

**Bipole III Information Requests, filed August 24, 2012,
with Manitoba Clean Environment Commission (IR round two)**

1. **Request:** Was trapping data from the past 60 – 70 years analysed for any of the following species (this data is held by Manitoba Conservation):
 - a. Wolverine
 - b. American Marten
 - c. Beaver
 - d. Grey Wolf

If trapping data was considered please provide the data used, with explanation as to how Manitoba Hydro applied this information in selecting the Bipole III corridor. If trapping data was not used in the EIS or selection of Bipole III corridor explain why not.

2. **Request:** Did Manitoba Hydro undertake a review and/or research to increase understanding of Treaties 1, 2, 4, and 5, prior to the selection of the preferred Bipole III corridor (as the current preferred route for Bipole III traverses all of these Treaty areas)? If so, please provide examples as to how the EIS considers the different treaties.
3. **Reference:** Draft Environment Protection Plan, p. 72-73
 - “A draft Access Management Plan will be provided for review by affected stakeholders including government departments, First Nations, Aboriginal communities, rural municipalities, environmental organizations and land owners.”
 - “The plan will be completed and implemented prior to the commencement of the construction phase for the Project. Once implemented, the management plan will be reviewed after each construction season and/or annually and results from the reviews will be used to adjust plan provisions to ensure continued effectiveness.”

Request:

- a. Manitoba Hydro to provide a copy of this “draft Access Management Plan” for review prior to the start of hearings?
- b. Manitoba Hydro to provide a template or sample, or example Access Management Plan for this or other transmission projects.
- c. How will Manitoba Hydro determine, which environmental organizations qualify as “stakeholders” to review the Access Management Plan?
- d. Will the annual review of the Access Management Plan be shared, with results made public? Posted in the public registry under the Environment Act?

4. **Reference:** Hydro has not adequately responded to CEC/MH-II-008b (see Manitoba Hydro Response Package #4, July 31, 2012 at p. 49). The question is if there has ever been any transformer or insulating oil spills in regards to the existing converter stations for Bipole I & II. The response instead focuses on upgrades to Dorsey in 2009 and upgrades to Radisson and Hendlay in 2009.

Requests:

- a. Manitoba Hydro to answer the question: has an oil spill, or other similar contamination problem, ever occurred at a converter station in Manitoba?
- b. In regards to the upgrades to converter stations in 2004 and 2009 Manitoba Hydro to provide further detail as to the nature of the upgrades and why they were needed.
- c. Is Manitoba Hydro acquiring easement rights for the entire Bipole III corridor right of way?
- d. If so how wide is the easement being sought? What proportion of the project study area and local study area will be covered by easements?
- e. As there is little information about right of way easements in the EIS materials, Manitoba Hydro to provide clear information as to what rights of use and access the easements for the Bipole III right of way Manitoba Hydro would hold
- f. Manitoba Hydro to provide full information about why the right of way easements are not shown on any maps in the EIS, and explain how these compare to the study area, project area, and corridor width.
- g. Manitoba Hydro to provide maps of the intended right of way easements for the Bipole III corridor.
- h. What about drill hole rights? Manitoba Hydro to provide information about the current process to gain access for drill holes in advance of Bipole III test drill holes being dug, combined with their relationship to the easements for right of way
- i. Manitoba Hydro to provide information about right-of-way easements notification, access to information etc.

5. **Reference:** (see Manitoba Hydro Response Package #4 CEC/MH-II-015b, July 31, 2012 at p. 65) “Once a right-of-way for a transmission line is approved, the Mineral Resources Branch would remove the surface rights from where the right-of-way is located, essentially leaving existing mining claims or leases unaffected except for the narrow band of land where surface rights have been removed.”

