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OCT 19 2001

Andy Ross
1840 High Noon Road
Bellingham, WA 98226

October 19, 2001
Sent via email

Allen Fiksdal
EFSEC Manager
Washington State Energy Facility Site Evaluation Council
P.O. Box 43172
Olympia, WA 98504-3172
efsec@ep.cted.wa.gov

SUBJECT: Comments on the Draft Supplemental Environmental Impact Statement for the Sumas Energy 2 Generation Facility Second Revised Application

Dear Mr. Fiksdal:

Thank you for requiring a second application process for the Sumas Energy 2 Generation Facility (SE2GF) and for preparing the Draft Supplemental Environmental Impact Statement (SEIS). I have conducted a brief review of the Ground Water Quality and Quantity sections in the September 2001 SEIS for the SE2GF. My concerns with the SEIS are listed below. While my comments on the SEIS are limited, I urge the Washington State Energy Facility Site Evaluation Council (EFSEC) members to review my previous comment letters while reviewing the current application (one letter is attached, the other is letter number 156 in the February 2001 SE2GF Final Environmental Impact Statement [FEIS]). There are many issues addressed in my other comment letters that are not part of this review.

At this point I recommend denial of the SE2GF. While more analysis has been conducted and the proposed project modified, there is still too little information to critically evaluate potential impacts. Sumas Energy 2 (SE2) has not provided the necessary information or analysis, and as stated in the SEIS on page 1-3, the need for SE2GF is diminished because *"the combined output potential of all proposed facilities far exceeds any forecast demand."* These factors coupled with very strong opposition and a poor location in the lower Fraser Valley Airshed mandate denial of the SE2GF. There are far better sites than Sumas for powerplants to be sited and the proponents have relied on inadequate science and a slick public relations campaign to make their case.

Comments on the SEIS.

1) Ground Water Quality

- a) The analysis of potential nitrate contamination is significantly improved over the presentation in the FEIS.

b) Reliance by reference on the City of Sumas Contingency Plan for nitrates exceeding the Maximum Contaminant Level (MCL) is not sufficient. It is not clear if the response time is adequate to prevent nitrates in excess of 10 mg/l from reaching a domestic water tap. This needs to be explicit, particularly since the pumping required for the SE2GF could accelerate the rate of travel of ground water (page 3.2-6), which could result in more rapid changes to nitrate concentrations.

2

c) I agree that it may be difficult to discern nitrate contamination of wells within the area of influence of the City of Sumas and May Road wellfields (Sumas wellfields) due to water use by SE2GF. However, this does not mean that it cannot be addressed. A discussion of historic and existing conditions of water quality in nearby wells should have been performed in the environmental review of the SE2GF. As explained later in this letter, I strongly disagree with a wait-and-see approach to determine if there is going to be a problem—a substantial level of investigation is required during the environmental review process, not afterwards. By wait-and-see, I mean that potential impacts will be evaluated and addressed after the public process has ended. However, if the SE2GF is permitted, water quality monitoring should be conducted on wells that may experience a change in flowpath direction and/or an alteration of the recharge zone where more nitrogen sources occur. The monitoring should occur prior to start-up as well as during operation of the SE2GF. It is unlikely that direct impacts of the SE2GF could be proven beyond a doubt—there should be a lower threshold to mitigate water quality impacts to individual wells.

3

i) This requires that all wells (or as many as practicable) in the U.S.A. and Canada be identified that are in the zone of influence. While this is a large task, the SEIS falls short because it appears that very few wells have been found/located in the zone of influence.

2) Ground Water Quantity

a) Section 3.3 is not improved over the FEIS—it is still worthless when it comes to evaluating potential impacts. I am dumbfounded that the modeling used to generate the recharge area illustrated in Figure 3.2-1 and discussed in Section 3.2 is not utilized in Section 3.3 of the SEIS. The fixed radius circles derived by Robinson & Noble (Figure 3.3-1) are completely inadequate, particularly when Section 3.2 contains information indicating that anything but a circle should be used (see comment number seven in my letter dated March 30, 2001 on the Motion for Reconsideration [attached] that addresses this issue).

