

**BEFORE THE HEARING EXAMINER  
OF THE PORT OF SEATTLE**

**CITY OF DES MOINES, et al.,**  
    **Petitioners**

**vs.**

**THE PORT OF SEATTLE, et al.,**  
    **Respondents**

NO. HE 96-04

**FINDINGS, CONCLUSIONS,  
AND DECISION**

**PROCEDURAL BACKGROUND**

This appeal challenges the adequacy of the environmental evaluation done by the Port of Seattle ("Port") pursuant to the State Environmental Policy Act ("SEPA") for the expansion of Seattle-Tacoma International Airport ("STIA"). The Port issued a Final Environmental Impact Statement ("FEIS") for its Airport Master Plan Update in February of 1996. Four appeals were filed of that FEIS. Appeals one and two were filed by Christopher P. Clifford and Ray Akers. The City of SeaTac filed appeal number three, and appeal number four was filed by the Airport Communities Coalition ("ACC"), which is made up of the City of Des Moines, the City of Burien, the City of Federal Way, the City of Normandy Park, the City of Tukwila, and Highline School District #401.

A pre-hearing conference was held on September 6, 1996 at STIA pursuant to the rules set forth in Port Resolution #3211, which are the rules governing administrative appeals of environmental determinations by the Port. On September 10, 1996, the Deputy Hearing Examiner for the Port issued a pre-hearing order which set a schedule for the submission of documents, including exhibits, witness lists, and witness testimony. The order stated that the Examiner would commence hearing testimony on January 27, 1997. Subsequent to the issuance of that order, the Deputy Hearing Examiner recused herself from hearing this matter.

At just about this same time, the Port and the Federal Aviation Administration ("FAA") determined that additional environmental analysis was necessary based upon new forecasts for the nation's airports conducted by FAA. The Port issued a Draft Supplemental EIS ("DSEIS") in February of 1997 based upon the new information as well as agency and public comments. A Final Supplemental EIS ("FSEIS") was published by the Port on May 13, 1997. The appeals of the same four parties were reinstated.

While the supplemental environmental analysis was being conducted by the Port and the FAA, this Examiner was retained to hear this matter. A pre-hearing conference was conducted by telephone conference call on July 2, 1997. Pursuant to the rules, a new pre-hearing schedule was established by order dated July 8, 1997, with deadlines for the submission of documents, including exhibits, witness lists, and witness testimony. A hearing was to be commenced on December 1, 1997.

On July 10, 1997 the Port filed a Motion to Dismiss Petitioners Christopher Clifford and Ray Akers for failure to perfect their appeals. Both Petitioners responded and by Memorandum Decision and Order dated August 14, 1997, the Hearing Examiner dismissed the appeals of Petitioners Clifford and Akers.

On September 22, 1997, the Port submitted a Stipulation and Proposed Order dismissing the City of SeaTac's appeal. The Stipulation was based on the fact that the City of SeaTac and the Port had reached a settlement agreement which included dismissal of the City's appeal. An Order dismissing the City of SeaTac's appeal was signed by the Examiner on September 25, 1997. That left the ACC as the sole remaining petitioner in this action. Both the Port and the ACC adhered to the pre-hearing schedule except as modified by stipulation, and the hearing on this matter commenced December 1, 1997 in Seattle at the King County Courthouse. During a recess on the first day, the Examiner conducted a site visit by driving around the perimeter of STIA.

Three primary issues were raised by the Petitioners. The first is whether the EIS/SEIS are inadequate because they are based on the assumption that: (1) The proposed additional runway at STIA would have no effect on the growth in passengers or aircraft operations at the airport, and (2) That the same number of passengers would use STIA regardless of whether the project is built or not. The second issue is whether the EIS/SEIS are inadequate because they did not adequately evaluate the impacts of the STIA expansion after the year 2010. And the third issue is whether the EIS/SEIS are inadequate because they failed to properly analyze reduced impacts alternatives as required by SEPA.

The Hearing lasted for five days from December 1, 1997 to December 5, 1997. On December 18, 1997, the Petitioners filed a Closing Argument and Brief in support of its position, along with Proposed Findings, Conclusions, and Exhibits. On December 24, 1997, the Port similarly filed its Closing Argument and Brief in support of its position, along with Exhibits and Proposed Findings and Conclusions.

After reviewing the Exhibits submitted before and after the hearing, reviewing expert testimony submitted before the hearing, and considering the testimony at the hearing, the Hearing Examiner hereby makes the following Findings of Fact and Conclusions of Law:

## I. FINDINGS OF FACT

### A. General Findings of Fact.

1. In 1993, the Port initiated an Airport Master Plan Update, which identified and studied alternate means of meeting the following needs at STIA: (1) improve the poor weather airfield operating capacity to an acceptable level of delay, (2) provide sufficient runway length to accommodate warm weather operations without restricting passenger load factors or payloads, (3) provide Runway Safety Areas that meet current FAA standards, and (4) provide efficient and flexible landside facilities to accommodate future aviation demand.

2. Also in 1993, pursuant to the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA), the FAA and the Port initiated preparation of a joint EIS

thoroughly analyzing the alternatives to, environmental impacts of, and possible mitigating measures for the improvements identified in the Master Plan Update.

3. In 1995, the FAA and the Port issued the Master Plan DEIS conducted two public hearings, accepted and responded to written and oral comments, conducted additional studies and prepared project revisions in response to public comments. On February 9, 1996, the Port issued the Master Plan FEIS, which included all comments on the DEIS and the Port/FAA responses to each comment.

4. On August 1, 1996, the Port Commission adopted Resolution No. 3212, which attached and adopted the Airport Master Plan Update for STIA, and granted approval to develop the third runway at STIA.

