

TO: City of Burien Impact Assistance Team
October 26, 1996
FROM: Debi DesMarais
(206) 529-8407
RE: Review of draft mitigation cost analysis

Thank you for the opportunity to review this document. The analysis is very impressive. I do not have any critique of the methods used to derive overall mitigation costs. I have some minor comments on textual errors which I feel may or may not be caught in editing, some suggestions for better wording in some cases and major comments on real estate.

I have read the entire draft with the exception of most of the noise data. Below are my comments.

Social Impacts

1. Map on page 4. Suggest change the red/magenta shades to completely different colors. It may be difficult for anyone with poor eyesight to tell the difference between shades.
2. Table 1-3. Suggest separating city of SeaTac and Tukwila from "Impacted Communities" since these two are the primary sponsors of hotel/motel visits.
3. Page 16, paragraph 3, change the word "possible" in the first sentence to significant or some other description or eliminate the word altogether as it is inaccurate.
4. Same as above for page 30, paragraph 2, third line.
5. Page 17, suggest including a discussion of the depreciation of assessed land values, untypical of greater Seattle area, which has occurred in 1993 in the Highline area and recently in 1996 and in only one other area of study as is evidenced by Highline Schools recent reduction in tax revenue by 2.58%.
6. On the same page, some discussion of increased frequency of flights as a new trend in creating undesirability in neighborhoods for prospective buyers might be useful. You might incorporate a discussion of the Expert Arbitration Panel's findings on noise issues. The Panel pointed to the need to increase noise remedy boundaries to include those previously excluded due to noise reductions which now have not been substantiated by the data. There are approximately 7,000 additional homes which need insulation.
7. Page 29, first paragraph. Sea-Tac has reached 386,000 operations. This situation is causing FAA to reconsider forecasting assumptions used in the Master Plan. A higher figure of percentage of increase has now been realized, future assumptions of use of Sea-Tac and including a third runway, may be revised in a new analysis (SEIS or Addendum). Maybe could consider a higher percentage of use increase over the study years to obtain a more accurate 2000, 2010 and 2020 scenario using a 39.7% increase over existing 386,000 to 2000 and determine what the new capacity might be with a third runway and reevaluate increased operations percentage throughout the planning period under study. Otherwise, with a revised FAA forecast analysis, the figures used and results derived may be too low.
8. Page 30, last paragraph and page 31. It is reasonable to use nonappreciating assumptions in gauging residential property losses but I am concerned that as blight

continues and the airport expands, that desirability, and therefore, values will tend to decline, if this is not occurring already. Several homeowners in once desirable neighborhoods in Normandy Park have taken considerable losses on resale. One home that had a market analysis of over \$400,000, still below replacement property in similar neighborhoods in unimpacted areas, sold after two years of rigorous marketing for \$300,000.

When I checked the market data for several areas around the airport, there were a number of homes, maybe 10 out of 100 that I noticed, which had assessed values higher than sale price. After researching four or five, I found that the common problem was the T/A sales which were below assessed value. In further researching three of five home sales, I found that the original appraisal done by the Port used land values consistently below assessed valuation of land. One home in particular had an assessed land value \$15,000.00 higher than the appraised value. This practice of appraisal of land below assessed land value is unusual. However, for 3,000 homes eligible for T/A¹, if all these had land values lowered by only \$2,000.00, this would be a net savings to the Port of 6 million dollars.

There are individual homeowners who have had their assessed values lowered due to down market trends and other factors, i.e., airplane noise, etc., which are depreciating properties in Highline area. The problem with using assessed value comparisons between Highline and Shoreline will be the lack of sales data support for homes selling above or at assessed value in Highline. There is a trend in the market data I've seen which indicates many Highline homes are losing value and dropping below assessed value in resale.

Due to rippling effects, the homes in Transaction Assistance (T/A) may also be devaluing properties adjacent and outward from the area eligible for these Port benefits. T/A will reduce the sale price of eligible properties until the home sells. In the case where the sale price is reduced by every percentage allowed by the program, the Port will retain the home and use it as a rental property. This also causes neighborhoods to deteriorate. But in cases where the home sells near the end of the marketing period, even though the ultimate sale price may be 30, 40 or even 50% below market value, the new, lower price is then used by any buyer eligible for FHA and VA loan guarantee at the lower last sale value rather than the Port paid originally determined fair market value, further depreciating homes possibly outside the noise remedy boundaries. This process can continue onward indefinitely, reducing values in a wide area.