4

i) Circles reflect uniform conditions, which are not the case for the Sumas wellfields. The aquifer material is strongly heterogeneous, the aquifer is transitioning from unconfined to confined, and there is a strong gradient in the potentiometric surface rising to the Northwest.

- ii) The Robinson & Noble 2000 citation contains a serious flaw. The statement is made, *“Thus, during the pumping of the City wellfield, the drawdown cone stops rapid spreading when it reaches the higher storativity area of the aquifer, resulting in no interference being seen at May Road. Therefore, the radii presented for the City wellfield are probably conservatively large, even with the small time value used.”* In light of the work illustrated in Figure 3.2-1, the radius for the City wellfield is conservative (too large) in some directions, but not universally, as is implied. Based on the work by Associated Earth Sciences, Inc (the source of Figure 3.2-1), drawdown associated with either well field would not be observed in the other wellfield. 4
- b) There is far to little information to effectively evaluate ground water quantity impacts, and there has been considerable opportunity for the applicant to utilize/provide better analysis. The wait-and-see approach (mitigation approach calling for monitoring of wells in Section 3.3.4) is not acceptable mitigation for failing to do proper analysis from the start. 5
- c) The statement on page 3.3-2 of the SEIS, *“Much of the needed information may be provided in the studies associated with the mitigation plan proposed by SE2 (see Section 3.3.4).”* THIS IS UNACCEPTABLE, THE STATE ENVIRONMENTAL POLICY ACT (SEPA) WAS NOT INTENDED TO ALLOW PROJECT PROPONENTS TO DO AN INADEQUATE ENVIRONMENTAL REVIEW DURING THE PUBLIC PROCESS. THIS APPROACH REMOVES EFFECTIVE PUBLIC EVALUATION OF POTENTIAL IMPACTS AND COMPLETELY SUBVERTS SEPA. 6
- d) It is not acceptable that very few wells have been identified in the area of influence of the Sumas wellfields. A substantial attempt should have been undertaken to identify all wells in the zone of influence and then an examination of potential impacts could have occurred and been presented during the environmental review. 7
- e) The Mitigation Measures identified in Section 3.3.4 of the SEIS are inadequate.
- i) The approach outlined subverts SEPA by removing public evaluation of potential impacts
- ii) The area of influence is wrong (see comment 2.a in this letter). 8
- iii) The wells in the correct zone of influence should have been identified prior to environmental review.
- iv) Quarterly water level measurements may not provide sufficient resolution to determine seasonal trends. Monthly or more frequent monitoring may be required based upon the variability of water level fluctuations. Continuous measurements of water levels in wells within the area of influence may be

warranted. Continuous water level measurement could occur for a week to a month at selected wells through each season and the data loggers could be rotated through a circuit of wells so that water level variation could be determined over a broad area. This would provide far more insight into water level fluctuations than quarterly measurements.

8

- v) Curtailment of water use is not provided as an option to deal with lost production at wells impacted by water use due to the SE2GF. Water law makes this issue cut and dry.

The SE2GF should be denied. There is still insufficient information to determine potential impacts. Thank you for your consideration of my concerns.

Sincerely,

Andy Ross
(no signature, submitted via email)

cc: Mary C. Barrett, Senior Assistant Attorney General

ATTACHMENT of March 30, 2001 Comments on the Sumas Energy 2 Motion For Reconsideration of the Sumas 2 Generating Facility letter starts on the next page. Note that page numbers are continued from those used in the letter above.