5. Subsequent to the publication of the FEIS, the FAA Office of Aviation Policy and Plans in Washington, D.C., issued its fiscal year 1996 Terminal Area Forecast ("TAF") for the nation's airports, including STIA. The fiscal year 1996 FAA TAF predicted levels of aircraft operations and passenger enplanements at STIA that exceeded the numbers of operations and enplanements in the Master Plan Update FEIS, which had relied on the 1994 Master Plan Update aviation demand forecasts.

6. When the FAA's 1996 TAF was released, a review of forecast aviation conditions at STIA was initiated to identify why the forecast was higher and how it would affect the Master Plan Update. P&D Aviation, the Port's Master Plan Update contractor, evaluated the FAA TAF and supported its general conclusions that activity could grow faster than identified by the 1994 Master Plan Update aviation demand forecasts. This evaluation led to the development of new Port forecasts which showed aircraft operations and passengers estimated to be approximately 17% greater (for planning year 2010) than the primary Master Plan Update FEIS forecast. In order to fully evaluate the possible project-level impacts (and potential mitigation measures) based on the new Port forecasts, the FAA Northwest Region and the Port commissioned a Supplemental EIS.

7. The DSEIS (containing a draft Clean Air Act Conformity Analysis) was released in February 1997. After receiving and responding to extensive agency and public comments, the FSEIS (and final Conformity Analysis) was published on May 13, 1997.

8. The Port Commission considered the potential environmental impacts and mitigating measures discussed in the FEIS and FSEIS, and weighed that information with other relevant considerations including the need for improved air transportation facilities to meet growing demand and reduce poor weather air traffic delay.

9. In light of the FSEIS, the Commission reaffirmed the approvals and commitments made in Resolution No. 3212, including adoption of the Airport Master Plan, approval of the third runway, and commitment to undertake additional noise reduction measures as called for in The Puget Sound Regional Council's ("PSRC") Resolution A-96-02. This appeal to the Port's Hearing Examiner followed.

10. The primary need for new runway improvements at STIA is the delay experienced at STIA during poor weather. While STIA operates efficiently during good weather conditions (Visual

Flight Rule 1 or VFR1 conditions), those conditions prevail only 56 percent of the time at the airport. During the remaining 44 percent of the time (VFR2 and all Instrument Flight Rule or IFR conditions), STIA presently operates with an unacceptable level of delay. That delay is expected to rapidly worsen as the region grows and demand for commercial aviation service correspondingly rises. A primary purpose of the proposed facility improvements is to increase the operating efficiency of STIA so that the region's residents and industry are provided with an acceptable level of commercial aviation service under the maximum range of weather conditions.

**B. Findings On Reasonableness of EIS Forecast Methodology and Analysis Relating to Numbers of Passengers and Aircraft Operations**

11. The ACC argued that the S8EIS is inadequate because the forecasts on which it is based show the same number of enplanements (passengers) under both the With Project and No Action alternatives. The ACC argued that the number of operations and enplanements with the project would be higher than the EIS forecasts and the number without the project would be lower than the EIS forecasts.

12. When the Port and the FAA began preparation of the Master Plan Update EIS, they retained P&D Aviation to prepare the forecast that served as the basis for the Master Plan Update EIS (the "1994 forecast"). Later, in 1996, when a decision was made to update the forecast, the Port again retained P&D Aviation to prepare the updated forecast (the "1996 forecast"). P&D Aviation had experience in preparing aviation forecasts for the Puget Sound Region, having prepared the forecast that served as the basis for a Flight Plan EIS issued by the Port and the PSRC in 1992.

13. The person at P&D Aviation primarily responsible for the preparation of the STIA forecasts was Stephen L. Allison, Senior Aviation Planner. Mr. Allison has 30 years experience in the aviation planning and consulting field, having served as project manager or lead aviation planner on the development of over 30 airport master plans and regional aviation system plans. While he functions as project manager or lead aviation planner on a variety of airport planning assignments, his specialty is the preparation of forecasts of aviation activity for individual airports and multiple-airport regions.

14. The approach used in preparing the STIA forecasts is widely accepted and used throughout the aviation industry. Mr. Allison generally described the process as consisting of the following steps:

- a. Analyze historic airport activity data and trends (such as passengers, air cargo, and aircraft operations).
- b. Assess the conditions and factors which influence the demand for aviation activity, including the local and national economies, air fares, changes in airline service, competing airports, technological advances in telecommunications, and international economic growth and bilateral agreements.
- c. Obtain input from the aviation community, particularly the airlines serving STIA, to obtain their opinions regarding the future of aviation demand in general and at STIA.
- d. Develop a mathematical relationship between a component of airport activity (e.g., domestic passengers) and the factors (explanatory variables) which are historically

- shown to strongly affect it. Evaluate this mathematical relationship, or "model," to ensure that it is logical for forecasting aviation demand and passes key statistical tests.
- e. Obtain projections of the factors in the model affecting airport activity, then use the model with the projected factors to derive a forecast of the airport activity.
  - f. Evaluate the probable effects of the forecast of factors not explicitly accounted for in the model, such as telecommunications, demand management techniques, and high speed rail.
  - g. Develop alternative forecast approaches as a check against the results of the model.
  - h. Prepare upper-range and lower-range forecasts based on the alternative approaches to illustrate the potential range of outcomes.
  - i. Compare the master plan forecast with forecasts prepared in other studies and by the FAA and evaluate differences in the purpose for the forecast, the forecast approach, and assumptions.

15. The evidence showed that three factors stand out as generally having the greatest influence on aviation demand, and at STIA these are the three factor which have the greatest predictive value for estimating future aviation demand. These three factors are (a) the population of the airport's service area, (b) personal income in the service area, and (c) average air fares. Higher population and personal income have a positive effect on demand for air travel, and higher air fares influence demand negatively.