Requests:

- a. Will mineral rights and existing mineral tenure be removed for the Bipole III right-of-way?
 - b. Did the preferred corridor selection avoid existing mineral rights and tenure when decisions were made?
 - c. What happens to existing mining claims and leases that are in the right-of-way for Bipole III?
 - d. Provide a map of the right-of-way combine a corridor of 66 meters – all four sections of Bipole III.
 - e. What is the land quantum for the right-of-way easements?
6. **Reference:** It would appear that the analysis for section 6 of the corridor is missing from the EIS (see: 7-46 to 7-47).
- Request** – Manitoba Hydro to provide analysis for Section 6.

7. **Reference:** Chapter 8, s. 8.2.1.2 mentions the risk of “permafrost degradation” (i.e. the loss of permafrost). The loss of permafrost will contribute to greenhouse gas (GHG) emissions, but no reference to permafrost can be found in the Bipole III GHG technical report.

Request:

- a. Did the GHG analysis take into consideration the increase in GHGs from permafrost degradation?
 - b. How many kilometres of permafrost lands will the corridor travel over?
 - c. How much permafrost lands will be taken up by the northern converter station site and access roads?
 - d. How much permafrost will be affected by road building, work camps, and infrastructure previously licenced for Bipole III?
 - e. How much permafrost will be affected or included in the right of way easements for Bipole III?
 - f. Manitoba Hydro to provide a map to show both continuous and discontinuous permafrost locations along the Bipole III corridor, and in project area
8. **Reference:** *CEC/MH-VI-264* states “Manitoba Hydro has only recently in the last two years begun to apply herbicides on Bipoles I and II.” Yet in Chapter 8 (8-7 “Herbicide Residues”) the EIS states: “Since 1985, Manitoba Hydro has significantly reduced the use of soil residual herbicide products for management

of vegetation (operation phase) along transmission rights-of-way. The original request asked for decade of data.

Request:

- a. Manitoba Hydro to provide data on all herbicide use on rights of way and corridors since 1985, including the types of and volumes of herbicide used in each year since 1985 through to 2012.
 - b. What is Manitoba Hydro's definition of a 'significant reduction' as referenced above? Compared to what?
 - c. How much herbicide has Manitoba Hydro been using annually since 1985? Including what types? And what Volumes?
 - d. How often is each herbicide applied? Where?
 - e. How does Manitoba Hydro's practices for application of pesticides, and herbicides compare with other industry practices?
 - f. Are annual reports with actual pesticide used in any given year available to the public?
 - g. What are the restrictions to Pesticide Use Permits?
9. **Reference:** 8-33 "... Mitigation measures that will be employed to minimize or preclude any potential for impairment of groundwater quality along rights-of-way will include the following:
- No herbicides are used in clearing new rights-of-way. (Manitoba Hydro *et al.* 2003);
 - If herbicides are required to control vegetation growth, all applicable permits and provincial regulations will be followed;
 - On private lands, prior to any vegetation management work, landowners or appropriate authorities will be contacted to obtain the necessary permission; and
 - Based on the above mitigation measures there are no anticipated residual effects.

Request:

- a. Again – how much herbicide is applied and how often?
- b. Are water samples collected from nearby streams, lakes and water courses to ensure application of herbicides are at levels that do not impact surface or groundwater?
- c. Are water samples taken before and regularly after application of herbicides?
- d. Manitoba Hydro to provide samples of its record keeping, monitoring reports and evaluation of risk and success for existing herbicide application programs for existing especially transmission corridors.
- e. Manitoba Hydro to provide a comparison and update on the herbicide application program for the new Wuskwatim transmission corridors.

10. **Reference:** 8-8 – “... Through Project mitigation, the residual effect to surficial and bedrock materials is not anticipated to effect any of the valued environmental components of the soil and terrain environment. Residual effects to surficial and bedrock materials are anticipated to be adverse, of low ecological and societal importance, small magnitude, affecting the local assessment area on an infrequent basis over the long-term with irreversible effects that are within regulatory requirements and objectives regarding the use of minerals.”