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OCT 19 2001

Andy Ross
1840 High Noon Road
Bellingham, WA 98226

March 30, 2001
Sent via Fax

Allen Fiksdal
EFSEC Manager
Washington State Energy Facility Site Evaluation Council
P.O. Box 43172
Olympia, WA 98504-3172

**SUBJECT: Comments on the Sumas Energy 2 Motion For
Reconsideration of the Sumas 2 Generating Facility**

Dear Mr. Fiksdal:

Thank you for extending the comment period on Sumas Energy 2's (SE2) Motion for Reconsideration (Motion) of the Sumas 2 Generation Facility (S2GF). I also very much appreciate the decision and tremendous work required to deny certification (Council Order No. 754 [Order]). The Washington State Energy Facility Site Evaluation Council (EFSEC) made the correct decision based on well thought out and documented reasons. EFSEC did a very thorough and competent job (even though I disagree with some parts of the Order).

The new proposal for S2GF without an alternate fuel supply and additional mitigation as specified in SE2's Motion for Reconsideration (revised S2GF) should either be denied or resubmitted as a new project subject to the entire permitting processes. I would recommend denial at this point because Sumas is a poor location; too little is known about potential adverse impacts, and it is a tremendous waste of time—time that should be spent reviewing projects which will provide a direct demonstrated benefit and that are located in areas substantially less sensitive to adverse environmental impacts.

The revised S2GF proposal does not address many of the concerns and issues addressed by EFSEC in Council Order 754, some of which are addressed in detail later in this letter. Unfortunately I have limited time to apply to this issue, the upshot of which is that I was not able to address all the issues I have with both the FEIS and the revised S2GF proposal. The extension of the comment period was very helpful to me. The comments that I am providing below are only a fraction of comments/problems with the inadequacy of the revised S2GF and the FEIS.

Overall, the applicant (SE2) has relied on word-games in an attempt to provide persuasive arguments (examples provided below) rather than providing arguments that are well supported with facts. Non-substantive arguments (word-games) indicate that the revised S2GF proposal cannot be supported on the facts. This combined with insufficient data and understanding of potential adverse impacts is unacceptable. The offer to

monitor and mitigate impacts (i.e., ground water quality and quantity) during operation of S2GF eliminates public and agency review of potential adverse impacts, which violates both the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA). As described below, much, much more could be known about potential impacts, if the proper studies and interpretations had been performed prior to initiating the application process.

NEED:

1. SE2 has not demonstrated a need for the electricity. On page 6 of the Motion the following statement is made,

“Available studies indicate that 3000 MW or more of new generation is needed in the region. The 660 MW provided by the S2GF will be a substantial part of the solution to this deficit, and, therefore, will be a substantial factor in leading to lower energy costs in the region. Moreover, because the S2GF is one of the only projects positioned to come online in Washington within the next two years, the S2GF presents one of the only ‘near term’ solutions available” (emphasis added)

SE2 makes the case that the power is needed regionally, then states that S2GF is one of the only “near term” solution available. This statement is only supported by the assertion that “S2GF is one of the only projects positioned to come online in Washington within the next two years.” Apples and oranges are being compared. Are other plants likely to come online in the next two years in the rest of the western U.S. and Canada? If so, the contribution of S2GF is diminished and may be completely unnecessary. This is a blatant example of the word games played by SE2.

SE2’s need and consistency requirements (page 8 of Motion) only provide assurances (not actual contracts), and do not provide that the energy will be sold locally. The consistency requirement can be easily be thwarted by 3 contracts, each for 33 percent of the plant’s output.

It appears that the supply of gas to S2GF may be subject to curtailment. The FEIS contains conflicting information about the gas supply. Page 3.1-9 states that,

“Historical gas shortage during the winter months has been limited to a few days or has not been required during mild winters.”

Page 2-14 contains the statements,

“Historic international natural gas shortages have occurred during the winter. The approximate frequency of these shortages is typically five days out of every 20 days during the winter months.”

Gas availability appears to be context sensitive. More to the point, S2GF will not be able to provide electricity at times when demand may be highest, substantially diminishing its' regional benefit.