16. The models used by P&D Aviation for the 1994 and 1996 forecasts were tested against actual aviation activity at STIA from 1973 through 1993. The 1994 model showed a 99.6% correlation with domestic passenger variation and the 1996 model showed a 99% correlation. These statistics indicate that the factors used in the P&D forecasting models are excellent in explaining past variations in numbers of passengers at STIA.

17. The forecasts prepared by P&D Aviation were reviewed by the FAA's Northwest Mountain Region. The FAA reviewed the forecasts in terms of the methodology, forecast variables used, statistical measures, and reasonableness of the overall results. The FAA accepted the P&D forecasts and approved their use for the preparation of the EIS/SEIS.

18. The forecasts were also reviewed by Landrum & Brown, Inc., the prime consultant selected by the Port and the FAA to prepare the Master Plan Update EIS and SEIS. The individual at Landrum & Brown primarily responsible for the review of the forecasts was Douglas F. Goldberg, Vice President and Leader of the firm's Facilities and Operations Practice. Mr. Goldberg has 14 years of experience in aviation and airport planning, has been involved in the planning of over 30 airports in the U.S. and abroad, and has participated in demand forecasts at a variety of major U. S. airports.

19. Mr. Goldberg reviewed the forecasts prepared by P&D Aviation and found them to be consistent with the industry accepted methodology and properly prepared. He testified that the methodology used by P&D Aviation has been used to provide the basis for implementing improvements at most of the major airports throughout the U.S. Landrum & Brown has applied this technique to develop aviation forecasts for many airport clients around the world, including the City of Chicago Department of Aviation and its two primary airports O'Hare and Midway.

20. The ACC presented the testimony of Dr. Clifford Winston, Senior Fellow at the Brookings Institution, in support of its challenge to the aviation forecasts. Dr. Winston stated that expanded airport facilities, including a third runway, would themselves cause a growth in demand for air travel. It was his position that, by not taking this factor into account, the STIA forecasts understated the actual demand that will occur once the improvements are constructed. The ACC argued that, as a result of understated forecasts, the EISs failed to consider and disclose the real environmental impacts of the proposed improvements when compared to the Do Nothing scenario. Dr. Winston had several bases for his position that expanded airport facilities would cause a growth in aviation demand which are discussed below. The ACC also argued in favor of the corollary to Dr. Winston's theory. That is, under the Do Nothing scenario, if the Port does not build the airport improvements, the number of operations and enplanements will be constrained. Thus, they allege, the EISs overstated the activity levels in the Do Nothing scenario and further understated the differences between the With Project and Do Nothing scenarios.

21. In response to Dr. Winston, the Port presented the testimony of Mr. Allison, Mr. Goldberg and Ms. Mary Vigilante who disagreed with Dr. Winston's positions. The testimony of the Port's witnesses was credible that aviation demand at STIA is not caused by expanded airport facilities and not constrained by the delay characteristics at STIA so long as there is sufficient airport capacity to serve the passengers who wish to fly. Thus, aviation demand at STIA can be adequately predicted by using population and income characteristics of the market area, along with air fares, and not by expanded airport facilities. This is particularly true for STIA, because there are no other airports in the region that can meet the demand, because the delays occur during poor weather conditions which are not predictable, and for other reasons set forth below.

22. Dr. Winston stated that a reduction in delays associated with air travel, and the uncertainties associated with that reduction, would generate increased demand for air travel. He asserted that eliminating the inconvenience and unreliability associated with delay would cause potential travelers to use more air services. Messrs. Allison and Goldberg disagreed with Dr. Winston's position. Their testimony was credible that delay at STIA occurs in poor weather conditions and poor weather primarily affects arrivals rather than departures. Because poor weather, particularly on arrivals, is not predictable, the delay is not likely to have a significant impact on travelers' decisions. Moreover, airlines can incorporate expected and routine delay into their flight schedules and incorporate sophisticated flight consolidation procedures. There are no other airports in the Puget Sound Region that provide an alternative to STIA. Therefore, even with the average delays projected for STIA during the planning horizon, alternative modes of travel (such as automobile travel) will still be considerably longer than air travel. For all these reasons, it is unlikely that reductions in delay at STIA caused by the preferred alternative will result in substantial additional demand for air travel.

23. In response to the ACC's argument that increasing delay at STIA without the project will reduce demand, Mr. Goldberg and Mr. Allison testified credibly that there will be sufficient capacity at STIA to accommodate passenger demand through the Master Plan Update's planning horizon (beyond the year 2010). That is, through modest adjustments in the number of passengers per airplane and the size of aircraft, as well as the hours of operation, STIA has the capacity to accommodate all the projected demand through the planning horizon. This available capacity at STIA would likely accommodate the demand even as average delays increased, because that has been the experience at other congested airports. Other airports in the U.S. currently operate with levels of delay at or greater than the delay levels projected for STIA beyond 2010. At some of these airports,

such as O'Hare, the level of activity is such that the FAA has imposed limits on the number of operations during most of the day. Despite the high levels of delay and the limits on operations, the activity levels at these airports have continued to increase in response to the demand. Therefore, it is not likely that increasing delays at STIA will significantly constrain demand between now and 2010.

24. Dr. Winston also stated that an increase in runway capacity and an expansion of terminal and ground transportation facilities would enable the airport to expand the number of aircraft operations at the hours most convenient to the traveling public. He asserted that this will result in an increase in discretionary travel by persons who otherwise might have been discouraged from flying because of the inconvenience. However, as testified to by Mr. Goldberg, the addition of the proposed third runway will not add significant new capacity at STIA during good weather conditions, which occur approximately 56% of the time. The purpose of the new runway is to improve efficiency in poor weather conditions, i.e., to provide two streams of aircraft traffic during poor weather conditions, the same as occurs now (and in the future with the new runway) in good weather conditions. Because poor weather is not predictable, the addition of capacity in poor weather conditions should not have a significant effect on the demand for air travel.

