Website <http://www.biodiversityexplorer.mnr.gov.on.ca/nhicWEB/>
- Ontario Crown Land Use Atlas (<http://crownlanduseatlas.mnr.gov.on.ca/>) Atlas of crown land use policies for a number of large areas and source for determining location of crown land areas
- MNR Species at Risk Website (<http://www.mnr.gov.on.ca/en/Business/Species/index.html>) provides additional information on species at risk and the Endangered Species Act, 2007.

In addition to the sources listed above, we also suggest that you consult peer reviewed and published material which may describe any natural features or species which may be present on your site such as;

Once you have completed your review of background information we would be pleased to discuss any issues or answer any questions you may have with respect to your findings.

Thank you,

Jennifer Telford

District Planner

Ministry of Natural Resources, Cochrane District

Phone (705) 272-7130

Fax (705) 272-7183

jennifer.telford@ontario.ca

From: Robin Boles [<mailto:rboles@nrsl.on.ca>]

Sent: January 25, 2011 10:47 AM

To: Telford, Jennifer (MNR)

Cc: Shawn MacDonald

Subject: Frederickhouse River Background Request

Hello Jennifer,

Please find a background and MNR Values Map request attached for proposed transmission line corridor associated with the Wanatango Falls Hydroelectric Development on the Frederickhouse River. A key map is also attached.

Thank you for your assistance in this matter.

Regards,

Robin



Robin A. Boles, B.Sc. (Env)
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www.nrsl.on.ca

Muriel Kim

From: Nava Pokharel [NPokharel@xeneca.com]
Sent: June 24, 2011 11:38 AM
To: Brett Woodman
Cc: Robert Steele; Ed Laratta; Tami Sugarman
Subject: FW: Wanatango Qea and Qcomp

Brett,

This is the email exchange we had with Chris Chenier. Sorry, forgot to cc you on the original communication.

Thanks,
Nava

From: Ed Laratta
Sent: June 22, 2011 12:09 PM
To: Nava Pokharel; 'Chenier, Chris (MNR)'
Cc: Uwe Roeper; 'Pyrce, Rich (MNR)'; 'Dossier, Sandra (MNR)'; Ed Laratta
Subject: RE: Wanatango Qea and Qcomp

Chris,

As discussed at our June 15 meeting, we intend to use the work that you and Rich would do at the site to inform the finalization of these flow objectives.

The information on water levels will be very useful in this upcoming discussion.

Regards,

Ed.

Edmond Laratta | Manager, Environmental Programs and Approvals | **Xeneca Power Development Inc.**
5160 Yonge Street, Suite 520, Toronto, ON, M2N 6L9
Tel: 416 590 9362 Ext 106 **Cell:** 416 856 3253 | **Fax:** 416 590 9955 | **Email:** elaratta@xeneca.com

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From: Nava Pokharel
Sent: June 22, 2011 11:48 AM
To: Chenier, Chris (MNR); Ed Laratta

Cc: Uwe Roeper; Pyrce, Rich (MNR); Dosser, Sandra (MNR)
Subject: RE: Wanatango Qea and Qcomp

Hi Chris,

Thank you for your email. Uwe and I reviewed the Qea and Qcomp flows you suggested. We think Qcomp numbers you suggested are little higher than even the flows in the present conditions for many months in a year. As we discussed in Timmins last time the flows in the bypass channel is less than 1/3 of 2 CMS when there is no flow release from the Frederick House Dam. As you and Rich mentioned in the Timmins meeting that you would like to do some flow measurement on the right bypass river reach and verify the flow when there is flow release from the Frederick House Dam.

From the flow measurement we did last year, we are fairly confident that the flow in the bypass reach in present conditions is less than 1.0 CMS when there is no flow release from the Frederick House Dam. Table 2 below is the updated Qea and Qcomp we would like to include in the operation plan and EA. Please let us know if you have comments or suggestions on the flows we have proposed in Table 2.

Table 1: Flows in the draft Operation Plan

	Spring	Summer	Autumn	Winter
Qea	No. Intermittent Operation	0.5	0.5	0.5
Qcomp	1	0.5	0.5	0.5

Table 2: Updated Flows after discussion with MNR

	Spring	Summer	Autumn	Winter
Qea	No. Intermittent Operation	2	2	5
Qcomp	2	1	1	1

Best Regards,
Nava

From: Chenier, Chris (MNR) [<mailto:chris.chenier@ontario.ca>]
Sent: June 16, 2011 9:44 AM
To: Ed Laratta
Cc: Nava Pokharel; Uwe Roeper; Pyrce, Rich (MNR); Dosser, Sandra (MNR)
Subject:

Ed/Nava/Uwe:

Yesterday's discussion was very productive in my view. Thanks for coming to us.

Forgive me for not catching this sooner I was thinking about this on my way home...as I understand our discussion Uwe will be looking into the possibility of moving the Qcomp and Qea to 2 cms as per the first table below. This in principle is

great; would keep the bypass wet and maintain the same downstream low flows currently there when OPG is not passing water. If I have misunderstood please feel free to correct me and we can discuss further (Rich or Sandra as well).

	Spring	Summer	Autumn	Winter
Qea	15	2	2	2
Qcomp	2	2	2	2

Would it be possible for Uwe to look at the provision of a Winter Qea of 7 cms instead of 2cms? I've looked this over and believe there is adequate water to do so generally speaking.

	Spring	Summer	Autumn	Winter
Qea	15	2	2	7
Qcomp	2	2	2	2

This would move you close to the natural monthly 75% exceedances (for winter) and better ensure protection for downstream benthos and overwintering areas. Overall if this could be adopted in my view we'd be doing pretty good wrt providing adequate minimum flows under a difficult situation.

Thanks again for your efforts.

Regards,
Chris

Muriel Kim

Subject: FW: Xeneca Power Development FIT Contracts - Ivanhoe, Fredrickhouse
Attachments: MOE Timmins -Cvr Ltr - June 10.pdf; Draft Notice of Commencement -Ivanhoe River.pdf;
Draft Notice of Commencement -Wanatango Falls.pdf; Wanatango Falls- Project Overview -
June10.pdf; Xeneca FIT Site Map.pdf; Ivanhoe River- Project Overview - June10.pdf

From: Samantha Leavitt
Sent: Friday, June 25, 2010 11:06 AM
To: minister.moe@ontario.ca
Cc: Ed Laratta; Mark Holmes; Vanesa Enskaitis
Subject: Xeneca Power Development FIT Contracts

Dear Hon. Gerretsen,

RE: Ministry of the Environment – Timmins Division

As you may be aware from recent correspondence forwarded to your regional offices, Xeneca Power Development Inc. is a leading independent renewable energy developer. We are committed to environmentally sound planning, a thorough consultative process, and good corporate social responsibility.

Following up on our recently mailed materials, we wish to provide you with an electronic version of this information. This will assist in ensuring that, in the event mail has been misdirected you are in receipt of information that is of interest to your office, and further that it will enable paperless exchange with relevant departments.

Kindly advise if you have not received a package from Xeneca containing a draft Notice of Commencement, Project Overviews for our proposed waterpower projects, as well as a CD, which shows in greater detail the location of these proposed project sites.

Please don't hesitate to contact Xeneca if you have any questions, comments or concerns.

Kind regards,

Samantha

Samantha Leavitt
Stakeholder Relations Representative
Xeneca Power Development Inc.
5160 Yonge Street, Suite 520
Toronto, ON M2N 6L9
Ph: 416-590-9362
Fax: 416-590-9955
samantha@xeneca.com

www.xeneca.com

June 10, 2010

Ministry of the Environment
Timmins District
Ontario Government Complex
Hwy 101 East, PO Box 3080 South
Porcupine, ON P0N 1H0

To whom it may concern,

As you may be aware, Xeneca Power Development Inc. has been awarded 19 Feed in Tariff contracts by the Ontario Power Authority ("OPA") to purchase water generated renewable power developed with the following sites believed to be within your jurisdiction:

Ivanhoe: Third Falls – MNR site # 4LC17 on the Ivanhoe River
Ivanhoe: The Chute – MNR site # 4LC18 on the Ivanhoe River
Wanatango Falls – MNR site # 4MD02 on the Frederick House River

An attached map provided on CD will help to further identify the site locations for each of the projects. Additionally, included in this package is a draft of the Notice of Commencement under the Class EA for Waterpower Projects which will be issued shortly, as well as descriptions of the projects listed above.

This letter is intended to notify your agency of the pending projects and invite agency comment and/or participation where applicable.

Upon review, you may be aware the OPA schedule will prove challenging to both Xeneca and the affected government agencies, as we now have less than 60 months to bring these waterpower projects to commercial operation. This concurs with an analysis of the process by the Ontario Waterpower Association, industry experts and our consultants.

To move forward in a timely manner, we are requesting the following:

- Ministry of the Environment's ("MOE") acknowledgement of receipt of this notice.
- Indication if the MOE intends to comment on some, or all of the projects. If the MOE intends to participate, please indicate the appropriate agency personnel who will handle the Xeneca project files.



- A MOE list of any known issues, concerns and/or comments with respect to the projects, as well as any known non-government stakeholders whom may have interest in these projects.

Please note Xeneca is prepared to meet with the MOE by teleconference to discuss any issues, and requests to be advised of any permits the MOE may require from Xeneca and/or its consultants in order to complete the MOE policy and procedures.

Please contact Xeneca Power Development Inc. with any questions or concerns.

Yours truly,

A handwritten signature in black ink, appearing to read "Patrick Gillette", written over a horizontal line.

Patrick Gillette
President and COO
Xeneca Power Development LP

Muriel Kim

Subject: FW: Waterpower Project - Frederick House River (Wanatango Falls)
Attachments: Xeneca Wanatango Falls MOE Response Draft NoC package Aug 12 10.pdf

From: Cramm, Ellen (ENE) [<mailto:Ellen.Cramm@ontario.ca>]
Sent: Thursday, August 12, 2010 12:05 PM
To: Patrick Gillette
Cc: Vanesa Enskaitis; Samantha Leavitt; Morash, Patrick (ENE); Leith, Carroll (ENE); Lefebvre, Larry (ENE); Telford, Jennifer (MNR); Quirke, Christopher (MEI)
Subject: Waterpower Project - Frederick House River (Wanatango Falls)

Hello Mr. Gillette –

Please find attached the Ministry of the Environment's (MOE) responses regarding the Wanatango Falls proposed waterpower development site package sent to our Timmins District office on June 10, 2010. I will be the primary contact for MOE during the class environmental assessment process for this project, so future correspondence of this nature may be sent to me. Please don't hesitate to contact me if you have questions regarding the attached letters, MOE's mandate, or the environmental assessment process in general.

Thank you.

Regards,

Ellen Cramm, MCIP, RPP
Environmental Planner/EA Coordinator
Technical Support Section, Northern Region
Ministry of the Environment
Telephone: (807) 475-1728 Toll Free: 1-800-875-7772
Fax: (807) 475-1754
ellen.cramm@ontario.ca

Ministry of the Environment
Northern Region
435 James Street South
Suite 331
Thunder Bay, ON P7E 6S7

Ministère de l'Environnement
Région du Nord
435 rue James sud
Bureau 331
Thunder Bay, ON P7E 6S7



Fax: (807) 475-1754
Direct Line: (807) 475-1728

August 12, 2010

Mr. Patrick Gillette
President and COO
Xeneca Power Development LP
5160 Yonge St., Suite 520
Toronto, ON
M2N 6L9

Dear Mr. Gillette:

Re: **Xeneca Power Development LP. Proposed Waterpower Project
Wanatango Falls – MNR site # 4MD02 on the Frederick House River**

Thank you for your letter of June 10, 2010, notifying the Ministry of the Environment's (MOE) Timmins District office of Xeneca Power Development's intent to initiate a Class Environmental Assessment (EA) project for the above-noted proposed waterpower project. You have indicated that the proposed facility will have a generation capacity of less than 200MW and will be situated on an unmanaged waterway. Projects of this nature require approval under the Ontario *Environmental Assessment Act* (EAA). In order to obtain the authority for the project to proceed, Xeneca Power Development LP (Xeneca) must plan for the project in accordance with the process outlined in the *Class Environmental Assessment for Waterpower Projects* (Ontario Waterpower Association, October, 2008).

As the Regional EA Coordinator responsible for the area where this project is located, I will serve as the primary MOE contact for the above-noted project. This means that, as stipulated in the Waterpower Class EA, I am a mandatory contact for all required notices which include the Notice of Commencement and Notice of Completion. For projects situated on an unmanaged waterway, there is an additional mandatory notice, the Notice of Inspection (Section 4.4.2 Page 41 Waterpower Class EA). In addition, I request that I be provided with any other notices and relevant information (i.e. technical studies related to MOE's mandate, information updates) issued during the environmental assessment process for the proposed facility, including a copy of the Statement of Completion upon completion of the Waterpower Class EA process. (Note that although the Class EA identifies the MOE Regional EA Coordinator at the appropriate Regional Office of the MOE as the mandatory point of contact, as an additional measure you may also wish to include the MOE Timmins District office and other MOE contacts on your circulation lists.)

As the MOE's primary contact for this project, I have reviewed the information provided with your letter of June 10, 2010, and offer the following guidance regarding the requirements of the Class Environmental Assessment for Waterpower Projects.

Applicant of Record Status

We note that at this time Xeneca does not hold Applicant of Record Status from the Ontario Ministry of Natural Resources (MNR) for this site. It is outlined in the Waterpower Class EA that prior to commencing the Class EA process, projects on provincial Crown land are expected to have satisfied appropriate requirements for the MNR's Waterpower Site Release and Development Review process. Applicant of Record Status is provided at the conclusion of this process. Part of the intent of this as a first step is to help inform the Class EA process and ensure that proponents are able to make a fully informed decision on whether they wish to proceed with the Class EA and seek other necessary approvals. It is also the point during which MNR, in collaboration with other agencies, compiles a list of Aboriginal Communities with which proponents need to consult throughout the planning process, including through the Waterpower Class EA process. By proceeding with the Waterpower Class EA for this project before completing MNR's site release process, Xeneca takes on the added risks associated with not having the same information as would be available if Applicant of Record status had been obtained initially. The information and consultation expectations of the Waterpower Class EA process remain the same regardless of whether or not the Applicant of Record status is obtained before initiation of the environmental assessment process.

Status of Waterway (Managed/Unmanaged)

We note that your letter of June 10, 2010 included a draft Notice of Commencement for the Wanatango Falls Waterpower project. This draft notice indicates that the project is considered to be on an unmanaged waterway. We recommend that this classification be discussed and confirmed with MNR and MOE, with reference to the definitions section of the Waterpower Class EA. Please note that if any portion of the anticipated zone of influence for this project falls within an unmanaged waterway, we would strongly recommend that the Notice of Commencement identify the waterway as unmanaged, and that the requirements of the Class EA process for unmanaged waterways be met.

Notice of Commencement

Our review of the draft Notice of Commencement provided with your letter indicates that the notice does not appear to meet the minimum content requirements for a Notice of Commencement, as outlined in the Waterpower Class EA. Detailed comments regarding the draft notice are attached to this letter. We strongly recommend that, prior to issuing the formal Notice of Commencement, Xeneca review the draft notice and revise it, as required, to ensure that it meets the requirements of the Class EA process. Note that the content of Notices of Commencement and other required notices/reports, together with various aspects of the process followed, may be considered in the event that Part II Order requests are received regarding this project. Once a final Notice of Commencement has been published/issued, please provide a copy of the final notice, along with confirmation of the date(s) published and publication(s) in which it appeared. If the

Notice of Commencement for this project has already been published in the form attached to the letter of June 10, 2010, the Notice should be revised and republished/re-issued to ensure it meets minimum content requirements.

Coordination Meeting with Agencies

MOE strongly recommends Xeneca initiate a coordination meeting, as described on page 32 of the Waterpower Class EA. This meeting should occur before a Notice of Commencement for a project is released, as it is an important step that can assist agencies in understanding your project. In advance of this meeting, more detailed information such as that outlined in Section 4.1.1 of the Waterpower Class EA (page 31), should be provided to relevant agencies. If it has been determined that other Class EAs or screenings apply to this project, and if the proponent intends to combine processes and issue only one Notice of Commencement, the agencies should be advised of this prior to the initial coordination meeting. It is anticipated that affected agencies, including the MOE, would be better able to assist in the identification of potential issues following their receipt and evaluation of this more detailed information.

Environmental Report

In accordance with the Waterpower Class EA, an Environmental Report must be prepared for proposed projects. In addition, for projects on unmanaged waterways, provision of a draft Environmental Report for review at the time of the Notice of Inspection is required. The Environmental Report must be reflective of the relative complexity of the project, as informed through the evaluation and consultation processes. Section 4.0 (pages 29-43) of the Waterpower Class EA describes the environmental assessment planning process. Also, the Environmental Report must contain the information as outlined in Section 4.4 (pages 40-41), including the assessment of significance of effects as outlined in Section 4.3.1. Sections 6.0 and 7.0 (pages 61-69), discuss public, agency, and Aboriginal Community consultation considerations.

Aboriginal Engagement/Involvement

At Applicant of Record stage, the Ministry of Natural Resources currently provides proponents who hold a FIT contract with a list of Aboriginal Communities that should be consulted regarding proposed projects. That list of Aboriginal Communities is developed in consultation with MOE and should be utilized during consultation efforts to satisfy the requirements of the Waterpower Class EA process. Also, the Waterpower Class EA document provides information that may be of assistance in developing an engagement approach specific to Aboriginal Communities. If for some reason you do not have a list of Aboriginal Communities provided through the Applicant of Record process, then MOE recommends that you refer to the Aboriginal Information Resources listed on our website (<http://www.ene.gov.on.ca/en/eaab/aboriginal-resources.php>). In this situation, agencies listed on the website should be contacted to assist you in determining which Aboriginal Communities may be affected by, or have an interest in your project. MOE recommends that you provide notification directly to the Aboriginal Communities who may be affected by, or have an interest in, your project and provide them with an opportunity to participate as early as possible in the environmental assessment process.

Draft Environmental Report and Notice of Completion

Once the final Environmental Report is complete, a Notice of Completion must be issued to all who have expressed an interest in the project, as well as to those on the distribution list for the Notice of Commencement (including newspapers or other publications). Although not a requirement of the process, MOE encourages that a draft of the Environmental Report be provided to relevant agencies and interested parties for comment before issuance of the Notice of Completion, because addressing outstanding concerns prior to the mandatory 30 day comment period can reduce the risk of receiving Part II Order requests. The final Environmental Report must be made available for public and agency review for a period of at least 30 calendar days, during which documentation, including technical reports and other supporting information, may be reviewed and comments/input submitted to Xeneca.

Consultation/Issue Resolution

Xeneca is reminded that when concerns are raised during the public/agency comment period, the concerned party should be consulted in an attempt to resolve the concerns. Discussions to this end should proceed for an appropriate period of time, even if this means the 30-day review period is exceeded. The Director of Environmental Assessment and Approvals Branch should be notified of any extensions to the consultation period. Xeneca must also advise the concerned party that if such discussions are unsuccessful at resolving the concerns, they can submit an elevation request, if they have not already done so, to the Director of the Environmental Assessment and Approvals Branch, Ministry of the Environment, within a further seven calendar days following the end of discussions (see page 74 of the Waterpower Class EA for further details).

Other Required Permits and Approvals

Completion of the Waterpower Class EA under the EAA does not relieve proponents from the responsibility to obtain any necessary approvals or permits required under other legislation for the project. Xeneca is reminded that the project may not receive approvals under other provincial legislation or commence construction until it has successfully satisfied its obligations under the EAA.

Agency Consultation and Federal Triggers for Waterpower Projects

At this time, Xeneca is directed to Section 4.1.2 and Appendix E of the Waterpower Class EA for information on provincial and federal agencies that should be contacted, and for triggers of the Canadian Environmental Assessment Act. If the federal environmental assessment process is triggered, there is an opportunity to coordinate the federal and provincial environmental assessment processes as discussed in Section 5.2 of the Waterpower Class EA. MOE also recommends that Xeneca contact the Canadian Environmental Assessment Agency as soon as possible for assistance in evaluation of the application of the Canadian Environmental Assessment Act to the proposed undertaking, and to determine the scope of any assessment that may be required for the Federal EA process. The Canadian Environmental Assessment Agency may be contacted at (416) 952-1576.

Xeneca is reminded that the Ministry of Natural Resources is a mandatory contact for hydroelectric projects. The Waterpower Class EA process should be coordinated with the Ministry of Natural Resources' Lakes and Rivers Improvement Act provisions. Please refer to Section 5.3.1 of the Waterpower Class EA for guidance on coordinating these processes.

I trust that the above information will be of some assistance as you proceed with the Class EA process. Please feel free to contact me at any time if you have any questions regarding the MOE's mandate, or the environmental assessment process under Class Environmental Assessment for Waterpower Projects. I look forward to further discussing this project with you at the anticipated coordination meeting for this proposal.

Yours truly,



Ellen Cramm, M.C.I.P., R.P.P.
Environmental Planner/EA Coordinator

attach.

cc: Vanessa Enskaitis, Public Affairs Liaison, Xeneca Power Development Inc
Samantha Leavitt, Stakeholder Relations Representative, Xeneca Power Development Inc.
Patrick Morash, MOE
Carroll Leith, MOE
Larry Lefebvre, MOE
Jennifer Telford, MNR
Chris Quirke, MEI

**Xeneca Power Development LP. Proposed Waterpower Project
Wanatango Falls – MNR site # 4MD02 on the Frederick House River
Draft Notice of Commencement – MOE Comments**

The following comments pertain to the Draft Notice of Commencement for the above-noted Waterpower project, as attached to the letter of June 10, 2010, from Xeneca Power Development Inc.

To ensure that the Notice meets content requirements as outlined in the Waterpower Class EA, the draft Notice of Commencement should be revised as indicated below. If the Notice of Commencement has already been published in the form attached to the letter of June 10, 2010, the Notice should be revised and republished/re-issued.

Required changes:

- revise map to identify the anticipated zone of influence for the project;
- confirm, through consultation with MNR and MOE, whether the project is proposed on a managed or unmanaged waterway, and revise notice if required. (Note that if any portion of the anticipated zone of influence of the project is situated on an unmanaged waterway, then the project should meet the requirements of the Class EA for a new project on an unmanaged waterway.);
- ensure that the project description included in the Notice of Commencement accurately reflects all components of the project. (We note that additional information provided with your letter of June 10, 2010 indicates that a Transformer Station is required, yet this has not been identified in the draft Notice.); and
- include information regarding the tentative project schedule (We note that the proposed project phasing calls for environmental assessment/approvals in 2010 - 2011, detailed design in 2011 - 2012, construction in 2013 – 2014, and operation in 2015. This information could be summarized in the Notice of Commencement.).

The following additional changes to the draft Notice of Commencement would aid in advancing the principles of clarity and transparency, as expressed in the Class EA, and would assist members of the public in understanding the proposed project, determining if they have an interest in the proposal, and more effectively participating in the process.