10

AIR QUALITY:

2. SE2 makes numerous claims that air quality in the Fraser Valley is not as bad as EFSEC believes it to be. On page 15 of the Motion, SE2 states that,

"First, the mantra of SE2 opponents that the Lower Fraser Valley has the second worst air quality in Canada is unfounded...acknowledged that '[a]ir quality in the Lower Fraser valley is generally quite good compared to other urban areas of similar size in Western North America.'"

SE2 challenges the finding that the air quality is among the worst in Canada, then compares the Fraser Valley to Western North America—apples and oranges. The air pollution in Los Angeles, California should not be used as a benchmark to state that Fraser River Valley air quality is acceptable. More word games.

11

Evidence is asserted specific to Canada to support the claim that Fraser Valley Air Quality is better than other places within Canada, however the too little information is provided to evaluate the information.

SE2 asserts that air quality is not unique in the Fraser Valley, but that there are unique topographic features. However, SE2 is separating air quality from meteorological conditions, and it is the combination that makes the problem acute. Without on-shore air flow and a box canyon, the air pollution could disperse more easily and not concentrate.

3. There is no assurance that air quality impacts are lessened to acceptable levels by removing the diesel backup portion of the S2GF proposal. There is insufficient information to demonstrate compliance with federal and state air quality standards.

SE2 states on page 17 of the Motion that,

"...the FEIS, and SE2 modeling agree that, without oil firing, the emissions from SE2 will not cause appreciable deterioration in the ambient air quality"

12

EFSEC states on page 22 of the Order that the

"...Council concludes that the project meets federal and state air quality standards"

I disagree with both EFSEC and SE2 on this issue. However, I do agree with EFSEC that compliance with standards is the beginning and not the end of air quality impacts.

Contrary to the opinion of the authors of the FEIS, the air quality monitoring does not accurately reflect conditions which I have observed and identified in my comments on the DEIS. If local terrain controls really are accurately portrayed, I suggest that the air quality results be placed over a topographic map. Imagination is required to conclude that local terrain controls are adequately considered. The air quality monitoring which has been done is likely to accurately reflect some of the conditions, perhaps even the majority, HOWEVER, it does not reflect critical conditions.

12

Response # 14 in the FEIS to my DEIS comments lists many factors which are considered in the modeling of air quality, inversions are not listed and are conspicuous through their absence. The authors of the FEIS could have more substantially addressed my comment by including text and diagrams of airflow which specifically reflect the conditions I described.

13

Response # 13 in the FEIS to my DEIS comments go so far as to suggest air quality modeling is consistent with the conditions that I observed. I strongly disagree, merely because highest concentrations are predicted there does not mean that the predicted pollutant concentrations are accurate. The extinction coefficient contours in Figures 6.1-27 and 28 from the January 10, 2000 Revised Application do not accurately reflect local topography and therefore CANNOT ACCURATELY predict pollutant concentrations.

14

4. While I am on the subject, I will address the rest of the responses in the FEIS to my DEIS comments on air quality.

It is not explicit in the FEIS that views of Mt. Shuksan (which in North Cascades National Park) will be protected. My comment is addressed generally in that there were addressed through "receptors" located within the National Park and National Forest. Given the popularity of the view, it would be nice to know if receptors were located properly.

Five years of meteorological data is still insufficient where a longer record is available. I understand that 5 years is all that the Environmental Protection Agency requires, and will be forwarding this letter to them.

15

The data from Marblemount, Washington used to characterize air quality in all of North Cascades National Park is quite an extrapolation, although it appears to have been weighted to reflect this, but the adequacy of the weighting is not known. In addition, calling the Marblemount data the "best data available" may merely mean that it is the only data available. There is a big difference, and given both the authors of the FEIS and SE2 tendency to describe best case scenarios, this appears to be another attempt to wordsmith the document in a favorable light.

There is still no explicit discussion of NO_x and SO₂ impacts to waters in North Cascades National Park. According to the FEIS, NO_x and SO₂ levels are at or above levels to protect Class I areas (page 3.1-23). Response # 15 in the FEIS to my DEIS comments dismisses vegetative impacts because SE2 impacts are below the criteria established to protect vegetation. There needs to be an explicit analysis of cumulative impact because ambient loading is already high, and an explicit analysis of the impacts specific to aquatic resources (e.g., alpine lakes).