25. Based on Dr. Winston's testimony, the ACC also argued that expansion of the airport facilities will lead to greater airline competition and reduced operating costs, thereby reducing air fares and inducing more air travel. The testimony of the Port's witnesses was more credible that the improvements at STIA will not result in greater airline competition because airlines add flights in response to increasing demand not in response to increased airport capacity. STIA already enjoys a high level of airline competition and comparatively lower air fares than the rest of the country. In addition, reduced airline delay costs will not likely result in lower air fares. Savings from delay costs will be partially offset by the airlines' share of the capital improvement expenses. Also, the savings from reduced delay costs, when spread among all airline passengers, represents a very small percentage of air fares and will not likely have a major impact on travel demand.

26. Dr. Winston also stated that more efficient and reliable air service would be a stimulant to regional economic growth which, in turn, would generate increased demand for air travel. For economic growth in a region to be affected by airport improvements, there would have to be a major change from extremely inadequate service to adequate or better service. STIA already provides adequate or better air service so the airport improvements should not result in significant new economic growth in the region. In addition, as Mr. Goldberg testified, the EIS/SEIS aviation forecasts did not assume any constraints in airport capacity, so it would be illogical to include in the forecasts a factor for increased aviation activity resulting from the airport improvements. Also, Mr. Goldberg testified that Denver, which recently constructed a new five-runway modern airport, has experienced a decline in the number of passengers and operations following completion of the new airport.

27. Finally, Dr. Winston testified that he developed a model to test whether the addition of a runway fuels growth in aviation demand. Applying his model to the top 150 airports in the country, he concluded that there is a statistical correlation between the number of runways and the amount of aviation activity at an airport. This, he argued, is empirical evidence demonstrating that an additional runway at STIA would cause additional growth. The testimony of Mr. Allison and Mr. Goldberg was credible on this point. As they testified, Dr. Winston's analysis did not test for a cause and effect relationship and can only show that a correlation exists between airports with high demand and airports with multiple runways. That is, the Winston analysis merely demonstrated that airports with greater

aviation activity generally have more runways than airports with less activity. This does not demonstrate that the additional runways were the cause of greater activity levels and it could demonstrate nothing more than that busy airports build runways.

28. Mr. Allison also testified that the addition of the second runway at STIA did not result in increased aviation demand. The second runway was built after a period of rapid growth at the airport, but this growth was not sustained after the construction of the runway. The number of passengers grew at an annual average rate of 14.8 percent in the five years before the runway was completed and at an average rate of 3.8 percent in the three years after the runway was completed. A similar pattern occurred with regard to the number of operations. As Mr. Allison credibly testified, this is not an unusual occurrence. Airport activity is typically cyclical (reflecting economic cycles), with activity growing rapidly for several years then growing more slowly for several years. Once an airport expansion has occurred, the airport will sometimes enter a period of slow or no growth.

29. The FEIS included at Appendix R, and the FSEIS included at Appendix D, analyses of certain "what if" scenarios that respond to the comments that growth might be higher than forecast. In these appendices, the Port considered the possible impacts if the ACC allegations are correct and added airport capacity results in higher aviation activity. In Appendix D, the Port considered in "Case 3" the potential differences in impacts between (a) a With Project scenario in which operations and enplanements grew at a 10% faster rate than forecasted and (b) a Do Nothing scenario in which it was assumed that the number of operations and enplanements would be limited to their 2010 levels. This analysis, which was based on an extrapolation of pre-2010 impacts, compared potential impacts in the areas of noise, air quality, surface traffic, and other areas.

30. The ACC asserted in its Closing Memorandum that the SEIS was internally inconsistent in that it predicted in Appendix D that the number of passengers would be the same in 2020 under both the With Project and Do Nothing scenarios and yet the SEIS also stated that severely congested conditions would prevent the airport from accommodating the predicted level of passengers in 2020. However, as testified by Mary Vigilante who prepared it, Appendix D was not a forecast of passengers and operations in the year 2020. It was an analysis of "what if" scenarios in response to comments from the ACC. Cases 1 and 2, relied on by the ACC in its assertion, merely considered the impacts if the number of operations and enplanements were the same in 2020 under the With Project and Do Nothing scenarios. Case 3 considered the situation if the ACC assertions were correct, that aviation activity would be different under the With Project and Do Nothing scenarios.

31. The ACC asserted that if Dr. Winston's theory is correct, that air pollution and noise would increase with the number of operations. However, increased number of operations under the With Project scenario does not necessarily translate to a comparable increase in air pollution. Eugene R. Peters is a Director with Landrum & Brown. He has over 10 years of environmental planning experience and has conducted the analysis of airport-related activity on regional air quality on airports throughout the country. Mr. Peters, one of the principal air quality professionals working on the EIS, provided a detailed analysis in his written testimony that was consistent with the SEIS conclusion that NO<sub>x</sub> will decrease even as the number of operations increases out to 2010, due to the impact of the reductions in delay which accompany the construction of the 3rd Runway.

