



Environment  
Canada

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# Letter 164

Pacific and Yukon Region  
Environmental Protection  
224 West Esplanade  
North Vancouver, B.C. V7M 3H7

May 2, 2000

Our File: 2-4191-5-37

Allen J. Fiksdal  
Manager  
Energy Facility Site Evaluation Council  
PO Box 43172  
Olympia, WA 98504-3172  
USA

# RECEIVED

MAY 02 2000

## ENERGY FACILITY SITE EVALUATION COUNCIL

Dear Mr. Fiksdal:

**Re: Proposed Sumas 2 Generation Facility**

Reference is made to your letter and attachments dated February 9, 2000 with respect to the review of this proposal by the State of Washington's Energy Facility Site Evaluation Council (EFSEC).

It is understood that Sumas Energy 2, Inc. proposes to build a 660 MW natural gas-fired electrical generation facility called the Sumas 2 Generation Facility (S2GF). It is to be located south of Abbotsford in the State of Washington, less than 1 km from the Canada/U.S. border. Nearby is the existing 125 MW Sumas generation facility.

Although located in the U.S., the facility will emit pollutants into the Lower Fraser Valley (LFV) airshed, an area shared by both B.C. and Washington. This airshed is under active air quality management by B.C. agencies as it is already prone to periods of poor air quality (elevated levels of ground-level ozone, inhalable particulate and visibility reduction).

Water for the new facility will be obtained by pumping from the Abbotsford-Sumas groundwater aquifer. Wastewater generated by the facility will be directed to the City of Abbotsford collection system for treatment at the JAMES treatment facility and subsequent discharge to the Fraser River. A new trans-boundary powerline will be constructed to allow for supply of power into the Canadian grid system.

Environment Canada was in receipt of an earlier referral from Canada's National Energy Board (NEB) specifically with respect to the powerline aspect of this proposal. We responded to NEB on August 31, 1999. I have attached our response to NEB together with correspondence generated during that review.

Environnement Canada / Environment Canada



# Canada

It is understood that EFSEC's review is intended to cover all issues which could affect the construction and operation of this project at the proposed site. A draft Environmental Impact Statement (DEIS) was circulated earlier in this regard. We have used this document as one of our main sources of information in generating the following comments on a number of issues from the Canadian standpoint. For convenience, I have arranged our comments broadly by subject matter, as follows.

### 1) Air Emissions

Environment Canada has been co-operating with the B.C. Ministry of Environment, Lands and Parks (MELP) and the Greater Vancouver Regional District (GVRD) on a technical committee set up to consider the air emission issues arising from this project. Our understanding of this issue is still evolving, and further insights may occur. We will of course share any further relevant information with you should it be received. However, the following summarizes our comments at this time based on current information. Our chief source is Section 3.1 of the DEIS.

#### **General Comments**

Section 3.1 (Air Quality) is a simplified version of the revised PSD application that was included in the Application for Site Certification Agreement document submitted to EFSEC in January. As with any simplification, there is a loss of detail. The following comments point out the areas where this detail is important from a Canadian perspective.

There is little information on the air quality impacts in Canada. For the criteria pollutants and the toxics, there are comparisons of the predicted maximums to various ambient guidelines/ objectives/ standards/ ASIL's (whether they are of Canadian or U.S. origin). However, air management in British Columbia is based on a more flexible approach than PSD, and thus comparisons to ambient objectives are not necessarily enough to determine the significance air quality impacts. In the case of deposition and visibility, the assessment has only focussed on the U.S. Class I areas even though deposition and visibility impacts will occur throughout the region.

The revised PSD application was more informative as it had additional tables and plots where the extent of the regional air quality impacts could be seen. In February, comments were sent to the proponent from the BC agencies on the revised PSD application and a detailed response document (dated April 18, 2000) is currently under review. The review of the response document (which represents a considerable technical effort) and its synthesis with the revised PSD application will not be completed until mid-May. The combination of both these documents is anticipated to provide a comprehensive and relevant information base for the assessment of air quality impacts in Canada.

