

March 31, 1997

Mr. Dennis Ossenkop
Northwest Region FAA
1601 Lind Avenue SW
Renton, WA 98055

Dear Mr. Ossenkop:

Attachment #1

These questions and comments are to be included along with the other comments I made and previously submitted to FAA with reference to the draft Air Quality Conformity Determination. These comments are not meant to replace the previous comments but are to be considered a supplement to those comments. Please include all my submittals into the Record of Decision.

Questions and Comments Regarding the draft Transportation and General Conformity Determination for the Sea-Tac Airport Master Plan Update Draft, Final and Draft Supplemental Environmental Impact Statements

Please refer to my numbers when responding to my questions and please indicate by page number or reference in the FSEIS responses to comments section where any questions and/or comments warranted any change and where that can be found in the text or no change in the analysis.

1. How can the project be exempted from a conformity review when there are existing and future modeled exceedances of the CO, NO₂ and PM₁₀ standards?
2. Why didn't FAA model ozone, especially since Sea-Tac Airport is the greatest producer by acre of ozone precursors in the county?
3. Why do the numbers for annual inventory in tons per year of pollutants vary so much between documents? Why do the numbers go up and down arbitrarily without any relationship to number or type of polluters?
4. Why is it that when I average the pollution from the standard fleet mix and then increase the number in the fleet as the SEIS predicts is the future case, I derive more pollution but the SEIS shows less?

5. Why is there such a difference (over 2500 tons) between the NRDC's report on inventory in tons per year for nitrogen oxides at O'Hare with relatively the same number of annual aircraft operations as Sea-Tac's and the SEIS estimates?
6. Why does this same illogical scenario occur with the 1991 Department of Ecology study, especially when nitrogen oxides is now increased in the newest EDMS 944 model over the 1991 version used by Ecology?
7. Why does the consultant make such unusual adjustments to the fleet mix that are untypical of Sea-Tac operations when peak hour operations are increased? Why does the consultant insist that aircraft spacing demands a lower level of peak hour operations when this situation does not constrain other airports such as O'Hare which has one jet departure every 22 seconds with new technology and scattered departure corridors?
8. When I increase nitrogen oxides incrementally based upon logical increases in aircraft operations, why do I get levels that are above de-minimus but the SEIS does not?
9. Why does the draft and final EIS state nitrogen oxides will increase in the future, but the inventory does not go up by levels that seem to make sense?
10. Why are levels of annual nitrogen oxides so similar in the SEIS to the draft EIS when aircraft operations are significantly increased?
11. Will there ever be dual-simultaneous departures from the first and third runways? If so, will a new air pollution analysis be conducted which considers this scenario?
12. Which receptor in the draft EIS was the one that had the exceedance of the NO₂ standard? Where does this correspond for the SEIS? How far from A-8 is the new receptor which has the same level of NO₂? Were there any higher receptors than South 154th Street or South 188th Street in the draft or final EIS screening dispersion analysis? Refined analysis?
13. Why are the FEIS dispersion contours confined to a second runway plot?
14. If other wind directions are used in the dispersion analysis in a worst case scenario, would the "westside" neighborhood adjacent to the airport west fence be impacted by air pollution? Why or why not? Tyee Golf Course? Riverton Heights neighborhood?
15. Why is there such a difference (over 100 times greater, 28 ppm compared to 0.215) between Ecology's 1991 EDMS peak hour screening analysis of nitrogen dioxide in comparison to the SEIS? Please justify this discrepancy. If the model has been improved, please discuss the improvements and how and/or why these improvements would change the analysis to this degree especially considering NO_x has increased in the newer version?