32. With respect to noise, the Port presented credible testimony from Mr. Jon Woodward. Mr. Woodward has more than 25 years experience in program design and common noise assessment



and land use analysis. He has prepared over 1500 noise contour studies in his career. He has worked on noise studies at major airports throughout the country, including Dallas-Ft. Worth, Los Angeles International, Cincinnati, St. Louis, Chicago O'Hare and Toledo. Mr. Woodward was in charge of preparing the noise contours for the EIS. Mr. Woodward corroborated analysis in the EIS which demonstrated the declining size of the 65 DNL noise contours under a do-nothing scenario between 1994 and the year 2010. Despite the anticipated increase in operations at STIA, noise impacts are expected to decline in the future relative to existing conditions. As Mr. Woodward testified, even if the operations forecast projected by Dr. Winston were to occur, the resulting effect would be an expected increase of 7/10 of one decibel (0.7 dBA) on average noise levels. Based on the FAA threshold of significant impact of 1.5 DNL, the 0.7 dBA would not be significant. If any of the current technological initiatives now under way by NASA achieve even 10% of their goals (i.e., one decibel reduction), this would more than offset the increased noise levels associated with the difference in forecasted operations predicted by Dr. Winston.

**C. Findings of Fact on Reasonableness of Decision to Limit Detailed Analysis in SEIS to the Year 2010**

33. At the time the Master Plan Update EIS was prepared in 1994, the airfares nationally and at STIA had been relatively stable. Thus, those charged with preparing long-term airport forecasts could with some assurance forecast for longer periods.

34. Several factors came together in the time period between the Master Plan Update EIS in 1994 and the SEIS in 1996, each of which added significant uncertainty to the planning efforts of those professionals charged with attempting to meaningfully evaluate long-term impacts under SEPA and NEPA. The EIS consultants uniformly agreed with the EIS Project Manager that these factors made it very difficult to meaningfully evaluate the environmental impacts of the Master Plan Update beyond the year 2010. The factors included, but are not limited to:

- a. A dramatic drop in air fares nationwide which led to radically different FAA forecasts in 1996;
- b. A calibrated aviation forecast which indicated an 17% increase in the operations at STIA in the year 2010;
- c. A major decision by Boeing to discontinue production of an entire line of aircraft, the MD-80;
- d. The major impact of the arrival of one of the nation's lowest airfare airlines, Southwest Airlines, on STIA and the changes in the fleet mix of both Southwest and the airlines which were competing with Southwest, an impact which added great uncertainty to the number of operations, fleet mix, engine type, day/night split, and other factors which are essential to the analysis of noise and air quality impacts;
- e. The drastic downsizing of the Regional Transportation Authority's road network and light rail system, with the resulting uncertainty in analyzing traffic at STIA and inability to rely on the PSRC's regional traffic model;

- f. New investments in noise and air pollution research which are likely to significantly reduce engine noise in new aircraft by ten dBa in ten years, starting in the year 2005 and in new aircraft starting in the next 5-10 years; and
- g. The 1996 work of NASA, in conjunction with GE and other aircraft and engine manufacturers to start a program with a specific goal of reducing aircraft NO<sub>x</sub> emissions by 70% by the year 2001.

35. The testimony of the professionals participating in the preparation of the EIS establishes that in various key areas, the SEIS-projected period of analysis of 13 years falls squarely within the typical range for studies of this type throughout the country. Mr. Peters testified that the air quality studies varied the study period from 5-15 years in the future. In the noise area, Mr. Woodward testified that noise contour studies for new runways typically run on a 10-12 year planning horizon.

36. While the ACC emphasizes the relationship of the planning period to the anticipated date of the runway in the year 2004 or 2005, a more proper context is to review the length of the planning period from the date of the EIS in 1996, rather than the year 2004. Thus the appropriate planning period to be evaluated is 13 years.

37. One of the principal decision makers in the determination of the planning horizon in SEIS was the EIS Project Manager, Mary Vigilante. Ms. Vigilante has, in addition to extensive airport project management experience, specialized experience in both air quality and noise analysis fields. She conducted much of the original analysis, as well as the response to comments in all of the project level environmental documents. In addition to the reasons set forth in Appendix D of the SEIS, she testified credibly as to the 13-year planning horizon. As Ms. Vigilante noted, there were rapid changes in aviation activity during the mid-1990s at STIA, which made forecasting aviation activity very difficult. Ms. Vigilante reasonably concluded that detailed analysis of the years beyond 2010 in the EIS would be speculative and could lead to a substantially inaccurate evaluation of environmental effects. The quantification of environmental impacts is dependent on factors such as total aviation activity, the time of day the activity occurs, the aircraft types, and the engines on the aircraft. Even slight changes in aircraft types and their associated engine types, for instances, can result in substantially different impact analysis. Due to the various volatile factors identified and because aircraft fleet mix and air fares could not be reasonably predicted beyond 2010, the SEIS concluded that impacts cannot be reasonably evaluated beyond this time period. Ms. Vigilante also described in detail the different forms of future environmental review, both state and federal, which will analyze possible adverse environmental impacts of the Master Plan Update during the period 2010-2020.

38. One of the greatest changes following issuance of the Master Plan EIS was in the 1996 change in projected airfares announced by the FAA. With respect to the Port's updated aviation demand forecast prepared for the SEIS, after calibrating for local data, this resulted in an 17% increase in the number of operations anticipated at STIA for the year 2010 over the number of operations anticipated under the 1994 Master Plan forecasts. The volatility in projected airfares represented by the FAA's changed airfare projections makes it more difficult to reasonably estimate long-term trends in number of aircraft operations, fleet mix, or day/night operations beyond 2010.

39. The forecasting uncertainty that surfaced in 1996 significantly changed the ability to analyze long-term forecasts, fleet mix, day/night operations, and created a corresponding uncertainty for the professionals charged with evaluating long-term air quality and noise impacts. In many aspects, this uncertainty did not exist two years earlier, when the Master Plan EIS was being prepared.