Request: How was this ‘residual effect’ determined to be a small magnitude? Given proximity to the nickel belt, what steps were taken with provincial geologists and the Manitoba Geology Survey to come to the conclusions stated in the EIS? Were studies done regarding mineral potential, and assessment for economic mineral potential? If so, Manitoba Hydro to provide to participants.

11. **Reference: 8.2.1.4 Environmental Effects Assessment and Mitigation (8-9)**

“... Potential environmental effects of the Project were identified using a combination of methods, including an environmental interaction matrix, feature mapping, professional opinion and review of Aboriginal Traditional Knowledge (ATK), key perspectives and comments from the Environmental Assessment Consultation Process and literature (Bipole III Terrain and Soils Technical Report).”

Request:

- a. How were these various information sources used to arrive at these conclusions as to environmental effects ?
- b. Was one method given greater value or priority over another?
- c. Was field studies, and possible effects given highest priority?
- d. Manitoba Hydro to provide ‘ feature mapping’ used in determining levels of potential environmental effects, unless already provided in the EIS materials.
- e. Manitoba Hydro to provide the interaction matrix mentioned in the EIS.
- f. Manitoba Hydro to provide explanation as to how potential economic effects were assessed in relation to potential environmental effects.
- g. Manitoba Hydro to provide explanation as to how potential effects on Aboriginal rights, traditional land uses, and protection of lands important to the land uses based in Aboriginal rights were assessed in relation to other potential effects fro the Bipole III corridor project.

12. **Reference** (8-10): “The following mitigation measures are recommended... Construction activities in southern Manitoba will be undertaken, where possible, under dry conditions in high compaction risk areas (Bipole III Terrain and Soils Technical Report) and moist conditions in high to severe wind erosion risk areas, where possible;”
- Preamble:** Obviously Manitoba Hydro does not control the weather. [Opposing conditions (dry conditions vs moist conditions) and mitigation measures will be hard to implement ... Timing will be most likely be the overall deciding factor on when construction activities will proceed]
- Request:**
- What happens if a wet year occurs?
 - Will Manitoba Hydro delay construction for a year or more if conditions are not dry?
 - What adaptive management methods in transmission line construction are used by Manitoba Hydro when the weather becomes wet?
13. **Reference:** 8-12 – “Investigations determined that there are four existing sites along the transmission line route that have unstable or steep slopes within the Local Study Area (Chapter 6). These sites have been identified as ESS where tower placement and equipment access will be carefully selected to avoid destabilizing the slopes.”
- Request:** Where are these four sites? Manitoba Hydro to provide map showing these locations.
14. **Reference:** 8-14 “...Depending on the planned future use for the site, aggregate borrow sites **should** be closed, or reclaimed, in accordance with the Mine Closure Regulation, M.R. 67/99 and Manitoba Mine Closure Regulation 67-99 General Closure Plan Guidelines (Manitoba Industry, Trades and Mines 2006).”
- Request:** Explain the approval process for an aggregate borrow site for a Manitoba Hydro permit. Are these publicly posted, are First Nations notified of the specific locations? Are the permits and locations of these borrow pits connected to right of way easements?
15. **Reference:** (8-29) “Follow-up is not required in relation to GHG emissions other than to record project inputs and volumes to improve the accuracy of the GHG contribution...”
- Request:** Does MB Hydro do anything to offset GHG emissions from their projects? On what basis is the statement above made – with respect to follow up not being required? Does Manitoba Hydro monitor and report GHG emissions during the life of a transmission project? Has Manitoba Hydro undertaken a risk assessment with respect to GHG emissions from transmission projects over time, and in relation to permafrost loss over time, identified GHG emissions during planning, construction, and operation phases of the life of a transmission system?

