



LETTER NO. L-110-09

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VIA E-MAIL

COURIER TO DR. A. MCMURTRY

December 3, 2009

**BC TC VCCT-PROJECT-CPCN**

**EXHIBIT A-4**

TO: Registered Intervenors (BCTC-VCCT-RI)

Re: An Application by British Columbia Transmission Corporation  
for a Certificate of Public Convenience and Necessity  
for the Vancouver City Central Transmission Project

Request for Comment on BCTC Letters of December 2, 2009

Further to Order G-122-09 dated October 8, 2009, the Commission held a Procedural Conference on November 25, 2009.

The purpose of the procedural conference was to identify the principal issues arising from or related to the Application, consider options for the review of the Application, including an oral public hearing, a written public hearing or some other process, discuss whether any Intervenors intended to submit written evidence, and review the Regulatory Timetable going forward.

During the Procedural Conference, the Commission Chair directed the Protest New Powerlines ("PNP") group represented by Dr. A. McMurtry, to file by Monday, November 30, 2009, the names and curricula vitae ("CV's") of its witnesses, the scope of their evidence, and the potential timing. PNP submitted a list of signatures (Exhibit C3-1-1), a Report on the Evaluation of the Possible Risks from EMFs (Exhibit C3-3), and a copy of the Testimony of David A. Harrison from the BC Hydro Boundary Road Inquiry March 1995 (Exhibit C3-4) at the Procedural Conference. On November 28, 2009, PNP submitted the BioInitiative Report - A Rationale for a Biologically-based Public Exposure Standard for Electromagnetic Fields (ELF and RF) from August 31, 2007 (Exhibit C3-5). On November 30, 2009, PNP submitted the name and a brief summary of the experience of its proposed expert witness, Mr. Walt McGinnis (Exhibit C3-6). It is proposed that Mr. McGinnis provide ELF magnetic field measurements of an underground power line similar to the proposed installation.

On December 2, 2009, BCTC filed comment letters on the positions put forward by the Intervenors at the Procedural Conference and on the submissions filed by PNP.

The Commission Panel now requests comments from the Intervenors on the attached BCTC letters of December 2, 2009. Please provide your comments, in writing, on or before Wednesday, December 9, 2009.

Yours truly,

*Original signed by:*

Constance M. Smith  
Erica M. Hamilton

for:

DJF/cms  
Enclosures  
BCTC Exhibits B-4 and B-5

cc: Ms. Janet Fraser, Director, Regulatory Affairs  
British Columbia Transmission Corporation  
[janet.fraser@bctc.com](mailto:janet.fraser@bctc.com); [bctc.regulatory@bctc.com](mailto:bctc.regulatory@bctc.com)

Ms. Joanna Sofield, Chief Regulatory Officer  
British Columbia Hydro and Power Authority  
[bchydroregulatorygroup@bchydro.com](mailto:bchydroregulatorygroup@bchydro.com)

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**FASKEN  
MARTINEAU** 

**Robert M. Loneragan**  
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December 2, 2009  
File No.: 260254.00129

**VIA ELECTRONIC FILING**

British Columbia Utilities Commission  
6th Floor, 900 Howe Street  
Vancouver BC

**Attention: Commission Secretary**

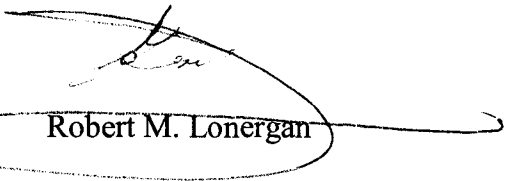
Dear Sirs/Mesdames:

**Re: BCTC VCCT Project CPCN Application**

Please find enclosed the Submission of BCTC on a Procedural Order following the Procedural Conference on 25 November 2009.

Yours truly,

**FASKEN MARTINEAU DuMOULIN LLP**



Robert M. Loneragan

RML/syy  
Encl.

DM\_VAN/260254-00129/7477303.1

\*Fasken Martineau DuMoulin LLP is a limited liability partnership and includes law corporations.

**In the Matter of the *Utilities Commission Act* RSBC 1996, c. 473**

**Re: British Columbia Transmission Corporation  
Application for a Certificate of Public Necessity and Convenience (CPCN)  
for the Vancouver City Central Transmission Project (VCCT Project)**

**Submission of BCTC on a Procedural Order  
following the Procedural Conference on 25 November 2009**

**The Issues Canvassed at the Procedural Conference**

1. At the opening of the Procedural Conference on 25 November 2009, the Commission Panel outlined the issues to be addressed:
  - (a) whether any intervenors intended to file any evidence;
  - (b) whether additional Information Requests were needed;
  - (c) whether the hearing should be written or oral;
  - (d) the regulatory process to be followed going forward.