Suggested changes:

- revise map to indicate the general route of the proposed transmission line;
- revise map to add a scale and North arrow, and clearly identify “Project Location”;
- identify the anticipated length and capacity of the proposed transmission line (e.g. 8.5 km, 27.6 kV);
- spell out “Distribution Station” (instead of using “DS”) when referring to the Hoyle Distribution Station;
- along with the reference to the Ontario Waterpower Association’s *Class Environmental Assessment for Waterpower Projects* (2008) in the second paragraph, include a link to this document on the Ontario Waterpower Association’s website;

- as suggested in the Class EA (Appendix D – Sample Notification Template, last paragraph), add wording to indicate that, if requested, comments and associated personal information included in submissions will become part of the public record and may be released to others; and
- include reference to the Lakes and Rivers Improvement Act and any other statutes for which this Notice of Commencement is intended to fulfil notification requirements. (Please note that, in order for this Notice of Commencement to meet notification requirements of specific statutes, the Notice must specifically identify those statutes and must also meet all of their information requirements. The Notice of Commencement, in its current form, would only address provincial Environmental Assessment Act (EAA) and Canadian Environmental Assessment Act (CEAA) requirements if all information requirements for those respective statutes are met (as noted above, the draft notice does not meet provincial requirements). Xeneca may wish to identify additional statutes and include further information to ensure that the Notice meets the requirements of other pieces of legislation. Similarly, if it is determined that other Class EAs or screenings (such as the Class EA for MNR Resource Stewardship and Facility Development Projects) apply to this project, and if the proponent intends to combine processes and issue only one Notice of Commencement, we would strongly advise that this be indicated in the Notice.

Muriel Kim

Subject: FW: Revised Notice of Commencement and PIC Announcement
Attachments: Revised Notice of Commencement and PIC - Wanatango - 30Sep10.pdf; Revised Notice of Commencement and PIC - Ivanhoe River - 30Sep10.pdf; Revised Notice of Commencement and PIC - Kapuskasing River - 30Sep10.pdf; Revised Notice of Commencement and PIC - Larder Raven - 30Sep10.pdf; Revised Notice of Commencement and PIC - Marter Twp - 30Sep10.pdf

From: Vanesa Enskaitis [<mailto:VEnskaitis@xeneca.com>]
Sent: Thursday, September 30, 2010 11:15 AM
To: Cramm, Ellen (ENE)
Cc: Philippa McPhee; Tami Sugarman; King, Larry
Subject: Revised Notice of Commencement and PIC Announcement

September 30, 2010

Dear Ms. Cramm,

Thank you for your initial comments regarding Notice of Commencement filed for Xeneca Power Development Projects within the jurisdiction of your office.

We appreciate your input and direction and have incorporated it into the revised Notice of Commencement which are attached for your review and comment. Also note that the revised Notice of Commencement will also include and Notice of Public Information Centres (attached). We believe the notices fulfill requirements outlined in the Ontario Waterpower Association Class Environmental Assessment for Waterpower.

It is intended that the attached will be published in local media within the next 20 days. Any additional comments you may have regarding these attached notices should be provided back to Xeneca prior to October 20, 2010.

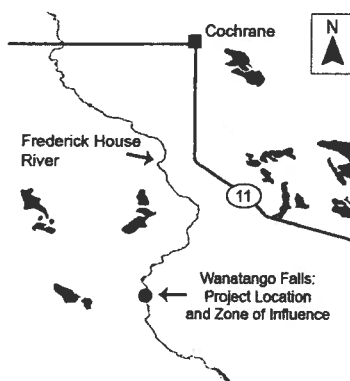
Further, we will shortly be issuing invitations to affected government agencies to attend the Public Information Centres. Kindly advise if you will not be attending and who from your office will be attending in order that we may communicate the invitation to them directly.

If you have any questions, please do not hesitate to contact me. We look forward to working with you along the EA process and beyond.

Vanesa Enskaitis

Public Affairs Liaison
Xeneca Power Development Inc.
5160 Yonge Street, Suite 520
Toronto, ON M2N 6L9
T: 416-590-9362 X 104
F: 416-590-9955
E: venskaitis@xeneca.com

Updated Notice of Commencement and Notice of Public Information Centre
Class EA for Waterpower Projects
Wanatango Falls Waterpower Project



Xeneca Power Development Inc. is planning to undertake an environmental evaluation and assessment for the proposed Wanatango Falls Generating Station to be located on the Frederick House River west of the Town of Iroquois Falls in Mann Township. If approved and constructed, this waterpower project will generate clean, green, and renewable energy at an installed capacity of about 4.7 MW. The Project will include a water control structure attached to the powerhouse with an open channel. As well, a new road and upgrade of existing roads will be required to access the site. A transmission line from the powerhouse to Hoyle Distribution Station would be installed in order to connect the station to the provincial power grid. The Project's location and study area are shown in the above map. Further information can be obtained by visiting the Xeneca website at www.Xeneca.com.

Construction is expected to start in the late fall of 2011 and the in-service date for the proposed Project is expected to be in early 2015.

The Project is subject to the provisions of the Ontario Waterpower Association's "Class Environmental Assessment (Class EA) for Waterpower Projects" (2008). Pursuant to the Class EA, this project is considered to be associated with an unmanaged waterway.

The Class EA process requires Xeneca to undertake an evaluation of the proposed Project to evaluate its potential effects on the environment (positive and negative) and prepare a detailed Environmental Report. The Project is also expected to require review and approvals under the *Canadian Environmental Assessment Act*, *Fisheries Act*, *Navigable Waters Protection Act*, *Lakes and Rivers Improvement Act* (location approval and water management plan), *Endangered Species Act*, *Ontario Water Resources Act*, *Environmental Protection Act* and other legislation. This notice and the public consultation process for the project under the Class EA are intended to coordinate and meet the notification requirements relevant to the planning stage of the Project under these statutes.

The evaluation and environmental report will assess the potential effects of its construction and operation. Xeneca Power Development Inc. has identified certain environmental components that are expected to be the focus of the proposed Project. Public consultation will be an integral component of this process.

Public Information Centre

Xeneca Power Development Inc invites you to attend a Public Information Centre where you will have the opportunity to learn more about the project and provide your input to our project team. Please join us on:

Tuesday, November 9th, 2010

Time: 4:00 to 8:00 pm

Transfiguration Church

316 7th Avenue, Cochrane

You are invited to provide comments on the issues to be addressed, and/or to ask to be placed on the project's mailing list. For information on the project proposal, to raise any issues or concerns, or to be placed on the mailing list, please contact:

Vanessa Enskaitis
Public Affairs Liaison Officer
Xeneca Power Development Inc.
T: 416-590-9362 X 104
F: 416-590-9955
E: venskaitis@xeneca.com

Under the *Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this matter and will be released, if requested, to any person.



5160 Yonge St., Suite 520, Toronto, ON M2N 6L9
tel 416-590-9362 fax 416-590-9955 www.xeneca.com

Muriel Kim

From: Tami Sugarman
Sent: March 28, 2011 5:34 PM
To: Cramm, Ellen (ENE)
Cc: Kentish, Lianne (ENE); Mitchell, Vicki (ENE); Karen Fortin; Pilar DePedro; Kai Markvorsen; Philippa McPhee
Subject: RE: Xeneca Power Development Inc. proposed Wanatango Falls waterpower project on the Frederick House River - Project Description Document Notice

Hi Ellen

I spoke with Vicki Mitchell at the Southern Regional office today. I will speak to Xeneca about including the Southern Region in their meeting scheduled in April sometime to discuss the hydrology reports and the Operating Plans for each Xeneca site. I feel with so many of the Xeneca projects in your region the Southern region gets overlooked.

We also discussed the SW letter reports from the 2010 field baseline studies. As the 2011 field season is soon upon us I wanted to receive some feedback on the data that was collected last year in comparison with the Draft guidelines for water quality monitoring. If required again this year, I would like to have a discussion towards a uniform approach to pre-development (and if not too much to ask, post-development) data collection so that design and preparations for upcoming field surveys can be undertaken appropriately (i.e. parameter list, frequency, methodologies, etc.). I anticipate that methyl mercury is the biggest discussion due to the effort and cost that could be required and that we will have to discuss if there are differing approaches based on different site specific plans and settings.

Vicki suggested that her technical team will review the WESA SW reports recently issued along with the new Draft guidelines and then will have an internal discussion before getting back to OEL-HydroSys and Xeneca. We discussed that this topic would also be of interest to Environment Canada and MNR. I mentioned that it may be most efficient if and required SW surveys correspond with the biological field crew visits to each site and that in the Southern area this may happen as early as the last 2 weeks in April. So time is, once again, an issue to keep in mind.

I hope that we can discuss this matter together within the next month or sooner.

Just one more thing to put on the plate.

Have a good day.
Best regards,
Tami

Tami Sugarman - OEL-HydroSys Carp - (613) 839-1453 x229

From: Cramm, Ellen (ENE) [mailto:Ellen.Cramm@ontario.ca]
Sent: March 28, 2011 4:55 PM
To: Environmental Assessment Information; Tami Sugarman
Cc: Kentish, Lianne (ENE)
Subject: RE: Xeneca Power Development Inc. proposed Wanatango Falls waterpower project on the Frederick House River - Project Description Document Notice

Hi Tami –

Could you please send copies of this report to MOE as follows:

1 CD copy to:

Ministry of the Environment Northern Region
199 Larch St., Suite 1201
Sudbury, ON
P3W 5P6

Attn: Mohammed Sajjad Khan, PH.D., P.Eng.
Regional Hydrologist

1 CD Copy and 1 hard copy to:

Ministry of the Environment Timmins District Office
Hwy # 101E, P.O. Bag # 3080
South Porcupine, ON
P0N 1H0

Attn: Lianne Kentish
Senior Environmental officer

2 CD Copies and 2 hard copies to:

Ministry of the Environment Northern Region
435 South James Street
Suite 331, 3rd Floor
Thunder Bay, ON
P7E 6S7

Attn: Ellen Cramm
Environmental Planner/EA Coordinator

Thank you.

Ellen Cramm, MCIP, RPP
Environmental Planner/EA Coordinator
Technical Support Section, Northern Region
Ministry of the Environment
Telephone: (807) 475-1728 Toll Free: 1-800-875-7772
Fax: (807) 475-1754
ellen.cramm@ontario.ca

From: Environmental Assessment Information [mailto:eainfo@oel-hydrosys.ca]

Sent: March 24, 2011 3:25 PM

To: Smith, Brett (MEI); 'Caitlin Scott'; 'Carl Jorgensen'; 'Colin Hoag'; Pickles, David (MAA); Cramm, Ellen (ENE); Webber, Gerry (MTC); Kwan, Helen L. (MEI); 'Jean-Pierre Ouellette'; Lillie-Paetz, Jennifer (MNDMF); Telford, Jennifer (MNR); Kirzati, Katherine (MTC); 'Kees Pols'; Kentish, Lianne (ENE); 'Mei Ling Chen'; 'Michel Morrisette'; Santos, Narren (ENE); Marleau, Paul (MTO); 'Paul Norris'; 'Rob Dobos'; Spooner, Dr. Simon (MTC); 'Stephanie Davis'; 'Transport Canada'

Cc: Ed Laratta; mholmes@xeneca.com; Tami Sugarman; Philippa McPhee

Subject: RE: Xeneca Power Development Inc. proposed Wanatango Falls waterpower project on the Frederick House River - Project Description Document Notice

Hello,

The login information provided in the previous notification contained a slight error. Correct information for accessing the project description document is as follows:

Site: <https://sps.wesa.ca/xeneca/wanatango/default.aspx>
Username: wanatango
Password: 7Ujmnhy6

Please let us know if you continue to encounter difficulties accessing the information.



Environmental Assessment Information

OEL-HydroSys Inc. — 3108 Carp Rd. - P.O. Box 430, Carp, Ontario, Canada K0A 1L0

(T) (613) 839-1453 (F) (613) 839-5376

eainfo@oel-hydrosys.ca — www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

NOTE: If you are not the intended recipient of this e-mail, please delete it immediately. Unauthorized transmission of this e-mail is prohibited.



Please consider the environment before printing this e-mail

From: Environmental Assessment Information

Sent: March 18, 2011 1:36 PM

To: Brett Smith; Caitlin Scott; Carl Jorgensen; Colin Hoag; David Pickles; Ellen Cramm; Gerry Webber; Helen Kwan; Jean-Pierre Ouellette; Jennifer Lillie Paetz; Jennifer Telford; Katherine Kirzati; Kees Pols; Lianne Kentish; Mei Ling Chen; Michel Morrisette; Narren Santos; Paul Marleau; Paul Norris; Rob Dobos; Simon Spooner; Stephanie Davis; Transport Canada

Cc: Ed Laratta; mholmes@xeneca.com; Tami Sugarman; Philippa McPhee

Subject: Xeneca Power Development Inc. proposed Wanatango Falls waterpower project on the Frederick House River - Project Description Document Notice

Importance: High

Good afternoon:

On behalf of Xeneca Power Corporation Inc. we are pleased to provide you with the attached letter of introduction and directions to accessing and downloading the project description document for the proposed Xeneca Power Corporation Inc. waterpower development at Wanatango Falls Project site located on the Frederick House River in northeastern Ontario. Xeneca has been awarded a Feed-in Tariff (FIT) contract for this site by the Ontario Power Authority (OPA).

You are included on our email list as you have been identified as the one-window contact for your organization and are listed as such on the Contact List for the project. We ask that you distribute this information to colleagues within your organization that should be involved in the planning process. If the main contact for your organization is someone other than you please inform us at Eainfo@oel-hydrosys.ca as soon as possible so that our staff can update the contact list accordingly.

We have elected to distribute this document in electronic format for environmental reasons. You may access our FTP site by completing the following instructions:

Site: <https://sps.wesa.ca/xeneca/wanatango/default.aspx>

Username: wantango

Password: 7Ujmnhy6

You will need to use Internet Explorer rather than Mozilla Firefox, Username and Password are case sensitive.

Aboriginal communities located nearby will also be receiving this notice directly from Xeneca's First Nation and Aboriginal Relations Liaison, Mr. Dean Assinewe.

A hard paper copy and/or CD Rom copy of the project description document will be issued shortly to federal agencies and Aboriginal communities.

Other Parties: If you require a paper and/or CD Rom copy in addition to this electronic copy please notify us at EAinfo@oel-hydrosys.ca otherwise we will assume that this electronic version is adequate.

We are pursuing an Ontario Class Environmental Assessment for Waterpower Projects planning process for this site. A federal screening may also be triggered at the site.

The project description is intended to provide an overview of the project components, general information on the project setting and relevant background information on the project. This Project Description is also designed to assist the proponent in ensuring that all aspects of the project are accounted for in enough detail to allow the public, Aboriginal communities and government agencies to provide meaningful comment throughout the Class EA process. The information will allow you to identify your environmental assessment and regulatory requirements associated with the project. It will also allow a federal authority to determine if there is potential for the *Canadian Environmental Assessment Act (CEAA)* to be triggered by the project proposal and whether the agency will be a Responsible Authority (RA) under *CEA Act* or whether it is able to provide technical expertise as an expert advisor (FA).

It is our intention to schedule a proponent-agency EA coordination meeting as soon as possible. We hope that this project description document will assist you in preparing for this meeting, the purpose of which is to discuss the following items in the context of the project's proposed schedule;

- applicable policies and procedures administered by each agency (list of statutes and regulations) and list of required approvals for the project;
- a comprehensive list of values and issues of concern/benefit identified with the site and the project (natural, socio-cultural, economic);
- data and information collection procedures; and,
- a consultation and engagement plan.

We trust this submission is adequate for these purposes. Please do not hesitate to contact us with any questions or clarifications.

Respectfully submitted on behalf of Xeneca Power Corporation Inc.,

Tami Sugarman and Philippa McPhee, EA Project Managers
OEL-HydroSys Inc.



Ministry of
Northern Development,
Mines and Forestry

Ministère du
Développement du Nord,
des Mines et des Forêts

933 Ramsey Lake Road
Sudbury, ON P3E 6B5
Phone: 705-670-5887
Fax: 705-670-5807

Ms. Samantha Leavitt
Xeneca Power Development Inc.
520-5160 Yonge St
Toronto ON M2N 6L9

July 8, 2010

Dear Ms. Leavitt

This letter is in response to the review of Xeneca Power Development Inc.'s proposal relating to 18 hydro-electric developments. The Resident Geologist Program (RGP) has done the following with regard to each development:

1. checked the site of the proposed dam to determine its status with regard to tenure and alienation of surface rights and mining rights;
2. checked the Ministry's Abandoned Mines Information System (AMIS) database to determine whether any mining-related hazards are recorded in the area of the dam, or within a one-kilometre radius of it;
3. checked the Ministry's Assessment File Report Inventory (AFRI) database to determine whether past mineral exploration activity has been reported for the area;
4. reviewed the Xeneca "Project Overview" for each site to assess the potential environmental considerations identified by the company; and
5. used the GIS-based "Metallic Mineral Potential Estimation Tool" to get an estimation of the mineral potential of the dam sites.


The outcomes of these reviews are listed in the Attachment to this letter.

.../2

An additional concern that relates to all of these sites is that they will have power lines ranging from 1.1 to 22 kilometres in length associated with them. All of the types of assessments that have been done for the dam sites themselves must also be done for the transmission corridors, and the concerns raised in the Attachment with regard to the individual dam sites will also need to be addressed for each of the transmission corridors.

I trust that you will find this in order.

Yours truly,

A handwritten signature in cursive script, reading "Ruth DeBicki".

R.L. Debicki, P.Geo.
Land Use Policy and Planning Coordinator

cc: Jennifer Lillie-Paetz, Environmental Assessment Coordinator, MNDMF

ATTACHMENT 1
Xeneca Power Development Inc.'s Proposals
MDNMF Comments – Resident Geologist Program

1. With regard to each project, Xeneca has recognized “riparian rights” in its Project Overview documents as being potential environmental considerations, and has identified the following four categories of land to which those riparian rights might apply:

- Crown Land;
- Federal Land and Private Land;
- Federal Land (DFB Petawawa); and
- Crown and Private Land

Xeneca has not recognized in its Project Overview documents that there are two rights in land: surface rights, and mining rights. Each may be held by different owners, and the owners of each have their own rights and obligations. Should Xeneca wish to undertake any work on a property where a mining claim is held by a third party, the *Mining Act* requires the company to obtain the approval of the claimholder before undertaking such work, or – failing such approval – the consent of the Lieutenant Governor in Council, regardless of whether the surface rights are held by the Crown or by some other private owner.

The status of land tenure at the dam sites (as noted on MNDMF's CLAIMaps website on July 7, 2010), is summarized in the table below.

Project Site	Mining Lands		Surface Rights		Other “Alien- ations”
	Claims	Leases	Patented	Crown	
Allen & Struthers	None	none	No	Yes	No
Big Eddy	None	none	No	CFB Petawawa	Yes
Cascade Falls	None	none	Yes	No	No
Four Slide Falls	Yes : 4221194	none	No	Yes	No
Half Mile Rapids	none	none	No	Yes	No
Lapinagam Rapids	none	none	No	Yes	Yes
Larder & Raven	none	none	No	Yes	Yes
Marter Twp.	none	none	Yes	No	Maybe
McCarthy Chute	none	none	No	Yes	Yes
McPherson Falls	None	none	Yes	No	No
Middle Twp. Buchan	none	none	No	Yes	Yes
Near North Boundary	none	none	No	Yes	Yes
Outlet Kapuskasing Lake	none	none	No	Yes	Yes

Soo Crossing	none	none	Yes	No	No
The Chute	none	none	No	Yes	Yes
Third Falls	Yes : 3006261	none	No	Yes	Yes
Wabageshik	none	none	No	Yes	No
Wanatango Falls	Yes : 1154617	none	No	Yes	Yes

Note that there are currently mining claims in good standing at three of the proposed dam sites. There are no mining leases at any of the proposed dam sites.

Since the mining tenure in the Province is constantly changing, however, Xeneca is advised to check the Ministry's CLAIMaps website at:

http://www.mndm.gov.on.ca/mines/lands/claimap3/disclaimer_e.asp

on a regular basis to determine the status of their areas of interest.

In addition to considerations regarding the mineral rights of the proposed dam sites, Xeneca may have to consider other factors with regard to the status of the land at several of the sites. It appears that there are privately owned lands at four of the sites. The owner may be the Ministry of Natural Resources (as opposed to the Crown), or some other third party.

There are other "alienations" at ten of the Crown-owned sites that may also need to be addressed. These alienations may be *Mining Act* withdrawals that would accommodate hydro-electric developments, but they may reflect other alienations such as protected area status that would make development difficult.

Depending upon the extent of inundation from the development, or the location of infrastructure related to the hydro-electric development, similar considerations may have to be addressed for the area surrounding the dam site itself. The table below lists the status of lands within a one-kilometre radius of the coordinates of the dam site, and shows that five of the sites have mining claims nearby, two have mining leases nearby. In addition, it shows that seven sites have patented surface rights nearby and 11 have "other alienations" nearby.

Project Site	Mining Lands		Surface Rights		Other "Alienations"
	Claims	Leases	Patented	Crown	
Allen & Struthers	None	None	Yes	Yes	No
Big Eddy	None	None	No	No	Yes
Cascade Falls	None	Yes	Yes	No	No

Four Slide Falls	Yes: 4221194 and 4221193	None	No	Yes	No
Half Mile Rapids	None	None	No	Mckay Yes Petawawa No	No
Lapinagam Rapids	None	None	No	Yes	Buchan, Clouston and Davin Yes Amundsen No
Larder & Raven	None	None	No	Yes	Yes
Marter Twp.	Yes: 4225614 and 5225613	None	Yes	Yes	Marter Yes Chamber, Iain No
McCarthy Chute	None	None	No	Yes	Yes
McPherson Falls	None	None	Yes	No	No
Middle Twp. Buchan	None	None	No	Yes	Yes
Near North Boundary	None	None	No	Yes	Yes
Outlet Kapuskasing Lake	None	None	No	Yes	Yes
Soo Crossing	None	Yes	Yes	No	No
The Chute	None	None	No	Yes	Yes
Third Falls	Yes: 3006261, 3006260, 3006253 and 3006257	None	No	Yes	Yes
Wabageshik	Yes: 4254407	None	Yes	Yes	No
Wanatango Falls	Yes: 3006946, 1190501, 1154618, 1154614, 1154622, 1219621, 1154621, 1154613, 1154617, 1154627, 4230128, 1154626, 1154616, 1154612, 1154620, 1154619, 1154611, 1154615 and 1154625	None	Yes	Yes	Mann: Yes Duff: No

2. The status of mining-related hazards, as identified using the Ministry's Abandoned Mines Information System (AMIS) database, is summarized below.

Mining-related hazards are normally divided into two categories; those in very close proximity to the dam sites; and those centred within one kilometre of the dam sites. Depending upon the type of a hazard, its effects may extend beyond its "pinpoint" surface location. For example, underground workings may extend laterally for significant distances from a shaft; windblown contaminants can affect areas surrounding an un-rehabilitated tailings area; and contaminated surface or groundwater may flow beyond the site of a physical hazard.

The table below indicates the number of recorded hazards that may need to be considered with regard to each proposed development. The first column gives the name of the project. The second indicates the number of hazards within the township where the proposed dam site is located. The proposed dam site may actually be more than one kilometre from any hazard, but more detailed work would have to be done to determine this. A preliminary review suggests that there are no mining-related hazards in the "immediate vicinity" of the proposed dam sites. The third column indicates the numbers of recorded hazards in all townships within a one-kilometre radius of each proposed development, because some of the proposed developments are close to one or more township boundaries.