In summary, *on its own* the Draft Environmental Impact Statement does not provide the Canadian agencies with enough information required to assess the impacts of this proposed project on British Columbia air quality. The statement in

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Section 3.1.8 that concludes "no significant adverse air quality impacts would occur" is not supported by the information in Section 3.1

1

It is recognized that many of the following comments are a repeat of the comments made on the revised PSD application. It is possible that the April 18 response document addresses most if not all of them. However, since this document is still under review, and since the following comments are on the Draft EIS alone, they are included for completeness.

#### Specific Comments

Pg 3.1-2. Table 3.1-1. The Canadian/GVRD ambient air quality objectives should be listed here as they were in the revised PSD application.

2

Pg 3.1-4. para. 2. The addition of SCR will reduce NOx emissions from 9 ppm to less than 4.5 ppm but will create emissions of NH3. In order to minimize ambient PM10, is the no SCR scenario a better alternative?

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Ammonia emissions are associated with SCR, although they have not been quantified (see Table 3.1-3). Please indicate the emitted amounts.

4

Pg 3.1-4. Para 1. "Chapter 173-460 WAC requires that BACT also be used to control emissions of toxic air pollutants. In general the same technologies or operational parameters that reduce criteria pollutants ... also reduce toxic air pollutants. .... The use of combustion controls to optimize combustion also reduces both criteria pollutants (Table 3.1-1) and toxic air pollutants, such as lead, some heavy metals, and some organics."

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Although dispersion modelling shows that ambient impacts of toxic emissions are less than the ASIL's, there is no indication that the proposed control technology is BACT for air toxics.

"the use of combustion controls to optimize combustion also reduces most criteria and toxic pollutants". Is there a reference or rationale to support this statement as it applies to toxic pollutants? Does this statement still apply under oil firing conditions?

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During oil firing, will the sulphur gradually poison the catalysts and reduce the SCR's performance even during natural gas operation?

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The revised PSD application indicates 3 days per year of oil firing would be expected based on historical records. On what basis was the 15 days chosen?

8

The use of oil will increase (in the case of SO2 up to 10 times) the emissions of both criteria pollutants and air toxics. Oil firing results in the highest ambient impacts of criteria pollutants, air toxics, depositions and visibility. What are the alternatives to oil firing? Other than reducing oil-firing periods, are there controls that could be applied to control emissions during oil firing?

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Pg 3.1-6, para 4 and 5. Typo "GRVD" should be "GVRD".

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Pg 3.1-6, para 5. The Abbotsford Airport station was terminated in 1994. The Abbotsford downtown station operated from 1992 to Sept 1998. Is the last sentence in the paragraph re: maximum hourly ozone applicable to the Abbotsford Downtown station?	11
Pg 3.1-6, last para. Is there any evidence to suggest that the measured PM10 was associated with woodsmoke, or fugitive dust, secondary aerosols, and or combustion sources (either solely responsible for the PM10 or in combination with each other)? If not then these sources should not be mentioned.	12
Pg 3.1-6, last sentence. As a qualifier on the Abbotsford data, Hi-vol PM10 monitoring began in 1992, while real-time hourly monitoring began in 1994.	13
Table 3.1-2. For 1996, the maximum 24-hour average PM10 was 73 ug/m3 and not the reported 62 ug/m3. The value of 73 ug/m3 is reported in the Appendix of the 1996 GVRD Annual Air Quality monitoring report.	14
Pg 3.1-7, last para. The BC MELP, 1997 document referred to does not indicate a source for high PM10 concentrations in Abbotsford. In the 1998 Lower Fraser Valley Ambient Air Quality Report there is a statement that indicates that high wind speeds are associated with elevated PM10. However, an analysis of the winds during the 24-hour maximum PM10 (73 ug/m3) event in 1996 does not show such an association.	15
Pg 3.1-13, last para. Abbotsford airport did not have a PM10 monitor. PM10 is currently measured at the new Abbotsford station and was measured at the previous Abbotsford downtown station.	16
The statement "high PM10 concentrations...associated with high wind conditions" is not correct if the "high PM10" refers to the maximum PM10 concentration during the 1996 – 1998 period. The identification of conditions under which the maximum occurs is important as there are conclusions made in this paragraph about the low probability of the predicted maximum PM10 occurring at the same time as a elevated PM10 event in that area of the valley.	17
Pg. 3.1-12. Table 3.1-6. Emissions of sulphuric acid mist conjure up images of dead vegetation and corroding materials. Please provide a description of the short-term and long-term impacts. Will they be confined to an area near the plant?	18
Table 3.1-7. What is the meaning of the first sentence of footnote b)?	19
Table 3.1-11. There is information missing in the Table.	20
Pg. 3.1-14 Table 3.1-7 At the minimum, for predicted SO2, NO2, CO, and PM10 the magnitude and location of the maximum value in BC should be identified. Maps of the impact areas for the region should be provided as were done in the revised PSD application.	21