16. **Reference:** (8-31) "... The Project will require the construction of wastewater treatment lagoons, for the Construction Camp and the Keewatinoow Converter Station. However this will be subject to separate licensing under The (Manitoba) Environment Act and not assessed in this EIS."
- Request:** Has the licensing process begun yet for the wastewater treatment lagoons? How many separate licences are involved in the entire Bipole III project? List and identify those existing, and those other environment licences intended. Manitoba Hydro to explain the rationale and decision making for the various staged licences for the entire Bipole III project.
17. **Reference:** (8-32) - "The main potential issue with transmission line construction in regards to groundwater is related to drilling for tower foundations, especially in sensitive areas such as artesian areas... result in a direct groundwater discharge to the surface or interconnections of aquifers if auger holes are not sealed properly or quickly enough... Interconnections of artesian saline aquifers with potable aquifers may result in degradation of groundwater quality."
- Request:** Has Hydro any experience with the risks identified in the text above? Manitoba Hydro to provide information as to any instances of transmission towers affecting (including drill holes) groundwater, connections between aquifers, water quality etc. Manitoba Hydro to provide its emergency plan for such instances. Manitoba Hydro to provide comparative information on this potential environmental effect based on its Wuskwatim work camps.
18. **Reference:** (8-35) "... There are no mitigation activities required for the drawdown of groundwater at the camp due to reversibility of the effect and absence of impact to the surficial environment or other aquifer users. The residual effect of aquifer drawdown is characterized as negative in direction, medium term in duration, small in magnitude, confined to the Project Site/Footprint, will occur on a regular/continuous basis, and is reversible during the life of the Project. The effects are therefore considered to be not significant."
- Request:** Manitoba Hydro to provide the basis and methodology for the statement above as to its assessment of environmental effects from drawdown of groundwater in an aquifer used for camp water supplies. Manitoba Hydro to provide its analysis and projections as to reversibility of aquifer drawdown effects. Manitoba Hydro to provide information on the potential impacts from drawdown of aquifers during dry summer(s) and the potential effects to surface water connected to the Nelson River and therefore fish habitat.

19. **Reference:** (8-37) “Aquifer quality and aquifer productivity are not anticipated to be affected by construction or operation of the Riel Converter Station, due to the absence of effect pathways/interactions. Water supply and wastewater disposal systems will be connected to the City of Winnipeg systems precluding effect pathways/interactions.”

Request:

- a. What would be impact of oil or other contaminant spill into the nearby City of Winnipeg Deacon Water Reservoir from the Riel Converter station?
- b. What is the probability of this occurrence. Please show all calculations or supporting evidence used to arrive at this probability?
- c. Did Manitoba Hydro review risk to streams, potential flow to ditches etc?

20. **Reference:** (8-37) “The potential for aquifer quality to be impaired at the ground electrode sites exists due to leachate from the continually-saturated buried coke beds at the electrode sites... The requirement for the coke beds to be kept saturated may cause any naturally occurring components in this material to leach which could directly affect groundwater quality. Leachate from coke commonly contains metals such as aluminum, manganese, nickel and vanadium (Puttaswamy *et al.* 2010). Within in-situ experiments, metal concentrations were often found to not be significantly elevated; however, this was likely due to the metals being taken up by organic and inorganic constituents (peat, naphthenic acids and other dissolved organic carbon species) (Squires 2005; Baker *et al.* 2007; Baker *et al.* 2008). Minute to no levels of polycyclic aromatic hydrocarbons were found in coke leachate (Squires 2005).”

Request:

- a. What are the impacts of coke (aluminum, manganese, nickel and vanadium) on groundwater, fish habitat, drinking water?
- b. How will coke be handled during transportation?
- c. How will code be handled during transportation construction?
- d. Where will it be stored?
- e. Could it be exposed to surface water during the installation process?
- f. What are the effects from exposed materials at the ground electrodes sites during installation and after installation should there be an extreme weather event, with above normal rainfall? Did Manitoba Hydro use methodology that tested their conclusions based on past and average water levels, weather, and leaching levels or did Mantioba Hydro include low likelihood, but extreme impacts scenarios in its self assessment for the EIS ?
- g. Did Manitoba Hydro go beyond in situ experiments in its analysis and self assessment ? Did Manitoba Hydro undertake a review and research to determine any instances of acquifer, and water quality effects from leachate at existing similar converter stations ?