40. The preparation of the air quality analysis in the SEIS was the product of collaboration among the three agencies with regulatory authority in this area, the Puget Sound Air Pollution Control Agency ("PSAPCA"), the Washington State Department of Ecology ("DOE") and the U.S. Environmental Protection Agency ("EPA"). DOE retained an independent consultant to assist in detailed review and preparation of comments in its review of the SEIS. All three agencies participated in the air quality analysis which found that the year 2010 was the logical planning horizon for air quality impacts. Although the three agencies had many questions during the process and in their comments on the DSEIS, they all approved the final air quality analysis contained in the F SEIS.

41. Mr. Gene Peters also testified that the volatility in airfares, forecasts, fleet mix, and other areas in the period following 1994 made it difficult in 1996 to predict or reasonably foresee air quality impacts beyond the year 2010.

42. The uncertainty of long-term airfare projections and the resulting fluctuation in aircraft operation forecasts at STIA added a significant element of uncertainty in the ability of the noise measurement professionals to prepare reliable long-term noise contours in the SEIS. While it is theoretically possible to run noise contours, the experienced noise professionals hired by the Port, Paul Dunholter and Jon Woodward, testified credibly that the reliability of this modeling diminishes significantly as one goes further out in time. While a range of assumptions or alternatives is theoretically possible to do and it is also possible to run contour models at any time, the usefulness of such an exercise is questionable, particularly given the time and cost involved in modeling, as it is not likely to lead to meaningful evaluation.

43. Because of the lack of reliable data beyond the year 2010 to input into the standard noise model (the INM model), the noise professionals preparing the SEIS limited detailed analysis to thirteen years from the 1996 date of the SEIS, because noise impacts analysis beyond that time would be speculative and not likely to lead to meaningful evaluation. Moreover, there are several additional steps of environmental review which will be completed in the future at a time when those impacts are more capable of being meaningfully evaluated. These include the Part 150 Noise Compatibility Program, future chapters of the Port's Master Plan Update process, and any future planning and environmental review required under the terms of the FAA Record of Decision. Although many of these have federal components, the Port will be taking actions under all of them which will be subject to SEPA review.

44. The advent of Southwest Airlines to STIA has since 1994 had a significant impact on the fleet mix at the Airport by Southwest and its airline competitors. There has been a significant change from three and four-engine aircraft to medium-sized two-engine jet aircraft. The change in fleet mix translates directly into significant changes in the resulting air pollution emissions. This recent volatility made long term analysis of air quality impacts more difficult in 1996 than in 1994

45. In addition to the inability to reasonably forecast aviation demand beyond 2010, there were also independent changes following issuance of the Master Plan EIS which made meaningful

evaluation of surface transportation impacts speculative in and around STIA beyond 2010. This analysis depends to a large extent on the reliability of the PSRC's regional model, which was used by INCA Engineers as the foundation for its analysis in the Master Plan EIS and the SEIS. When the SEIS was getting underway, there were three major changes affecting arterials and intersections in the vicinity of the Airport, none of which was included in the PSRC model.

46. First, the state's largest public infrastructure project, the Regional Transportation Authority ("RTA") dramatically changed in scope following issuance of the EIS, from \$13 billion to \$3-4 billion. This change would radically alter the impact at intersections and arterials in and around STIA after 2010 in ways that could not be fully understood in 1996, as the impacts of this change were not yet included in the PSRC model.

47. Second, the state highway adjacent to the Airport, SR 509, also experienced major planning changes following issuance of the Master Plan EIS. The route and connections for the proposed extension of SR 509 to Interstate 5 was changed. Given its proximity to the Airport, this change would also have very significant impacts on the analysis of traffic intersections in the area after the year 2010. None of these new impacts were evaluated or included in the PSRC traffic model on which INCA relied to conduct its analysis.

48. Third, the City of SeaTac's proposed Personal Rapid Transit system, which was very conceptual in 1994 when the Master Plan Update EIS was issued, was two years further into the planning process by 1996. As this was proposed in the jurisdiction surrounding the Airport, if constructed it too could have significant impacts on traffic in the area, which impacts were not yet evaluated and not included in the PSRC model.

49. The record reflects numerous examples of ongoing environmental review which will be conducted by the Port and other state agencies of the future impacts following the year 2010 of the Master Plan Update improvements. Those include, but are not limited to:

a) Additional Master Plan-related SEPA review by the Port. The Port Director of STIA, Gina Marie Lindsay, testified this process would likely get underway in the next several years,

b) The Port's portion of the Part 150 Noise Compatibility Program. While ACC correctly notes this is a FAA-authorized activity, there was testimony outlining the Port's role in approving a plan for FAA consideration. The Port decisions will be subject to SEPA requirements. The scope of this review includes consideration of noise impacts on affected schools. The Port has a well-established track record of conducting Part 150 review at regular intervals, and is currently collecting data for the Part 150 process now underway.

c) Port Review and Action Mandated by the FAA in its Record of Decision ("ROD"). This will be required prior to 2010 and must include an "adequacy, accuracy, and validity of the final statement." Under the terms of the ROD, "if this review identifies additional significant adverse environmental impacts, the Port will be required to adopt further noise and land use measures designed to minimize any significant adverse effects found in that evaluation." (Emphasis added.)

d) Supplemental Environmental Review for Projects Not Underway by June 2000. Because many of the Master Plan Update improvements will not be initiated until after

the year 2000, it is likely that a new or updated environmental analysis will occur to cover these projects.

e) Air Quality Conformity Review is required under state law (although the state is applying the duties of the federal Clean Air Act, which have been delegated to the state and regional agencies.) Under federal law, any action in the Port's Master Plan Update which is not commenced within five years must undergo environmental review again.

f) NPDES Permit Renewal Process. Although not directly included in the ACC appeal, the future SEPA review will include consideration of stormwater and water quality impacts associated with the Master Plan Update, as the Port must every five years submit a detailed application for renewal. WAC 173-220-180 (1), (2).