Given the effort to develop an ambient PM2.5 standard under the Canada Wide Standards process, what can be concluded about the PM2.5 impacts of this proposed project? Can the PM10 concentrations provided in this document be conservatively assumed to be all PM2.5? What would be the maximum PM2.5 impacts in BC?	22
Pg. 3.1-19/20 Tables 3.1-13/14. Provide the magnitudes and locations of the predicted maximums air toxics that occur in BC.	23
Pg 3.1-21 para 3. With reference to Table 3.1-15 there is a statement that the concentrations are higher near the Canadian border. This implies that they are even higher (as yet unspecified impacts) in BC. Please provide details on the impacts of SO2 and NOx concentrations in BC.	24
Pg. 3.1-24 Table 3.1-17. At a minimum, provide the magnitudes and locations of the predicted maximum depositions that occur in BC. A plot of the regional deposition should be provided as was given in the revised PSD application.	25
Measurements of annual deposition (Feller, 2000) for the past four years at the University of British Columbia research forest north of Haney (approximately 49° 16' N, 122° 35' W) range between 19.0 and 32.1 kg/ha/yr for nitrogen and 12.8 and 23.8 for sulphur.	25
Table 3.1-18. There is no definition of $b_{dry}$ and $b_{SN}$ (hygroscopic and non hygroscopic?).	26
Based on Table 3.1-18 and the predicted extinction values in Table 3.1-19, how were the percentages calculated in Table 3.1-20?	27
Pg. 3.1-26. Table 3.1-19. At a minimum, provide the magnitude and locations of the predicted maximum extinction co-efficient that occurs in BC. A plot of the extinction over the complete modelling domain (as was included in the revised PSD application) should be provided.	28
Extinction coefficients are not useful in terms of communicating visibility impacts to the public. Specifically, will there be a reduction of visible range, an increase in visibility episodes, a change in haze colour? In response to comments made on the revised PSD application regarding visibility, the proponent has generated more information which will allow a better assessment of the visibility impacts.	28
Pg. 3.1-29 Greenhouse Gases. Some of the following comments are based on the submission by Dames and Moore document (Greenhouse Gas Offset Strategic Plan).	29
<ul style="list-style-type: none"> <li>• The GHG emissions calculations did not appear to include N<sub>2</sub>O, which is an emission by-product of SCR.</li> <li>• Although Sumas2 suggests that they could satisfy BC Hydro's power purchase criteria, this assumes that BC Hydro will be purchasing power from Sumas 2. According to Pg. 1-2 para 1, BC Hydro has indicated no interest in purchasing the power.</li> </ul>	30

- \$100,000 per year for 10 years has been committed to support GHG research, offsets, or management projects. Provide details on how this money will be managed and what specific tasks/projects will be funded.

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Page 3.1-31 Section 3.1.8 Significant Unavoidable Adverse Impacts

As stated earlier, the DEIS does not contain enough information on the air quality impacts in Canada to justify the statement "no significant adverse air quality impacts would occur". The revised PSD application was much better in this respect.

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References Relating to the Above Comments on Air Emissions

Feller, M.C., 2000: Temporal trends in Precipitation and Streamwater Chemistry at the University of British Columbia Research Forest Near Maple Ridge, Draft Unpublished Interim Report, Environment Canada.

2) Water Resources

The following review addresses mainly Section 3.2 of the DEIS – Water Resources.

Summary of Water Use, based on the DEIS.