16

5. SE2 implies on page 17 of the Motion that the use of alternative fuels in the Fraser Valley this last winter did not adversely impact air quality. Their arguments are one-sided and rely on word-games.

SE2's reliance on and presentation of the material in Appendix B of the Motion is lopsided (one-sided). The document also contains information indicating that the monitoring network is not designed to detect impacts from this type of event, the distribution and duration of fuel switching is not well known, and meteorological conditions were favorable for the dispersion of the emissions. Page 5 (Appendix B page number) also contains the statement,

17

"However, it is probably safer to say that we have dodged an air quality bullet than to assume a cavalier and Kevlar immunity to such bullets."

SE2's use of Appendix C appears is a severe misrepresentation. SE2 states that

"Ironically, Abbotsford's star witness, Peter Sagert, also claimed that the substantial emissions associated with the recent fuel switching 'did not lead to a measurable change in air quality,' and, in fact, the air quality index remained at a level indicating 'good' air quality."

18

The "claim" attributed to Peter Sagert is really a letter prepared by Bull, Houser & Tupper for the Lower Mainland Large Gas Users Association (LMLGUA) submitted to the GVRD that is attached to a fax for convenience. The purpose of the fax was to request appearance at a meeting. Peter Sagert did not sign the letter and his involvement or agreement with the letter is not explicit. This sleight-of-hand type argument substantially undermines both the ability to evaluate the facts, and the credibility of SE2 throughout the document.

PUBLIC OPPOSITION:

6. SE2 misrepresents public input.

SE2 states on page 18 of the motion,

"Unfortunately, as recognized in the Council's Order, the public's concern often reflects inaccurate information" (emphasis added).

19

EFSEC states on page 29 of the Order,

“While the Council does not find all of the public's sentiments to be based on completely accurate scientific information, the public's general belief that this amount of pollution emitted into an already sensitive and confined air shed is likely to cause adverse health impacts is supported by more concrete evidence in our adjudicative record as discussed throughout this order.”

19

Apples and oranges. SE2 is shooting themselves in their “proverbial” foot putting out such blatant misrepresentations. It leads me to believe that SE2 does not believe that the facts (merits) of the project can stand on their own.

WATER ISSUES:

7. The pump tests, and the interpretation of the pumptests conducted by Robinson and Noble are flawed. The applicant reluctantly admits this on page 22 of the Motion through conducting controlled tests of the wellfields to confirm the zone of influence from withdrawals for SE2 as part of the mitigation.

The applicant really doesn't know what the impacts will be because the tests have been inadequate and misinterpreted. Circular drawdown areas reflect uniform conditions, which the aquifer around the wellfields is not. SE2's consultant openly admits this, yet still applies a fixed radius drawdown area. A 4 hour pumptest is too short. Additionally, the wellfields are in an area where the aquifer is transitioning from unconfined to confined, the aquifer materials are variable, and gradient of the potentiometric surface is steep to the Northwest. As if this is not enough proof of the inadequacy of the interpretation of ground water characteristics, the wellhead protection area illustrated in (Wellhead Protection Areas map, January 28, 2001, Whatcom County Health and Human Services) is a narrow plume extending northwest into British Columbia. The pumptests could have both been designed and interpreted with the information used to develop the wellhead protection area. The applicant states that too little is known about the aquifer to address whether potential adverse impacts will occur. This is due in large part to the lack of proper ground water investigation and is not acceptable.

20

The offer to monitor and mitigate ground water impacts during operation of S2GF eliminates public and agency review of potential adverse impacts, which violates both NEPA and SEPA.