16. Do de-minimus level requirements for conformity analysis change depending on the severity of historical exceedances of any particular standard? Nonattainment status? Maintenance status?
17. Will there be any exceedances of the new ozone or particulate standards with or without the project?
18. Are there any federal regulations covering the emission of HAP in a gaseous or particulate form? Any of these that apply to the conformity review? Are any of these types of pollutants present in the emissions from aircraft? What about PAH? PNA? PAN? Particulate that contain nitrite, sulfite or other hazardous or toxic pollutants? Why has there been no thorough analysis of the risk to nearby residents from emissions at Sea-Tac?
19. Will or can FAA assure the nearby residents that they will not experience ill health effects from any air pollution and/or emission(s) associated with future Sea-Tac Airport aircraft operations? If so, what is the degree of certainty? If not, how many will be affected and where?
20. When will a cumulative and multiple project air quality impact analysis be conducted? Why has it not been conducted so far? Would FAA be within de-minimus levels if all sources and projects expected to increase in the future are considered as an aggregate whole? How would mitigation offset any of these increases? What types of mitigation might be proposed which could significantly reduce emissions?
21. Why does FAA assume that air pollution will decrease in the future when all estimates indicate new exceedances of the federal CO standard by 2010 due to increased population, VMT and single passenger automobile use?
22. When will jet aircraft produced particulate data be estimated in the EDMS model run? The FAA has admitted that the data has been removed, but that the model defaults of zero are open to the user. Why didn't the consultant input data from FAEED?
23. Will FAA add all the potential operational and project related dust, particulate, NO_x and other emissions together in the FSEIS?
24. Will FAA use better baseline data for background levels of particulate in the FSEIS?
25. Will FAA reevaluate the project draft air quality conformity determination considering the following issues:
- a. New violation of the standard for particulate during hauling
 - b. Worsening of an existing violation of the NO₂ standard once cumulative impacts are assessed and logical assumptions are input into the model.

- c. Delaying achievement of interim milestones in ozone standard maintenance due to continued increase in NO_x and VOC inventory at Sea-Tac Airport in the future build scenario.
- d. Worsening of CO exceedances in the intersections at Sea-Tac.
- e. Lack of mitigation commitment or plan.
- f. New violation of the NO₂ standard at 188th.

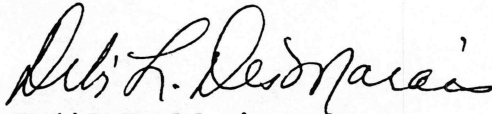
26. Does the SIP include all airport related inventories including the automobile impacts in nearby intersections? Cumulative? Will total and cumulative inventories affect the conformity analysis?

27. Why does the SIP allow Sea-Tac emissions to increase when all other regional sources must be reduced?

28. Why does the SIP inventory not include the 20,000+ tons per year from automobile impacts in the intersections near Sea-Tac?

29. Would the project conform to an applicable SIP if all airport related/generated pollution were added together as a cumulative whole?

Sincerely,



Debi L. DesMarais
CASE
19900 4th Avenue SW
Normandy Park WA 98166
(206) 824-3120

March 4, 1997

Mr. Dennis Ossenkop
Northwest Mountain Region FAA
1601 Lind Avenue Southwest
Renton, WA 98055-4056

**Comments Regarding the Transportation and General Conformity Determination
for the Sea-Tac Airport Master Plan Update Draft, Final and Draft Supplemental
Environmental Impact Statements**

Dear Mr. Ossenkop:

- 1) I do not agree that the FAA is exempted from a General Conformity determination as the FAA asserts in the Draft Supplemental Environmental Impact Statement (SEIS).
- 2) I also do not concur that if FAA were subject to a general conformity analysis that they would pass the test as FAA also states in the SEIS. According to the FAA, the Clean Air Act (CAA) and Amendments of 1990 require as a prerequisite for the necessity to perform a general conformity analysis, that certain de minimus levels of pollutants be exceeded. These de-minimus levels, FAA believes, are not exceeded in the SEIS analysis and air pollution inventory tons per year.
- 3) I believe FAA's assertion that they are exempt and their claim of compliance if subject to such a review is based upon flawed data input into the model, a misunderstanding of the intent of the law and a possible predisposition to manipulate the data input to eliminate their responsibility to the public and the Clean Air Act.
- 4) I also believe that even if FAA were exempted from general conformity by being below de minimus levels, that the predicted exceedances of the NAAQS NO₂ annual standard, 8 hour carbon monoxide standard and the 24 hour and annual PM₁₀ standard, (some of which is project related, [foreseeable direct and indirect emissions within the authority of the FAA/Port of Seattle's jurisdiction and/or control¹], while others cannot be mitigated and none of which considers cumulative impacts) would not allow FAA to fund, support or approve the project.

I would appreciate a response from FAA to not just my direct questions, but also to each of my comments and include information according to the following chapter of NEPA:

¹See FR Vol. 58, No. 228 page 63221, particularly, see definition of reasonably foreseeable direct, indirect, exclusive and support.

§1503.4(5) “Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency’s position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response.”