The proposed annual water consumption by the new facility is between 37 and 41 L/sec (peak use is not included). Nearly all of the water used for cooling will be pumped from the two existing Sumas well fields (Sumas Municipal and May Rd) in the Abbotsford-Sumas Aquifer. According to Section 3.3 of the original application (WAC 463-42-322), an unspecified amount of storm water at the site would also be collected for cooling. A one million US gallon storage tank will be constructed at the site to store water as standby for cooling and fire-fighting. This water will be pumped from both well fields during off-peak times (midnight to early morning).

The following withdrawal rates are based on the past 5 year records:  
Sumas Municipal well field - 41 L/sec  
May Rd well field - 28 L/sec  
Current total from both well fields - 69 L/sec

A significant (60%) increase in the total withdrawal rate from the two Sumas well fields (106 - 110 L/sec) will be required to meet the demand by the Sumas 2 facility. Apparently, the City of Sumas plans to continue to increase withdrawal rates from the two well fields to meet new demands. Based on a projected growth rate of 26% in water use, the maximum total withdrawal rate of 228 L/sec (full water right) would be realized in 20 years.

Wastewater discharge from the project (at a rate between 37 and 41 L/sec) will be collected by the City of Sumas and piped to Abbotsford for treatment and discharge through the Joint Abbotsford Mission Environmental System (JAMES)

wastewater treatment plant in Abbotsford. We have some additional comments on this issue below in the Wastewater Disposal section.

**Comments on Water Resource issues**

In general, the report identifies likely or possible impacts on surface and ground waters in the Sumas area of the United States, but does not address potential impacts in Canada, with the exception of some statements about general effects on the aquifer. Following are some specific examples.

- The report identifies a possible lowering of the potentiometric surface and the water table within the two Sumas well fields' draw-down zone (Figure 3.2.6, which stops at the border) in the vicinity of Sumas in the US. It is expected that similar effects would occur in Canada. The potential overlap between the draw-down zone of the Sumas well fields and the draw-down zones of high capacity production wells in Canada, such as the Abbotsford Municipal wells at Farmer Road and Fraser Valley Trout Hatchery production wells at Vye and Riverside should be considered. The impact of cumulative withdrawals on dug wells in Canada should be shown and considered. The report should also consider if these effects will continue for the long-term, as it appears that the City of Sumas intends to pump continuously at full capacity to meet increasing demands.

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- Ground water mining may become an issue if the total withdrawal rate exceeds the total recharge of the aquifer. The report alludes to the possibility of "incremental long-term effect of lowering the water level in the Sumas aquifer", as well as decreasing the base-flow to local streams. Such impacts would affect the aquifer in Canada also. In addition, decreased flow to streams can remove fish habitat (including the habitat of Canadian fish migrating to the Sumas area streams). The long-term lowering of the water table will be of particular concern if there are significant sustained increases in withdrawal, coupled with minimum recharges over consecutive years.

36
- Effective spill containment facilities are important for the project in order to avoid potential impacts to surface and ground water quality in the Canadian Sumas Prairie. From Figure 3.2-3 it appears that the general flow direction of ground water in the area of the facility is easterly and north-easterly. Thus, any introduced contaminant plume in groundwater would flow across the International Boundary into Canada either in the ground water or in surface water. We have attached a news release summarising the findings of two reports recently released by Environment Canada relating to the issue of groundwater quality in the Abbotsford-Sumas aquifer. You may find these reports to be of interest.

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- The report notes that the increased pumping by the City of Sumas could result in changes in the water chemistry – particularly in nitrate concentrations. It is possible that such increased pumping may increase the width of the ground water capture zone (largely in Canada), as well as result in steeper hydraulic gradients within the zones of contribution. Such an effect could cause alterations in the flow direction and rates of flow of local ground waters. Thus

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dispersion of contaminants, such as nitrates, would also be altered and could affect water quality in Canadian wells. Such effects in Canada were not addressed.

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- As a final comment, Table 2-1 indicates that two 400-500 gallon biocide tanks will be located in the site. Due to the toxic nature of the contents and the location of the facility on a flood plain, precautions should be taken to ensure the integrity of the tanks and minimize any risk of spillage from the tanks. Reference is also made to the dual-fuel option, which pre-supposes the storage of liquid fuel on site. This too should be the subject of an adequate spill containment and contingency program.