Project Site	AMIS Reports – Township of Project Site	AMIS Reports –Townships within one kilometre of Project Site
Allen & Struthers	1	1
Big Eddy	None	None
Cascade Falls	13	13
Four Slide Falls	1	1
Half Mile Rapids	None	None
Lapinlgam Rapids	None	Buchan, Clouston, Amundsen and Davin: None
Larder & Raven	None	None
Marter Twp.	1	Marter: 1 (Mine site within 1 Township); Chamberlain: None
McCarthy Chute	1	Proctor: 1; Deagle: None
McPherson Falls	9	9
Middle Twp. Buchan	None	None
Near North Boundary	None	None
Outlet Kapuskasing Lake	None	None
Soo Crossing	13	13

The Chute	None	None
Third Falls	None	None
Wabageshik	7	7
Wanatango Falls	1	Mann: 1; Duff: None

Xeneca Power Development Inc. should take these areas into consideration as a matter of health and safety for any of its employees who may be working in the area. In addition, Xeneca Power Development Inc. should be aware that it is an offence under the *Mining Act* to alter, destroy, remove or impair any rehabilitation work made in accordance with the Act.

Please note that the information provided with regard to AMIS sites has been compiled from various sources, and the Ministry makes no representation and takes no responsibility that it is accurate, current or complete. Xeneca Power Development Inc. may wish to undertake its own independent investigation to validate this information.

3. The Ministry's Assessment File Report Inventory (AFRI) database provides an indication as to whether past mineral exploration activity has been reported for the area.

For the townships in which the proposed sites are located, the numbers of assessment reports listed in the table below are on file with the Ministry. The first column gives the name of the project. The second indicates the number of assessment reports within the township where the proposed dam site is located. The proposed dam site may actually be more than one kilometre from the subject area of any or all of the assessment reports, but more detailed work would have to be done to determine this. The third column indicates the numbers of assessment reports in all townships within a one-kilometre radius of each proposed development, because the sites of some of the proposed development sites are close to one or more township boundaries.

Project Site	AFRI Reports – Township of Project Site	AFRI Reports – Townships within one kilometre of Project Site
Allen & Struthers	None	None
Big Eddy	None	None
Cascade Falls	58	58
Four Slide Falls	12	12
Half Mile Rapids	1	Mckay: 1; Petawawa: None
Lapinigam Rapids	0 or 1	Buchan: 0 or 1; Clouston, Amundsen and Davin: None
Larder & Raven	62	62

Marter Twp.	29	Marter: 29; Chamberlain: 5
McCarthy Chute	12	Proctor: 12; Deagle: 10
McPherson Falls	18	18
Middle Twp. Buchan	None	Clouston: None; Buchan: 0 or 1
Near North Boundary	0 or 1	Clouston: None; Buchan: 0 or 1; Maude and Allenby: 1
Outlet Kapuskasing Lake	None	None
Soo Crossing	58	58
The Chute	11	11
Third Falls	64	64
Wabageshik	78	78
Wanatango Falls	Approximately 232	Mann: Approximately 232; Duff: 36

Again, please note that the information provided with regard to the assessment reports has been compiled from various sources, and the Ministry makes no representation and takes no responsibility that it is accurate, current or complete. Other exploration and development work that may have been done, but not reported is also protected by the *Mining Act*.

Xeneca Power Development Inc. should note that if mineral development workings or claim markings are not recognized and subjected to damage (e.g., claim lines or grid lines are destroyed by cutting vegetation), the *Mining Act* requires that compensation shall be paid to the claimholder.

4. The "Project Overviews" for each of the sites were reviewed to assess the potential "environmental" considerations identified by the company. Four considerations were identified for every site. They are:

- fish species, habitat and migration;
- terrestrial vegetation and habitat;
- First Nations / Aboriginal traditional land / resource use; and
- recreational use and navigation.

A fifth consideration, commercial operations and tourism, was identified for the following six sites:

- Cascade Falls;
- Lapinagam Rapids;
- McPherson Falls;
- Middle Twp. Buchan;
- Near North Boundary; and
- Wabageshik Rapids.

The term "commercial operations and tourism" is unclear, and should be clarified. It should include forestry operations, and mineral exploration and development in addition to tourism. Off mine-site exploration and deposit appraisal expenditures in Ontario are expected to be close to \$500 million in 2010; the possibility that exploration might be occurring on or around the proposed development sites must be considered.

5. For the sites under consideration as potential dams, it is normal practise for the Ministry of Natural Resources to ask the Ministry of Northern Development, Mines and Forestry to withdraw either the surface rights, or both the surface and mining rights from staking. When a request for a withdrawal is received, the Resident Geologist Program normally carries out a mineral resource assessment as part of its review.

Given the early stage of the current proposals, full mineral resource assessments were not done, but the GIS-based "Metallic Mineral Potential Estimation Tool" was used to estimate the mineral potential of the dam sites. Scores of 65 or higher are normally considered to have provincial significance. Eight of the 18 sites under consideration have scores higher than 65. A more detailed assessment may result in different scores for some of the sites (e.g., lower scores for the sites scoring 100).

Site	Score/100	Ore Deposit Model
Allen & Struthers	62	Paleoplacer Uranium Deposits
Big Eddy	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Cascade Falls	100	Sudbury Igneous Complex Hosted Cu-Ni-PGE
Four Slide Falls	67	Lode Gold
Half Mile	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Lapinagam Rapids	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Larder and Raven	81	Diamond-Bearing Rocks
Marter Township	96	Lode Gold
McCarthy Chute	19	Lode Gold
McPherson Falls	100	Sudbury Igneous Complex Hosted Cu-Ni-PGE
Middle Twp. Buchan	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Near North Boundary	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Outlet Kapuskasing Lake	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Soo Crossing	100	Sudbury Igneous Complex Hosted Cu-Ni-PGE

The Chute	41	Diamond-Bearing Rocks / Carbonatite – Alkalic Intrusive Complex
Third Falls	93	Volcanic-Hosted Massive Sulphides
Wabageshik Rapids	62	Paleoplacer Uranium Deposits
Wanatango Falls	93	Volcanic-Hosted Massive Sulphides

The Provincial Policy Statement, issued under the *Planning Act*, provides that development and activities that would preclude or hinder the establishment of new operations or access to the resources in areas of provincially significant mineral potential shall only be permitted if:

- resource use would not be feasible; or
- the proposed land use or development serves a greater long-term public interest; and
- issues of public health, public safety and environmental impact are addressed.

The Ministry of Northern Development, Mines and Forestry considers the direction provided by the Provincial Policy Statement when assessing whether or not to approve applications for withdrawal orders.

Muriel Kim

From: Tami Sugarman
Sent: December 6, 2010 9:06 AM
To: Tovey, Dan (MAH)
Cc: Kaufman, Wendy (MAH); White, Charlsey (MAH); Philippa McPhee; Pilar DePedro
Subject: RE: Xeneca Power Development Inc.

Acknowledged.

Best regards

Tami

Tami Sugarman - OEL-HydroSys Carp - (613) 839-1453 x229

From: Tovey, Dan (MAH) [mailto:Dan.Tovey@ontario.ca]
Sent: December 3, 2010 6:43 PM
To: Tami Sugarman
Cc: Kaufman, Wendy (MAH); White, Charlsey (MAH); Philippa McPhee; Pilar DePedro
Subject: RE: Xeneca Power Development Inc.

Tami,

As noted in our July 20th correspondence, MMAH's Northeastern Municipal Services office doesn't need to be further notified on any of the projects you've identified below.

Thanks

Dan Tovey|Manager(A)
Community Planning and Development, Northeastern Municipal Services Office
Ministry of Municipal Affairs and Housing
☎: 705.564.7128|☎:705.564.6863|✉:dan.tovey@ontario.ca

Visit our OnRAMP Site at: www.mah.gov.on.ca/onramp-ne



Please consider the environment before printing this email note.

From: Tami Sugarman [mailto:tsugarman@oel-hydrosys.ca]
Sent: November 25, 2010 1:45 PM
To: Tovey, Dan (MAH)
Cc: Kaufman, Wendy (MAH); White, Charlsey (MAH); Elms, Michael (MAH); Philippa McPhee; Pilar DePedro
Subject: RE: Xeneca Power Development Inc.

Hello Dan and MAH team:

Thank you for providing a copy of your Ministry's correspondence to Xeneca dated July 20, 2010. This correspondence was not shared with my office, which may explain why we did not contact your regional offices directly.

For the Larder site it is very clear that no further engagement of the MAH is required.

Please clarify: To what degree, if at all, does your Ministry need to be further notified in the EA planning processes for the remaining proposed waterpower development projects? We have the MAH team organized as such;

For the six projects that we have issued Project Descriptions to date:

- Serpent- Four Slide Falls - Charlsey White
- Serpent- McCarthy Chute - Charlsey White
- Ivanhoe- The Chute, Wendy Kaufman
- Wanapatei- Allen and Struthers, Wendy Kaufman
- Vermilion- Wabageshik, Wendy Kaufman
- Petawawa- Half Mile, Michael Elms

And for some pending Project Descriptions:

- Petawawa- Big Eddy - Michael Elms
- Blanche- Marter Twp. - Wendy Kaufman
- Ivanhoe- Third Falls - Wendy Kaufman
- Vermilion- At Soo Crossing, Cascade Falls, McPherson Falls - Wendy Kaufman
- Frederickhouse- Wanatango – Wendy Kaufman

Our consultation and engagement plan for these projects include the municipalities listed in your July 20 letter as well as others identified for each project. We will ensure that these municipalities are provided with opportunities to engage in the planning process, including all mandatory notice points.

Respectfully,
Tami Sugarman



Tami Sugarman, B.Sc., P.Geo. — Principal, Environmental Assessment and Approvals Coordinator

OEL-HydroSys Inc. — 3108 Carp Road - P.O. Box 430, Carp Ontario K0A 1L0

(T) (613) 839-1453 x229 (C) (613) 894-3509 (F) (613) 839-5376

tsugarman@oel-hydrosys.ca — www.oel-hydrosys.ca

OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

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From: Tovey, Dan (MAH) [<mailto:Dan.Tovey@ontario.ca>]

Sent: November 23, 2010 2:22 PM

To: Tami Sugarman

Cc: Venskaitis@xeneca.com; Kaufman, Wendy (MAH); White, Charlsey (MAH); Pilar DePedro; Elms, Michael (MAH)

Subject: Xeneca Power Development Inc.

Hello Tami,

Over the last few days this office has received several emails containing the link to the project description and advance notice on upcoming meetings for FIT projects in the following locations:

- Allan and Struthers (Wanapitei R)
- Serpent River
- Larder River
- Ivanhoe
- Wabagishik Rapids

An individual response re the Larder River was provided via email on Friday, November 19, 2010.

Review of our files has revealed that a comprehensive response regarding 19 FIT projects was provided by our office to Mr. Peter Gilette by mail on July 20, 2010 following a telephone discussion with Vanesa Enskaitis. The unsigned version of our response is attached for your reference.

Thank you for providing us with a second opportunity to comment on some of these projects, but this first response will be the only comments that our office will be putting forward.

The Petawawa River notice should be directed to Mike Elms, Manager of Community Planning and Development, of our Eastern Municipal Services Office (c.c.'d on this email).

Thank you,

Dan Tovey|Manager(A)
 Northeastern Municipal Services Office
 Ministry of Municipal Affairs and Housing
 ☎: 705.564.7128|📠:705.564.6863|✉:dan.tovey@ontario.ca

Visit our OnRAMP Site at: www.mah.gov.on.ca/onramp-ne



Please consider the environment before printing this email note.

From: Tami Sugarman [mailto:tsugarman@oel-hydrosys.ca]

Sent: November 21, 2010 1:10 PM

To: Liu, Amy [CEAA]; Hutchison, Carrie (ENE); rich.rudolph@dfo-mpo.gc.ca; EnviroOnt@tc.gc.ca; EACoordination_ON@inac-ainc.gc.ca; melanie_lalani@hc-sc.gc.ca; Rob.Dobos@ec.gc.ca; Caitlin.Scott@NRCan.gc.ca; Robinson, Bob L. (MNR); Webber, Gerry (MTC); Miller, Chuck (MNR); Morello, Murray (MNDMF); Tovey, Dan (MAH); Kaufman, Wendy (MAH); Gibson, Amy (MEI); Pickles, David (MAA); Godin, Greg (MTO); paul.sajatovic@sudbury.ca; townkill@vianet.on.ca

Cc: Ed Laratta; Vanesa Enskaitis; Philippa McPhee; pnorris@owa.ca; Rob Steele

Subject: Xeneca Power Development Inc. proposed Allen and Struthers waterpower project on the Wanapitei River - Project Description Document Notice

Importance: High

Good afternoon:

On behalf of Xeneca Power Corporation Inc. we are pleased to provide you with the attached letter of introduction and directions to accessing and downloading the project description document for the proposed Xeneca Power Corporation Inc. waterpower development at the Allen and Struthers Project site located on the Wanapitei River in northeastern Ontario. Xeneca has been awarded a Feed-in Tariff (FIT) contract for this site by the Ontario Power Authority (OPA).

You are included on our email list as you have been identified as the one-window contact for your organization and are listed as such on the Contact List for the project. We ask that you distribute this information to colleagues within your organization that should be involved in the planning process. If the main contact for your organization is someone other than you please inform us at EAinfo@oel-hydrosys.ca as soon as possible so that our staff can update the contact list accordingly.

We have elected to distribute this document in electronic format for environmental reasons. You may access our FTP site by completing the following instructions:

Site: <ftp://clientftp.wesa.ca>
Username: XENECA
Password: WESA.2010

An attached word document guide will assist you with the download process. You will need to activate passive mode in your Internet Explorer browser to be able to access the FTP site behind our corporate firewall.

Aboriginal communities located nearby will also be receiving this notice directly from Xeneca's First Nation and Aboriginal Relations Liaison, Mr. Dean Assinewe.

A hard paper copy and/or CD Rom copy of the project description document will be issued shortly to federal agencies and Aboriginal communities.

Other Parties: If you require a paper and/or CD Rom copy in addition to this electronic copy please notify us at EAinfo@oel-hydrosys.ca otherwise we will assume that this electronic version is adequate.

We are pursuing an Ontario Class Environmental Assessment for Waterpower Projects planning process for this site. A federal screening may also be triggered at the site.

The project description is intended to provide an overview of the project components, general information on the project setting and relevant background information on the project. This Project Description is also designed to assist the proponent in ensuring that all aspects of the project are accounted for in enough detail to allow the public, Aboriginal communities and government agencies to provide meaningful comment throughout the Class EA process. The information will allow you to identify your environmental assessment and regulatory requirements associated with the project. It will also allow a federal authority to determine if there is potential for the *Canadian Environmental Assessment Act (CEAA)* to be triggered by the project proposal and whether the agency will be a Responsible Authority (RA) under *CEA Act* or whether it is able to provide technical expertise as an expert advisor (FA).

It is our intention to schedule a proponent-agency EA coordination meeting as soon as possible. We hope that this project description document will assist you in preparing for this meeting, the purpose of which is to discuss the following items in the context of the project's proposed schedule;

- applicable policies and procedures administered by each agency (list of statutes and regulations) and list of required approvals for the project;
- a comprehensive list of values and issues of concern/benefit identified with the site and the project (natural, socio-cultural, economic);
- data and information collection procedures; and,
- a consultation and engagement plan.

We trust this submission is adequate for these purposes. Please do not hesitate to contact us with any questions or clarifications.

Respectfully submitted on behalf of Xeneca Power Corporation Inc.,

Tami Sugarman and Philippa McPhee, EA Project Managers
OEL-HydroSys Inc.



Tami Sugarman, B.Sc., P.Geo. — Principal, Environmental Assessment and Approvals Coordinator

OEL-HydroSys Inc. — 3108 Carp Road - P.O. Box 430, Carp Ontario K0A 1L0

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OEL-HydroSys, WESA Envir-Eau, WESA, WESA Technologies, members of WESA Group Inc.

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Minutes

Re: Agency Discussions re: Xeneca Power Hydro Development Projects
Fisheries Act Authorizations

Date/Time: February 11, 2011, 10:00am to 12:10pm

Location: Holiday Inn Toronto Airport East
600 Dixon Road
Toronto, ON M9W 1J1

Participants Present:

Robert Steele – NRSI
Andrew Schiedel - NRSI
Bill Touzel – OEL HydroSys
Patrick Gillette – Xeneca
Ed DeBruyn – DFO
Jennifer Thomas – DFO
Thomas Hoggarth – DFO
Carl Jorgensen – DFO
Cindy Mitton-Wilkie – DFO

Participants by Teleconference:

Tami Sugarman – OEL HydroSys
Julie Dahl – DFO
Jim Beal – MNR
Dave Brown – MNR
Bob Bergmann – MNR
Sandra Dosser – MNR

The following Meeting Minutes were recorded jointly by Andrew Schiedel of Natural Resource Solutions Inc. and Cindy Mitton-Wilkie of Fisheries and Oceans Canada. The notes reflect the understanding of discussions held at the meeting and were previously circulated for review by participants between March 8 and March 21, 2011. Some minor comments were received and corresponding revisions were made. These minutes are now considered accurate.

1. Introductions

2. Opening comments

Patrick Gillette – Xeneca

Xeneca currently has 19 small hydroelectric projects, most of which are run-of-the-river with some projects having opportunities for limited peaking. All of these are located in northeastern Ontario.

Patrick had spoken with DFO staff about doing habitat banking or regional scale compensation, and is aware of other projects, such as some in the mining sector, which are in need of compensation within the northeast region. He asked whether there are sites that DFO or MNR are dealing with where Xeneca could contribute as a means of fish habitat compensation. He also suggested that Xeneca could potentially propose projects as well. They are looking for opportunities for bigger 'wins' instead of dealing with small compensation projects on a site basis.

DFO – Ed Debruyn

Ed indicated that there is a lot of uncertainty with the FIT contracts, and there is the reality of timelines. He has spoken with MOE regarding meeting the challenges of the regulatory process. He was at an OWA roundtable meeting where there were similar discussions about the regulatory process and the EA process. All parties are working toward the same end. MNR and DFO are working collectively and effectively to make decisions, with MNR regulating fisheries and DFO regulating Habitat.

Ed said there are some places where it makes sense to do this regional compensation and we need to determine where it may make sense. There is work underway to develop agreements on how to do things better. They are working with OWA on strategic issues, and there is similar work underway elsewhere across the country. DFO needs to better understand what is being proposed by Xeneca. DFO can take ideas and give them consideration, and discuss them with MNR.

Ed reminded the Xeneca group that DFO is bound by Policy, and they need to determine where they may be setting precedents. They are held accountable by members of the public as to what they are doing and how they are implementing their policies. In that regard, he requested that meeting minutes be circulated.

Dave Brown - MNR

Dave indicated that he did not have specific comments. MNR staff will be in listening mode during the meeting. They want to hear the discussions and then have further discussion with DFO.

3. Background – What is driving Xeneca's desire to pursue regional scale fish habitat compensation?

Rob Steele (NRSI) provided background on the Xeneca projects, the complexity of developing fish habitat compensation plans, and the timing challenges for the projects. A copy of his presentation is attached.

- Xeneca Power currently has 19 proposed hydroelectric projects at various locations across central and eastern Ontario (Rivers include Vermilion, Wanapitei, Frederick House, Ivanhoe, Serpent, Petawawa, Larder and Kapuskasing)
- The relative size and complexity of these projects introduces difficulty in terms of traditional "like for like" fish habitat compensation at the project level (i.e. distance of river being altered may be too large)

- Timing associated with multiple “separate” *Fisheries Act* Authorizations vs. project timelines also adds complexity

4. Goals and Objectives of Today’s Discussions

- Provide General Understanding of Xeneca Project Types
- Provide summary of pressures related to project schedule
- Introduce potential concepts for larger scale fish habitat compensation
- Determine Information needed from Xeneca?
- Provide forum for open discussion
- Determine next steps and action items

5. Project Schedules

Patrick Gillette (Xeneca) discussed the numerous FIT contracts and indicated that 40 of those contracts are hydro. Xeneca has 19 of the hydro FIT contracts. There is a 5 year contract schedule. Xeneca is one year into the process. There is about 18 to 24 months to complete the EA, and 12 to 16 months to complete permitting. It is challenging just to develop 19 hydro projects, and the schedule of the FIT contracts adds further challenge.

Patrick explained that there is an incentive in these contracts to provide peaking capability, such that a small river gets about a 35% premium in operating revenue. The province does not require peaking as part of the FIT contracts. Instead, they offer a premium on the price of electricity produced between 11am and 7pm on any weekday (Monday – Friday) of the year. From 7pm to 11am on the weekday and during weekends and holidays, they are offered 10% less than the standard price. The facilities are not ‘on call’ to provide peak power.

Patrick described the timing constraints for ordering equipment. Equipment cannot be ordered until the design and operation plan is in place, because this can affect the type of turbine and other equipment that is required.

Bill Touzel (WESA) indicated that financing is also a factor in the timing of equipment orders. Once the project is further along in the EA and approvals processes, the financing becomes available to order equipment.

Patrick Gillette (Xeneca) added that having a Notice to Proceed from the Ontario Power Authority (OPA) contributes to the ability to proceed with equipment orders. A Notice to Proceed is dependent upon the completion of the provincial EA process. Fear of government change and the potential cancellation of the FIT contracts is another reason to wait to order equipment.

Ed Debruyne (DFO) asked about Xeneca’s project priorities. Do they all have the same level of priority? If some projects are higher priority, which ones are they?

Patrick Gillette (Xeneca) indicated that they are in the process of preparing operation plans, which will be completed in the next 30 to 60 days. They will then use this information to begin triaging the projects. Factors under consideration also include acceptance of projects by locals which presents a clearer path through the EA process.

Action: Xeneca to provide project priority list in 30 to 60 days.

Ed Debruyne (DFO) indicated that there are many demands on DFO's fixed resources. Renewable energy is not the only priority.

Bill Touzel (WESA) explained that the 5-year FIT contracts have penalties for not meeting the timeline of the contract.

Patrick Gillette (Xeneca) indicated that he views permitting as the real bear. The financial burden incurred during permitting is a collective function of the processes with all the various permits and the responsible agencies. The easier and more functional the Xeneca team can make the process for the agencies, the fewer burdens Xeneca needs to bear as a result of permitting.

6. Discussion of Xeneca Projects and Range of Anticipated Fish Habitat Impacts

Patrick Gillette (Xeneca) indicated that the generator sizes for the 19 projects range from 1.5 MegaWatts for the smallest generator, to the range of 3 to 7 MegaWatts for most of the projects, and 9 MegaWatts for the largest generator. Rob Steele reviewed two examples of Xeneca's project representing the smallest fish habitat impact and the largest fish habitat impact.

- The McCarthy Chutes project on the Serpent River has a small inundation area in terms of both river length and area, and a close-coupled powerhouse that does not create a flow bypass reach.
- The Four Slides Falls project has a very large inundation area in terms of river length (6km) and area. It also has a bypass reach because a penstock conveys flow to a powerhouse located downstream of the dam.

7. Potential Concepts for Consideration

Rob Steele (NRSI) presented various concepts for consideration.