NO₂

The draft Environmental Impact Statement (DEIS) aircraft operation numbers used for the EDMS screening analysis are one example of why I believe the numbers have been manipulated to obtain the predetermined results. While the forecast numbers of total number of aircraft operations for existing, 2010 and 2020 were used for the purpose and need section of the DEIS at 384,000 approximately existing condition, 440,000 for 2010 and 525,000 for 2020, the air pollution modeling analysis used 384,564, 408,040 and 443,869² respectively. These existing, 2010 and 2020 numbers were used to determine area impacts from future aircraft air pollution contours in the DEIS. These same numbers were also used in the final Environmental Impact Statement (FEIS) and the results were similar to those of the DEIS. The DEIS and FEIS both indicated a NAAQS annual NO₂ exceedance at South 154th Street of 0.08 ppm compared to the standard of 0.053 ppm annual. The FEIS claimed that this single exceedance was in an area restricted to public access and therefore, was not of concern. For the 2010 scenario, a new, similar exceedance appears in the FEIS at South 188th, an area of public right of way, similar to the 154th street area.

The SEIS has increased the numbers of aircraft operations considerably to 445,000 in 2005 and 474,000 in 2010 yet the impacts in the dispersion screening and refined analysis of NO₂ as well as tons per year in the SEIS are almost exactly the same or less than the DEIS and FEIS.

Date/Forecast	Annual Operations	Tons/Year	Inc./Dec. #	TPY dif.
1994 DEIS existing	384,564 annual ops.	1378.30	constant	constant
FEIS existing	384,564	1400.00	no change	+21.7
1994 DEIS 2010	408,040	1524.60	+23,476	+ 124.6
FEIS 2010	408,040	1523.50	no change	- 1.1
SEIS 2005	445,000	1441 ³	+ 36,960	-82.5
SEIS 2010	474,000	1523.60	+ 29,000	+82.6
DEIS 2020	443,869	2006.40 ⁴	-30,131	+482.8
SEIS 2010 Case 2+10%	521,400	1592.0	+ 77,531	-414.4
SEIS 2020 Case 2+10%	585,200	2182.0	+ 63,800	+590

²Draft EIS page D-3 Table D-1

³Page 5-2-3 (B) states: “...improvements would reduce Nox by 2%”, and given amount in this text when reduced by 2% is actually 1176 tons/year.

⁴Page D-14 Alternative 3 “With Project”

1989 DOE ⁵	360,000 ⁶	2066	- 225,200	-116
1993 Chicago O'Hare ⁷	383,362 L/T/O /year	4650	+ 23,362	+2584

I would tend to believe that if you increase the number of yearly polluters, the amount of pollution would also increase. But this is not the case with these three documents. The annual tons per year of NOx has gone up and down arbitrarily regardless of the number of aircraft takeoffs/operations.

For the SEIS 2005 condition at 445,000 annual operations, there are 565 less tons per year of NOx over the DEIS 2020 case although the DEIS used only 1131 less annual operations. If the documents had shown consistency between the numbers evaluated, there would actually be an increase in NOx between the Do-Nothing condition existing and With-Project scenario of over 628.1 tons per year with the addition of 59,305 possible airplane operations if I consider the original numbers and compare to the most recent. However, the SEIS, I believe, has biased the outcome of their analysis and managed to be below de-minimus levels. I do not trust this most current analysis since it is so different from previous and independent analyses done in the past. While there is a significant increase of airplane operations, the increase of NOx in tons per year is insignificant and where the inventory is increased considerably such as the Case 2 + 10%, no dispersion analysis is conducted so we do not know what additional exceedances might occur.

Compare the increase in operations in 2010 between the DEIS 2010 scenario at 408,040 and the SEIS 2010 at 474,000 or an increase of 65,960 annual aircraft operations but one less ton per year of NOx. In the SEIS 2010 Case 2 condition at 521,400 annual operations there is 542.4 less NOx than the 1991 Ecology study even though there are 161,400 more aircraft operations.

I have used the average fleet mix, not the adjusted fleet the consultant uses for increases in peak hour takeoffs, gathered an average number from the most consistent figures in the tables above and increased the NOx incrementally based upon increases in aircraft operations. There is no other way to obtain examples from the data without re-running the model and there is not time to do this in the brief comment period. The new figures are given in the tables as below:

1994 existing [baseline]	384,564 annual operations	1378.30 tons/year NOx
FEIS 2010 [baseline add]	408,040 (23,476 more)	1523.50 + 145.2 tons/year or equal to 0.0062/plane
SEIS 2010 [example 1]	474,000 + 65,960 x .0062	1932.45 + 408.9 TPY
SEIS Case 2 + 10% [example 2]	521,400 + 47,400 x .0062	2226.33 + 293.8 TPY

⁵ Department of Ecology Seattle Tacoma International Airport; Air Pollutant Contribution May 91 pg. 16