8. Potential nitrate contamination could also be better understood and mitigated.

I agree that nitrate may be difficult to precisely model, but do not agree that in itself constitutes a wait-and-see approach. A preliminary analysis could be performed to obtain a basic understanding of the nitrate dynamics, or to truly determine if they are completely unpredictable. In light of the data used to

21

generate the wellhead protection area, land use could be correlated with nitrate conditions in the recharge area, and changes in the recharge area could be examined to determine if greater or fewer sources may be captured. With properly designed pump tests (and ideally installation of new pumping and observation wells), both drawdown effects and nitrate levels could be examined and compared to predicted changes based upon the correlation of land use and recharge area. This is basic ground water investigation and should not have to be spelled out by the public.

21

The mitigation for nitrate contamination of the potable water supply appears conservative from the SE2s perspective, and not the affected parties (customers). It is good that SE2 is contributing money to aquifer protection and offering to build a treatment plant if a problem arises. However, it would be prudent to install the treatment system prior to operation of SE2. If the lag time between the need for treatment and installation of treatment results in an interruption of service (for quantity or quality reasons), the treatment should be installed proactively. Particularly if management changes (e.g., reduced pumping) are not effective in reducing nitrate levels to acceptable levels over the short term.

22

Another mitigation to consider would be the curtailment of SE2s operations if nitrates began to increase. The frequency of monitoring for nitrates should be based both on the variability of nitrate concentrations in the City wells as well as nearby wells, and the time required for the city to take appropriate management actions. It would be tragic if elevated nitrates occurred for several weeks (the FEIS only recommends monthly monitoring) that elevated the nitrate concentration of water throughout the system. This scenario would substantially reduce the Sumas's management options and supports the need for the treatment plant to be built proactively.

23

SE2's stance on nitrates is not in the spirit of being a "good neighbor" (page 24 of Motion). If SE2 were that responsible, they would be more willing to admit that though they may not be the source of nitrates, they may cause nitrate problems for the public water supply.

9. The FEIS states that because Abbotsford is reducing ground water pumping and the pumping was in substantial excess of SE2's needs, there should be plenty of water (FEIS page 3.2-26 and General Responses to Major Issues-Page 7). The reason Abbotsford is curtailing reliance on ground water (and has nearly ceased use of a wellfield ½ mile north of the City wells) is due to ground water quality concerns. What are the ground water quality concerns for the Abbotsford wells? This has direct relevance and needs to be discussed. A water quality problem at a nearby high-production well may provide significant insight into ground water issues, and if not, should still be explained so that one knows that nitrate or another contaminant was not an issue.

24

10. There does not appear to be adequate mitigation in the Motion for wells within the area affected by the increased ground water pumping of the May Road and City wells to accommodate SE2's needs.

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Nitrate contamination of these wells needs to be addressed by SE2.

The mitigation for the impairment of water supply of these wells does not include diminishing the water use required for SE2. What if a well-owner does not want city water and physical fixes (e.g., lower the pump) are not adequate or feasible (e.g., deepening the well)?

SOCIOECONOMIC:

11. No negative socioeconomic impacts were addressed in the FEIS. The response in the FEIS (No. 17) to my DEIS comment appears to be in response to a different comment. What industries have better job/water use ratios? How likely is it that they would locate in Sumas if water were or were not available?

26

CONSERVATION:

12. Conservation is inadequately addressed. The response to my DEIS comment (Response No. 23) basically states that conservation alone cannot meet the growing electrical energy needs of the region. Conservation does not have to be all or nothing. Conservation can be a very effective strategy and management tool, and needs to be given due consideration. For example,

27

West Kootenay Power in British Columbia recently urged customers to conserve so that the utility would not have to buy power on the spot market. It worked, and each customer received a \$200 credit towards their electrical bills. Conservation works and needs to be addressed substantially.

In summary, the project should be denied (and/or the record not reopened). SE2 has not demonstrated a specific need or more than general benefit, and there is far too little information on which to evaluate potential adverse impacts. If EFSEC decides not to deny the project, then the project should be treated as a new project and subjected to the entire application process.

Again, thank you for the opportunity to comment on the Motion.

Sincerely,

Andy Ross

Cc: Environmental Protection Agency