- h. Did Manitoba Hydro undertake any review of risk to aquifer, ground water, and surface water from the combined developments in the project area for the Converter Station? This would include then cumulative impact risk assessment for leachate from combined with other risks in the project area.

21. **Reference** (8-39) - “Underground irrigation systems will be installed at the ground electrode sites to allow for soil wetting during periods of dry soil conditions, with irrigation water being sourced from groundwater at the sites... The groundwater withdrawal requirements for electrode irrigation are anticipated to be minimal; therefore disturbance to aquifer productivity is not anticipated and there are no anticipated residual environmental effects.”

Request: Exactly how much water is required for irrigation – it is referred to as minimal – how much? At what pumping rate? Total per year ? How many sites?

22. **Reference** (8-39) – “While not highly likely, an unintended groundwater discharge to the surface could result in a residual effect which would be negative in direction and could impact both the surface and subsurface environments. The surficial discharge may have high ecological and social importance depending on the quality of the discharging groundwater and the effect may range from low to high in magnitude. The geographic extent would likely be localized and the impact is considered to be short-term and sporadic. Reversibility of the impact would be dependent on the quality and quantity of the discharging groundwater. Saline groundwater discharges could also directly or indirectly affect other local environments (e.g., terrestrial/soils) and these effects could potentially outlast those to the groundwater or surface water environments. After mitigation measures and remediation activities, the residual effects are is anticipated to be not significant.”

Request: Manitoba Hydro to explain its methodology, and scientific basis for concluding that a ‘ surficial discharge that may have high ecological and social importance’ and may not be reversible, may be saline water full of other minerals and chemical – is not significant.

Manitoba Hydro to provide information about any instances fitting the risks identified in its text above from the EIS, and what the environmental effects were. Manitoba Hydro to provide its standards in terms of assessing environmental effects and identifying mitigation that may be needed vs assessing level of residual environmental effects after an incident has occurred.

23. **Reference:** (8-44) “Petroleum coke is a solid, carbonaceous material that is placed around the ground electrode rod to increase its conducting surface. The rod along with the coke is located approximately 3 m under the ground. The coke has the potential to leach various hazardous substances, such as metals and PAHs (polycyclic aromatic hydrocarbons). Effects during construction include the deposition of fine particulate coke material resulting in an increase in Total Suspended Solids (TSS) of a water course and the introduction of PAH and metals to the water course.”

Request:

- a. What are the potential impacts of particulate coke materials on a watercourse, fish, aquatic species, etc.?
- b. If it settles to the bottom of the stream could there be ongoing impacts to that watercourse due to the metals present in coke?
- c. How long would particulate code material stay in the environment – soil, water, on plants, etc?
- d. What occurs if the three meter depth for burying the rod and coke is insufficient ? How was the 3 meter depth determined? How was the site for the electrodes selected ? Based on land availability ? Based on least risk to waterways, ground water and aquifer? Manitoba Hydro to provide detailed explanation as to the site location for the Riel converter station and the electrode underground system.

24. **Reference:** (8-47) “Existing aquatic environment information was collected and analyzed for the project areas. This information included the review of available fish and fish habitat information, local knowledge obtained through ATK studies, and field studies conducted at a selected subsample (57) of the stream crossing sites for the transmission line, converter station, and ground electrode sites...”

Preamble: The project requires overhead line crossings of 360 water courses.

Request: Is this subsample (57 crossings) sufficient enough to draw conclusions? What local knowledge from ATK studies was applied to assess environmental effects risk to aquatic systems, and species? Did Manitoba Hydro ask Peguis First Nation to participate in ATK studies with respect to the location for the converter station and or the electrodes, underground irrigation system etc ? Manitoba Hydro to provide the studies, sets of aquatic environmental information used to come to the conclusions in this section of the EIS. Which 57 stream crossings are referred to here and how was the subsample selected?