**C. Findings of Fact Relating to the Issue of Whether the EIS/SEIS Adequately Evaluated Reasonable Alternatives**

50. The third issue for decision is whether the lead agency, under the rule of reason, considered a reasonable range of alternatives in the Master Plan EIS and SEIS.

51. Petitioners allege that the Port should have considered a runway shorter (6000 to 6700 feet) than the preferred alternative runway (8500 feet). Petitioners' proposed runway would also have a staggered north threshold - i.e., the north end of the new runway would not align with the north ends of the existing two parallel runways at STIA. Instead the north end of the petitioners' proposed runway would be 2000 to 2500 feet further south than the north end of the existing runways. Petitioners allege that such a runway would require less fill and would, therefore, have fewer impacts.

52. Both the preferred alternative third runway and petitioners' suggested runway would be located 2500 feet to the west from the existing inboard runway at STIA.

53. The threshold stagger and runway separation are important factors in air traffic control operations at STIA. The existing inboard runway is Runway 16L/34R, which is the runway closest to the terminal and is currently 11,900 feet in length. The Port's proposed new third runway is located with its centerline 2500 feet west of the centerline of the existing inboard runway. A 2500-foot runway separation is the minimum runway separation distance for conducting (1) dependent arrivals at STIA (two coordinated streams of arrivals) and (2) independent departures at STIA from the inboard runway at the same time as arrivals to the new outboard runway during poor weather conditions subject to Instrument Flight Rules ("IFR") and south flow. Unlike most airports in the U.S., IFR conditions are common at STIA, occurring approximately 25 percent of the time. During approximately 3/4 of the IFR conditions, or approximately 17 percent of the time, STIA is also operating in a "south flow" condition.

54. Independent arrivals and departures during IFR conditions (departures from the inboard runway at the same time as arrivals on the new third runway) would be a relatively common occurrence at STIA. The ability to conduct those independent arrivals and departures is a factor in reducing bad weather delay at STIA. The situation would be common (as often at 15 to 17 percent of the time) because the inboard runway, being the longest runway at STIA, is best suited for departures of all aircraft types. In addition, from an air traffic control perspective, it is preferable to taxi aircraft

across a runway where departures rather than arrivals are occurring. For both reasons, the situation where departures are occurring on the inboard runway while arrivals are taking place on the new third runway would be a relatively common occurrence at STIA. Moreover, it is desirable, in order to reduce aircraft operation delay at STIA, for the inboard departures and outboard arrivals to be "independent" so that the air traffic controllers do not need to create a temporal separation between departing and arriving aircraft.

55. Under FAA planning guidelines and air traffic control requirements, 2500 feet is the minimum runway separation at STIA, during south flow IFR conditions, for independent takeoffs from the inboard runway while landings are taking place on the proposed third runway. However, this is only true when the ends of the runways are aligned. For every 500 feet of stagger on a runway threshold, the FAA advisory and air traffic control requirements would require an additional 100 feet of separation between the two runways.

56. One of the reasons for this FAA requirement is to keep departing aircraft a safe distance away from the wake vortices of arriving aircraft.

57. In order to maintain the ability to do independent landings on the new runway and landings on the existing inboard runway, in south flow IFR conditions, the proposed alternative runway proposed by petitioners would have to be moved to the west by 400 to 500 feet. This would result in additional environmental impacts to wetlands, require significant additional construction fill hauling, would necessitate the relocation of additional stream channels, and would likely require relocating State Route 509, the construction of expensive retaining structures, and the hauling of large additional amounts of fill material. In addition, any movement westward of the runway would require filling several additional wetland areas.

58. In its Record of Decision approving the Port's Master Plan Update, the FAA has stated that a staggered north threshold runway is not practical or desirable at STIA.

59. Although the primary function of the new runway is to serve arrivals, which require less runway length than departures, the new runway is planned for use by limited departures during certain conditions. This will enable air traffic controllers to offload departures from the primary departure runway during limited peak periods and during conditions in which the existing runways are unavailable. Limited use of the new runway for departures will also provide added flexibility for air traffic controllers.

60. A significant percentage of the fleet mix projected to use STIA in the planning period could not use the shorter runway proposed by the ACC for departures.

61. A great majority of the fleet mix could use the proposed ACC runway for landings, based on the standard book value used for runway planning purposes. These "book value" numbers assume "still wind" conditions. Still wind conditions are frequently not present at STIA and cannot be counted upon during bad weather conditions.

62. The testimony demonstrated that many pilots would refuse a 6000 to 6700-foot runway, given the availability of a longer parallel runway. The statistics used in the EIS and by ACC witness Stephen Hockaday for aircraft landing/takeoff ability on runways of various lengths are based

on the technical capabilities of the aircraft, the "book value." However, pilots are ultimately responsible for the control of their aircraft, and it is likely that pilots may frequently refuse the runway length proposed by the ACC, especially during bad weather or crosswind conditions. Any time a pilot does so, additional delays and increased air traffic controller workload will result. The availability of an 8500-foot runway would provide more flexibility to accommodate arrivals, regardless of aircraft type and weather conditions.

63. Because a smaller percentage of the fleet would be able to use a 6000 to 6700-foot runway, as compared to an 8500-foot runway, the shorter runway would complicate air terminal management under some circumstances, based on routine air traffic control procedures at STIA. In particular, certain long-haul traffic would have to be segregated from other traffic and resequenced into the approach pattern of the existing longer runway. This procedure would tend to increase controller work load, aircraft flying time and delays.

64. The administrative record shows that the Port considered shorter-length runway alternatives in the Master Plan EIS/SEIS, including a 7000-foot runway located 2500 feet from the existing inboard runway. The EIS/SEIS also considered alternative runway configurations with staggered north thresholds of 935 feet and 1435 feet. In addition to the information in the Master Plan EIS/SEIS, the detailed Airside Options Evaluation prepared by P&D Aviation for the Master Plan is incorporated by reference into the EIS and discusses runway configurations.