- Preserving Areas for Conservation: Xeneca could purchase private lands alongside a river and set it aside for conservation.
- Orphan Mine Site Rehabilitation

- Currently more than 5,700 known abandoned mine sites located within Ontario,
- Approximately 4,000 sites could potentially be hazardous to public health and safety and to the environment, including potential toxic impact on aquatic habitat.
- Approximately 30 - 40 per cent of Ontario's abandoned mine sites are estimated to be located on Crown land.
http://www.mndmf.gov.on.ca/mines/mg/abanmin/default_e.asp
- Example – Xeneca’s McGraw Falls Project
- Example – Graveyard Chutes
 - Located on Aux Sable River near a Provincial Water Park close to the Town of Massey, Sudbury District.
- In general, Xeneca can adopt smaller projects with their staff and resources to get the work done. Are there projects that DFO/MNR wants done?
 - The Larder and Raven project is an example where the hydroelectric facility is small, having a 1.5 MegaWatt generator. Work is required at the site that the project cannot fund, but the work could be done with some resources from another project.

Thomas Hoggarth (DFO) suggested that this regional concept may be more complex and onerous than treating the 19 sites individually, which is contrary to the suggestion by Xeneca’s consultants, that regional compensation will simplify the compensation process. Also habitat banking must be completed and monitored before being given credit that can be applied to your project, so it does not work with the FIT timelines.

Bill Touzel (WESA) clarified that the intention is to find existing problems and fix them, not to bank habitat.

Thomas Hoggarth (DFO) pointed out that the EA process will become more complex as additional projects and locations are used. More geographic areas and issues will be added to the EA. He said it is a good idea to think about regional habitat compensation, but in reality the timeline may not be improved.

Ed Debruyn (DFO) agreed that the compensation site would be added to the project’s EA.

Bill Touzel (WESA) indicated that Xeneca’s team is aware of the issues and complexities. At this point we are not yet at the point of those complexities. Xeneca needs buy-in to the regional compensation approach.

Ed Debruyn (DFO) indicated that DFO’s presence at the meeting provides indication of potential and interest in regional compensation. At the same time, DFO must be sure they are within the 3 principles of the Policy for the Management of Fish Habitat.

1. Fish Habitat Conservation
2. Fish Habitat Restoration
3. Fish Habitat Development

Jennifer Thomas (DFO) indicated that they need to have information on the habitat issues at the each site before they can discuss concepts and potential projects for compensation. Some examples would include: fish and fish habitat resources, potential impacts to fish and fish habitat (e.g. physical habitat, fish passage), mitigation, compensation options on site, residual impacts that can't be compensation on site. This information needs to be developed with local staff input.

Bill Touzel (WESA) said Xeneca is very close to being able to provide that.

Action: Xeneca to provide operation plans to local DFO and MNR staff.

Rob Steele (NRSI) indicated that he would like to see a matrix of the various projects and their residual fish habitat impacts. This list could be provided to senior DFO staff.

Action: Once draft operational plans are available, NRSI to provide impacts to fish and fish habitat.

Action: Once Xeneca has worked with local staff, NRSI to provide senior DFO and MNR staff a matrix of impacts that could not be compensated for on-site.

Dave Brown (MNR) said MNR would like to have some discussions with both DFO and the MNR field staff regarding the operational plans.

Bill Touzel (WESA) clarified that the agency field staff do not yet have the operational plans.

Dave Brown (MNR) said that is his concern.

Patrick Gillette (Xeneca) suggested that circulation to agency field staff and agency senior staff in parallel. Xeneca will also strive to get their operational plans out ASAP to get some feedback.

Ed Debruyne (DFO) said he understands Dave Brown to be saying that the agency staff needs to discuss the veracity of the impacts before discussing the nature of the compensation that is required.

Bill Touzel (WESA) expressed concern for the timeline implications.

Tom Hoggarth (DFO) said he did not hear anything that suggested timeline implications. It's a matter of first confirming the impacts with the agency field staff without discussing compensation. His staff are hearing people say that impacts do not need to be discussed because we are going regional with the compensation. He suggests:

1. Agree on the impacts
2. Determine on a case-by-case basis whether regional or site-specific compensation is the better way to go.

Ed Debruyne (DFO) said he is hearing that the agencies need a cogent way to determine and agree on impacts.

Patrick Gillette (Xeneca) indicated that we know the physical impacts, and Xeneca is working on discerning the operational impacts. We need to wrap our minds around the process of how to get where we need to go.

Julie Dahl (DFO) said that doing off-site rehabilitation of other sites elsewhere in the watershed or in an adjacent watershed is not new. Going to other watersheds is included in the hierarchy of preferences for compensation. At-site compensation is preferred, and that is done first. If it is not possible to compensate for all impacts on site, they consider off-site, like-for-like compensation. Off-site compensation that is not like-for-like is on the list, but is further down on the hierarchy of preferences. Julie also stated that the concept of money in lieu of compensation is not one of the options outlined in DFO's policy.

Julie also said we need to be clear that we are compensating, not mitigating. The EA phase work is where 'tweaking' happens to mitigate impact and that is not part of compensation (for the residual impacts).

Julie clarified that it is not new to combine several small impacts from a project into a larger habitat compensation effort, but it is less tested to combine impacts from multiple projects into a larger compensation effort.

Rob Steele (NRSI) reviewed the second slide titled "Potential Concepts for Consideration".

- Removal of Existing Control Structures
 - MNR owns 391 dams in Ontario
 - Some of these are very old and no longer have a water control function (estimated at 25%)
 - Many of these are barriers to fish movement
- Species at Risk (SARA/ESA)
 - Using the concept of "net benefit" can some of the species at risk habitat impacts be compensated for off-site?

Carl Jorgenson (DFO) said the SARA/ESA work may not get acknowledgement under the *Fisheries Act*.

8. Questions for DFO

Regarding information requirements, the following actions were identified:

- Initiate regional staff involvement in conjunction with the introduction of operation plans and for the assessment of impacts to fish and fish habitat.
- Provide the matrix of habitat impacts along with the operation plans.

Patrick Gillette (Xeneca) indicated that when there is uncertainty about impacts and the compensation is also uncertain, Xeneca can commit to further study to raise the certainty regarding impacts and implement corrective measures if necessary.

Carl Jorgenson (DFO) said DFO has embraced some of this as adaptive management. Impacts are monitored on an ongoing basis. Some of these things are routine on authorizations.

Regarding case studies that DFO/MNR are aware of, Rob Steele (NRSI) referred to Jennifer Thomas's earlier statement about needing to understand impacts. They do not want to talk about case studies or potential projects without first understanding the impacts requiring compensation.

Are there legislative or policy impediments? Rob Steele (NRSI) asked whether the compensation is required to be included in the EA.

Thomas Hoggarth (DFO) said the compensation location becomes part of your project and therefore part of the same EA. This brings the greater audience of both projects into the EA.

Julie Dahl (DFO) agreed, but said again that it is not new that the scope of the EA increases.

Bill Touzel (WESA) agreed that there are complexities in the federal EA process, and asked whether they should decouple the provincial Hydro Class EA from the federal EA.

Action: Patrick Gillette (Xeneca) suggested that the Xeneca team go back and come up with ideas. He can involve their environment lawyer to help come up with solutions.

Bill Touzel (WESA) said decoupling the provincial and federal EAs is desirable because it allows for earlier conclusion to the provincial EA and prevents the provincial EA from being expanded in scope geographically.

9. Open discussion

Much discussion occurred throughout the presentation, and no further open discussion time was required.

10. Next Steps

Actions were reviewed:

1. Xeneca to provide an indication of project priorities to senior DFO and MNR staff once they have determined this based on the operation plans.
2. Xeneca to provide operation plans to local staff (DFO and MNR).
3. NRSI to provide impacts to fish and fish habitat along with the operation plans to local staff (DFO and MNR).
4. Once Xeneca has worked with local staff, NRSI to provide senior DFO and MNR staff a matrix of impacts that could not be compensated for on-site.
5. Xeneca to review their strategy for the EA process with respect to the possibility of decoupling the provincial and federal EAs.

Ed Debruyn (DFO) has met with the CEA Agency director regarding priorities. He would like to know Xeneca's intentions for the EA process. Ed's next meeting with the CEA Agency director is on March 11.

Jennifer Thomas (DFO) emphasized that given the time lines and realities of the FIT program open communication at the local and operational level will be critical for all parties and, where there may be disputes, they should be advanced to DFO senior staff or MNR senior staff.

Rob Steele (NRSI) thanked everyone for their participation and adjourned the meeting at approximately 12:10pm.



Xeneca Power Hydro Development Projects

**Agency Discussion – Fisheries Act
Authorizations**

Feb 11, 2010

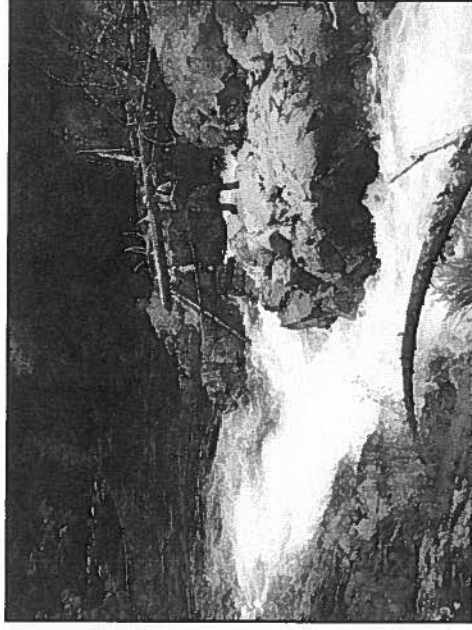


Opening Comments

Xeneca Power – Patrick Gillette

DFO - Ed DeBruyn

**Four Slide Falls –
Serpent River, On**



NATURAL RESOURCE SOLUTIONS INC.
Aquatic, Terrestrial and Wetland Biologists



Background

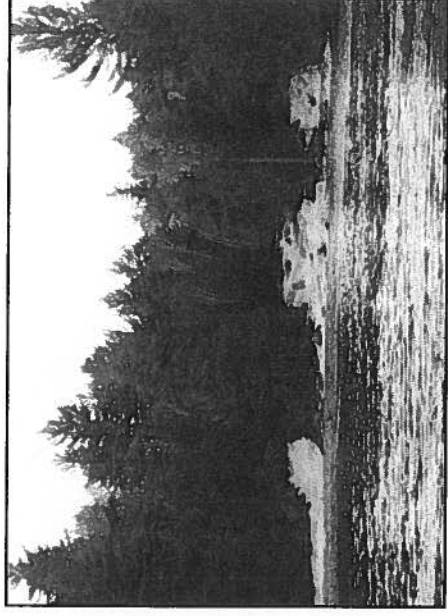
- Xeneca Power currently has 19 proposed hydroelectric projects at various locations across central and eastern Ontario (Rivers include Vermilion, Wanapitei, Frederickhouse, Ivnahoe, Serpent, Petawawa, Larder and Kapuskasing)
- The relative size and complexity of these projects introduces difficulty in terms of traditional “like for like” fish habitat compensation at the project level (i.e. distance of river being altered may be too large)
- Timing associated with multiple “separate” *Fisheries Act* Authorizations vs. project timelines also adds complexity



Goals and Objectives

- Provide General Understanding of Xeneca Project Types
- Provide summary of pressures related to project schedule
- Introduce potential concepts for larger scale fish habitat compensation
- Determine Information needed from Xeneca?
- Provide forum for open discussion
- Determine next steps and action items

McCarthy Chutes -
Serpent River, On

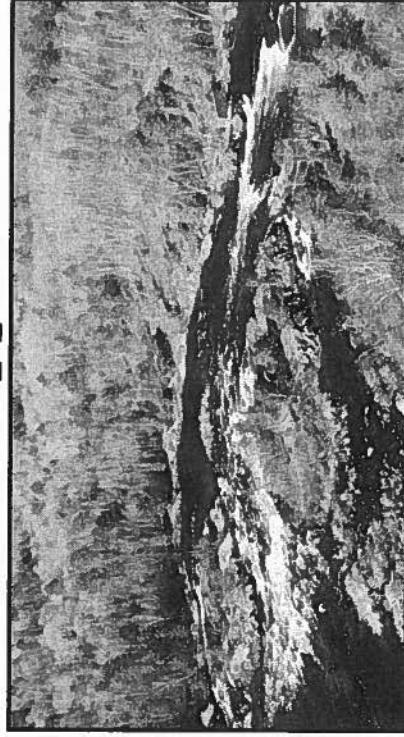




Project Schedules

- **Feed in Tariff Contract Schedules**
 - 5 Year Contract Schedule
 - 18 – 24 Month EA Schedule
 - 12 – 16 Month Permitting Schedule
 - 24+ months to order equipment and commence construction in late summer.
 - 3 – 6 months pre-commissioning work.

- **Power Supplied to the Grid in 2015**



McPherson Falls –
Vermillion River, On



Xeneca Projects

Range of Project Types

1) McCarthy Chutes

- Very short zone of inundation (300 m)
- Close-coupled (powerhouse incorporated in dam)

2) Four Slide Falls

- Longer zone of inundation (6 km)
- Weir- Penstock arrangement with bypass reach



Potential Concepts for Consideration

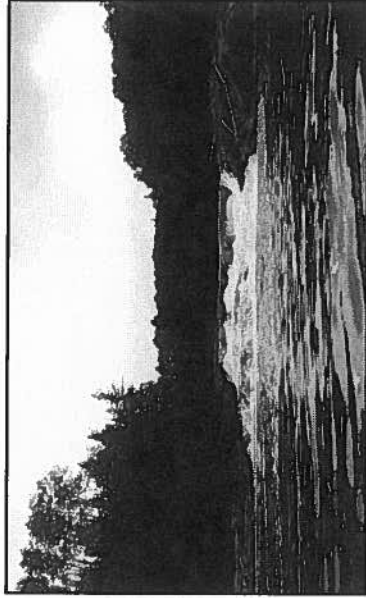
- **Preserving Areas for Conservation**

Example – Little Abitibi River Provincial Park

- **Orphan Mine Site Rehabilitation**

- Currently more than 5,700 known abandoned mine sites located within Ontario,
- Approximately 4,000 sites could potentially be hazardous to public health and safety and to the environment.
- Approximately 30 - 40 per cent of Ontario's abandoned mine sites are estimated to be located on Crown land.
(http://www.mndmf.gov.on.ca/mines/mg/abanmin/default_e.asp)

- **Example – Xeneca's McGraw Falls Project**



Third Falls –
Ivanhoe River, On



Potential Concepts for Consideration

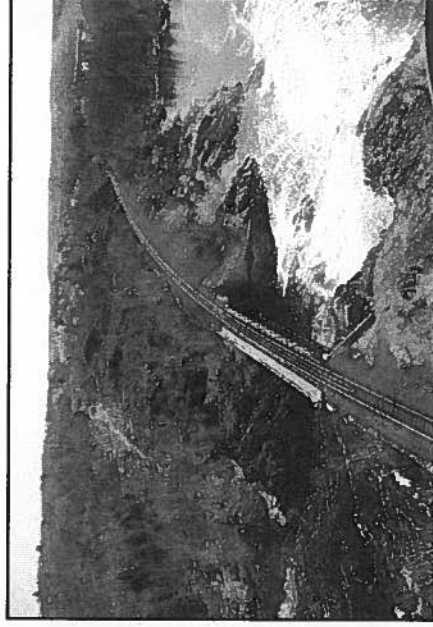
Removal of Existing Control Structures

- MNR owns 391 dams in Ontario
- Some of these are very old and no longer have a water control function (estimated at 25%)
- Many of these are barriers to fish movement

Species at Risk (SARA/ESA)

- Using the concept of "net benefit" can some of the species at risk habitat impacts be compensated for off-site?

Soo Crossing -
Vermillion River, On





Questions for DFO?

- Are there outstanding information requirements that DFO needs from Xeneca to facilitate internal discussions on this subject
- Are there existing case studies of large scale compensation for us to consider
- Are there legislative or policy impediments to undertaking a regional scale approach to fish habitat compensation?
- If so, can these be overcome within the time frame of these projects (i.e. within the next two years)?

MINUTES OF EA COORDINATION MEETING Wanatango Falls Hydroelectric Project

Date: Tuesday, April 20th, 2011, 10:00

Meeting Location: MNR Timmins District Office and via Teleconference Call

Prepared By: Pilar DePedro

Attendees:

Ministry of Natural Resources:

- Sandra Dosser, Renewable Energy Coordinator (SD)
- Jennifer Telford, District Planner (JT)
- Chris Chenier, Area Biologist (CC)
- Denis Clement, District Planning and Information Management Supervisor (DC)
- David Shaw, Regional Aboriginal Policy Liaison (DS)

Ministry of the Environment:

- Lianne Kentish, Senior Environmental Officer (LK)

OEL-HydroSys Inc. (Environmental Approvals Consultants):

- Tami Sugarman, Environmental Approvals Senior Advisor (TS)
- Pilar DePedro

Natural Resource Solutions Inc. (Biological Consultants)

- Brett Woodman (BW)

Via Teleconference

Ministry of the Environment:

- Ellen Cramm, Environmental/EA Coordinator (EC)
- Rod Sein, Surface Water Specialist (RS)

Ministry of Energy and Infrastructure:

- Helen Kwan, Senior Policy Advisor REA Office (HK)

Department of Fisheries and Oceans:

- Carl Jorgensen, Fish Habitat Biologist (CJ)

Environment Canada:

- Sheryl Lusk, Environmental Assessment Officer (SL)

Natural Resources Canada:

- Caitlin Scott, Junior Policy Analyst (CS)

Regrets

Canadian Environmental Assessment Agency; Stephanie Davis, Environmental Assessment Analyst
Transport Canada; Lisa McDonald, Environmental Officer
Ministry of Energy and Infrastructure; Brett Smith, Senior Advisor
Xeneca; Mike Vance, Ed Laratta, Dean Assinewe

Attachments

Project Description for Wanatango Falls Waterpower Development
(document issued in advance of meeting)

The following Meeting Minutes were recorded by Pilar DePedro of OEL-HydroSys Inc. The notes reflect the understanding of discussions held during the meeting. Based on comments received from the Draft distribution, these minutes have been adopted and are considered accurate.

Distribution of these meeting minutes to anyone other than a participant, or an invited participant requires prior approval by all those on the distribution list.

Item	Item Description	Action by
1.0	<p>Introductions and the Environmental Assessment Process</p> <p>Meeting objectives</p> <ul style="list-style-type: none"> to initiate the discussion surrounding information that has been distributed to regulators for the proposed project; to identify applicable legislation and permitting requirements early in process; to identify any gaps in data analysis; to open dialogue <p>OEL (TS) introduced the Wanatango Falls project and outlined that the proponent would assess the project through the Class Environmental Assessment for Waterpower Projects. Additionally, it is expected that the project will trigger the requirement for a Federal Environmental Screening due to law list triggers (<i>Navigable Waters Protection Act</i> and the <i>Fisheries Act</i>). As a result it was the intent of the proponent to harmonize the Provincial and Federal processes into one environmental assessment planning process for each site and to produce a single environmental report for each project which would address the requirements of both the provincial and federal processes.</p> <p>OEL (TS) briefly explained the Class Environmental Assessment (EA) for Waterpower, noting this was a proponent driven process, as such there is no formal approval granted. The Frederick House River is considered a managed waterway and as a result the proponent will follow the planning process for a new site on a managed waterway. TS added that there is a 30 day review period once the final Environmental Report is released (Notice of Completion), and that the review is open to regulators and the public. If there are objections to how the proponent conducted the EA, a request for a Part II Order under the Ontario Environmental Assessment Act can be filed during this period. If resolution is not achieved, the Director of the MOE will issue a decision either denying the request, directing the proponent to correct deficiencies or granting the request for a Part II order.</p> <p>OEL assumes the role of writing the EA document and agency consultation; public and aboriginal consultation aspects of the projects are undertaken by Xeneca staff directly.</p> <p>OEL (TS) provided a synopsis of the site noting that the proponent is proposing a second option which includes an additional 9 m head which would increase the size of the current inundation area. This would require</p>	<p>Xeneca to decide on RSFD Class EA for</p>

	<p>an agreement with private land owners which has not yet been finalized. The Waterpower Class EA classifies powerlines under 115kV capacity to be exempt from assessment; however, the federal screening has scoped these lines within their planning process. The MNR, in previous EA coordination meeting with Xeneca has identified that the MNR Class EA for Resource Stewardship and Facility Development (RSFD) process is required to assess the transmission line component as this line will be tenured for these project, including Wanatango Falls. It was agreed that the planning requirements for the RSFD Class EA will be incorporated into the OWA Class EA processes so that these two processes can be harmonized. Once the T/L mapping is available Xeneca will send it to MNR for them to categorize these ROW and outline the planning requirements of MNR for the ROW. OEL (TS) added that the proponent, as an alternative may consider the option of proposing a separate EA for the transmission corridor but no decision has been made on this matter to date.</p>	<p>transmission corridor and reissue NOC as required.</p>
2.0	<p>Proposed Project Schedule</p> <p>OEL (TS) explained that Xeneca would move forward with issuing a Draft Environmental Report in June 2011. Under the terms of the FIT contract commissioning is set for April 2015, with start up to be initiated towards the end of 2014. TS acknowledged that there may be gaps in the data collected to date and that these would be identified once the technical reports (including biology, archaeology, hydrology and operating plans) had been reviewed by the agencies/ministries. CD copies of the biology reports were given to MNR (JT) (SD) and MOE (LK). TS added that Xeneca would commit to completing any further studies as required prior to the permitting stage for the project, noting that while it was a somewhat unconventional approach to EA planning, the scheduled necessitated this approach.</p> <p>MOE (EC) elaborated that this was a tight time frame and that before any irreversible decisions are made appropriate mitigation needs to be identified and a minimal level of field work and evaluation must be conducted in order to meet requirements. TS replied that Xeneca had already completed 2010 field investigations and that it was hoped that at the draft review that the agencies/ministries would dictate the requirements for any additional investigations. TS added that Xeneca would identify clear commitments to complete any outstanding studies within the final Environmental Report. MOE (EC) commented that this approach may not meet the requirements of the Class EA process as studies are to occur after the EA is scheduled for completion. MOE (EC) and MNR (SD) stated that there remains a public consultation requirement to present the findings of these investigations which could otherwise lead to a Part II order request.</p> <p>TS responded that Xeneca has indicated at other meetings that they understand that any commitments made by the proponent would have to be honoured otherwise an amendment to the EA or possibly a new EA may be required.</p>	<p>OEL to inform Xeneca on consultation requirements.</p>
3.0	<p>Public and Aboriginal Consultation</p>	