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### 3) Wastewater Disposal

Our comments on this issue are based on our review of the DEIS document distributed earlier.

#### Section 2.7.1

- indicates that spent process waters (such as cooling water blowdown) and the plant sanitary sewage will receive advanced treatment in Canada and that the projected cooling tower blowdown and plant sewage will be discharged at a maximum rate of 256 gpm, or approximately 368,640 gallons per day. The relative proportion of cooling water blowdown and sewage should be provided.

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#### Section 2.7.2.2

- indicates that all wastewater will receive advanced treatment at the JAMES plant in Abbotsford with ultimate discharge to the Fraser River. To our knowledge, the JAMES plant does not provide advanced treatment, but is a secondary treatment plant using trickling filter technology. Also, despite the fact that much of the water to be piped to the JAMES wastewater treatment plant (WWTP) at Abbotsford will be spent warm "cooling water", there is no indication of the anticipated temperature of the combined waste water. Further discussion is required regarding whether or not the temperature could be high enough after transport to negatively affect the waste treatment process or even affect the ultimate receiving environment.

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#### Section 2.8

- Table 2.8-2 provides the approximate chemical makeup of the cooling water blowdown and a comparison with the Fraser Valley Regional District discharge standard (no exceedances indicated for the constituents listed). Since the list of restricted wastes in the discharge standard is likely not comprehensive, it should be confirmed that no anti-scaling or anti-bacterial agents used in the cooling water system or any other constituents in the blowdown water will cause treatment plant performance problems or reduced effluent quality resulting in concerns for the receiving environment.

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We are aware from a number of media reports and citizen inquiries that the City of Abbotsford has expressed concerns regarding this project. This led us to inquire into the basis for the apparent acceptance of the wastewater from this plant by the City of Abbotsford. It appears that in November 1998 an agreement was reached between Abbotsford, B.C., Canada and Sumas, Washington, USA, that Abbotsford will accept 290,000 USgpd from Sumas and that this quantity could increase by 5,500 USgpd per year up to a maximum of 400,000 USgpd. A further agreement relating to a proposed paper plant was apparently never signed, since the plant was not built.

Abbotsford appears to have the full right/authority to deny, or put limits on, flows in excess of the signed agreement. With the annual increase allowed under the agreement, current maximum discharge across the border is 295,500 USgpd. The Sumas Energy 2 proposed maximum discharge of 256 gpm (368,640 USgpd) alone is in excess of the agreement, and is additional to the existing discharge from Sumas.

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Our staff contacts at Abbotsford have not seen anything in writing stating that Abbotsford would accept flows in exceedance of the present agreement. As well, they are aware of no discussions regarding compensation for excess flows. However, for the disposal to take place as indicated in the project prospectus, a significant exceedance would have to be accepted by Abbotsford. Given the concerns over this project which have been publicly attributed to the City of Abbotsford, we recommend that EFSEC seek input from Abbotsford to confirm their willingness to accept the wastewater from the proposed Sumas 2 facility in the manner proposed.

#### 4) Site History

We recommend that any past use of the site be fully documented to assess the potential for any residual on-site contamination to be present. Industrial uses, including waste disposal or hazardous material handling, would be the primary issues of interest here. Construction could permit the re-mobilisation of any soil contaminants, with possible transboundary or groundwater effects.

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#### 5) Construction Issues

Environment Canada notes that installation of the pipelines associated with this project will involve a number of stream crossings. Horizontal Directional Drilling (HDD) is the proposed method of constructing these crossings. While HDD allows the installation of facilities such as pipelines with no direct in-stream disturbance of the watercourse itself, the one exception to this situation is where a soil fracture occurs during the course of the drilling which opens up a direct connection between the drill line and the river bed. In such a case, significant release of drilling muds into fish bearing waters can occur with possible detrimental consequences from a fisheries standpoint.

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Accordingly, we recommend that the following steps be taken in connection with any HDD activities to minimize any potential impacts which could result from soil fractures occurring during the course of the work.