In the mitigation recommendations, there must be clear guidance on how to guarantee that homeowners receive relocation benefits using at least two appraisals and offering homeowners a choice of at least three possible replacement dwellings including moving expenses/mortgage and interest differential prior to construction and prior to land use changes in areas eligible for redesignation. It is undesirable to leave homeowners adjacent to areas destined for blight since this will cause further loss of desirability, marketability, salability and value. These things must be decided upon first, committed to with adequate

¹ Expert Arbitration Panel *Final Decision on Noise Issues* March 27, 1996 page 26

funding sources identified and before any construction begins. With a polluting facility (the airport) as an anchor, the tendency for redesignated land uses will be to draw similar or more polluting industry into the area. Since the communities surrounding Sea-Tac are mostly single family residential, it will be very costly and extremely undesirable to remove so many homes to accommodate blight causing industry. However, previous recommendations contained in the SeaTac Communities Plan were to avoid emitting facilities due to the high rates of air pollution presently surrounding Sea-Tac Airport. This is a dilemma since most family oriented business will not wish to locate adjacent to an airport and industry is not environmentally acceptable.

As for the 119 businesses which the Port has planned to remove for the runway, what will be the effects on lost revenue during construction? If free access to local businesses along Des Moines Way will be severely disturbed or made inconvenient for customers, will business owners lose money? Will they be more likely to sell their property to the Port at prices below existing value once they are damaged by construction related losses of income? I believe the businesses and homeowners should be removed prior to construction, not only for the reasons stated above, but because of the tremendous loss of value for all owners which will inevitably occur once construction is complete shortly after 2000.

I am also concerned about the loss of available, affordable housing such as what might occur if nearly three hundred homes are purchased for the third runway and over 100 are purchased for the SR 509/South Access project, both of which may occur simultaneously. The purchase costs may depreciate nearby properties, while driving costs upward in other areas where displaced residents wish to relocate. This should be an item discussed or developed by HOK since this directly relates to needed mitigation for the third runway, i.e., will available housing be affordable for masses of relocating residents if hundreds are forced into the market at the same time? Will this market influx cause replacement home prices to rise necessitating a greater housing differential? Will housing have to be constructed? How many homes, where and at what cost? Who must pay and how? What about mobile home parks? Will local zoning allow for the numbers which might be relocated where these types of homes are not available?

I believe I read in the 509 draft EIS that available housing shortages might occur with the implementation of the developments proposed for the area. I believe this EIS identified 4% available housing in SeaTac City compared with a potential 20% displacement rate.

9. Page 32, last paragraph, substitute the word higher for lower in last two sentences.
10. Table 4-3 on page 34 is difficult to understand or add up. Under "Average Change Per Year" "2000-2020" it appears that Burien will have an average \$6,951 change for each year between 2000 to 2020 but the figures are more indicative of a change, once in 2000 and again in 2020. Could you better explain this table, as well as the one on page 38 (4-5) with the method for calculating the average change per year?

I would also tend to believe that these value changes will become more dramatic in the future especially with the slow rate at which airports in general dispense mitigation funds in comparison to construction, development and redesignations of use. With continued increased frequency of flights and the potential for technology to create the mechanism to increase capacity limits above those in today's standard the losses of value may be more pronounced and quicken in the future.

Noise

1. Page ES-2 bullet number 2 text might be changed to read "... and health problems associated with speech and sleep interference;" I do not believe it is regular to consider speech and sleep interference as health effects, but rather that these interference's cause or contribute to health effects. Is this so?
2. Page ES-3 second set of bullet points at the second point might include some discussion of the constant vibration and body interference from low frequency noise due to the compacting of soil at the site of the third runway. I understand from a Boeing engineer that mitigation should/might be considered for the duration of compaction work.
3. The Impact Team should consider the costs associated with an expanded noise remedy/acquisition area according to the recommendation of the Expert Noise Panel. In their final decision on noise, the Panel pointed out the need for the Port to consider a total 17,000 homes for insulation, rather than 10,000 due to the Panel's findings that noise reductions in an area as large as the Port has claimed could not be substantiated.²