⁶1992 Flight Plan Project Final EIS 1990 aircraft operations

⁷NRDC Flying Off Course October 1996 page 44 (Attachment #1, selected pages)

In each case where logic might prevail and the increases in the annual aircraft inventory would equal a constant and reliable increase in expected pollutant inventory, the levels are above de-minimus levels of 100 tons per year. An example is given below:

1378.30 tons/year NOx existing baseline	384,564 annual operations baseline	divided by total planes = .00358 tons/year/plane NOx	
existing to 2005 x 60,436 increase in 2005 above existing to 445,000 = 216.36 tons/year incr.	2005 to 2010 x 89,436 increase in 2010 above existing to 474,000 = 320.18 tons/year NOx incr.	2010 to 2020 x 111,200 + 10% faster growth from 474,000 to 585,200 = 398.09 NOx tons/year incr.	
existing to 2020 =710.50 tons/year incr.	2000 to 2010 232.7 tons/year incr.	2000 to 2020 630.08 tons/year incr.	2005 to 2020 501.2 tons/year incr.

Consider also the statements the DEIS makes regarding NOx:

“According to the USEPA, many of the newer aircraft engines emit significantly lower levels of carbon monoxide (CO) and Volatile Organic Compounds (VOC), while generally producing higher emissions of nitrogen oxides (NOx).”⁸

“Accordingly, the addition of larger jet aircraft with their higher rates of fuel flow could contribute to higher NOx levels.”⁹

“However, these same fuel-efficient aircraft also produce increased NOx emissions.”¹⁰

In case the argument might be made that these numbers of aircraft would arrive and depart Sea-Tac with or without a new runway, the DEIS told us that 525,000 annual aircraft operations would occur with or without a runway. The SEIS tells us that no more than 460,000 aircraft per year can arrive or depart Sea-Tac without a new runway. What is the truth?

⁸Draft EIS page D-4 column 1, 2.

⁹Ibid.

¹⁰Ibid. page D-5 column 1, 3.

The 1973 SeaTac Communities Plan told us that the maximum capacity of Sea-Tac Airport was 260,000 and hence, the noise remedy boundaries are based upon that figure.

It should therefore be plainly obvious that we are dealing with unreliable data, inconsistent figures and forecasts that are either biased, flawed or just plain wrong.

Please refer to the enclosed (Attachment #2) table of forecasts and the dates those forecasts were made.

Another dramatic illustration of the disparity between figures is in the peak hour screening and refined dispersion analysis for nitrogen dioxide. The tables below represent these problems which are most likely based upon the same inconsistent figures used for the annual inventory above:

1994 Draft EIS	43.9 existing hourly op.	0.08 ppm NO ₂ 154th St.
1995 Final EIS	63.9 hourly op.	0.051 “
1997 SEIS existing	54.1 hourly op.	0.08 “
1997 SEIS 2000 do-nothing	64 hourly op.	0.09 “
1997 SEIS 2000 with proj.	64 hourly op.	0.05 “
1997 SEIS 2005 do-nothing	64 hourly op.	0.09 “
1997 SEIS 2005 with proj.	64 hourly op.	0.06 “
1997 SEIS 2010 do-nothing	64 hourly op.	0.07 “
1997 SEIS 2010 with proj.	64 hourly op.	0.05 “

One reason the dispersion analysis shows decreased NO₂ impacts even though the airplane numbers departing in the peak hour are increased is due to the fact that the consultant insisted that larger aircraft could not take off at a rate of one per minute due to regulations regarding aircraft spacing in the preferred noise abatement corridor.¹¹ When a higher number was used in the peak hour, the consultant used a higher number of non-jet operations. In the 2000 scenario where approximately 408,000 annual aircraft operations are considered, the peak hour fleet mix reflects 217,000 annual non-jet aircraft operations. This scenario is untypical of Sea-Tac and will be even more untypical in the future. This number of non-jet operations represents more than half the expected 2000 Sea-Tac aircraft operations and is unrealistic and must be revised.

The consultant failed to note that even the FAA states that one aircraft departure per minute is theoretically possible at Sea-Tac with two runways and they make no qualifications about spacing or types (Attachment #3) and that the Sea-Tac tower personnel have publicly stated in the enclosed article that 75 peak departures occur beginning at 7:00 a.m. in the summer (Attachment #4). The consultant also failed to mention that aircraft departing from the third runway 3 to 4% of the time will have to

¹¹SEIS Appendix B Attachment A-11 Response to Comment 28

make a break-neck turn to hit the existing noise abatement corridor before reaching the 5 NM or 3000 foot turn. I must assume that the consultant believes that all aircraft departures in the future from the third runway will use the same old noise abatement route even though the EIS flight tracks for the third runway are independent of the old corridor.