- The work should be monitored continuously, at all times, when drilling is taking place beneath the bed of any fish-bearing watercourse, and the monitor should be an appropriately qualified individual, familiar with the symptoms of soil fractures, and knowledgeable in the correct procedures to deal with the issue.
- A site specific Contingency Plan should be prepared prior to the work commencing which clearly sets out the range of measures to be taken in the event that a soil fracture and consequent release of drilling fluids occur.
- Drilling fluids selected for works of this nature beneath fish-bearing waters should be specifically chosen from among available materials which are known to be of lesser toxicity to fish. In particular, fluids having additives which are potentially deleterious to fish, should be avoided.

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#### 6) Wildlife Issues

The Canadian Wildlife Service (CWS) has noted three areas of concern relating to this project proposal, as follows:

- environmental impacts to wetlands;
- disturbance to nesting birds and habitat destruction;
- spread of noxious weeds.

Construction of the facility will result in the infilling of 1.9 acres of emergent wetlands, as well as buffer area (farmland and grasses) adjacent to this wetland. Of the 1.9 acres, 1.0 acre is designated wetland ditch and 0.9 acres is farmed wetland. To mitigate this loss, the proponent proposes to create a 1.5 acre wetland and enhance a 0.56 farmland pasture (wetland). In total, 2.06 acres of wetland will be added to an existing 9.4 acre wetland. Based on the aforesaid, CWS recommends:

- that a Post-Construction Monitoring Plan (PCMP) for the above compensation measure be made a condition of the project certification. A PCMP may include bio-inventories by a qualified biologist, with regular reporting to the appropriate state department (Washington Department of Ecology). To optimize the likelihood of success of this compensation measure, monitoring results should be assessed so as to provide for an adaptive management approach.
- CWS is satisfied that potential impacts to wildlife arising from pipeline and transmission line construction can be effectively mitigated provided best management practices are adhered to (including those outlined by the proponent and Washington Department of Ecology).

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The report indicates there will no significant impacts to federal species of concern. Nonetheless, CWS recommends that:

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- clearing and construction activity be timed in such a way as to avoid the nesting season as much as possible in environmentally sensitive areas; a bird survey along construction corridors would assist in this regard.
- the Sumas River riparian area is described as, 'having the best quality salmonid spawning and rearing habitat in the project area'. As such, CWS recommends that the removal of any riparian vegetation be replaced with native trees and shrubs typical of the area(s) to be disturbed from corridor construction. Should planting along the corridors not be feasible, replacement at nearby location(s) might be considered.
- In regard to the concern for spread of invasive and noxious weeds arising from site facility construction and along the pipeline and transmission line corridors, CWS recommends that the proponent produce a Weed Control Plan that emphasizes biological controls to be implemented during construction and maintenance phases of this project.

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The above comments are offered for your consideration during the course of your ongoing review. Since NEB may have an ongoing interest in this proposal, we are copying them for their information. Please feel free to contact the undersigned at (604) 666 0670 or by email at [adrian.duncan.ec.gc.ca](mailto:adrian.duncan.ec.gc.ca) if you require anything further at this time.

Yours sincerely,



Adrian C. Duncan, P. Eng.  
Co-ordinator, Referral and Liaison  
Environmental Assessment

cc: Michel L. Mantha, NEB  
Kirk Johnstone  
Andrew Robinson  
Brad Minnes

 Environment Canada Environnement Canada  
Pacific and Yukon Region  
Environmental Protection  
224 West Esplanade  
North Vancouver, B.C. V7M 3H7

Our File: 2-4191-5-37

August 31, 1999

Michel L. Mantha  
Secretary  
National Energy Board  
444 Seventh Avenue SW  
Calgary, Alberta, T2P 0X8

Dear Mr. Mantha:

Re: **Canadian Environmental Assessment Act (CEAA) Screening  
Sumas Energy 2 Inc. Proposed International Power Line,  
near Abbotsford, B.C.**

Further to our letter of July 26, 1999 I am attaching correspondence received in this office since the date of my initial letter. Please note in particular Kirk Johnstone's July 28, 1999 memorandum stating that Environment Canada does not consider that it possesses any specialist or expert information or knowledge relating to the proposed transmission line which is the subject of your referral. It appears that our interests will generally be unaffected by the construction of this line.