<p>Dave Shaw entered the meeting at this point to represent the MNR Task Team on First Nation Consultation.</p> <p>OEL (TS) provided a summary of aboriginal consultation to date based on Dean Assinewe's report from the previous day (Ivanhoe River Projects EA coordination meeting held April 19, 2011) and what aspects would be addressed in the consultation plan. TS added that Xeneca's Aboriginal Liaison Dean Assinewe would distribute the aboriginal consultation plans to the regulators for review once they are finalized. The proponent identified the following aboriginal communities involved in the Wanatango Falls project;</p> <ul style="list-style-type: none"> • Mattagami First Nation • Matachewan First Nation • Wahgoshig First Nation • Flying Post First Nation • Taykwa Tagamou First Nation • Métis Nation of Ontario • Wabun Tribal Council <p>MNR (DC) commented that each FN should sign off on the Environmental Report as Wabun Tribal Council can't sign for all represented FN's. MNR (DC) suggested that an additional community meeting explaining the project should be held in Moosonee since there are numerous members of Taykwa Tagamou FN residing in Moosonee.</p> <p>MNR (DS) advised that the proponent will need to accurately convey information to the FN's otherwise they are vulnerable. On May 4th a face to face meeting will be held and MNR (DS) will be working closely with Dean Assinewe to produce sufficient aboriginal consultation plans and guidance on engagement.</p> <p>OEL (TS) commented that there may not be a lot of detail or information on aboriginal consultation in the EA scheduled for completion in June 2011 due to time constraints and asked how this will affect the success of the EA. MNR (SD) and (DC) responded that the EA will not be successful as it is a FN constitutional right to consultation. In the absence of a consultation record the FN's may request a Part 2 Order which has happened in the past within the identified communities. DS stated that the implications could result in starting from the beginning which would delay the project and does not recommend this approach.</p> <p>MNR (DC) led dialogue on public consultation stating that a Public Information Centre (PIC) should be held in Iroquois Falls in addition to Cochrane as it is closer to the proposed site and hosts more users. DC further stated that more information is needed to be included in future PIC's. JT requested increased public consultation which could be facilitated by the MNR through a stakeholder mail out. If Xeneca wants to meet consultation requirements they should forward all stakeholder notifications to the MNR for distribution, this also applies to the transmission line aspect of the project.</p> <p>SD recommended the proponent attend any Standing Advisory Committee meetings coming up.</p>	<p>Xeneca to forward Aboriginal and Public consultation plans to agencies and regulators for review.</p> <p>Xeneca to contact Taykwa Tagamou FN in Moosonee directly.</p> <p>OEL will inform Xeneca on requested additional PIC's and amount of information. Xeneca to coordinate focus group meeting with the SAC.</p>
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<p>4.0</p>	<p>Legislation, permits and approvals</p> <p>OEL (TS) stated that although CEAA was not present at this meeting it was communicated that the Responsible Authorities had been identified as Transport Canada and the Department of Fisheries and Oceans with Natural Resources Canada and Health Canada providing expert advice where required.</p> <p>NRCan (CS) indicated that to date it has taken an advisory role and has provided input into the scoping document and will continue to do so at the request of the Responsible Authorities.</p> <p>EC (SL) has a regulatory interest in air quality, water quality, migratory birds, and avian species at risk as administrator of the <i>Canadian Environmental Protection Act</i>, subsection 36(3) of the <i>Fisheries Act</i>, the <i>Migratory Birds Convention Act</i>, and the <i>Species at Risk Act</i>. SL commented that EC also has an interest in any potential acid rock drainage and that the first step would be a desktop study of geological mapping in the area to confirm the degree of potential for ARD. MOE (LK) would also like to see study results with regards to stockpiling and ARD.</p> <p>DFO (CJ) noted that Potential Approvals List provided in the project description contained the correct sections of the Fisheries Act that are administered by DFO. CJ commented that in order to gain authorisation for permitting and fish passage the proponent would also need to ensure that they will comply with the MNR's Fisheries Management Objectives. DFO and MNR will work together, meeting these requirements will highly rely on field studies and adequate mitigation. CJ noted that to date there had been no aquatic SAR habitat identified however this requires confirmation.</p> <p>MEI (HK) stated that at this stage in the process their role was observational only; responsibilities lie with the FIT contract and making sure timelines are being kept.</p> <p>MOE (LK) requested a list of activities to occur during construction and operation to properly advise the proponent on applicable permits and approvals. A detailed Construction Plan and Sediment and Erosion Control Plan were also requested.</p> <p>MOE (LK) noted that once the project moved into the permitting phase, she would be the main contact for MOE. LK added that the bulk of the Ministry's permitting is in advance of the construction phase, including Permits to Take Water (PTTW – Category 2) for dewatering behind cofferdams, and water use for road construction. The requirement for a Certificate of Approval the discharge of any treated water to the environment was also noted.</p> <p>MOE (LK) suggested that the proponent investigate alternatives for waste disposal since the local landfill may not have the capacity to accept the project's waste. LK noted the accepting landfill may have to amend its C of A to accept the quantity of waste likely to be generated. LK noted that absolutely no on-site burning of waste would be permitted.</p>	<p>DFO (CJ) to confirm if there is SAR habitat.</p> <p>Xeneca to provide; Construction Plan, Sediment and Erosion Control Plan.</p> <p>Xeneca to investigate local waste handling facilities for capacity.</p> <p>No on-site burning is permitted at any time.</p>
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5.0	<p>MNR requirements for permitting, field studies, other</p> <p>MNR (JT) stated the she will lead and facilitate the EA review. JT advised that all site specific aspects of the project should be covered in the EA to minimize extra work. JT noted some information gaps in the current drawings and mapping where identified existing roads are actually trails (confirmed by NRSI BW) and will require upgrading, this highlights the potential for gaps in the EA and care must be taken. JT commented that a Forestry Resource Licence may be required as upgrading will involve cutting and road construction, brushing and grading will not be sufficient. JT noted that the transmission line mapping required more detail, only 7 to 8 km of the line route is actually in the MNR Cochrane District and the MNR in Timmins will have to be brought in to identify any additional requirements.</p> <p>JT stated that the transmission line will have to meet the RDFS Class EA requirements. OEL (TS) responded that the proponent does not want to conduct any ground truthing at present for the transmission line as it is subject to change. TS added that the proponent would prefer to conduct a comprehensive desk top study and that they have committed to this in May so may not have information available in the ER but only prior to the permits and approvals stage. JT commented that this approach may result in the project being delayed as she would be hesitant to sign off on an incomplete EA and a Part 2 Order may be requested. JT stated that at this stage they would hope that the transmission line would be decided and a desk top study completed, if there are information gaps the proponent may have to re-start the EA.</p> <p>MNR (DC) noted that this 2 tier approach is creating more work and to anticipate delays. As the transmission line crosses two districts additional public consultation will be needed. JT stated that one document is the preferred option. SD asked if the proponent had contacted the Cochrane District MNR for information on specific route options to which JT responded that they had not. OEL (TS) added that the proponent had originally committed to providing transmission line information with the Permit 1 application for the MNR to categorize and incorporate into the EA however there was no information to date. Once the mapping of the route is available it will be forwarded to the MNR.</p> <p>MNR (SD) noted that a desktop review had been completed. This was confirmed by NRSI (BW) who added that he was waiting for final alignment from Xeneca to conduct another ELC review. SD suggested using the MNR's <i>Significant Wildlife Technical Guide</i> for habitat assessment in order to provide a structured approach.</p> <p>MNR (CC) requested a work plan from the NRSI biologists in order to improve the data acquisition during upcoming field investigations and to incorporate guidelines. CC suggested starting with NRSI's work plan and filling in the gaps.</p> <p>MNR (JT) commented that that more detail was needed on aggregates sourcing.</p>	<p>Xeneca to provide access roads and transmission line corridor mapping to agencies and regulators.</p> <p>OEL to inform Xeneca of additional public consultation requirement in Timmins for transmission line.</p> <p>NRSI to provide MNR and MOE with Work Plan.</p> <p>Xeneca to confirm</p>

	<p>MNR (CC) discussed permit and approval requirements, Public Lands Act, fish and wildlife resources, protecting ecological functioning and agreed to provide management objectives to DFO. OEL (TS) added that a steering group should be formed to address these issues.</p> <p>NRSI (BW) discussed logistics of fish passage with CC who advocated planning with DFO involvement. DFO is the lead for fish passage; Sec 20 of the <i>Fisheries Act</i>. However, as fishery/fish population managers MNR is also concerned about fish passage at this site. To date fish passage at this site remains an unknown. DFO (CJ) responded that DFO only manages fish habitat and that fish are the responsibility of the MNR. DFO involvement is reliant on biological evidence, once it is determined that fish are passing thorough the proposed site area, DFO should be alerted. CC commented that currently NRSI has a poor understanding of habitat use and that there is not enough information to help identify impacts (e.g. changes to flows and subsequent impacts to biota), the 2010 data is insufficient (based on 2010 atypically low flows, missing study components, and in some cases low sampling intensities/effort expended) although methodology is satisfactory. NRSI (BW) responded that the gaps have been addressed in the 2011 work plan and that a meeting between MNR, DFO, NRSI and Xeneca should happen soon to review the 2011 work plan to get agency comments.</p> <p>MOE (EC) requested that work plans be sent to Rod Sein (RS). RS identified his role as the surface water quality technical support for the MOE. RS noted that additional information was required for the PTTW application and that methyl mercury resulting from the impoundment of water was of concern to the MOE. RS offered to provide the proponent with baseline monitoring guidelines and suggested a review of the work plan in order to improve design for sampling otherwise it will have to be repeated. OEL (TS) responded that due to the tight deadline spring spawning will be missed and that issues such as surface water and fish tissue may require a second meeting for discussion.</p> <p>CC requested that benthos be an active part of the work plan which led to a discussion between NRSI and CC. BW confirmed that benthic studies are part of the 2011 work plan. CC asked if additional egg mat surveys were scheduled as a part of the walleye spawning work. BW confirmed that they were and outlined the new survey locations for egg mats in the 2011 work. CC requested that they also be included at Zevely's and at the fast water habitat located at approximately 8.5km upstream of Wanatango Falls. CC and BW agreed to hold a follow-up meeting to fully review the 2011 workplan. CC asked if the 2010 terrestrial survey was conducted in the area included in the project description. NRSI (BW) stated that it did not include the transmission line area or access roads. DFO (CJ) added that water crossings, roads, potential fish habitat, temporary staging areas and line crossings all need to be included.</p>	<p>aggregate provider.</p> <p>MNR to provide DFO with management objectives.</p> <p>MOE to send SW baseline monitoring guidelines to Xeneca.</p> <p>NRSI to schedule a meeting with DFO, MNR NRSI and Xeneca to review the 2011 workplan.</p>
8.0	Meeting adjourned at 12:30	

NOTES OF MEETING

April 28, 2011

PROJECT Xeneca – FIT Projects

LOCATION Radisson Hotel – Sudbury, ON

WRITTEN BY Zach Vorvis

PRESENT See attached

PURPOSE Present and discuss 18 Xeneca Waterpower FIT Projects

<u>Item</u>	<u>Action By</u>
10:15 Uwe welcomed attendees, introduced the purpose of the meeting and the approach for the day. All attendees introduced themselves.	
Question on stakeholder concerns (from MNR Chapleau) - Ivanhoe stakeholders advised they aren't hearing back from Xeneca. Requested information from Xeneca on Third Falls inundation, etc. Also concerned about last minute data submittals from Xeneca.	Xeneca
Uwe - will follow up with their stakeholder group on responses. That is their task/focus. On information to agencies - realizes that large volumes of information are being distributed all at once and not all the information has been posted on the ftp site. Xeneca is trying to prioritize and post information accordingly.	
MOE(Paula) - when information in documents is being updated, Xeneca should be advising agencies so they are aware and able to work from the most current version.	Xeneca
Question on mean lake levels - based on monthly or annual data?	
Uwe - it is up for discussion, can simulate seasonal lake levels if necessary. Listening to stakeholder concerns on cottage lakes although there are some disagreements between cottagers and biologists. MNR needs to help resolve.	
MNR(Steve) - how is lake level max/min determined? What is period of record? If transducers only recently installed, concerned that have had very dry years and likely atypical conditions.	
Uwe - Have installed transducers on lakes over last year. Doing hydraulic HEC-RAS modeling to try to simulate how lakes should behave. Also have bathymetry data. Nava answered that we have 30-40 years of inflow/outflow data from river transducers and can model what the lake level should have been (daily) based on these flows.	
Greg - Question about McCarthy, contrary to MNR policy and objectives for trout lakes. Concerned that it is contrary to MNR policy: difficult to defend a decision to change that.	
Uwe - have had discussions on this already, and can discuss more during project specific presentation.	
11:00 - Uwe finished introductory presentation on all projects and methodology of data collection/stakeholder consultation/ FN. Nava started presentation on Ivanhoe	

Item	Action By
river projects (The Chute and Third Falls)	
The Chute - 3.6 MW, 9.5 m head, 38 m3/sec, 2.8 km head pond, close coupled.	
<p>MOE(Sajjad) - How has Xeneca confirmed upstream extent of inundation?</p> <p>Nava – Initially projected static inundation for the plan presented NOL (Normal Operating Level). Have now done HEC-RAS modelling to confirm the upstream extent of inundation which is where the normal water level meets the inundated water level.</p> <p>Sajjad - Inundation that MNR looks at is flood condition, not NOL. Has this been looked at?</p> <p>Nava - Xeneca has plotted NOL, high water mark, 1:2 yr, and 1:100 yr inundations. Used long term average flow for the inundation area.</p> <p>Will be asked to lower dam if a house would be inundated in the 1:100 year flood scenario.</p> <p>Nava - private land is considered in 1:100 yr inundation. Downstream dam break analysis is not done until detailed design stage. Need to look at IDF (inflow design flood) level at this stage to look at impacts. Uwe answered that Xeneca is aware of new guidelines from LRIA and new MOE guidelines. Xeneca sees the EA stage as a conceptual design stage, where plans/specs approval is the more detailed stage and need to deal with detailed issues at that time.</p>	
<p>MNR - for location approval, it will be best to have a more conservative approach in EA stage so that location approval falls inside of EA envelope. From a process perspective, if it is an impact at location approval stage, need to be considered at EA stage to avoid potential of having to open up the addendum provision.</p> <p>Uwe - Kapuskasing example discussed where two different concepts are being considered, presenting both through the EA process, will decide which to proceed on based on negotiations with Tembec, stakeholders, etc. Treating land stakeholders very consciously because they will be involved at all stages.</p> <p>Uwe - confirmed that two different inundation areas will be carried through on multi-concept projects if inundation areas vary and effects on wildlife will be considered for both options at the EA stage.</p>	Xeneca
<p>MNR asked about earthen embankment accessory dam for the Chute mentioned in project description.</p> <p>Nava - dyke wouldn't be required if a creek is coming into the head pond, only if it is flowing out to prevent head pond spill into a secondary area.</p>	
Third Falls - 5 MW, 10 m head, 46 m3/sec, 5.6 km head pond (option 1)	
<p>Nava explained issues with conservation area (Clay Belt Forest Complex Conservation Area), powerhouse originally designed within the area. If powerhouse is moved upstream, lose significant head and want to build head pond 1.5 m higher and head pond would extend up to tailrace of The Chute project, resulting in 30 km inundation area.</p>	
<p>MNR - why Xeneca is continuing to consider option 1 when MNR has advised that by legislation it is not an option because of the conservation area. With option 2, is it not considered one project (with The Chute) in terms of impact because of extent of inundation?</p> <p>Uwe - option 1 is still on the table because it has small footprint/impact, while option 2 has significant footprint. Since Receiving some conflicting advice on process, we</p>	

Item	Action By
<p>want to consider it until absolutely removed as possibility. Xeneca is producing EAs for multi projects as one EA where they are in series and can revise the approach for The Chute/Third Falls if necessary.</p>	
<p>MNR - when will they receive updated PD to show option 2 and the 30 km of inundation?</p> <p>Uwe - will be sent out when complete. Xeneca wants to forward information as soon as possible. There are a lot of projects and a lot of data, Will make it available as soon as possible.</p>	Xeneca
<p>MNR - what is conflicting advice?</p> <p>Uwe - order in council decision is a possible way forward. Would do this if Xeneca had MNR backing that it was a better option. Lawyers are looking at options but may not proceed if it is too complicated and no backing from MNR.</p>	
<p>MNR - why is Xeneca proceeding with the project with greater inundation, less head? Why not stop the project given changed conditions?</p> <p>Uwe - Xeneca builds hydro projects, will continue working on this project if it is at all possible.</p> <p>MNR - timelines for approvals with an order in council decision likely 1-2 years including land use amendment change for Crown Land.</p> <p>Sandra – Would Xeneca like some process information from MNR?</p> <p>Uwe - yes that would be helpful. Xeneca has prioritized projects based on issues and Third Falls is lower down on priorities because of some of these issues.</p>	MNR
<p>MNR - raised requirement for baseline data for full inundation length if option 2 is being followed up with.</p> <p>Uwe - that work has been started and is underway.</p> <p>MNR – Is Xeneca looking for a FIT extension?</p> <p>Uwe - it is being considered, but comes with some conditions that are not favourable.</p> <p>MNR - can provide some support for this if required. MNR is concerned that timelines are short, not enough time to collect/provide baseline data. Inundation affects down to Groundhog River, potential affect to sturgeon that spawn at 6 Mile Rapids. A mining company that has requirement to compensate. Mercury methylation and fish contamination issues discussed as well as recreational fishing, etc. MNR concerned that timeline does not allow for all of this data collection. Need to get baseline data collection done to date submitted and what is planned.</p> <p>Uwe/NRSI - following presentation on the river is to discuss this. The purpose of the meeting is to get the process started. There is more work and consultation required. Xeneca is electing to do this as a staged approach to deal with issues as they are raised instead of trying to provide all the information at the end of the process. Projects will have impacts, but want to make smart solutions and not miss the obvious fixes.</p>	
<p>MNR - does The Chute get moved into medium priority if projects are addressed in a single EA?</p> <p>Uwe – yes, potentially.</p> <p>MNR – What is the erosion potential downstream of projects? Did not see discussion on this in the operating plan. How does Xeneca plan to baseline the sediment regime of the river downstream of the projects?</p>	

Item	Action By
<p>Uwe - this will have to be studied but need to make sure we are discussing the same issue. Projects will not increase flow downstream, will potential cause effects from modified run-of-river pulsing.</p> <p>Steve - orientation of project is very important based on past experience where operating project is on eroding bank.</p>	
<p>11:50 Dave Green presentation started on Ivanhoe River.</p>	
<p>MNR (Kris) - Glad to see that invertebrate work is starting this year. Want to make sure that local outfitters are covered by maintaining fish populations. Yields need to be maintained post project. There is a major feeding bed near the site. In June 10, 2010 (letter) and at Jan 26, 2011 (meeting) 80% exceedance flows downstream of the sites discussed where 0.5 m³/sec shown in operating plan. Need to discuss/agree on flows. Depending on level will adjust the baseline data requirements. 80% exceedance was an educated guess on the flows required to maintain downstream habitat. Need to discuss flows/habitats because MNR is concerned that earlier discussions may not have been reflected in operating plans.</p> <p>Uwe – also need to have discussion around seasonal requirements. How do we make the best of the conditions we have.</p> <p>Want to know what is there, what is area being used for, what is impact on benthic invertebrates, etc., what will happen to it. Need that data for location approval.</p> <p>Sajjad added that scientific background supports this flow for maintaining habitat. Sajjad mentioned unsteady flow modeling, share with biologists to help with minimum flow questions and negotiations.</p>	<p>Xeneca</p>
<p>MNR – Was a bottom draw dam considered for temperature management?</p> <p>Uwe - no. Consider that to be more of a detailed design or later stage decision.</p> <p>MNR - Need to have design engineers at table to discuss options at these meetings.</p> <p>Uwe agreed.</p>	
<p>13:25 Nava started engineering presentation on Wanatango.</p>	
<p>Wanatango - 4.6 MW, 9 m, 50 m³/s. Carrying forward two options with different headpond levels because of private land concerns/impacts. Have a smaller head option in case land concerns can't be resolved.</p>	
<p>MNR (Rich) - mentioned that OPG released zero flow downstream of Fredrickhouse Dam last year for approximately 3-4 months.</p> <p>Uwe – have had discussions with OPG. Power line for project may be run past Fredrickhouse Dam so that they can power the dam for control. Currently no power and only stop log management.</p> <p>MNR – There was no water for fishing or recreation in the impoundment area and had to cut off flow. Uwe added that Larder had the same issue last year.</p>	
<p>13:35 Dave started environmental presentation on Wanatango.</p>	
<p>MNR – what is scope of terrestrial investigations?</p> <p>Dave - Initial study done in 2010, no change to inundation area. Study considered complete.</p>	
<p>MNR - confirming that fish flesh will be tested for mercury.</p> <p>Dave - yes, mortalities from 2011 program will be used and will harvest more if required.</p>	

Item	Action By
<p>Uwe – is there a database of mercury impacts of past facilities?</p> <p>MNR/MOE (Steve/Todd) - Districts receive information and do a comparison, not aware of regional repository of data. Todd added that there is no central database. Currently working on linking sport fish contaminant data and incorporating existing data into screening level model provided by another proponent. Just starting out.</p> <p>Uwe and Todd agreed that data should be used for larger benefit. Todd added that small scale hydro projects have not been analyzed as much as large projects. Want to have the data available for public for mercury. Also added that prior project where MOE was on record saying mercury would not be an issue and it became a problem. Dealing with FN concerns on this issue. One objective of the program is due diligence to be able to answer to groups coming forward later on saying that mercury levels increasing. Will have data/tracking to refute if untrue.</p>	MNR/MOE
<p>13:50 KBM (Dave Thomson/Stephane Audet) transmission line/access route presentation</p>	
<p>MNR(Greg) - in NE region have guidelines for road construction. An example is no road construction within 1 km of lake trout lakes. Added that same sort of restrictions w.r.t. remote fly-in recreational lakes.</p> <p>Uwe asked for guidelines to make sure we are aware of all the issues.</p> <p>Dave – agreed and added that Sustainable Forest Licenced (SFL) companies will be approached to build some roads because it can be easier for them to proceed on these.</p>	MNR
<p>Do roads follow all transmission line routes?</p> <p>Stephane - No, will not have road along entire transmission line. Overland sections will likely be tracked vehicle type construction.</p> <p>MNR – Question on transmission line priorities w.r.t. project priorities. Kapuskasing projects are lower down in priority than Ivanhoe projects, but Kapuskasing transmission lines are required to connect Ivanhoe projects.</p>	
<p>MNR - will Xeneca be contacting MNR districts for values layers?</p> <p>Dave - yes, do have values, NRVS layers now, being updated monthly though and will be contacting MNR for this data. SAR species, significant habitat, etc.</p> <p>MNR - cultural heritage, FN data might not be with Land Information Ontario (LIO). Also, following roads that were built before any values planning had to be done could be a concern.</p> <p>Dave discussed new guidelines w.r.t. Provincially Significant Wetlands (PSWs) and rapid assessment technique. Came out of wind/solar work, technique has been revised. Sandra added that desktop exercise can be done to assess candidate significant wildlife areas. Will provide the program reference information to KBM.</p>	KBM
<p>14:10 Nava started upper Kapuskasing engineering presentation</p>	
<p>Outlet Kap - 2.5 MW, 6.5 m, 48 m³/s, lake connected, currently a bypass project, may be close-coupled with long tailrace canal.</p> <p>Lapinigam - 8 MW, 20 m, 49 m³/s, two options due to lack of geotechnical data, currently close-coupled. Second option is canal bypass.</p>	
<p>MNR - what is difference between option 2 and new raised inundation?</p> <p>Nava - 29.9 ha is option 2, increased to 149 ha if dam is raised.</p>	