**Transcript, page 3, lines 2 – 10**

2. BCTC made submissions on these issues during the course of the Procedural Conference. We do not propose to repeat those submissions here.

**The Remaining Issues**

3. However, at the close of the Procedural Conference on November 25, the extent to which Dr. McMurtry would be given leave to file further documentary and expert evidence remained open.

*Further Documents*

4. Dr. McMurtry expressed a potential interest in filing intervenor evidence. Commission counsel expressed the intention of Commission staff to assist Dr. McMurtry in filing documents as evidence immediately following the hearing. BCTC understands that this was done.
5. Dr. McMurtry was given, and has taken, the opportunity to file further documents as she wished to do. BCTC is prepared to address those documents in written argument.

*Expert Opinion Evidence on the Effect of EMF on Human Health*

6. During the Procedural Conference, Dr. McMurtry described her concern about EMF:

“Yeah. I’m not – I know this is simply – you just want us to list what would be doing. But I’m just representing the ordinary citizen living along these transmission lines and their concern about a possible negative impact to their health, long-term. That’s why I’m here.”

**Transcript, page 7, lines 14 – 19;**

**See also generally, Transcript, page 11, line 15 – page 17, line 11**

7. Dr. McMurtry described two potential experts and expressed a potential interest in filing an expert report. Submissions were made by the parties on the prospect of further expert evidence on this issue. The Panel commented as follows:

“Ma’am, the problem is that you need to establish that EMF is bad for you. That is the first hurdle and that’s what you need an expert report for.”

**Transcript, page 16, lines 6 - 9**

8. Ultimately, the Commission Panel gave Dr. McMurtry leave to file information on the following by Monday, November 30, 2009:

- (a) the identity of the experts;
- (b) their CVs;
- (c) a brief comment on the scope of their intended evidence;
- (d) a date by which they would provide a final report.

**Transcript, page 41, lines 10 - 25**

9. On Monday, November 30, Dr. Murtry filed Exhibit C 3-6, a letter from Mr. Walt McGinnis. In Exhibit C 3-6, Mr. McGinnis states, amongst other things:

“I have been asked by Dr. Anne McMurtry to provide ELF magnetic field measurements of an underground power line similar to the proposed installation.”

10. Mr. McGinnis has not provided a separate CV. In Exhibit C 3-6, he describes himself as a “licenced electrician”. He does not suggest that he is qualified to give expert evidence on the human health effects of EMF nor does his letter reflect any relevant experience or knowledge on the effect of EMF on human health. At best, the letter indicates that Mr. McGinnis' experience is limited to measuring EMF.

Exhibit C 3-6

11. The Commission has issued eight decisions in the past two and a half years on the issue of EMF and health. These decisions have consistently rejected the claim that EMFs pose health hazards.
12. In *Re British Columbia Transmission Corporation An Application For A Certificate Of Public Convenience And Necessity For The Vancouver Island Transmission Reinforcement Project*, the Commission set forth the standards for its review of matters related to EMF. The Commission held that the EMF exposure guidelines developed by International Commission on Non-Ionizing Radiation Protection (ICNIRP) and endorsed by World Health Organization are the appropriate guidelines for considering the safety of EMF levels and that evidence that EMF levels from a proposed project are below the established guidelines is convincing and conclusive that there are no sufficient public health risks associated with the EMF exposure. The Commission's other decisions have followed this approach.<sup>1</sup>
13. In view of these decisions, it is BCTC's submission that Dr. McMurtry has a significant burden to overcome in opposing this Application on the basis of a concern about the impact of EMF on public health. This position is reflected in the comments by the Commission Panel during the course of Procedural Conference on November 25, quoted above.
14. Dr. McMurtry was given a fair opportunity to demonstrate an intention to file expert opinion evidence in an effort to meet that burden. She has not taken that opportunity:
  - (a) While the identity of a proposed expert has been provided, a proper CV has not. To the extent that evidence of qualifications has been provided, it demonstrates only that the proposed expert is a licenced electrician.
  - (b) Mr. McGinnis does not propose to provide opinion evidence on the effects of EMF on human health.