Air Quality

1. Page 3-1 Bullet number one, "nitrogen dioxides" should be changed to dioxide. The same is true for page 3-4 last paragraph.
2. Page 3-2 3.1.1 The consultant did not consistently use AP-42 Volume II EPA Mobile Sources aircraft emissions data. There are no particulate data within EDMS for any jet aircraft. This undermines and falsifies the entire database. Although, in answer to comments regarding the lack of particulate data, the consultant insisted that the data contains only that which is accurate, he failed to mention that all of it has been removed from the model! Zero is inaccurate. AP-42 still contains particle data and some higher hydrocarbon data than what the consultant used. Additionally, FAEDD has been updated for a 1994 version that contains particle data. FAA letter indicates that all new aircraft engines are still tested for particle output.
3. Page 3-4 last paragraph. I am fairly certain that although nitrogen dioxide and carbon monoxide are of concern, they are not the only predicted problem. Particulate was predicted by the 1991 Ecology screening analysis using EDMS, (when it still contained particles) to exceed the standard (one-hour compared to 24-hour standard) in worst case by several hundred percent. SeaTac Communities Plan contains reference to an air quality analysis from 1973-74 which used monitoring vans in the neighborhoods surrounding Sea Tac, including the west side of the airport property, at a time when only one runway was

² Ibid. Expert Arbitration Panel *Final Decision on Noise Issues* page 27

open. The monitored rates of total hydrocarbons exceeded the then Federal Standard by 1200% on one occasion and particulate was at 50% of the higher 1970 federal standard.³ Additionally, oxidant levels (federal standard included all oxidizing agents prior to the knowledge of ozone as the primary pollutant of concern) were predicted to violate the federal standards and nitrogen dioxide levels were higher than expected.⁴

Planning strategies recommended by the study were to exclude construction of any new emitting facility which would exacerbate this situation, including milling and grinding industry which would contribute to greater particulate impacts and which, I believe, should most logically include avoidance of dust causing emissions such as hauling, dumping, digging, and etc. Other recommendations of three reports for reducing air quality impacts at Sea-Tac include:

- Land uses prohibiting gas stations, solvent manufacture, chemical process industry
- Shutting down some aircraft engines during taxi/idle/queue
- Towing aircraft to/from gates
- Discontinuing use of generators for power at the gates
- Install signalization in parking garage directing autos to specific vacant spots/floors
- Charging higher rates for short parking stay
- Prohibit land uses which attract large groups of people and automobiles; amusement parks, sports complexes, junior colleges

Since the release of this abovementioned plan in 1973, these recommendations have been largely disregarded and ultimately, forgotten. New fueling facilities have been added at the airport, parking has been vastly increased, more single passenger autos accommodated with large scale digging and dumping activities continuing to put nearby residents at risk.

4. page 3-5 last paragraph. EDMS results were not included into the intersection dispersion analysis and the haul truck analysis did not include intersection and EDMS. Each was mutually exclusive and was not added one to the other for any final analysis.

5. Page 3-11 last paragraph. No previous airport analysis that I know of has ever had vehicles on nearby roadways as the *primary source* of airport related pollution. The EIS statements that local autos are the primary pollution source of concern, are unique and unusual. I would advise HOK to drop these statements as they are unsubstantiated, irresponsible and absurd. I have reviewed the SPEAS forecast of LAX, St. Louis, the EPA Chicago Midway study, the Hartsfield in Atlanta inventory, TAMS and NVOC data, the 1970 Donaldson Report, the 1991 Ecology study, the SIP inventory for Sea-Tac, Newark emissions data, Frankfurt Airport figures, O'Hare inventory, EDMS database, FAEED, and others and *never, never* have I seen statements like these. EDMS Airplane emissions database, as I have stated previously, is open for the consultant to adjust. Time-in-mode for Sea-Tac, emissions data, the inventory itself, fractional aircraft and truncation, and numerous other emission impact factors for Sea-Tac have been dramatically and

³ Adams, R. and et.al., ESL Incorporated ET-59 *Sea-Tac Air Quality-Final* June 28, 1973 page 2-15, 2-22

⁴ Ibid. page 2-20

suspiciously underestimated by Mr. Peters of Landrum and Brown while automobile factors have been increased for some unknown reason.