Item	Action By
<p>MNR concerned about late presentation of options, changes from project descriptions.</p> <p>Uwe - discussed mixed feedback initially. Xeneca was told not to table the raised option earlier if land deal not resolved with Tembec. Likely should have been tabled anyway.</p>	
<p>MNR – found that terrestrial information provided to date was vague w.r.t. species. Cannot identify if regional/provincial/federal species affected. Also concerned about upstream/downstream concentration of field work.</p>	
<p>MNR - Want to understand how whole system functions. With one project in Kapuskasing, 4 Hydromega projects being added and Xeneca projects being added MNR wants to assess whole system instead of just isolated projects/areas.</p> <p>Uwe - discussed general timeline constraints. Will work to get data to agencies as it comes in. Regarding dealing with Kapuskasing river as a whole – it is considered a general use river. Need to resolve conflicting priorities in province w.r.t. conservation, protection and development.</p>	Xeneca
<p>MNR - Kapuskasing Outlet - concern expressed regarding access to Kapuskasing Lake. Remote outpost site, tourism, has to remain remote. Also have significant cultural sites on Kapuskasing Lake with burial areas, etc. Issues in past with increased erosion and will need to show how erosion on the lake has been assessed/ addressed.</p> <p>Uwe - received letter from MNR discussing wetland on Kapuskasing Lake that will have to be addressed. Stakeholders have raised issue of access to lake. These issues will be discussed in the EA.</p>	Xeneca
<p>MNR - would like to see longitudinal section of inundation area once preferred option has been selected to see if there are any areas that are not regulated still.</p> <p>Uwe – Xeneca has this from LiDAR and HEC-RAS and using to assess if rapids are left for benthics, etc. HEC-RAS can show surface and subsurface profile so water depths can be assessed. Profiles will be shared with agencies.</p>	
<p>MOE(Paula) - asked for walk through of how an option will be assessed. Will need to assess whether or not it will be viable to go ahead with multiple options in EA. If not making a decision on a preferred alternative pre-EA, have to make sure that issues and mitigation have been assessed for all of the options. Asked why options are still on the table at this stage?</p> <p>Uwe - OWA class EA process allows for options. Two reasons to change a layout; environmental constraints or geotechnical information. Access is another issue and do not have all the data needed to decide on a final design. This is why EA process allows for options.</p>	
<p>MNR - What is assessment of how Xeneca will affect Hydromega since they are all run-of-river (not modified)? MNR has to protect their interest now that they have permits.</p> <p>Nava – with 30 km between proponents there is a lot of room for attenuation and do not expect to have much effect. Xeneca will do modeling work to confirm. By regulating flows it may actually help Hydromega's operations.</p> <p>Sajjad – Hydromega has already selected turbines and operating flows. Xeneca may not really help their operation unless flows fit into their operating range.</p> <p>Uwe - unsteady flow models were generated for exactly this reason. Can resolve</p>	Xeneca

Item	Action By
<p>once minimum flows have been addressed.</p> <p>MNR - From a biology perspective, have negotiated with proponent downstream (Hydromega) to assess flows when Xeneca projects were not in consideration. LRIA permits provided based on non-peaked or modified flows. Frustrating that flows will now be different.</p> <p>Uwe – understands the frustration and recommended this issue be resolved later. Again, do not think there will be much effect from the projects given 30 km of attenuation.</p>	Xeneca
<p>14:45 Noel started presentation on Kapuskasing River projects.</p>	
<p>MNR(Dave) – Would like to have an answer as to why walleye are using Buchan Falls (Lapinagam). Numbers seem to be too large. Fragmentation of habitat is a concern with projects considered downstream. Is it a food source and what is the productivity of the food source. Concerned that these questions need to be answered before location approval can be addressed. Also concerned about agencies dealing with consultants and not aware if proponent (Xeneca) has bought into the process. Management goals will be provided to Xeneca.</p>	MNR
<p>MNR – question on fish migration.</p> <p>Uwe - unless fish migration is discussed, assumption is that the project is a barrier to migration. The only site where passage is being considered right now is Big Eddy due to eel, sturgeon, etc. In general fish passage hasn't been provided on waterpower projects. Inquiry into MNR for Thornbury project and other passage designs that have been approved by MNR. No response yet. Fish passage will be discussed, but there has to be real merit to the results. If fish are moving along a long reach to access a specific spawning area, this could be the driver, but if there are a lot of spawning areas along a reach and projects are isolating sections but there are still spawning opportunities the issue could become more of a genetic diversity issue.</p> <p>MNR - EA process is for proponent to advise whether or not passage is happening by tagging and assessing to see if this is an impact that needs to be addressed in report.</p> <p>Kristi - Petawawa discussed as an example and trying to prove a negative does not work very well. By tagging sturgeon and having none pass does not prove they will not ever pass.</p> <p>MNR - last year was lowest recorded flows on record at Kapuskasing Lake Outlet. Reviewing fisheries data from this year is critical to review how applicable the data is.</p>	
<p>MNR – Current fish habitat protocol between MNR and DFO is that passage is upstream and downstream.</p> <p>DFO added that they rely heavily on fisheries management objectives of fisheries manager, in this case MNR. If fisheries manager says that passage is critical to maintain the viability of the stock/habitat, DFO will follow up with this requirement as required by federal regulations. Will be practical though when considering projects on a waterfall or old/existing facility where there clearly is not passage. Will not ask for passage in future.</p>	
<p>MOE(Sajjad) - asked about experience with fish passage in past, any data summarizing effectiveness.</p> <p>DFO - some research has been done to assess, report (provided to Uwe) that showed less than positive data on how well they operate.</p> <p>Sturgeon passage upstream/downstream became an issue on Namaken project, dealt with in a workshop approach. Fishways can be successful in moving sturgeon.</p>	

Item	Action By
<p>Not concrete channels, but more natural rocky ramps.</p> <p>Steve(MNR) - natural channel design requires enough flow that is likely above and beyond what has been discussed to date on minimum release for these projects.</p>	
<p>15:55 Nava started Middle Twp. engineering presentation</p>	
<p>Middle Twp. - 5 MW, 13.5 m head, 50 m³/s, 7.2 km headpond reach.</p>	
<p>MNR (Pat) - question on pre vs. post inundation areas. Increase of 18 ha to 50 ha.</p> <p>Nava – based on natural vs. added inundation area shown on mapping.</p> <p>Pat added that inundation area changed between November 2010 report and now (12 ha to 50 ha).</p> <p>Nava - initially used static inundation, now using HEC-RAS modeling to refine the areas.</p> <p>Uwe – added that changes in areas seem too large and could be due to a difference in terminology between what engineering is considering to be new inundation and what biologist/consultants define as inundation. Will take this concern back to resolve.</p>	<p>Xeneca</p>
<p>MNR(Rob) – Suggested that Xeneca start looking at cascading effects of multiple projects. Changes in inundation areas may have larger implications. Discussed cascading effects w.r.t. dam break. Have to look at lower project first and design for higher hazard if other projects cascade down. Affects zone of influence of EA. If end up outside of this area during EA process, have to start over again. Design flows would change if projects become cascading.</p> <p>Nava - IDF/dam break/downstream effects are assessed later on when design becomes more detailed.</p> <p>Rob added that if plans/specs were tabled in approval stage and were not right, it will get sent back to EA stage. MNR advised to classify sites at this stage so classification does not have to be revised later on.</p> <p>Sajjad asked what MNR opinion is for flow consideration to assess zone of influence at EA stage. MNR answered that Xeneca should use the flow that captures the worst case scenario for the site. Biology and land ownership issues have to be addressed at EA.</p> <p>Nava - 1:100 is design flood used for EA process.</p> <p>Rob - If IDF is 1:500 yr for a site, should work up to these higher levels, carry that through. Nava agreed that this would be valuable to assess now.</p>	<p>Xeneca</p>
<p>MNR(Dave) - Regarding location of powerhouse and tailrace orientation, why not in middle of river.</p> <p>Uwe/Zach - for access, not only during construction but long term for operations and maintenance as well. Reduction of concrete/construction cost for smaller projects is also a factor.</p>	
<p>MNR(Pat) - question about construction method/materials. Rolled Compacted Concrete (RCC) identified in PD. Is this still the plan?</p> <p>Uwe – Don't want to specify at EA stage. Would be more at the plans/specs stage. The concept designer thought RCC was most likely when considering project at the concept stage.</p>	
<p>Near North Boundary - 3.75 MW, 9 m, 60 m³/s</p>	

Item	Action By
<p>MNR(Dave) – Is Xeneca trying to maximize peaking ability at this site given the capacity/ minimum flow numbers?</p> <p>Uwe – Modified Run-of-River (MROR) is the chosen operating mode for permitting but with 5 ha of storage area there is very little storage (1-3 hours potentially at Q_{min}).</p> <p>Dave – in summer operation will likely have 2-3 months where flows are always below Q_{min} of 18 m³/s. Can Xeneca use multiple smaller units instead?</p> <p>Uwe - multiple units are being considered, but it is a cost impact. Also considering that single higher flow unit is largest impact and if Xeneca decides to change to multiple smaller units later it will be less impact and should be an easier amendment than amending the other way.</p>	
<p>MNR – How have the units been sized?</p> <p>Uwe - sizing assessments have been done and multiple unit scenarios were ruled out initially. Will be going out for turbine-generator pricing this summer and will determine whether or not multiple units are viable.</p>	
<p>MNR - has bathymetry been done?</p> <p>Uwe - above ground topography done with LiDAR, below surface by boat with depth sounders. Seven cross sections done upstream/downstream. Data used to calibrate HEC-RAS models.</p>	
<p>MNR(Dave) - regarding fragmentation of rivers, can bathymetry be used to assess habitat areas in headponds and isolated reaches?</p> <p>Uwe - yes, bringing habitat data and engineering data together.</p> <p>DFO – how were seven cross section locations chosen?</p> <p>Uwe - done primarily as calibration sections. Interpolated other cross sections from HEC-RAS model.</p> <p>DFO - seven sections are known, but other/interpolated sections likely don't have enough detail to identify riffles/pools left behind after inundation. Suggested that riffles/pools be targeted for cross-sectioning in next phase.</p>	Xeneca
<p>MNR(Steve) is substrate material assessment part of the plan? Have flows/depths but to move to habitat modeling need to know the substrate and how it might change with inundation.</p> <p>Hatch – substrate testing has been done throughout inundation area.</p> <p>Steve - Brown bullheads encountered in netting?</p> <p>Hatch - no.</p>	
<p>16:45 - Nava started engineering presentation on Four Slide/McCarthy</p>	
<p>Four Slide - 7.3 MW, 29 m head, 23 m³/s, 6.8 km headpond reach, large inundation area (150 ha) will not affect upstream lake</p> <p>McCarthy Chute - 2 MW, 7 m head, 36 m³/s, lake connected.</p>	
<p>MNR(Rob) - Question about lake effect on McCarthy. Understanding from early on was that there would be no connection/no effect on lake levels. Currently showing connectivity of lake and river and this is in contravention of policy and applicant of record award. Do not have leeway to mitigate or minimize, need to neutralize the impact showing that there is no connection to the lake. MNR added that IDF has to be used for modeling.</p>	Xeneca

Item	Action By
<p>(NRSI)Rob - From biologist perspective, talking about a zone of fluctuation of 4 inches, equivalent to wind set-up on a windy day. Cannot see how that will affect trout if that is the purpose of the policy.</p> <p>MNR(Greg) - given loss of lake trout, policy is no disposition of MNR land on lake trout lakes. Precautionary policy/approach because the resource is stressed. Regarding biological perspective, understandable that effect is minimal. Problem is the precedence that would be set. This project may not be an issue, but precedence is the concern.</p> <p>Uwe - asked for confirmation of what makes a lake trout lake.</p> <p>MNR - water temperature, depth, oxygen levels, low nutrient levels, etc.</p> <p>MOE(Paula) – summarized that for this site to proceed, needs to be designed not to connect into lake up to IDF.</p> <p>Uwe - adherence to policy and "no impact" approach will be taken back. Xeneca has been working towards a no impact principle with a hydraulic scheme and operating scheme that would not impact the lake.</p>	
<p>MNR - Question about Four Slide dam location, output, inundation. Also concerned about connection with Pecor Lake which is another lake trout lake. Difficult to review with changes in data between reports.</p> <p>MOE(Paula) added that Xeneca is working on many different projects and trying to get data out. Important to communicate updates to everyone. There is also a concern with public perception when data changes.</p> <p>Uwe - PDs were submitted early on to give agencies an early look at projects and in some case draft information was provided and expectation that some changes would occur. Will look into some of the changed numbers that seem very drastic between earlier reports and current design. Based on LiDAR data very confident that Pecor lake is not affected by Four Slide inundation.</p> <p>Nava added that flows and information are being refined.</p> <p>Uwe - since hydrology was done 1 year ago, another round has been done with daily average flows instead of using instantaneous flows. Other change has been turbine/output assessment refinement.</p>	
<p>Paula - need to communicate which documents/information have changed in a summary format.</p> <p>Inundation map on presentation is the same that was used for field program.</p> <p>Discussed the 1 km move of project site.</p> <p>MOE(Paula) asked about consultation plans for projects. Some initial consultations done. Does Xeneca plan to re-present changes? Explained their dual role of technical review as well as advisory role to public.</p> <p>Uwe – yes, Xeneca is going to a second round of PICs. There is a 3 person team in the office that deals only with stakeholder consultation. Will make sure that information that was given to public was accurate and not significantly changing and will go out to public again if that is the case.</p>	Xeneca
<p>17:35 Rob presenting on environmental aspects of McCarthy.</p>	
<p>MNR - suggested that Xeneca should be using the Significant Wildlife Habitat: Technical Guide for this work.</p>	NRSI

<u>Item</u>	<u>Action By</u>
Rob - have not used yet but starting to review it now.	
<p>MNR(Steve) – asked regarding natural fluctuations of lake and trying to assess this.</p> <p>Rob - based on observations of lake trout spawning. Want to assess elevations of these areas and report on this with the operating fluctuations.</p> <p>Steve – raised issue of data from last year that may not be as applicable in long term.</p> <p>Robert - shoals are known, including main shoal. Will be surveying grades, depths, substrate again this year.</p>	
<p>MNR(Greg) asked about observation methods</p> <p>Rob - did not do depth transects. Did gill netting/observations. Do not know the depths that eggs were placed on.</p> <p>Greg - has seen on lakes in Muskoka where egg transects done that showed eggs at much different location than expected.</p>	
15:50 Robert presented on environmental aspects of Four Slide.	
<p>Question about walleye spawning assessment</p> <p>Rob - will include egg mats this year.</p>	
<p>MNR(Steve) – Regarding brook trout populations in tributaries, are there plans to visually investigate tributaries, redds, substrate size?</p> <p>Robert – yes, once limits of inundation provided by engineering side. Substrate, size of tributaries, etc. are not in the plan right now.</p> <p>Steve - this is typically missed in most EAs.</p> <p>NRSI(Dave) - brook trout was 1% of catch, and although angling only is not typical sampling method, water was so clear that could see bugs and everything. Fairly confident that not much was getting through un-observed.</p>	
<p>MNR(Greg) - observation on size of impoundment vs. size of watershed. May want to think more about overall ecosystem downstream regarding relative impacts.</p> <p>Measured oxygen is lower than predicted, close to 7 mg/l.</p>	
<p>Rob - added issue of changing habitat from riverine to lacustrine and potential species changes. Can it be compensated for in the normal way?</p> <p>DFO answered that there are precedents for compensating for this.</p>	
18:10 Uwe and Paula closed.	

NOTES OF MEETING

April 29, 2011

PROJECT Xeneca – FIT Projects

LOCATION Radisson Hotel – Sudbury, ON

WRITTEN BY Zach Vorvis / Tami Sugarman

PRESENT See attached

PURPOSE Present and discuss 18 Xeneca Waterpower FIT Projects

<u>Item</u>	<u>Action By</u>
<p>Uwe - started introductory presentation at 9:00.</p> <p>Uwe asked that documents shared with agencies in pre-consultation not be shared with public as they are not final and subject to change.</p> <p>MNR - would Xeneca consider marking the documents confidential?</p> <p>Uwe - considering this given that in the last few days a document was released that should not have been.</p>	Agencies
<p>MOE(Sajjad) – regarding minimum flow identified in the operating reports presented to date - what was the rationale and can this be explained in the reports.</p> <p>Uwe - numbers had to be picked for unsteady flow modeling, etc. Not considered final but were meant to be discussed and finalized.</p> <p>Discussed seasons that flows were based on (hydrograph instead of calendar seasons). Want to look at wetted perimeter calculations with MNR and calculations to review water depths, flow velocities, seasons flow is required, etc.</p> <p>Sajjad - data needs to consider hourly fluctuations in Modified Run-of-River (MROR) sites because flow will be changing at that frequency. Uwe agreed.</p>	Xeneca
<p>MNR(Rich) - need to provide details to district staff on what kind of flows would be available downstream on an hourly basis.</p> <p>MOE(Sajjad) - added that daily flow data has been shown so far, not hourly flow data.</p> <p>Rich - graph of Misema fluctuations presented.</p> <p>Uwe agreed that flows will look similar with a daily fluctuation between Q_{ea} and Q_{max} that are to be discussed with MNR/MOE/DFO.</p> <p>Uwe - need to agree what numbers to use for analysis (for unsteady flow, MROR operation).</p>	Xeneca

<u>Item</u>	<u>Action By</u>
MNR(Steve) added that numbers will be different for each site.	
MOE(Todd) - no starting point to know what wetted perimeter/flow requirements are. Conditions that are not measured and data that we don't know are the issues.	
How many sites are ROR vs. MROR? Uwe – 1 vs. 17, but not quite that clear. Downstream projects that have no storage can't be run as MROR on their own, can only be run this way if upstream projects are MROR.	
Question about MROR sites and operating band. All projects are designed for 20% exceedance flow. MOE(Sajjad) - based on experience, ROR turbines are designed for 50% exceedance, MROR is less. Uwe - these are designed lower because gives more range for modified operation and because projects are small and can only afford single unit. Difference in cost between 3 to 3.5 MW single unit not much.	
How much are other users, operating plants considered in the operating regimes? Uwe - OPG on Ottawa river has been approached, discussing these issues. They are concerned with low water levels on the Ottawa river. Have several projects that are on rivers with water management plans. Dealt with in three places - Stakeholder consultation, land stakeholder consultation and EA process. McGraw project is on a managed waterway and will be incorporated into WMP when it is revised in next 1-2 years.	
Can inundation be mapped at highest level and lowest level and downstream water levels? Uwe, yes, inundation has been done in HEC-RAS modeling. MNR Kirkland advised they have not received HEC-RAS report yet. Nava - downstream inundation mapping has not been done. Have hydraulic information downstream. Mapping downstream could be done. MNR - concern is what areas might be dry with extended ponding as well as, connected wetland areas that might be affected. MNR(Steve) added issues with ramping rates, substrate movement/effect from pulsing of flow is a concern. Would like to see this mapping, more examination of the downstream area. Ground truthing plans. Uwe - this exercise has been undertaken with the bathymetry.	Xeneca
MOE(Sajjad) - regarding calibrating of unsteady flow, need to measure hourly to calibrate. Uwe agrees, but no facility there to monitor the flow. Sajjad added that natural hourly flow data could be assessed to calibrate, although this could not be monitored over the same range.	

Item	Action By
10:20 Nava started engineering presentation on Larder Raven.	
Larder Raven - 1.25 MW, 12.5 m head, 7 cms, lake connected	
<p>Does MNR headpond affect tailwater of project?</p> <p>MNR advised that the Upper Raven dam is scheduled to be decommissioned in the future. The Xeneca dam will replace it and it will have to be removed. The headpond therefore will effectively be 30 km because it will be the length between Xeneca dam and MNR dam + existing headpond behind MNR dam. Old dam downstream of planned Xeneca dam (wood structure) needs to be removed but concrete can stay because of historic value.</p>	Xeneca
<p>MNR - 75% of contributing water to park comes from this river, concern about MROR operating and effect downstream in park and to other MNR weirs downstream.</p>	
<p>Nava - water balance has been done, can be looked at again. Currently do not show any effect on lake downstream.</p> <p>MNR(Rob) - concern is that weirs downstream may become the controlling structures if levels dropped too far.</p> <p>Uwe added that there has been a lot of stakeholder feedback from cottagers on the lake, concerned about water level fluctuations and affect from manual stoplog operation where flows affected for days at a time. Hourly fluctuations from automatic operation at the project could actually improve water balance.</p>	
<p>MNR - stoplogs are operated 1 or 2 times/year. Daily operating will have more affect on biology.</p> <p>Uwe - Xeneca's position is that daily operation will be better for downstream.</p> <p>MNR(Rob) - stoplog structure is never dry. Concern downstream is mostly in spring freshet when cottagers get flooded. In summer flows are less than they would like but never dry. What has been proposed is Monday to Friday operation at this site, concern is weekend non-operating period.</p> <p>Uwe - automatic operation must be better than manual management with stoplogs. Will work with MNR to agree on an operating regime and lake management.</p>	Xeneca
<p>MNR - concerned that operating plan is too generic, no specific details to comment on.</p> <p>Uwe - agrees that specifics need to be agreed on, understand that it is a sensitive system with all of the users, a lot of conflicting requirements/priorities. Want dialogue with MNR to discuss release flows. Bigger questions are seasonal operation and lake level management. MNR jurisdiction to control this.</p> <p>MNR understanding is that Xeneca will not be affecting lake water levels.</p> <p>Uwe - there will be changes up to 10 cm.</p> <p>MNR - concerned that no biology work has been done downstream of the plant, only</p>	Xeneca

<u>Item</u>	<u>Action By</u>
<p>between two lakes.</p> <p>Uwe - yes, but only needs to be done if evidence that there will be an effect.</p> <p>Sajjad added that another proponent modeled 200 km downstream to see what the effect would be.</p> <p>Nava said that depends on size of project/effects.</p> <p>MNR(Rob) added that Xeneca needs to show what are the limits of the effects before agencies can comment on the effects.</p> <p>Uwe clarified that weekly inflow will equal weekly outflow.</p> <p>MNR(Rob) added that operational limits are legal once agreed to and proponent can operate within this limit as they see fit, that is why there is need to put a lot of thought into these limits.</p> <p>Uwe - lakes, for example, have natural level range of 1 m, Xeneca plans to work within this limit. The intent is not to draw down 10 cm incrementally drawing down to a very low level.</p> <p>Uwe – Regarding dam removal, Xeneca is only planning on removing stoplogs.</p> <p>MNR - do not agree with this. Dam removal was a condition of the site release. Dam removal needs to be part of the EA. Cost of removal is by proponent.</p>	Xeneca
10:55 Kristi starting biological presentation on Larder Raven.	
<p>Question about sturgeon at Wendigo</p> <p>Kristi - another proponent has project below Teddy's Falls (McCrebec FN). WESA and Kristi are working with them on this. Temperature logging is going in this year.</p>	
11:30 Nava starting engineering presentation on Half Mile & Big Eddy	
Half Mile - Nava presented PD layout and proposed alternate with upstream dam and tailrace channel.	
Big Eddy - ROR, 5.3 MW, 9 m, 68 cms, 2.7 km headpond reach	
<p>MNR(Henry) - question about 1:100 yr flood HEC-RAS modelling and what weir elevation was used.</p> <p>Nava - based on lowered obermeyer.</p>	
<p>Question about effects from Half Mile MROR upstream of Big Eddy which is ROR. Should the projects be linked together w.r.t. hydrology?</p> <p>Nava - downstream of Half Mile is Black Bay and another river with more flow. Based on these, expect that effects are minimal on Big Eddy but will confirm with modeling.</p>	
<p>MNR(Tania) - Regarding the bypass reach flows and habitat management. How much of this is up for debate still?</p> <p>Uwe - this is to be resolved still. Two types of bypass flows required at Big Eddy -</p>	