As you will note from the other correspondence, Environment Canada is participating with the Washington State Energy Facility Site Evaluation Council (EFSEC) in the review of the actual generating facility in Sumas, Washington. Please advise if you wish to be kept informed of Environment Canada's participation in that review.

Otherwise, please accept this letter as confirmation that Environment Canada has no specialist or expert information or knowledge to share with the National Energy Board in relation to the proposed transmission line.

Yours sincerely,



Adrian C. Duncan, P.Eng.  
Coordinator, Referral and Liaison  
Environmental Assessment  
Telephone (604) 666-0670

attachment



Environment Environnement  
Canada Canada

Memorandum - Note de service

*TO* Adrian Duncan, Referral and Liaison

*SECURITY/*  
*SÉCURITÉ:*  
*FILE/* 8725-58  
*DOSSIER:* 4191-5-37

*FROM/* Kirk Johnstone  
*DE* Manager, Aquatic & Atmospheric Sciences  
Division

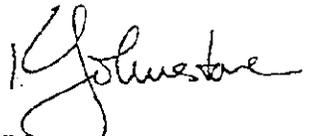
*DATE:* July 28, 1999

*Subject/* CEEA Review - Sumas Energy 2, Inc. Power Transmission Line  
*Objet:*

This is in reply to your memo of July 26 on this subject.

The consultant has completed the environmental assessment report for the power transmission line, and neither the consultant or NEB have identified any specialist or expert information or knowledge that they require to complete this report or the screening. Moreover, we do not believe that we have specialist or expert information or knowledge that is necessary, and not available from the consultant, to conduct the environmental assessment of the transmission line.

With respect to the proposed power plant in Washington State, Environment Canada has provided the attached comments to the Energy Facility Site Evaluation Council (EFSEC) in response to EFSEC's May 17 letter. In Canada, the review and preparation of comments on air quality issues is being coordinated by the B.C. Ministry of Environment, Lands and Parks in cooperation with the agencies on the Lower Fraser Valley Air Quality Coordinating Committee, of which Environment Canada is a member. These comments should be sent from the Coordinating Committee to EFSEC shortly. I will forward a copy of the letter(s) to you when they are finalized. You may wish to pass them along to NEB.



Kirk Johnstone

Attachment

Environment  
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Environmental Protection  
224 West Esplanade  
North Vancouver, B.C. V7M 3H7

Our File: 4191-5-37

July 26, 1999

Michel L. Mantha  
Secretary  
National Energy Board  
444 Seventh Avenue SW  
Calgary, Alberta, T2P 0X8

Dear Mr. Mantha:

Re: **Canadian Environmental Assessment Act (CEAA) Screening**  
**Sumas Energy 2 Inc. Proposed International Power Line, near Abbotsford, B.C.**

Reference is made to your referral dated July 19, 1999 on the above subject. In accordance with the Federal Coordination Regulations, please be advised that there do not appear to be any aspects of this proposal which would give rise to a responsibility under Section 5 of the *Canadian Environmental Assessment Act* (CEAA) for Environment Canada. However, it is possible that we may have specialist technical advice with respect to potential impacts and would in such a case have a Federal Authority (FA) responsibility under Section 12(3) of CEAA.

The matter has been forwarded to interested reviewers within Environment Canada, with a request that they advise me of any relevant information which should be considered during the course of the CEAA review. I will forward any comments received as soon as they are prepared.

Yours sincerely,

Adrian C. Duncan, P.Eng.  
Coordinator, Referral and Liaison  
Telephone (604) 666-0670

Environment Canada / Environnement Canada



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July 7, 1999

Deborah Ross  
Chair, Energy Facility Site Evaluation Council  
State of Washington  
P.O. Box 43172  
Olympia, Washington  
U.S.A. 98504-3172

Dear Ms. Ross:

Thank you for your letter of May 17, 1999, inviting Environment Canada's comments and suggestions regarding the evaluation of the proposal to build the Sumas 2 generation facility. I appreciate your willingness to consider our views and suggestions.