Additionally, the spacing of the third runway is suspicious at 2500 feet from the easternmost runway. The FAA Advisory Circular 5300/13 Change #4 states that for independent departures, the standard separation distance between runways is 2500 feet and that the distance for independent landings is 4300 feet. We already know that this new runway will not allow for dual simultaneous arrivals in poor weather without the addition of advanced technology and equipment such as LDA and GPS. We learned during the DEIS process that the alleged existing 44% bad-weather landing delay figure at Sea-Tac that was used to justify the purpose and need of the third runway is false. We have seen the current FAA statistics which rank Sea-Tac as one of the least delayed airports in the country. The SEIS now gives us an admission that the third runway will increase capacity. Therefore, it is reasonable to conclude that the 2500 feet, being the exact separation needed for dual simultaneous departures, will accommodate dual simultaneous departures in the peak hour which will use independent flight corridors without the addition of further noise abatement procedures.

The FSEIS should re-run the model considering 75 aircraft departures and using the standard fleet mix given in the DEIS Table D-1 with an existing condition dispersion analysis that compares 75 peak departures in the do-nothing condition to a number at least 30% (to 500,000) higher for the new runway which will accommodate dual-simultaneous departures.

Another area of concern is the analysis that moved from the original screening of nitrogen oxides to the refined analysis in the DEIS¹². The SEIS provided the short term screening rate of NO₂ at the receptor located at 154th Street which corresponds with qualifications with receptor C-7 in the DEIS.¹³ The DEIS did not chose the highest receptor from the screening dispersion analysis and the approximate rates of annual refined level of higher original DEIS receptors is given below:

Max concentration NOx	Annual Average by µg/m ³	Annual Average ppm
C-7 3058.80 = 14226	0.215 = 2.6875	0.08 ppm (SEIS exceedance)
C-6 3315.09	0.23	0.086 ppm annual
M-7 3614.60	0.25 ¹⁴	0.095 ppm annual
L-6 3783.65	0.26 ¹⁵	0.099 ppm annual

¹²Ibid. A-4 Response to Comment 10

¹³DEIS pages D-17 - [grid] and D-86, 87 dispersion rate by grid point in micrograms per cubic meter.

¹⁴Ibid.

¹⁵This rate and the last two are above the California short-term 1 hour standard of 0.25 ppm

B-7 4392.0	0.31	0.115 ppm annual
L-7 6208.55	0.44	0.162 ppm annual

I realize that to obtain the refined dispersion levels of nitrogen dioxide/oxide, that five years of actual weather data was added to the modeling. However, since some of the grid points are actually closer to the pollution sources expected to produce the single exceedance rate that the South 154th Street receptor detected, it is unusual that some of these much higher, more downwind receptors did not experience annual exceedances unless they did, but were ignored in the SEIS as they were in the DEIS. Additionally, I note that the grid on page D-17, "Exhibit D-1" chose receptor A-8 in Riverton Heights neighborhood, which is not the closest receptor to 154th Street, for that refined dispersion analysis. I am assuming that the high receptor which experienced the exceedance of 0.08 ppm is the one as it is described in the final EIS and SEIS as located at South 154th Street which description corresponds more accurately with receptor C-7.

However, if A-8 is the receptor that was chosen for the refined analysis and the originally much higher receptor C-7 was ignored, the rates given in the table above, would actually be as much as three times higher considering A-8 measured a mere 1392.10 compared to L-7 at 6208.55!

All receptors listed in the tables above are in areas of public access. Some are located in Tyee Golf Course, others are near Riverton Heights neighborhood where an elementary school is located near a public park. The South 154th and South 188th Street receptors are along public streets, NOT ON PORT PROPERTY! Also, please note that the NOx dispersion contour hot spots in the FEIS Appendix D page D-17 existing condition are, for the most part, confined to the runway area with some branches reaching over a mile to the east and west and into the Normandy Park community. Page D-18 year 2000 "With Project" has similar branches but are confined to use of the west runway only, with a run-up plot on the east runway. This is unusual because the east runway is the primary takeoff runway for most of the larger aircraft utilizing Sea-Tac.