<u>Item</u>	<u>Action By</u>
habitat/fish passage flows and kayaking flows.	
<p>MNR(Joanna) - Concern that weir flows are geared towards kayakers and fish passage is secondary. Also concerned about TC approval of weir and allowing kayakers to use.</p> <p>Uwe - stakeholders at Big Eddy have been very vocal, kayakers have been vocal. Their concerns are being addressed. MNR has provided some direction on the fish passage but this discussion is just starting. On kayak passage, working with Northwest Hydraulics to design a weir that can pass kayakers safely. Modeled on Calgary weir. Working on channelling flows for sturgeon access to weir. Still have to figure out how to get them over the weir.</p>	
<p>MOE (Peter) on phone about stakeholder consultation - has this been done at all projects or only at Big Eddy?</p> <p>Uwe - summarized stakeholder consultation steps so far, PIC coming up. A lot of communication going back and forth with kayakers. Concerned that public has received report that was issued as a pre-consultation draft document and not meant for public release.</p> <p>Also asked about private land, stakeholders, more than what was identified in operating plan.</p> <p>Uwe - these issues will be addressed in the final document. Elaborated that stakeholder consultation has come a long way at Big Eddy. Political rhetoric is still there, but behind the public consultation. Xeneca and kayakers are talking about "how" now instead of "if". Other discussion is with ex-president of Black Bay rate payers association (Al Hepburn).</p>	
<p>MNR(Joanna) - Question about inundation elevation to high water mark and mapping to represent this is not shown.</p> <p>Uwe – HEC-RAS modeling/report is to cover this issue exactly.</p>	
<p>MOE (Peter) on phone on previous public engagement sessions.</p> <p>MNR confirmed they have been invited to all meetings.</p>	
Low flows, management of Ottawa river and OPG discussed.	
<p>MNR(Tania) - concerned about fish habitat and passage at Half Mile. Question about Algonquin Park effect will be an issue to watch.</p> <p>Uwe - discussed Willie creek, known turtle habitat and road upstream that Xeneca will be ensuring not to effect. Discussed that option presented at Half Mile will make fish passage easier if it is required.</p>	
<p>Question about Big Eddy downstream modeling to assess sedimentation and affect on downstream beach area.</p> <p>Kristi – substrate survey was done down to confluence with Ottawa river.</p> <p>Uwe - Big Eddy is ROR and will not affect flows, so should not be affecting sediment.</p>	

<u>Item</u>	<u>Action By</u>
<p>Can pass sediment if necessary with design of weir.</p> <p>Kristi - delta and turn upstream may be the concern and increasing delta size. Some affect from town work with gabions, etc.</p> <p>MNR – also concerned project does not increase erosion due to tailrace orientation.</p>	
<p>MNR(Tania) - Fresh water sponges found?</p> <p>Kristi - have not seen any in 5 years of work on river.</p>	
<p>13:20 Nava presented engineering details of Marter TWP.</p> <p>2.1MW, 12.5 m head, 16 m³/s, 1.7 km headpond reach</p>	
<p>MNR - issue about sturgeon spawning area at confluence with Misema/Blanch rivers. Raised issue of cumulative effects with Misema. Need to coordinate with water management plan. Mentioned possibility of requiring an ESA waterpower agreement to deal with species at risk. Have to deal with riparian rights.</p> <p>Uwe - regarding land process in EA context, in Xeneca's opinion property process is part of LRIA, not EA. Negotiations with landowners is ongoing. Site release status is known, letter received.</p> <p>MNR - riparian owners are a stakeholder, disagree with Xeneca assessment.</p> <p>Uwe suggested this be dealt with separately, have been in discussion with MOE about how this fits into process.</p>	
<p>Question regarding zone of influence downstream of project. Have to take other projects into account.</p> <p>Uwe – Misema is 2km downstream and was taken into account as a ROR plant. Understand now that it is authorized to operate as a peaking facility. Was not aware of the WMP on this river and would like a copy.</p>	MNR
<p>MOE(Sajjad) - asked about biologist involvement. Are they involved up to EA stage? Want to know if there is coordination between biologists and engineers. Ramping rates are critical, etc.</p> <p>Uwe - even when approvals have been received, owner is still liable if there is an adverse affect on the environment. Aware of this and that is why Xeneca wants to build appropriate projects.</p> <p>Uwe - there has been biologist input to the operating plans, but not wholly defined yet and has not been detailed discussion. Example is that Larder now has zero proposed minimum flow because preliminary indication is that 200 m rock channel downstream has no habitat. Will be discussed/reviewed in detail.</p>	
<p>MNR(Lauren) - sediment issues at Marter - important because of sturgeon, brook trout, etc. Ice scour is another big issue.</p>	
<p>13:50 - presentation started by KBM on transmission line/access roads</p>	
<p>Question/comment on using same roads as forest operators (SFLs) where they have</p>	

<u>Item</u>	<u>Action By</u>
access rights through private property. Xeneca will make their own agreements to access through private property.	
Question about when FN consultation would be done. Not by KBM, Xeneca is doing now.	
Question about primary vs. tertiary roads. KBM - following existing roads as much as possible and are aware of long term access routes. Tertiary roads are shorter term, expected to be decommissioned in short term and do not want to be following them.	
Wetlands considered but vernal pooling, snake fernacula, etc. need to be considered beyond wetlands. Will consult with district staff to resolve this.	
MNR Sudbury – were information packages provided to Xeneca in site release process provided to KBM? KBM(Dave) – not yet, have not asked for that information.	
Regarding ground-truthing - have information from SFLs on primary, secondary, tertiary. Need to assess for condition. MNR suggested that MTO does a lot of work on transmission line routing and KBM should talk to an MTO official about their ground-truthing.	
14:10 - Nava started engineering presentation on Wabageshik 3.4 MW, 6 m head, 64 cms, 1 km headpond reach	
MNR(Pat) – What geotechnical information is driving the option revisions? Uwe - move was based on identification of a spawning bed and large gravel esker identified at current location. Geology can vary over small differences – this gravel bar esker needs to be protected and that is not a stable basis for construction so we need to avoid it.	
MNR(Wayne) – Did the shift upstream make this a lake-coupled project? Uwe - project was supposed to be coupled before and after, no change to elevation. Agreed that if this has changed will have to go back to the public. MNR Eric Cobb - Is it lake-coupled? Because the PD did not include this design. Uwe - Was it not? Well we will have to go out to correct that information.	Xeneca
MNR(Rob) – Scour/erosion effect with upstream move? Uwe - this has to be studied further but in general not too concerned about scour because sand has been transported and only gravel/cobble remain. Outflow velocities – will you be looking at this for erosion issues of the gravel bed? Uwe - Flows will be slower in the tailrace than they would have been naturally. The	

<u>Item</u>	<u>Action By</u>
scour is possibly reduced but we will need to look at the velocities over the spawning bed.	
14:40 Robert started environmental presentation on Wabageshik.	
Sturgeon task team discussion. Should be general for all projects. Bob (Sudbury) will discuss with Sandra to set up.	MNR
<p>MNR(Pat) - how will minimum flow be released, has this been considered? How will these minimum flows be provided for fisheries purpose?</p> <p>Uwe – not yet. It will be determined when we have detail design. Could be low flow tube, through plant or allowed to crest over the spillway.</p> <p>MNR has advised other proponents that compensation flows can't be run through turbines because they can be turned off.</p>	
Uwe - clarification – with Option 2 there is a variable flow reach so those discussions need to be had with the regulators.	Xeneca
<p>MNR – need to ensure that you have discussions with other users and operators on the river – Vale</p> <p>Uwe – we have had some discussions with Vale regarding their upstream water intake.</p> <p>– we will get together and share information with them and any data gap issues can be resolved. Domtar is another stakeholder with area downstream.</p> <p>I will check with communications group, and Nava need to follow up on this discussion.</p>	Xeneca
<p>MNR(Wayne) - Upstream option was the most fish friendly which is the option that is not really being considered now. Can it be reconsidered?</p> <p>Uwe - Coupling with lake is a concern including peaking flows. Expect that project will affect quite a bit of reach downstream beyond plunge pool and that this should be looked at. Also concerned about possible effect on walleye spawning when running continuously. Regardless of which option, the confirmed spawning habitat is important to be protected and need to discuss.</p> <p>NRSI(Rob) - when meeting with Wayne will try to have an engineer in meeting.</p>	
<p>MNR - will inundation of the lake be impacted?</p> <p>Uwe - No.</p>	
<p>MNR - Coupling with the lake – is a concern – zone of influence will stop at the plunge point in the lake – I believe it extends to confluences with the Spanish. This is substantial flow fluctuations and is a huge issue to be discussed.</p> <p>MNR(Wayne) - General concern is the issue of downstream zone of influence. If operation between 0.5 and 40 cm/s in 24 hour, Intermittent operations with large flow</p>	

<u>Item</u>	<u>Action By</u>
<p>Uwe – we have a general understanding of spawning area upstream and downstream. We will keep eyes open and keep in mind.</p> <p>MNR - Mike Hall needs to be consulted.</p> <p>Andrew – yes we have talked to him in the past and will do so again.</p> <p>MNR - Concerns raised by Wayne on Vermillion will be an issue here as well and needs to be discussed.</p> <p>Gaps around lake sturgeon passage: has there been discussion to modeling 1 in 100 year flow rate? as they only need one to two opportunities over lifespan for passage.</p> <p>NAVA – have done 100 year, 2 year, and 5 year flood analyses to see if passage would exist under these flow events using the model.</p>	NRSI
<p>MNR – Transmission line and roads are 20 km, and there are a lot of species at risk in this area but no data (Blinding turtles) roads, rattler, spotted turtle. What will be the approach to assess these?</p> <p>Uwe - We do not have roads to access. A lot of survey is required. We will look in detail on aerial photos, but we won't look into detail on corridor because options may change.</p>	
<p>Who is doing that Screening for EA? At EA level – desktop and aerial photos</p> <p>Nava – we can provide that information.</p> <p>For permits – we will do ground truthing once routes are absolutely firmed up.</p> <p>MNR – if there are more options – you need to consider that one area may have higher incidence of impacting SAR than another.</p> <p>Yes – we agree – KBM is conducting the analysis for the routes options – KBM and Xeneca and NRSI will have to decide who is doing final level of analysis for the EA to decide on the preferred option</p> <p>MNR – environmental degradation around these areas – analysis of soil or water what has been done or are there discussions to be had on this?</p> <p>Uwe – Yes, we do surface water only, not soil. This has been identified and we will sit down and talk about how to address this.</p>	KBM and Xeneca and NRSI
<p>MNR – does first nation realize lake sturgeon is there? FN consultation will notify FN ahead if they are to tag species.</p> <p>Nava - Xeneca has a FN person on staff for such notification</p>	Xeneca
<p>MNR - French River is Federal Designated Heritage Waterway – is this a consideration or a barrier for this project or in general for waterpower?</p> <p>Unknown – OEL will check into this question?</p>	OEL
Presentations From upstream to downstream:	

<u>Item</u>	<u>Action By</u>
Vermilion – McPherson Falls Vermilion - Cascade Falls – two options being considered. Vermilion – At soo Crossing.	
<p>Highway 17 and a railway line are close to site. We input data and run the model. It won't impact the highway.</p> <p>MNR - Is the railway a big deal? Is it possible for building construction on rail?</p> <p>Need to consult with Canadian Transportation Agency due to the active railway line crossing.</p> <p>CN – railway line needs to be consulted.</p> <p>MTO – effect on bridge needs to be consulted.</p> <p>Land agreement with Vale in process</p>	Xeneca
<p>MOE – Sudbury intake pump house – Where is the intake? Is the lake deep and how wide is it? How much will be released when shut down?</p> <p>Nava – 400 m wide and 500 m long. Xeneca has limited information of the depth around intake area from the bathymetry survey. Need to consult with them about intake details and operations. Need to have MOE provide information on the PTTW.</p> <p>Xeneca – agree we need to consult with Greater Sudbury about this intake and our operation regime.</p>	Xeneca MOE
<p>Xeneca intends to meet with regional level MNR and other agencies on an on-going basis.</p> <p>Biologists are meeting to fine tune the workplan that has been developed and approved by Xeneca for the variable reach.</p> <p>Sandra – remind Xeneca to notify agencies when new data is available.</p> <p>Paula – to add – please indicate what the change has been.</p>	Xeneca
<p>Closing</p> <p>Ed, Grant, Sandra, Mary Ellen and Paula should sit down to narrow out next steps.</p> <p>Thank You- our meeting these two days was very helpful and successful and we look forward to meeting with MNR districts starting next week to conduct scoping reviews for the proposed 2011 field programs.</p>	

Attendees for Xeneca FIT Projects Meeting on April 28, 2011

Name	Position	Organization
1 Mike Mable	Reserve Analyst	MNR Northeast Region
2 Tim Mutter	Dist. Planner	MNR Chapeau
3 Dave Barbour	Planning Biologist	MNR Kapuskasing
4 Kris Vascotto	Planning Biologist	MNR Chapeau
5 Laurie Brownlee	EA Coordinator	MOE Northern Region (Sudbury)
6 Zach Vorvis	Engineering Consultant	CPL
7 Lianne Kentish	Env Officer	MOE Timmins District
8 Paula Allen	APEP Supervisor	MOE Sudbury Regional Office
9 Todd Kondrat	Surface Water Specialist	MOE Northern Region
10 Mohammad Sajjad Khan	Hydrologist	MOE Northern Region
11 Grant A Ritchie	Manager, NER Planning Unit	MNR Northeast Region
12 Lisa Keable	Renewable Energy Biologist	MNR Sault Ste. Marie
13 Kim Mihell	Renewable Energy Planner	MNR Sault Ste. Marie
14 Tami Sugarman	EA Coordinator	OEL Hydrology Inc /Wesa
15 Bill Touzel	EA Coordinator	OEL Hydrology Inc /Wesa
16 Greg Deyne	Sr. Regional Fisheries Biologist	MNR Northeast Region
17 Pat Cantin	Professional Quantity Surveyor	MNR NER Eng. Unit
Muhammad Jahan Zeb		
18 Khan	Engineering Technologist	MNR NER Eng. Unit
19 Rob Schrybart	Senior Project Engineer	MNR NER Eng. Unit
20 Allan Chow	Engineering Supervisor NE-NW	MNR NWR Eng Unit
21 Rich Pryce	Hydrologist	MNR NE Science Information
22 Sandra Dosser	Renewable Energy Coordinator	MNR NE Region
23 Robert Steele	Principal, Senior Aquatic Bio.	Natural Resources Solutions
		Ontario Resources Management
24 Kristi Beatty	Project Manager	Group
		Ontario Resources Management
25 Lise Uskov	Wildlife Technician	Group
26 Dave Green	Senior Project Manager	Natural Resources Solutions
27 Brett Woodman	Senior Project Manager	Natural Resources Solutions
28 Ed Laratta	Mgn. Env. Services	Xeneca Power Development Inc
29 Andrew Schiendel	Aquatic Biologist	Natural Resources Solutions
30 Robin Stewart	Planner	MNR Cochrane District
	Planning & Information	
31 Denis Clement	Supervisor	MNR Cochrane District
32 Dave Thomson	Consultant	KBM Thunder Bay
33 Stephane Audet	Consultant	KBM Thunder Bay
34 Carl Jorgensen	Biologist	DFO Sudbury
35 Jennifer Hallett	Biologist	DFO Sault Ste. Marie
36 Uwe Roeper	CEO	Xeneca Power Development Inc
37 Steve McGovern	Aquatic Biologist	MNR NESI S. Porcupine
38 Noel Boucher	Biologist	Hatch
39 Grace Yu	EA Coordinator	Xeneca Power Development Inc
40 Marty Blake	D.M	MNR SSM District
41 Bill Greenaway	Supervisor	MNR Kapuskasing

Attendees for Xeneca FIT Projects Meeting on April 29, 2011

Name	Position	Organization
1 Bob Robinson	RE	MWR Sudbury
2 Edmund Laratta	Manager of Environmental Affairs	Xeneca Power Development Inc
3 Eric Cobb	SAR Biologist	MNR Sudbury
4 Bruce Richard	Planning & information Supervisor	MNR Sudbury
5 Nava Pokharel	Project Manager	Xeneca Power Development Inc
6 Tania Baker	Area Biologist	MNR Pembroke
7 Joanna Samason	Water Resources Coordinator	MNR Pembroke
8 Karen Handford	Planning & IM Supervisor NE Region Renewable Energy Coordinator	MNR Pembroke
9 Sandra Dosser		MNR South Porcupine
10 Rich Pyrce	Hydrologist	MNR NESI S. Porcupine
11 Pat Cantini	Professional Quantity Surveyor	MNR NER Engineering Unit
12 Henry Haemel	Sr. Project Engineer	MNR South Reg Eng Pho
13 Allan Chow	Engineering Services Supervisor	MNR NE region Timmins
14 Muhammad Jahanzeb Khan	Engineering Technologist	Ontario Resource Management Group
15 Lisa Uskov	Wildlife Technician	Ontario Resource Management Group
16 Kristie Beatty	Project Manager/ Biologist	Ontario Resource Management Group
17 Rob Steele	Project Manager/ Biologist	NRSI
18 Stephane Audet	Consultant	KBM
19 Dave Thompson	Sr. Consultant	KBM
20 Todd Kondrat	Surface Water Specialist -Troop Leader	MOE - Thunder Bay
21 Rob Schryburt	Sr Project Engineer	MNR North East Region
22 Rick Gordon	District Planner	MNR KLK district
23 Lauren Mc Donald	Management Biologist	MNE Kirkland Lake
24 Grace Yu	Ea Coordinator	Xeneca Power Development Inc
25 Andrew Scheidel	Aquatic Biologist	Natural Resources Solutions Inc
26 Jennifer Hallett	Habitat Biologist	Fisheries & Oceans Canada MNR Renewable Energy Program Team
27 Leala Pomfret	Renewable Energy Program Advisor	Fisheries & Oceans Canada
28 Kelly Eggers	Habitat Biologist	MOE
29 Rod Sein	Surface Water	Moe Timmins
30 Lianne Kentish	Environmental Officer	MOE Sudbury
31 Paula Allen	APEP Supervisor	MOE Sudbury
32 Mohammad Sajjad Kahn	Hydrologist	MNR NER
33 Michael Malek	Resource Analyst	MNR NER
34 Grant Richie	Manager Northern Region Planning Unit	OEL hydro Sys Inc/ Wesa
35 Tami Sugarman	EA Coordinator	OEL hydro Sys Inc/ Wesa
36 Bill Touzer	EA Coordinator	SSM MNR
37 Marty Blake	DM	MNR North East Region
38 Greg Deyne	Sr. Regional Fisheries Biologist Engineering Consultant - Project Manager	CPL
39 Zach Vorvis		Science & Information Branch MNR
40 Mary Ellen Stoll	Manager NESI	NESI, Timmins MNR
41 Steve McGovern	Sr. Biologist	DFO Sudbury
42 Carl Jorgensen	Biologist	

Actions Summary for Xeneca April 28-29th Meeting

Project	Action	Organization	Process/ Complete
18 FIT projects	To notify agencies when documents updated and indicate what changes have been made.	Xeneca	
	Make sure that information given to public was accurate and no significantly changes, and will go out to public again if that is the case.	Xeneca	
	To provide guidelines for road construction & remote fly	MNR(Greg) to KBM/Xeneca	
	Two different inundation areas will be carried through on multi-concept projects if inundation areas vary, and effects on wildlife will be considered for both options.	Xeneca	
	To provide Xeneca process information regarding to approvals	MNR Sandra	
	To contact MNR for program reference information including values layers for SAR species, significant habitat, etc.	KBM / MNR Sandra	
	Need to consider data of hourly fluctuations in Modified Run-of-River	Xeneca / MOE Sajjad	
	Documents shared with agencies in pre-consultation shall not be shared with public as they are not final and subject to change.	Agencies	
Ivanhoe (MNR Kris)	To discuss flows/habitats, seasonal requirements, area of impacts	Xeneca/MNR/NRSI	
	To update PD to show option 2 and the 30 km of inundation	Xeneca	
Third Falls	To have data available for public for mercury.	MNR/MOE (Steve/Todd)	
	Ivanhoe stakeholders requested information on Third Falls inundation	Xeneca	
Wanatango	Terrestrial information including regional/provincial/federal species affected and upstream/downstream concentration of field work.	Xeneca	
Kapuskasing	Discussion on wetland at Kapuskasing and issues of access to lake	Xeneca / MNR	
	To do modeling work to confirm no impact on Hydromege projects;	Xeneca	
	To provide Water Management goals to Xeneca.	MNR(Dave)	

Kapuskasing	To check the reason why there is big difference of inundation areas between November 2010 report and now	Xeneca	
Middle TWP (MNR Pat)	To use the flow that captures the worst case scenario for the site. Biology and land ownership issues have to be addressed at EA.	Xeneca	
(MNR Rob)	Riffles/pools need to be targeted for cross-sectioning in next phase of bathymetry	Xeneca	
(MNR Dave)	Need to neutralize the impact showing that there is no connection to the lake. MNR added that IDF has to be used for modeling.	Xeneca	
McCarthy (MNR Rob)	To use the Significant Wildlife Habitat Technical Guide for study.	NRSI	
Larder & Raven	To provide HEC-RAS report	Xeneca	
	To work with MNR to agree on operating regime and lake level management.	Xeneca	
	Removal of dam downstream needs to be part of the EA. concrete can stay. Cost of removal is by proponent.	Xeneca	
	To provide a copy of WMP on Petawawa River	MNR Pembroke	
Petawawa	Update PD of Wabageshik w.r.t lake coupled operation	Xeneca	
Wabageshik (MNR Wayne)	Team discussion on Sturgeon task	Bob (Sudbury) & Sandra	
MNR(Bob)	Meeting with Vale/ Land agreement	Xeneca	May 6, 2011
MNR(Wayne)	Discussion on fish spawning area & period, zone of influence, and study area.	Xeneca/MNR/NRSI	
	Discussion on Rainbow trout or salmon with MNR prior to field work	NRSI	
Allen and Struthers	Consultation with Mike Hall	NRSI	
Upper Vermillion	To decide who is doing final level of analysis for the EA to decide on the preferred route option	KBM/Xeneca/ NRSI	
	To notify First Nation about tagging lake sturgeons	Xeneca	
	- French River is Federal Designated Heritage Waterway – is this a consideration or a barrier for this project or in general for waterpower?	OEL	
	Need to consult with Canadian Transportation Agency due to the active railway line crossing.	OEL	

Upper Vermillion	CN – railway line needs to be consulted.	OEL	
	MTO – effect on bridge needs to be consulted.	OEL	
	To consult with Greater Sudbury about intake details and operations. Need to have MOE provide information on the PTTW.	Xeneca/MOE	



NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

Project No. 1052 / 1215D

Meeting Minutes

Date: May 2, 2011

Time: 9:00a.m.

Project Name: Wanatango Falls

Parties Involved: Chris Chenier, Area Biologist MNR Cochrane (CC), Carl Jorgenson, Fish Habitat Team Leader DFO Northern Ontario District (CJ), Ed Larata, Xeneca (EL), Andrew Schiedel NRSI (AS), Tami Sugarman (OEL Hydrosys (TS), Pilar DePedro, OEL Hydrosys (PD), Dave Green, NRSI (DAG), Brett Woodman, NRSI (BW)

Topic: Scoping future Wanatango Falls Fieldwork Page 1 of 5

Details of Conversation:

CC's draft Notes on Data Requirements for Wanatango Falls will be used as an informal agenda for this Scoping Meeting conference call.

Study Area

In 2010 the study area was defined as the limit of upstream inundation (approximately 1.4km below Frederickhouse Lake Dam) to Zevery's (bridge).