---

<sup>1</sup> *Re British Columbia Transmission Corporation An Application For A Certificate Of Public Convenience And Necessity For The Vancouver Island Transmission Reinforcement Project*, Decision (C-4-06, July 7, 2006); *Re Fortisbc Inc. Certificate Of Public Convenience And Necessity For The Ellison Substation Project*, Reasons For Decision (C-4-07, May 10, 2007), *Re Fortisbc Inc. Certificate Of Public Convenience And Necessity Black Mountain Substation Project*, Decision (C-7-07, July 9, 2007), *Re Fortisbc Inc. Customer Complaints Regarding The Naramata Substation Project*, Decision (G-124-07, October 12, 2007); *British Columbia Transmission Corporation And An Application For A Certificate Of Public Convenience And Necessity For The Interior To Lower Mainland Transmission Project*, Decision (C-4-08, August 5, 2008); *Re Fortisbc Inc. And An Application For A Certificate Of Public Convenience And Necessity For The Okanagan Transmission Reinforcement Project*, Decision (C-5-08, October 2, 2008); *Re British Columbia Transmission Corporation Certificate Of Public Convenience And Necessity Central Vancouver Island Transmission Project*, Decision (C-6-08, December 10, 2008); *Re FortisBc Inc. And An Application For A Certificate Of Public Convenience And Necessity For The Benvoulin Substation Project*, Decision (C-1-09, January 20, 2009).

15. Exhibit C 3-6 does not meet the requirements set out by the Commission Panel on November 25.
16. The scope of Mr. McGinnis' proposed evidence is:

“... ELF magnetic field measurements of an underground power line similar to the proposed installation.”
17. Dr. McMurtry has not demonstrated how this evidence will assist the Commission in its consideration of the issues properly before it in this Application. It is BCTC's submission that the Commission ought to decline to give Dr. McMurtry leave to file Mr. McGinnis' evidence, along with the associated delay in the VCCT CPCN process.

**The Regulatory Process Going Forward**

18. BCTC submits that the issues identified by the Commission Panel have been addressed and that this Application ought to move forward as follows:
  - (a) A written process should be followed;
  - (b) BCTC would deliver its written argument by Friday, December 11;
  - (c) Intervenors would deliver their response arguments by Thursday, December 24;
  - (d) BCTC would file rebuttal argument, if necessary, by Friday, January 8.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

Dated: December 2, 2009

  
\_\_\_\_\_  
Solicitors for British Columbia Transmission  
Corporation

**Fasken Martineau DuMoulin LLP \***  
Barristers and Solicitors  
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December 2, 2009  
File No.: 260254.00129

**VIA ELECTRONIC FILING**

British Columbia Utilities Commission  
6th Floor, 900 Howe Street  
Vancouver BC

**Attention: Commission Secretary**

Dear Sirs/Mesdames:

**Re: BCTC VCCT Project CPCN Application**

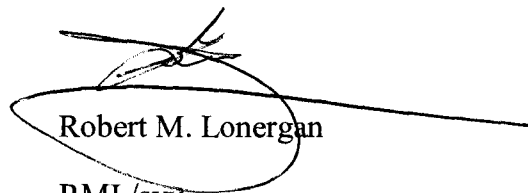
We are the solicitors for British Columbia Transmission Corporation ("BCTC").

Please find enclosed the Supplementary Submission of BCTC on a Procedural Order following the Procedural Conference on 25 November 2009.

We confirm that 20 copies of the enclosure and of the Submission filed earlier today will be delivered to the Commission.

Yours truly,

**FASKEN MARTINEAU DuMOULIN LLP**



Robert M. Loneragan

RML/syy  
Encl.

**In the Matter of the *Utilities Commission Act* RSBC 1996, c. 473**

**Re: British Columbia Transmission Corporation  
Application for a Certificate of Public Necessity and Convenience (CPCN)  
for the Vancouver City Central Transmission Project (VCCT Project)**

**Supplementary Submission of BCTC on a Procedural Order  
following the Procedural Conference on 25 November 2009**

1. This submission is supplementary to the “Submission of BCTC on a Procedural Order following the Procedural Conference on 25 November 2009”, particularly with respect to paragraphs 9 and 17 of that submission, filed earlier today.

2. At paragraph 9 of that submission, the following a statement found in Exhibit C 3-6 is quoted:

“I have been asked by Dr. Anne McMurtry to provide ELF magnetic field measurements of an underground power line similar to the proposed installation.”