6. Page 3-12 first paragraph. The existing inventory is too low and the future inventory does not take into account any capacity building with a third runway. Cutler & Stanfield, attorneys for the ACC cities, have stated this premise is counter-intuitive and I believe it to be an absurd and unbelievable premise. The EIS has failed to inventory and calculate the worst case scenario. All conclusions are based upon average or best-case input. Please eliminate or revise the statement "*seems reasonable.*"

7. Same page, bullet number two. Please advise the public that the minimum detection limit for WISHA standards are much higher than ambient air standards and are not meant for protecting the public health but are set for employee, short-term exposure. It might also be helpful to make note that workplace standards do not readily apply for areas of free public access such as baggage claim areas, parking garages, curb front and indoor departure/arrival gates. Therefore, any WISHA monitoring cannot detect public standards for indoor or outdoor ambient air.

8. Page 3-14 second bullet. Please advise in this report that the EDMS database did not estimate for any jet aircraft operation particulate impact whatsoever and that the results of this particulate screening, although having the appearance of compliance, runs of the risk of vastly underestimating the true impacts.

9. Page 3-14 fourth bullet. This is a flawed assumption. The third runway is meant to accommodate mostly arrivals. However, for peak takeoff's, the separation between the first and third runways will accommodate dual simultaneous departures. This mode of the L/T/O is the greatest producer of nitrogen oxides, hence nitrogen dioxide. The consultant vastly underestimated the impacts of capacity enhancement. EPA requested 20% higher peak takeoff figures be used in the final in their comments on the draft EIS which was not accomplished according to EPA's request, however the results, although underestimated, still revealed a violation of the nitrogen dioxide standard and would have been higher and occurring at more receptor points had the consultant not made arbitrary adjustments to the fleet mix and time-in-mode. Please remove or revise the statement that the impacts would be less with a third runway as it is unsubstantiated and does not consider more aircraft accommodated with a third runway, the future aircraft (engines predicted to produce increasingly more nitrogen oxides), the fleet mix which will be utilizing Sea-Tac in the future, technology, and dual departures.

10. Page 3-16 second bullet. The statement that aircraft produce 20% of air toxics and automobiles produce 70% is very likely wrong. Although this statement, or some similar type of statement, may have been used in the EIS, there is no data to support this claim. Until more data is obtained or until this claim can be documented with credible, objective analyses, this statement should be considered conjecture and rejected based upon historical monitoring and modeling indicating the exact opposite.

11. Page 3-17 first bullet. In the year 2000, although older Stage II aircraft are phased out, newer Stage III aircraft will be older and dirtier. Additionally, there are no guarantees that Stage II's will be phased out on schedule. Indications are that Stage II operations at Sea-Tac have dramatically increased over the past year and will continue to do so in the next several years. This planned phase-out may be delayed and operators who cannot afford to convert may be granted exemptions to fly Stage II.

Should Stage II aircraft be phased out by 2000, there are also no guarantees that air toxics will decrease in since larger aircraft which utilize more fuel (EIS predicts a 72% increase in Jet A fuel incrementally by 2020) will potentially create more air toxics considering capacity increases, more VOC's from increased frequency of operations, fueling, and other, as yet unforeseen circumstances. Vapor recovery systems, clean burning ground support vehicles, park-n-ride remote lots, more transit access, etc., are needed at Sea-Tac and the cost of this should be calculated to offset any additional impacts in VOC's regardless of what the EIS considers with wishful thinking types of analysis such as their unsubstantiated and undocumented reductions in overall emissions. Increasing transportation, the draw of users, the need for more ground support, more heating, fuel and etc., means more pollution, not less.

12. Page 3-17 third bullet. Formaldehyde, acetaldehyde also were above the ASIL.

13. Page 3-17 fifth bullet. Acrolein exceeded the 24 hour ASIL.

14. Significant differences in upwind vs. downwind were not detected due to the unusual placement of most monitors in a downwind configuration and assumed to be upwind. It also is very difficult to differentiate between upwind and downwind sites when it is an airport and the sources are *mobile and airborne*.

Please note that the TO-11 aldehyde monitoring made a differentiation between upwind vs. downwind in the results as the report states:

"In contrast to the canister sampling program, the results of the TO-11 sampling indicated that the downwind monitoring site's samples were typically higher than the upwind location's concentrations. Formaldehyde and acetaldehyde samples were approximately 40% higher at the downwind site when compared to the upwind location. During southerly flow, acrolein values were 8.5 times higher at the downwind site⁵

15. Page 3-18 Sixth paragraph discusses the residue sampling. The MDL was too high and the method was not quality assured. Residue was collected off contaminated surfaces with a 100 cm. swab. Nobody really knows how this was done for quality control, nor understands what this method is comparable to for volume, mass, density, content, etc. Fungus, insect particles, soil were identified, but not in relation to how much per what or in relation to soot. Soot was not broken down into types of compounds or how much of each to identify a source. Therefore, statements such as cars or woodstoves as the most likely sources are unsubstantiated and should be qualified or rejected. Saying that residues "*were not due to jet fuel related products*" when some of the component of the test sample indicated soot but did not explain, and the source of the sample being a material which could likely contain fungus, insect particles, etc., is irresponsible.