Frederickhouse Lake Dam is currently a manual operated dam. There are preliminary discussions underway to explore the potential of automating this dam using power generated at Wanatango Falls GS that will result in some flow regime change below Frederickhouse Lake Dam (FHL D).

CC- For the past week or longer the FHL D has been holding water and so any water that NRSI staff are seeing at Wanatango while doing the telemetry work is tributary inputs only.

Presumably changes to FHL D management might be considered as a form of compensation if it could be a benefit to walleye spawning. The increased flexibility through automated flow management will translate more readily into ecological benefit (for benthos, spawning fish, etc.)

Based on this discussion it is important to expand the study area for all future field work to extend to FLHD.

The downstream limit of study area has been updated from 2010 based on the VFR provided by Xeneca to the consulting team in March 2011. The VFR for FH River is estimated to be 2.0km. Because, roughly 2.0km below Wanatango Falls is the large over-wintering pool for Lake Sturgeon and that there is a sizable tributary at 3.0km below, the downstream study area has been extended to 3.0km to include both of these features.

Fish Community

The discussion relating to fish community touched on a number of metrics including: species diversity, species abundance, age structure, growth and fecundity.

Species diversity – Northern pike are the only potential species that have not yet been encountered / documented.

Species abundance – can be achieved through the combined 2010 and 2011 RIN netting programs with the exception of benthic-pelagic species which may not be effectively caught using RIN nets. NRSI results will be presented in terms of catch per unit effort (CPUE).

CC- heavily stressed that NRSI should sample as robustly as possible to ensure that the findings are meaningful and accurately represent the existing conditions in the study area.

Age structure – CC aging work was done in 2010 downstream of Zevely's. With this data NRSI will look at length at age curves to generate aging information with our data set.

NRSI will consider collecting aging structures for future aging and confirmation of length at age estimates. This could include otolith (mortality) or scale collections from fish.

Growth – growth rate estimates cannot be done without age estimates. NRSI will consider this after decisions about aging work have been made.

Fecundity – CC- this work is necessary for MNR to manage the fishery resource.

Fecundity estimates can only be completed using dead fish. This work is not included in the Xeneca approved 2011 work plan. It represents a sizeable amount of work. NRSI will discuss further with Xeneca to determine if they will commit to this extra work.

BW – request that CC provide data sets / reports on fish work carried out by MNR below Zevely's

RIN

RJS – does the MNR have a software that they use to process RIN data
CC- supposed to use fishnet, but he uses excel

In 2010 NRSI did 12 net sets. In 2011 NRSI is budget approved for 5 days of sampling. It is anticipated that this will yield 20- 25 net sets.

CC – for his 27km study area below Zevely's he did 50-60 net sets. NRSI's yield catches will probably be low. Some species will be hard to catch in the quantities required for meaningful statistics (eg. Goldeye).

Tributary Sampling

NRSI will be studying the tributaries within the study area. This will include habitat mapping and fish community sampling using an electrofisher backpack and minnow traps.

CC- requested that habitat areas be calculated, water temperature be recorded as well as known locations of groundwater inputs, substrates be documented and channel morphology (eg. proportion of riffles, pools and runs) be recorded. CC – this work should mirror what is done on the main stem.

NRSI will use OSAP protocols to focus the tributary investigations.

Benthic Invertebrates

NRSI will sample fast water benthic communities only as these are the ones that will be potentially affected by increased inundation. We will employ Surber, Hess or possibly U-net samplers. It is anticipated that we would identify 5 sample locations (inundation, variable flow reach and bypass channel) with three samples collected from each of these locations. The purpose of this work will be to determine taxa richness and densities (individuals / meter squared)

CC_ questioned whether NRSI would be able to calculate meaningful densities with this level of effort. Samples from other habitats (slow-moving or pools) at a lower level of effort are recommended. These details will be needed in advance of permitting.

CJ – Benthos are a component of fish habitat, for example feeding areas. Will they be altered?

Aquatic Plant Community

NRSI will build on the 2010 work. This will incorporate the additional study area.

CJ – In the absence of aquatic plants it is important to note that they are absent.

Primary Productivity

NRSI is not approved by Xeneca to do any work on primary productivity.

CC – not usually completed for EAs. He requests that we provide compelling rationale if not doing it. He indicated that larval fish drift would be preferred.

Due to the small size of the headpond, primary productivity is less relevant / important. Collection of larval fish drift data is not included in the Xeneca approved 2011 workplan.

Channel Characteristics

RJS- in CC's notes on data requirements, was he thinking that the channel metrics data would be collected by a Fluvial Geomorphologist?

NRSI will collect information regarding channel characteristics (e.g. substrate size and depth) as it relates to fish habitat. Additional information requested by CC is best completed by a Fluvial Geomorphologist.

CC – NRSI needs to tie their work to fish habitat. Other details need to be addressed the appropriate experts in terms of erosion.

CJ- the key characteristics to document are substrate size, depth, velocity and air and water temperatures. He recommended that we collect this data while setting egg mats.

DAG – NRSI will install water temp loggers above and below Wanatango Falls and one air temperature logger.

Fish Habitat

This work is done; NRSI is working on quantifying critical habitats.

CJ – acknowledges that compensation is not on a square meter for square meter basis. But it is important to replace critical habitats that could be lost or altered (eg. pike spawning). What are the inverts of the channel and wetland that may provided pike spawning habitats.

Transmission Line and Access Roads

CC- strongly recommended again that field work be undertaken on these alignments this year.

NRSI is not budget approved by Xeneca to do anymore work beyond the desktop review that is completed.

EL – It is not possible to do field work this year and wondered if the agencies could help scope field work such that every kilometer does not need to be studied.

VECs

Walleye, Sauger Northern Pike and Lake Sturgeon are identified as VECs for the study area. Brook Trout and Goldeye are questionably VECs. (TBD by CC).

CC - Invasive species that the MNR would like to know about if we encounter are Rock Bass, Bullhead species, Emerald Shiner and Small Mouth Bass.

CJ - Make sure that Compensation Plan does not create habitat for invasive species.

CC- please append to the minutes what NRSI is doing to address fish passage. Specifically, seasonal movement between critical habitats (overwintering, summer forage, spawning and nursery). NRSI should focus on understanding fish passage over Wanatango Falls or Zeverleys to critical habitats. This should be achieved by manual tracking, tag returns (of external Dart tags), upstream and downstream netting, base station data and possibly aerial surveys

EA Discussion

This section was not well documented. Please add or revise as you see fit.

EL – what do we do with data that comes after the EA is filed?

CC – Location approvals need more data than does the EA

CJ – CC is manager of the fishery; DFO is the manager of the habitat. Federal EA and habitat are connected. Compensation may target the base of FHL and use the hierarchy for compensation.

MNR – Compensation Plan is developed between DFO and Xeneca to meet the MNR's Management Objectives

Resulting Actions:

CC- to provide NRSI with existing reports and data

NRSI – to provide to MNR and copy Xeneca work plans for each future trip including trips currently underway.



NATURAL RESOURCE SOLUTIONS INC.

Aquatic, Terrestrial and Wetland Biologists

June 15th, 2011 Biological Scoping and Operating Plans Meeting and Conference Call

Wanatango Falls, Frederickhouse River

Meeting Minutes

Participants

Sandra Dosser, MNR
Greg Deyne, MNR
Larry Ferguson, MNR
Rich Pyrcce, MNR
Bill Guthrie, MNR
Chris Chenier, Cochrane MNR
Tim Mutter, Chapleau MNR
Kris Vascotto, Chapleau MNR
Paula Allen, MOE District Supervisor
Amy Liu,
Helen Kwan,

Larry Ferguson, MNR
Mike Maleck,
Dan MacDonald, CEAA
Uwe Roeper, Xeneca
Ed Laratta, Xeneca
Nava Pokharel, Xeneca
Tami Sugarman, OEL Hydrosys
Pilar Dipetro, OEL Hydrosys
Kai Markvorsen, OEL Hydrosys
Brett Woodman, NRSI
Dave Green, NRSI
Rachele Young, NRSI

Regrets

Laurie Brownlee, MOE
Dave Bell, CEAA
Al Rowlinson, DFO
Mohammad Khan, MOE
Ed Snucins, MOE

STUDY AREAS

1. Wanatango Falls 9:50am – 12:20pm

A: Background Info

Person	Details
A)	BACKGROUND INFORMATION
UWE	Described the upstream and downstream locations. He also mentioned Xeneca is working towards easement agreements with landowners. However it is a separate process from this meeting. The main focus is on the details and issues of the larger inundation but if the agreement is not reached, then the focus will be on a smaller inundation.
	The information available up to this date is the hydrologic profile of stretch. Uwe mentioned the longitudinal profile is not available yet, but will have the same effect for inundation. The river profile is a handy view because it shows water elevation variation along the stretch which is useful for studying inundation.
	Static inundation is a single line of water levels. There will be a significant change in



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	<p>habitat within the static inundation areas during the 1:2 year flood event when riffles upstream are fully inundated.</p> <p>Dynamic inundation is the varying differences in water levels. Xeneca wants to look at the differences and the effect on habitat assessment and property impacts because most often, this is the least useful for habitat assessment. With the 1:2 year flood riffles in the dynamic inundation, what needs to be looked at is if there is an impact on habitat. What needs to be looked at further are water depths and what happens to habitat when varying levels in centimeters of additional water is added.</p>
Greg Deyne	<p>When analyzing the inundation areas, Xeneca has to keep in mind that during the 1:100 year flood, habitats are difficult to maintain with varying water depths. The requirements change for each area when water moves so the analysis has to adhere to the change.</p>
Brett	<p>At the bio scoping meeting held on May 2nd, 2011 for Wanatango, there were no operational (ops) plan available at that meeting. Chris Chenier, MNR requested additional information and Nava responded by email</p>
Uwe	<p>He would like to discuss the ops plan and design but would like to tie it to key biological locations discussed in the scoping meeting</p>
Brett	<p>At the PIC two options were presented. One is the full 8.5km headpond and the second is for a smaller headpond should an easement across private property not be realized.</p>
Uwe	<p>The EA will look at the max inundation in the worst case scenario and discussion will be made with the landowners. The key design will be finalized following the EA</p>
Brett	<p>Is there inundation mapping now available from the May 2nd scoping meeting. NRSI has not seen it and finds the maps quite instructive to put context to inundation areas.</p>
Nava	<p>Responded that there are maps now available but they are not much different from the static modeling so there will not be much change in results.</p>
Brett	<p>There are fast water near the below Frederickhouse River. The static inundation shows the extent of the inundation approx 1.4 to 15 km below the river. The static inundation may or may not be impacted (potentially mitigate with operations). However the riffles close to the dam will be impacted. There were discussions based on what solutions could be made to protect habitat 1.4 – 1.5 km below the dam.</p>
Greg D	<p>There are pockets of fast water habitats right below Frederickhouse River which include spawning areas. Make sure that wall eye and sauger have suitable habitats.</p>



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Uwe	<p>The upstream area has daily water fluctuations and the flow varies the effect on the riffles</p> <p>The downstream area has flow fluctuation which means downstream flow variability causes significant variations in downstream habitat due to flow. There are proposals to change the water levels upstream on a daily basis of ~1m range</p>
Chris C	<p>Given enough water, is there a possibility to do peaking operations more than once a day?</p>
Uwe	<p>Yes</p>
B)	ACTIONS AND PROPOSALS
	<p>From the SLIDES at the meeting:</p> <p>The Footprint impact forms the inundation and physical footprint. The Operational impacts illustrate variable flows and downstream. The Chutes is not a bypass site but Wantango is. A bypass site is simply a barrier in the river.</p>
Uwe	<p>There are Two choices that can be discussed for Wanatango Falls (Hydropower overview). The first choice is building a by pass which will divert some water to a pipe or a channel to the powerhouse and release from the powerhouse to the river. This will allow us to maintain some function of habitat.</p> <p>The second choice is building a close coupled site further down rapids. It will be a bit larger in size and the powerhouse and barrier will be at the same site. With this option, habitat will always stay wet and it will convert to a different habitat since flushing occurs.</p>
	<p>If we have a modified run-off-river there is no long term storage but variation in flow on a daily basis.</p> <p>If we have a machine run continuously throughout the day, how fast it runs will vary during the day. If we only save water during the day and run when enough is saved in the reservoir, it will provide the best effect and use. The four operating modes are as follows:</p> <ol style="list-style-type: none">1. Minimum to maximum flow2. Flow for much of the year3. Most spawning happens over spring4. Low flow periods are most difficult
Chris C	<p>Since dates need to be set up regarding the building of the motions discussed above, he would like to discuss arbitrary dates.</p>
Brett	<p>June 1st could be an issue and will need to be thought about before discussions</p>
Chris C	<p>The biggest concern in the river is about sturgeon and not walleye. The June 1st date for modified operations shows some concerns because of incubation and the tail end of it.</p>
Uwe	<p>The Arbitrary dates have to take into consideration walleye spawning and the flow events happen differently than on calendar so is there a way to pick dates better? Can</p>



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	<p>we use water temperature or can MNR provide an annual basis?</p> <ol style="list-style-type: none">1. MNR's criteria would include providing monthly flow guidelines if possible instead of seasonal which is present accordingly2. Can they provide an example operationally such as a hydrograph which is within the run of river walleye3. Sturgeon are in immediate downstream areas so spawning is of a concern. Can we extend operating implications to later area in the year so the dates can match all spawning areas of all species?
MNR	Can you produce water at the max turbine capacity during intermittent operations?
Uwe	We will do what benefits the most. Peak performance will be at about 60 or 70 percent of the max, and the turbine is best at 50 – 60 percent. Work best to try and run in that range to process all the water change percentage
Greg D	How can you make a commitment about no interment flow during spring if you don't know the requirements for by pass flow? Also, how do you make commitment for spring spawning when don't know what to provide to attract habitat? Will the bypass be where spawning is happening?
Uwe	The bypass is where spawning occurs so it is a difficult discussion. The key habitat issue areas are below the structure and further downstream. Spawning area at the bridge will be covered by spring run off "noise". Spawning in the tailrace could be "extended" by moving and spreading out the coble /reconfiguring the cobble below the tailrace habitat. Should be wetted at all times, but will need to review it. Dave can you identify other areas?
Dave Green	There are walleye spawning in these areas (confirmed fish but not spawn in 2010, can't speak for 2011 work – ongoing atm). No sturgeon spawn above Zevery's Bridge but did confirm a presence below. He noted that where there are bedrock pinch points in the channel, there is usually spawning activity.
Brett	Below the bridge, some crew caught a young sturgeon 77 cm in length 2011. It is not overly abundant but they do believe that they get to the bridge, spawn and variation inflow causes trouble and makes it difficult to catch
Greg D	To attract fish into the bypass spill area and discontinue that spill because water is needed to run the turbine. This is problematic and we don't want to lose site for the fish to spawn and then not spill water into the bypass
Uwe	<p>Water goes around the large island two ways in this area</p> <ol style="list-style-type: none">1. It goes over a cliff (steep) and down into the channel but not much habitat is related2. Along the long channel it is rough and habitat is present. It then moves to the bottom of the channel into a pool where the water is deeper. There is deposition and it is full of eroded material. This Spawning area is identified as a key area. Beyond the water gets deeper to a set of falls by the hydro bridge <p>The main Issues are as follows:</p> <ol style="list-style-type: none">1. immediate spawning at the base of the site and few meters downstream



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	<p>at the bridge and variable flows are the key discussions because they are important pieces of habitat</p> <ol style="list-style-type: none"> 2. The Bridge should be taken care of by no intermittent spring runoff 3. The other barrier function has Tale race flow and a short distance upstream which means it functions properly but needs to be reconfigured accordingly for best spawning habitat
	<p>According to the hydrograph (present at meeting):</p> <p>Regulated flows from Fredrickhouse Lk. dam (seasonal storage) have extensive periods of zero flow on Frederick house river. This results in periods of zero flow on the Fredrickhouse and we want to make sure that there's nothing that Xeneca can do when Fredrickhouse River reaches zero flow conditions.</p>
Brett	<p>During early spring work there is river work were the result is tributary inputs below Fredrickhouse dam since no water is coming out of it. He noted the potential for compensation related to the project allowing for the automation of the FHD. No power present at FHD at the moment which requires manual operations. Is there an option to run the power line close to the FHD to allow for that operation?</p>
Uwe	<p>The Compensation plans down road from the May 2nd discussions:</p> <ol style="list-style-type: none"> 1. The Option for the site to run a power line (Fredrickhouse Lk. Dam to run manually but automate through development of Wanatango). We can put a power line past Fredrickhouse dam to bring power there which means less extreme operations or more fish friendly operations 2. The Discussion with OPG opens up to build another hydro site at Fredrickhouse site and this gives the opportunity to revisit Fredrickhouse river for better solution → More discussion on how to get meaningful objectives for more water 3. Can't commit to no intermittent operations because April has hydrograph cut off with no water from Fredrickhouse dam (could hold back water and not give it to the project). Wanted to ask MNR about the "abuse" that the sturgeon take as a result of intermittent operation at FHD. <ol style="list-style-type: none"> i. Good habitat downstream, thus wall eye and sturgeon put up with abuse so how do we sustain with weeks of zero flow?
Chris	<p>Sturgeons take refuge in deep areas during low flows. Also note that there might be a recruitment issues because we don't usually find juveniles. We are still trying to assess with field work. Note that if they're not spawning locally, they'll have to go 20km downstream. So they think they still spawn on the river and it may not just have been noted due to life history of fish. There is belief that there is fish passage at Zeverly's.</p>
Uwe	<p>This is tough site to propose flow on because;</p> <ol style="list-style-type: none"> a. Flow any time of year of any magnitude so if water isn't coming nothing happens and if there is too much then spill occurs b. There is 2cms at Wanatango Falls c. Low numbers in Ops plan for EA flows, but need to actually address them and make them higher because they don't know what is actually reasonable due to odd hydrograph. Would like feedback from MNR on how to address.
Chris	<p>There is lots of zero flow but with a Little bit of flow that comes down it would work around two ways but the chance that is does not happen and zero flows from OPG. The</p>



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	biggest problem for here is the <u>bypass flow</u>
Uwe	The key discussion is agreeing on how many bypass flows are needed and at what time of the year.
Chris	Could use stop logs and the number of flow to go through the bypass before intermittent storage to run power
Uwe	The BUILDING is to Keep one side shut since not much significant flow because more useful on other side 1. What's the acceptable number for other side to not close? 2. Intermittent operations at what time of year do we have no problem
Brett	The Window for wall eye spawning is April 1 st to June 15 th ? What other things can we look at for modified operations? Can we look at temperature on river or annual direction from MNR for if spawn was completed for year instead of full range of dates
Chris	Approach dates with caution and it makes it difficult to provide on an annual basis
Uwe/ Dave Greem	There is Variability in upstream by pass reach but what makes fish chose between the options of flow? Therefore there is structure of flow but need range in flow for best results to determine wall eye spawning a. However there is more concern about sturgeon later on b. Sturgeon spawning is unknown and the closest confirmed spawning is 25 km away below Zheverley's by the bridge. It is not confirmed but it has been seen Is there confirmation of sturgeon between Zheverley and Wanatango stretch? From Zheverley's to hwy 11 there is very little population c. There is a lot of population on the edge d. Sturgeon are long lived fish but little spawning perspective <u>There are two approaches:</u> 1. Approach: manage flow for wall eye spawning because it is easy to obtain information 2. Approach for sturgeon is to continue to look for spawning in by pass reach e. There is some downstream sturgeon spawning so provide effective flow in that area f. The Bypass reach for sturgeon. Can anything be done to make spawning more successful? g. There needs to be an adaptive approach for sturgeon and progressive for others on bypass reach and whether to use or not h. Over wintering sturgeon feed on something in the pool so keep food for them
Chris	Need to tag sturgeon and just keep following them which means keep doing whats being done now to get a better understanding. More females need to be found and tagged to observe Map 2.2 km below Wanatango falls the over wintering pool is by the little island Any sturgeon picked up? Was June 4 th only wall eye and sauger
Brett	Can we use a helicopter to find females? Noted it could be the fastest way between Zeverley'd and hwy 11 with a receiver on outset of spawning season. Once sturgeon are in there location of spawning season, they won't go too far from where they are. In the Spring we located at the beginning of spawning season and mapped individuals likely to be found in the spawning areas



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	<p>Could we extend the studying area and use stations which are good to do monitoring</p> <p>i. Once Stations are in place we will know if they are coming into the bypass areas and respond accordingly</p>
Dave Green	<p>NRSI 2010 done summary</p> <ol style="list-style-type: none"> There is a Report available for all projects available on FTP site It was a challenging year because we were late on the spawning area (1 week late because of spike in temperature) 8.2 km upstream there is influence on 100 m downstream but it has been extended to 400 m in 2010 There are 10 stations, netting & electrofishing. We caught 11 species which makes it low on the species list. The Species caught were external dark tags We used Additional egg mats NRSI Marked 400 fish externally and still tagged a population of 19 fish In the Summer time the rin protocols were extended 3 km downstream
Brett	Noted unsure if extensive terrestrial breeding bird surveys were additional for site.
Larry F	Why would wetlands be effected by inundated area?
Brett	There is only one wetland potentially effected part way up at inundation area; it is hydrolgically connected to river at certain times during the year, fairly small marsh habitat adjacent to river. This is the only wetland up to date
Sandra	The side discussion with MNR is if they like wetlands within the study area looked at from ELC or do wetland evaluations?
Brett	ELC informs plant community present and various wildlife surveys on study area. Breeding birds and snake cover boards were checked last year and the rest was incidental observations. Surveys and ELC characterization would provide adequate info for impact analysis. Sandra may be looking for formal wetland evaluations
Larry F	<p>If looking for changes in water levels, hydrology and function, it is fine to use ELC but functioning of and how it relates to the impact on the wetland, different components need to be looked at to see how wetlands are affected – SIDE BAR DISCUSSION</p> <p>Also need to discuss terrestrial assessment on transmissions but adding to side bar meeting</p>
Ed:	NRSI staff have to make sure no difference between gold eye and moon eye because ALL POPULATIONS ARE IMPORTANT AT SITE
Uwe	<p>Is the extended area a good area for spawning habitat? If so, we have to maintain suitable habitat. The Spawning area upstream will be quite valuable so have to ensure to protect and maintain as well</p> <p>(Refer to minutes on May 2nd for further details on some stuff discussed)</p>
Chris	Noted age structures
Dave Green	Provide them but not analyze them
Chris	The impact can be useful if seen after construction and if collect money to process we can provide age structures and process them (was this dave or chris?)



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Uwe?	<p>If using data to collect and predict, it can be danger in relying and using to guess at all other influences that would affect populations beyond hydrologic construction. Thus Measuring flow in by pass region is critical</p> <ol style="list-style-type: none">Stop logs do have leakage occurring and water has to build up againIs there No control on Fredrickhouse?There are flows on both side of the island. Low flow dynamics of bypass are of interestBlock off one channel since little ecological valueHigher ecological value is smaller amount of2cms is quite a bit of water
Rich	We Measure 2cms by doing an actual measurement
Sandra	EA has to talk to owners on notion of changes and the potential impact. What we have talked about, do all understand and agree? If the EA do not reach an agreement we don't collect for that level
Uwe	<p>Noted understood,</p> <p>The EA will state that if there is no landowner easement/agreement then the inundation area will be smaller and therefore no impact to landowners. Noted in discussions at the moment and will make sure that the landowners understand what the process is for raising issues and objections.</p>