3. There are already such measurements in the record before the Commission. A report by Powertech Labs Inc. is included at Appendix C of Appendix Q of Exhibit B-1. In that document, Powertech reports measurements of magnetic fields taken along a 230kV underground transmission circuit in the north east part of the City of Vancouver. For ease of reference, a copy of Powertech report is attached to this Submission.

4. Dr. McMurtry has not filed any evidence to suggest that the measurements in the Powertech report are inaccurate or otherwise unreliable.

5. As noted in BCTC’s submission of earlier today, at the Procedural Conference, the Panel commented as follows:

“Ma’am, the problem is that you need to establish that EMF is bad for you. That is the first hurdle and that’s what you need an expert report for.”

**Transcript, page 16, lines 6 - 9**

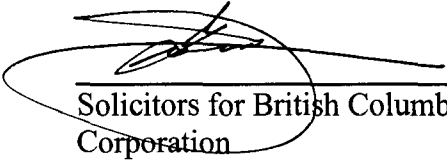
6. The measurements proposed by Mr. McGinnis would not provide any additional evidence on the relationship between EMF and human health.

7. In summary, no reason has been given for repeating measurements, evidence of which is already on the record. The further delay and expense that would result cannot be justified.

8. For these reasons, it is the submission of BCTC that Dr. McMurtry ought not be given leave to file evidence of the type described in Exhibit C 3-6.

ALL OF WHICH IS RESPECTFULLY SUBMITTED

Dated: December 2, 2009



Solicitors for British Columbia Transmission  
Corporation

## APPENDIX C: POWERTECH REPORT



Powertech Labs Inc. • 12388 - 88th Avenue, Surrey, B.C. Canada • V3W 7R7

POWERTECH LABS INC.

**MAGNETIC FIELD MEASUREMENT ALONG  
A 230 KV CABLE CORRIDOR ON EAST PENDER  
STREET AND WINDERMERE STREET**

PROJECT NO. 18799-27

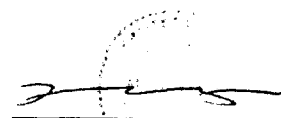
January 2009

**ABSTRACT:** Magnetic measurements were performed along a 230 kV cable corridor on East Pender St. and Windermere St. near the PNE. Magnetic fields (60 Hz) were measured at one meter above the ground level. The measurements were made at the locations requested by BC Hydro. The highest magnetic field level measured was 44 mG and the lowest was 26 mG.

TESTED BY:

PREPARED BY:

  
B. Kitson  
Senior Technician

  
M. Wang, PhD, P. Eng. Jan 27, 2009  
Senior Electrical Engineer

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January 2009

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## 1. SUMMARY

Magnetic measurements were performed along a 230 kV cable corridor on East Pender St. and Windermere St. near the PNE. Magnetic fields (60 Hz) were measured at one meter above the ground level. The measurements were made at the locations requested by BC Hydro. The highest magnetic field level measured was 44 mG and lowest was 26 mG.

## 2. REQUEST

Mr. Sudhakar Cherukupalli from BC Hydro Transmission Cables Engineering, requested Powertech Labs Inc. to perform magnetic field measurements along a 230 kV cable corridor on East Pender St. and Windermere St. near PNE area.

## 3. TESTS PERFORMED

Power frequency magnetic field measurements were performed along a 230 kV cable corridor on East Pender St. and Windermere St. near the PNE. The measurements were performed at the locations shown in Figure 1 and Table 1. The measurements were done at one meter above ground level.

## 4. TEST RESULTS

### 4.1 Magnetic Field Measurements Procedure

The magnetic field measurements were made on January 21, 2009. A calibrated tri-axial magnetic field meter (Erdex C-143) was used for the magnetic field readings at one meter above ground level and every 10 meter along the cable corridor. The meter was calibrated on January 20, 2009, prior to the site measurement.

### 4.2 Magnetic Field Measurements

Measurements were made along the 230 kV cable corridor. Figure 1 gives a drawing of the measurement location and results and Figure 2 shows a plot of the measured results. Table 1 lists the locations and measurement results. Appendix I shows the test site drawings and photos. Appendix II gives the test instrument details.