These contours indicate that the wind direction used in the worst-case condition was primarily from the east or west even though the text on page D-16 would indicate a worst-case wind angle. A worst case would consider closest neighborhoods and elementary schools and if wind angles from 90 degrees are used, the Westside single family residential neighborhood would be the area experiencing the greatest impact, from 225°, Riverton Heights neighborhood and elementary school would be most impacted, from 315°, Angle Lake community and elementary school would be most impacted, and from 135°, Sunset Park baseball field and tennis courts would experience the greatest impact, etc. Ecology's 1991 study of the NOx contours summarized:

“...the contouring routine produced artifacts because of the low point density in this particular data set; the actual shape of the contours is expected to be much narrower and symmetrical as in the two other cases. In this particular run EDMS predicted a concentration of 19 ppm NO₂ in a receptor location right on 154th street. With the wind blowing directly from the north (1 degrees) the Tyee Golf Course can be getting as much as 12 ppm NO₂ one-hour average during worst-case conditions.”¹⁶

These NO₂ rates above, are nearly one hundred times greater than the highest screening analysis rate detected by the SEIS dispersion modeling at 0.215 ppm South 154th Street even though there were only seven more aircraft used by Ecology in the peak departure hour in comparison to the SEIS (71 compared to 63.9). Ecology used an older version of the EDMS model, but when I reviewed the NO_x rates in this 1991 study in comparison to the newer model 944 used by the consultant for the DEIS, I noticed that the NO_x rates for the larger aircraft such as the DC-10 and 747, have *increased* in the newest version (compare 215.3 kg/hr/engine for DC-10 and 747 1991 Geomode 1 pages A1-6, 8 and referenced from EPA AP 42 Volume II Mobile Sources 1985 with EDMS 944 at 277.78 kg/hr/engine Geomode 1 DC-10 and the 747 at 358.88 kg/hr/engine) rather than decrease, which would be the logical assumption if the dispersion rates are now lower. There is no explanation for this apparent discrepancy.

I believe the SEIS documentation supports existing violations of the NO₂ annual standard. I also believe that the NO₂ exceedance at 188th in 2010 is a direct project related exceedance which would not occur without the addition of the third runway and that the South 154th Street exceedance is a new violation recently discovered and is directly related to increased aircraft operations at Sea-Tac that have recently occurred.

I also believe that there are more exceedances of the NO₂ standard in the project vicinity that have been ignored in the refined dispersion analysis. I also contend that if proper numbers of airplane operations had been used with an appropriate fleet mix throughout the study years and an inventory that more logically reflects Sea-Tac historical mostly jet-fleet mix and increases based upon capacity building, that the exceedances would be higher and more of them. I am also concerned about the number of NO₂ rates listed on page C-2-27 of the SEIS “With Project” for 2005 and 2010 at South 154th and 188th, both east and west at 0.05 ppm which cannot be compared to the standard of 0.053 ppm since the last digit is not printed.

Sea-Tac Airport is the greatest producer of ozone precursors NO_x and VOC by acre than any other countywide source¹⁷ and in this situation the following applies:

“(Note that project-specific modeling for ozone is not generally considered an

¹⁶DOE page 18, 19 (see Figure 17, page A5-10 345° case with contours next to Angle Lake and Seattle Christian Schools)

¹⁷SEIS Appendix B Attachment A-2 Comment #5

option since, as a technical matter, ozone models are not sufficiently precise to show such impacts unless the project is a large portion of the total area inventory.”¹⁸ (underlining added)

Fulfilling the intention of the SIP to reduce emissions does not mean to report them and then ignore them. Emission reduction programs at airports have been talked about for two decades and although many strategies are affordable and relatively convenient to implement, little has been accomplished at Sea-Tac although several control measures could have made a tremendous difference to the local air quality by now. Meanwhile private citizens are paying for cleaner cars, I/M programs, public taxes for park-n-ride, light rail, etc. Private citizens are paying the way for the local airport to increase their emissions budgets by reducing ours. People are largely unaware that when our region has an air quality alert in the summer, and we are asked to curtail driving or mowing our lawns, Sea-Tac will continue to operate status-quo even though it takes the pollution levels of either thousands of cars or one million 4-stroke mowers operating at full power for one minute to equal the ozone producing emissions of just one - one minute takeoff of a 747.

Section 176(c) of the Act defines the purpose of conformity to assure that projects will not increase the severity of the number of violations of the NAAQS, contribute to any new violation of any standard in any area, increase the frequency or severity of any existing violation of any standard in any area or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. The purpose of the SIP is to “ensure emissions reduction progress targets are achieved and air quality attainment and maintenance efforts are not undermined.”¹⁹ Maintenance of the ozone standard will be undermined by the project and also by the predicted continued increases of Sea-Tac Airport operations. Some type of control of the existing condition exceedances must be implemented.