The proposed facility will emit air pollutants into the Lower Fraser Valley, an area prone to periods of poor air quality caused by elevated concentrations of ozone and fine particulate, particularly during the summer. Both pollutants have negative impacts on human health and contribute to reductions in visibility. Environment Canada considers action to reduce exposure to these pollutants to be a priority. The Council can assist by requesting that the project proponent consider and mitigate the potential effects of the proposed power plant on air quality in Canada.

Environment Canada is working with the B.C. Ministry of Environment, Lands and Parks and the Lower Fraser Valley Air Quality Coordinating Committee to coordinate the provision of our technical comments on the air quality effects of the power plant. These will be coming under separate cover.

As development of water resources is within provincial jurisdiction, a decision to remove water from Abbotsford for the Sumas 2 generation facility would require the approval of the government of British Columbia. The protection of Canada's water resources, however, is a concern shared by both federal and provincial governments. For this reason, we are currently working with provinces and territories to address the issue of bulk water removal.



...../2



including for the purposes of export, with a view to defining a consistent and environmentally sound approach to protecting our watersheds and water resources.

Thank you again for the opportunity to comment on the proposal.

Sincerely,



Art Martelli  
Regional Director General

Environment Canada

# News Release

FOR IMMEDIATE RELEASE

## ENVIRONMENT CANADA RELEASES TWO REPORTS ON GROUNDWATER QUALITY IN THE ABBOTSFORD-SUMAS AQUIFER

**Vancouver - March 20, 2000-** Two reports that examine groundwater quality were released by Environment Canada today. The reports analyze water samples from wells in the transboundary region of southern British Columbia, an area straddling the Canada-US boundary in the Fraser Valley about 60 kilometres east of Vancouver.

One report, *Ground Water Quality and Flow Rates in the Abbotsford Aquifer* focuses on nitrate concentrations in the groundwater while the other report, produced in conjunction with the US Geological Survey, deals mainly with pesticides and organic compounds.

Both reports indicate that nitrate concentrations in groundwater near the border (representing roughly 60% of the wells sampled) are higher than the Canadian or American drinking water guideline of 10 mg nitrogen per litre. The primary sources of nitrates affecting the aquifer are fertilizers, poultry manure, manure applied on surrounding berry crops and septic tanks—all of which can seep into groundwater.

The reports found that levels of pesticide and organic chemical compounds detected in water samples were low, relative to recognized Canadian and American guidelines for both drinking water and protection of aquatic life.

The results of these reports reinforce Environment Canada's commitment to continue its participation in existing multi-agency programs to promote protection of the groundwater. Stakeholders in the Abbotsford-Sumas area recognize that the solution to water contamination of the aquifer requires the cooperation and participation of the entire community including private well owners, farmers and government agencies.

Environment Canada supports a number of such programs with other agencies including the Ministry of Environment, Lands and Parks, the Ministry of Agriculture and the Municipality of Abbotsford. These programs include: the

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Abbotsford-Sumas Aquifer Stakeholder Group which was established by the City of Abbotsford to develop a protection plan for the B.C. portion of the aquifer, and the Partnership Committee on Agriculture and the Environment which develops environment-friendly farming practices.

The department has provided financial support to the Sustainable Poultry Farming Group which is aimed at removing manure from the aquifer. As well, the department participates and helps to fund education projects to help residents, including farmers, to protect their wells from septic and other contamination.

The reports, *Ground Water Quality and Flow Rates in the Abbotsford Aquifer, British Columbia, September 1999* and *Ground-Water Quality Data from the Abbotsford-Sumas Aquifer of Southwestern British Columbia and Northwestern Washington State, February 1997*, can be obtained from Aquatic Sciences Section, Environment Canada, 700 -1200 West 73<sup>rd</sup> Avenue, Vancouver, BC, V6P 6H9. Both reports will be made available on the internet at <http://ecoinfo.org/>

The Abbotsford-Sumas Aquifer supplies water for about 100,000 residents on either side of the border. Both groundwater studies addressed the southern portion of the Canadian side of the aquifer, specifically in areas suspected of high nitrate concentration.

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