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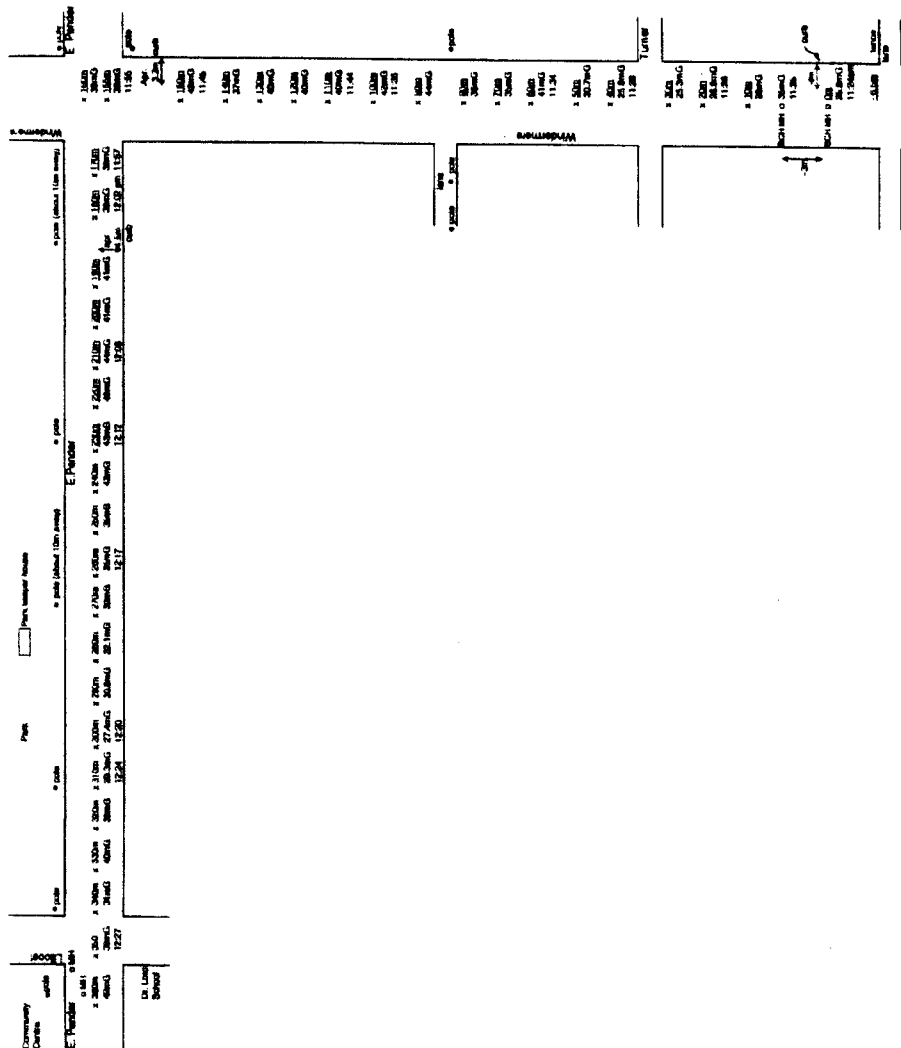


Figure 1 – Cable corridor magnetic field measurement location and data

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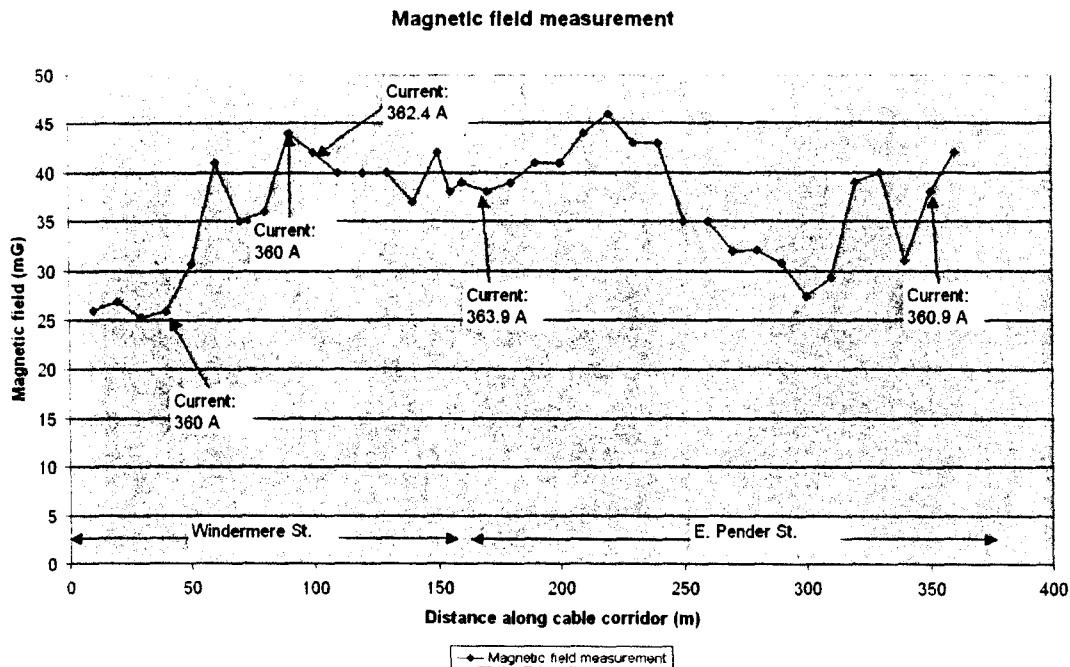