The NO₂ violations are an indication that the intent of the Clean Air Act is not being fulfilled. The addition of a new violation at South 188th should be cause for alarm, not merely because the federal standard is being exceeded, but mostly because the criteria air pollution is an immediate public health threat that can cause or contribute to irreparable injury to passers-by, people living nearby, children attending local schools, and the elderly living in nearby nursing homes, etc. The potential for additional project related and future exceedances of the federal standards is inherent to the nature of aircraft engine produced NO_x and the subsequent significant impact on ambient air quality for ozone, nitrogen dioxide and HAP.

The FAA should not be allowed to fund, approve or support this project until a mitigation plan to reduce the exceedances of the NAAQS NO₂ standard can be developed that will

¹⁸FR Vol. 58, No. 228 page 63223

¹⁹Ibid. page 63215

consider all areas of public access and neighborhoods which are affected in the existing and future conditions.

In addition to the necessity for a general conformity determination, the FAA and Port of Seattle also must consider additional emission inventories that are reasonably foreseeable. Some examples are the SASA facility where engine testing/run-ups will be performed on a 24 hour per day basis. This facility is mentioned in the SEIS, but the SASA FEIS did not model air quality impacts or conduct a conformity determination for the project. The SEIS talks about SASA as though it is a relocation of existing Port routine maintenance facilities. However, there is no complete analysis of what the vacated facilities at the airport will be used for nor any analysis of how much additional aircraft activity to Sea-Tac the SASA facility might draw in the future. Other examples of cumulative impacts required by NEPA §1508.7 and 1508.25 necessary for a thorough general and transportation conformity analysis are:²⁰

- 1) ***509/South Access Freeway (DEIS)***
- 2) 28th/24th Avenue South Arterial
- 3) *International Boulevard Phase II (Checklist?)*
- 4) *SeaTac Aviation Business Park*
- 5) *Alaska Flight Training Facility*
- 6) *Hotel (FEIS)*
- 7) ***Parking, both on airport, part of the NUT and at South 154th Street (piecemeal)***
- 8) ***Federal Detention Center (Nearly complete)***
- 9) ***FAA Tower***
- 10) *Enplane Drive Improvements/Asbestos Removal (DNS)*
- 11) *Federal Express Expansion (DNS)*
- 12) *IWS Upgrade (DNS)*
- 13) ***FAA Localizer Directional Aid Underground Tank Remediation (DNS)***
- 14) ***SASA (Incomplete FEIS)***
- 15) Haul Truck NOx

The SEIS maintains it contains a cumulative impacts analysis. However, as in the FEIS, many projects are merely mentioned and the SEIS also notes that some other projects do not have a completed environmental analysis (See Attachment #5). This is true with the 509/South Access Freeway Extension, but not so in the case of SASA, International Boulevard Phase II, the Hotel, Federal Detention Center, Runway Safety Area Improvements (RSA), Enplane Drive Improvements, and others which have a completed checklist, or a final EIS or a partially completed project such as the RSA.

CO

²⁰Bolding added to federal projects, italics to those which might be federally funded/supported or on federally acquired/controlled land.

The intersection dispersion analysis continues to show exceedances of the NAAQS for 8 hour carbon monoxide (CO) levels and a project related increase in these emission rates predicted to occur in the future. Additionally, I note that the intersection at South 188th and International Boulevard shows 1,000 less cars in the future build scenario which assumes several things which are probably inaccurate:

1) Assumes that the additional passengers and employee VMT using an expanded airport will not increase although it is inevitable. Or assumes that automobile traffic will decrease in general which is not predicted to occur in the future, in fact, just the opposite, increased SPA use and VMT is assured. Assumes that the parking facility at South 154th Street will be constructed even though it is planned for land belonging to City of Seattle used for a wellfield. Assumes that SASA and SASA Cargo facility, the Hotel, SeaTac Business Park and etc., will not draw additional traffic although the plans for these facilities indicate otherwise.

The FSEIS should also increase the CO tons per year inventory and the dispersion analysis based upon hundreds of additional planes in an 8 hour period in the future, idling and taxiing across two active runways an additional 1700 feet, all of which is uphill, which may offset any emission reduction benefits of the third runway congestion and delay relief. Additionally, it is apparent from the EDMS inventory that the same unusual problem of arbitrary and illogical increases and decreases of both dispersion modeling and tons per year of CO is also inherent in this analysis and should be revised.

PARTICULATE

NEPA § 1502.21 states:

“When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.”