16. Page 3-19 last paragraph. Envirometrics re-ran an estimate of haul-truck related particulate impacts and they predicted rates of concern in the borrow areas. A copy of their comments under air quality impacts might be quoted for an alternate point of view.

⁵ McCulley, Frick and Gilman Final Report *Air Quality Survey Seattle-Tacoma International Airport* January 1995 page 34

for particulate contribution. Additionally, a number of citizens and others voiced concern regarding the nitrogen oxide contribution of the haul vehicles and wondered why it was not estimated.

17. Page 3-20 first bullet. The general conformity determination for the EIS project, I believe is site specific, although it encompasses a wide area of impact, but is not considered in relation to the entire metropolitan or regional area.

Water Quality

This section might include some discussion of the potential cost of cleaning the Highline Aquifer should it become entirely contaminated. Reports from Ecology and Department of Development and Environmental Services with King County indicate the first and second aquifer within this system may be or is contaminated with jet fuel.

Highline Water District comments on the EIS also are concerned about the future loss of the 208th well or other nearby well should it become contaminated or when it becomes contaminated, whichever applies. The 2,000,000 to replace this water source comments from Highline Water District might be incorporated into the future mitigation costs of the third runway.

1. Page 4-8 first paragraph might include a discussion of the cost and need for a new IWS or for either extensive upgrades to the existing system or in the case of the absence of the above, what the costs of destroying Des Moines Creek habitat with overflows, and/or continued release of untreated ethylene and propylene glycols into the creek and potential for ground and groundwater contamination from these problems to clean and remediate the damage. The SASA final EIS discussed a new IWS for that facility. This cost and need has not been carried over into the present EIS. If SASA needs another or better IWS, this cost should be explored along with the SASA predicted impacts to I-vee pond and need for additional holding ponds/storage capacity, relocation of Des Moines Creek, etc., and other SASA associated costs.

Wetlands

In 1992, P & D Aviation Team discovered and wrote a report for the Port of Seattle on what they identified as potentially 100 acres of wetlands which would be impacted by the third runway project. Just prior to the release of the draft EIS, there was talk of 18 + acres which would be impacted by the project. The draft disclosed 9.7 and the final has 10. In discussions with the Army Corps of Engineers, it is my understanding that they do not get involved as a cooperating agency unless there are more than 10 acres to be impacted and permitted. I find it very interesting indeed that the wetland impacts have been changed so many times. I have not been able to obtain a current wetland map from the Army Corps. They do not have copies available for the public. But SeaTac City map

of wetlands shows a Class I rated wetland near Lake Reba. When WSDOT had discussions with the city council of Des Moines recently on the 509 project, they stated that the category 4 alternative was eliminated due to its impact on a Class I wetland which would be nearly impossible to permit and federal law prohibited its destruction.

What are the costs of mitigating/removing and relocating a Class I Wetland from the Miller Creek Basin? How long will it take to prove the effectiveness of the recreation of this wetland in Auburn?

Appendix A

Could you write my name Debi DesMarais and could you please add the names of Minnie Brasher of Burien and Barbara Stuhling of Des Moines, as they supplied volumes of historical information that other citizens, agencies and cities have utilized over the years, including reports I've copied and supplied recently for HOK.

Additionally, the Port has always been very slow to honor their commitments to the community members, cities and officials. Without a firm and guaranteed commitment to mitigate with all funding sources of those commitments identified, the potential impacts, not only the operation of the third runway, but also of the construction phase, before it begins, there will be little solace, support or help for the impacted citizens.

I find it very disheartening indeed that I might pay some additional tax to the county or state to help mitigate noise impacts for a person living in Seahurst, while my home sits uninhabitable, unsalable and a giant debt to our family for at least another 10 years that is depreciating faster than we are paying it off!

Thank you for the opportunity to comment on this document.

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