Figure 2 – Magnetic measurement results

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Table 1 - 60 Hz magnetic measurement results

| Street                   | Direction | Distance<br>(m)                       | Magnetic<br>Field (mG) | Time     | Current (A) |
|--------------------------|-----------|---------------------------------------|------------------------|----------|-------------|
| Windermere               | To North  | 6.5<br>BCH 1 <sup>st</sup><br>manhole | 25.8                   | 11:24 am | 365.75      |
| Windermere               |           | 7.5<br>BCH 2 <sup>nd</sup><br>manhole | 35.0                   | 11:25 am |             |
| Windermere               |           | 10                                    | 26.0                   |          |             |
| Windermere               |           | 20                                    | 26.9                   | 11:26 am |             |
| Windermere               |           | 30                                    | 25.3                   |          |             |
| Windermere               |           | 40                                    | 25.9                   | 11:29 am |             |
| Windermere               |           | 50                                    | 30.7                   | 11:30 am | 359.97      |
| Windermere               |           | 60                                    | 41.0                   | 11:34 am |             |
| Windermere               |           | 70                                    | 35.0                   |          |             |
| Windermere               |           | 80                                    | 36.0                   |          |             |
| Windermere               |           | 90                                    | 44.0                   |          |             |
| Windermere               |           | 100                                   | 42.0                   | 11:36 am | 359.97      |
| Windermere               |           | 110                                   | 40.0                   | 11:44 am | 362.40      |
| Windermere               |           | 120                                   | 40.0                   |          |             |
| Windermere               |           | 130                                   | 40.0                   |          |             |
| Windermere               |           | 140                                   | 37.0                   |          |             |
| Windermere               |           | 150                                   | 42.0                   |          |             |
| Windermere<br>+ E Pender |           | 155                                   | 38.0                   |          |             |
| E Pender                 | To east   | 160                                   | 39.0                   |          |             |
| E Pender                 |           | 170                                   | 38.0                   | 11:57 am | 363.90      |
| E Pender                 |           | 180                                   | 39.0                   | 12:02 pm | 363.90      |
| E Pender                 |           | 190                                   | 41.0                   |          |             |
| E Pender                 |           | 200                                   | 41.0                   |          |             |
| E Pender                 |           | 210                                   | 44.0                   |          |             |
| E Pender                 |           | 220                                   | 46.0                   |          |             |

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| Street              | Direction | Distance (m) | Magnetic Field (mG) | Time     | Current (A) |
|---------------------|-----------|--------------|---------------------|----------|-------------|
| E Pender            |           | 230          | 43.0                |          |             |
| E Pender            |           | 240          | 43.0                |          |             |
| E Pender            |           | 250          | 35.0                |          |             |
| E Pender            |           | 260          | 35.0                |          |             |
| E Pender            |           | 270          | 32.0                |          |             |
| E Pender            |           | 280          | 32.1                |          |             |
| E Pender            |           | 290          | 30.8                |          |             |
| E Pender            |           | 300          | 27.4                |          |             |
| E Pender            |           | 310          | 29.3                |          |             |
| E Pender            |           | 320          | 39.0                |          |             |
| E Pender            |           | 330          | 40.0                |          |             |
| E Pender            |           | 340          | 31.0                |          |             |
| E Pender            |           | 350          | 38.0                | 12:27 pm | 360.9       |
| E Pender + Lillooet |           | 360          | 42.0                |          |             |

## 5. CONCLUSION

Magnetic field measurements were performed along a 230 kV cable corridor on East Pender St. and Windermere St. near PNE area on January 21, 2009. The magnetic fields (60 Hz) were measured at one meter above the ground level at the locations requested by BC Hydro. The highest magnetic field level measured was 44 mG and lowest was 26 mG, the reported current at the time of the measurements were from 359.97 A to 363.90A.

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January 2009

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