In the SEIS, the response to my question on the complete lack of particulate data in the EDMS model was “revised to include only that data for which reliable particulate information is known. “The FAA has not updated the particulate data because no reliable data on aircraft particulate emissions is available.”²¹ This is not an accurate statement. New aircraft engine testing certification has current particulate emissions that do not predate FAA’s removal of all particulate data from the EDMS model. Additionally, the consultant did not answer the question this way when I first asked it during the DEIS process. It took two years for me to ask the right question which got the complete answer that I knew must be true in the beginning.

²¹SEIS Appendix B Attachment A-7 Response to Comment 15

All particulate data for every jet aircraft operation in the L/T/O cycle has been removed from the EDMS standard airport air pollution model.

For a proper particulate inventory and a cumulative analysis which considers the project long-term construction related haul truck particulate matter violations of the NAAQS 24 hour standard along haul-routes identified in the SEIS on page 5-4-15, current particulate measurements for jet aircraft contained in FAEED is available for the consultant. According to the enclosed letter from Dennis Ossenkop (Attachment #6), the model is open to the user to input information such as smoke number. This much needed new analysis should include a cumulative impact analysis which then can be added together to better formulate a mitigation plan for the predicted exceedances of the PM₁₀ standard along the haul routes and in the project vicinity. The future particulate inventory should also include an analysis of the new particulate standard and the PM_{2.5} standard, especially in light of the previous Department of Ecology Study, which is now the only available study which included the particulate data in EDMS prior to its removal by FAA, and it states:

“EDMS revealed localized hot-spots of particulate concentrations in the range of 800 micrograms per cubic meter, particularly in the 170 degree case...Note that 154th Street is located at the hot spot.”²²

The combination of particulates and the exceedance of the Federal NO₂ Standard at this single location should be cause for concern, especially since atmospheric particulate matter is a significant contributor to the problem of regional haze. The hauling and dirt dumping near this location at 154th Street along with significant existing NOx concentrations and VOC emissions could cause exceedances of both the PM₁₀ and ozone standard. It is critical that a baseline for existing impacts be established and that FAA use the upcoming monitoring of NOx and particulate by Department of Ecology to establish this baseline for background concentrations which should then be added to the hauling phase both for haul truck particulate, dumping, re-entrained dust, digging and dirt flying off of trucks during transport as well as haul truck NOx added to existing condition of the NO₂ exceedance and publish these rates once available in the FSEIS.

The re-run of the model should also consider 18 mile backup queues of trucks during peak hour periods, since “do not use” and “avoid” as the planned mitigation for congested roadways will not work because these severely congested roads are the ONLY way to the area to be filled!

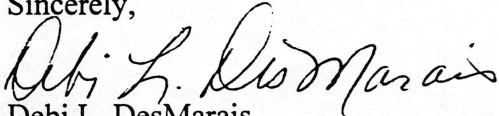
Referring to page 5-4-15, it appears that the Spokane data used for background is already in excess of the federal standard in many areas of study. I am somewhat confused as to the reason why Spokane data rather than local Duwamish and Kent monitoring data was

²²May 1991 Department of Ecology Seattle Tacoma International Airport; *Air Pollutant Contribution* page 20

used. It appears that along some haul routes, particulate matter with the addition of haul trucks will increase by several hundred percent over the do-nothing condition. The SEIS explains that the mitigation might and could reduce emissions by as much as 80%. I do not know if this mitigation equals 80% of the 200% increase over the federal standard, 80% of the entire 300% or whether the standard is still expected to be exceeded by 20% or not at all. "Might and could" do not sound like a commitment to reduce particulate impacts. It also sounds like an 80% reduction might be wishful thinking, especially since the hauling is not being done in a Spokane environment where burning of crop waste and the dusty atmosphere generally cause elevated particulate levels which would be controlled completely different from haul vehicle and dirt hauling mitigation.

I believe that these particulate levels indicate that the PM₁₀ 24 hour and annual standard will be violated during the project. But it is difficult to know if this is a new violation of the federal standard because the arid or dry environment used for background is already too high. However, these rates of particulate represent a worsening of an existing violation (one that does or does not exist in this area) and some type of mitigation plan that uses BMP's that can be tested and approved to be effective prior to the commencement of the project, should be implemented (this may be the biggest dirt moving project in state history, and as such, a mitigation plan should be monitored since this hasn't been done before).

Sincerely,



Debi L. DesMarais
31500 1st Ave S #14-103
Federal Way WA 98003
(206) 529-8407

cc: Congressman Adam Smith
EPA
Senator Patterson
Representatives Keiser, Blalock
DOE
PSAPCA
ACC