65. The Port conducted an assessment of airfield options before the preparation of the Master Plan DEIS. That analysis considered the following representative alternatives: the existing airfield (Option 1 — No-Action); two separate 5200-foot commuter-length runway configurations (Options 2, 3); a 7000- to 7500-foot runway in three separate configurations (Options 4A, 4B, 4C); and an 8500-foot runway in two configurations (Options C, D). Based on this early analysis, the Port determined that the commuter-length runway configurations (Options 2, 3) would not meet the proposal's purpose and needs.

66. Because the commuter-length runway options (Options 2, 3) did not meet the proposal's purpose and needs, they were not analyzed in detail in the EIS. A range of other runway length options (Options 4A, 4B, 4C, 5, 6), including runway lengths from 7000 to 8500 feet separated by at least 2500 feet from the existing inboard runway, were analyzed in the Master Plan EIS/SEIS.

67. The ACC claims that shorter runways were not discussed because one of the Option 4 alternatives (Option 4B) was only discussed in a representative manner in the Master Plan EIS/SEIS. As explained in the EIS/SEIS, this option's environmental impacts were considered to be similar to Options 4A, 4C, and 5.

68. The runway alternatives analysis in the Master Plan EIS/SEIS is organized to present representative alternatives and to use the preferred alternative as a benchmark for the discussion of other alternatives. The possible variations are first presented. Representative alternatives were then used for some groups of alternatives. And the proposed action was used as a baseline to make the discussion of all alternatives understandable. When the environmental impacts of shorter runway lengths differ from an 8500-foot runway, those impacts are identified in the EIS/SEIS.

69. The ACC argues that the Port did not discuss the impacts that could be avoided by adopting its suggestion of a runway with a staggered north threshold. However, the EIS discusses alternative runway configurations with a staggered north threshold and discloses that a runway with a staggered north threshold would have different impacts from the preferred alternative (8500-foot runway). The Master Plan Final EIS, for example, shows that a 1,435-foot staggered north threshold, for example, would require 5 million cubic yards less fill material than the Port's preferred alternative. The Master Plan Final EIS also discloses that a 935-foot staggered north threshold would require 4 million cubic yards less fill than the preferred alternative. The extent to which other environmental impacts, including wetland impacts, would be different for a staggered north threshold options is also disclosed.

70. The ACC criticizes the EIS for not considering the difference between the volume of fill material at the mining site (where the material would be mined) and the volume of that material in the trucks coming to the STIA construction site. The ACC also argues that the EIS/SEIS underestimated the amount of truck trips needed to import the required volume of fill because the "swell" factor was underestimated. As Port engineering expert Bob Maruska explained, the "swell" factor translates the compacted in-place volume (at the construction site) to the volume required to haul that material to the site in trucks, so that the number of trucks can be predicted.

71. As Mr. Maruska and the Port's traffic engineering expert James Edwards credibly testified, the Port's analysis of construction impacts used a "swell factor" of 15 percent, which was based on regional conditions, empirical evidence from local contractors and material suppliers, and their experience obtained in similar projects. Moreover, the construction traffic analysis in the Master Plan EIS/SEIS used an overall conservative approach to traffic volumes that likely overestimates the probable construction traffic required for the material haul.

72. The ACC alleges that the Master Plan EIS/SEIS ignored the impact of Boeing Field on the operation of STIA. The evidence presented by the testimony of Mr. Goldberg discussed an analysis performed by the FAA in 1992 which considered interactions with Boeing Field. That analysis concluded that the STIA Master Plan Update could achieve its delay reduction objectives. As Mr. Goldberg's testimony points out, the EIS analysis did, in fact, consider the effect of airspace interactions between STIA and Boeing Field (King County airport).

73. In its briefing to the Examiner, the ACC alleges that the Port's EIS/SEIS failed to consider the potential socioeconomic impacts which could result from hauling the required fill dirt to the third runway construction site. The ACC did not present any evidence at the hearing showing that socioeconomic impacts, such as property devaluations, would actually occur.

74. The ACC alleged in its briefing to the Examiner, that the Port has failed to finalize a plan for mitigating impacts from hauling fill dirt. The testimony of Mr. James Edwards and Ms. Gina Marie Lindsay discussed the potential Best Management Practice mitigation measures which the Port will incorporate into its hauling contracts in order to mitigate potential impacts associated with the construction haul traffic, including both short-term and long-term impacts to area roadways.



## II. CONCLUSIONS OF LAW

### A. General Conclusions Of Law.

1. EIS adequacy has been characterized as a question of law. Questions of law generally are subject to a de novo standard of judicial review. Leschi Improvement Council v. Washington State Highway Commission, 84 Wn.2d 271, 280-87, 525 P.2d 774 (1974). However, the de novo standard of review is specifically qualified by SEPA's statutory requirement that agency determinations of EIS adequacy are entitled to substantial weight in administrative and judicial appeals. RCW 43.21C.090. OPAL v. Adams County, 128 Wn. 2d 869, 875, 913 P.2d 793 (1996).

2. The legal standard by which EIS adequacy must be determined is the "rule of reason."

3. Washington courts consistently have articulated the "rule of reason" as a "broad, flexible cost-effectiveness standard." E.g., Citizens Alliance v. Auburn, 126 Wn.2d 356, 362, 894 P.2d 1300 (1995). Under this standard, an EIS is not to be a "compendium of every conceivable effect or alternative to a proposed project." E.g., Toandos Peninsula Ass'n v. Jefferson County, 32 Wn. App. 473, 483, 648 P.2d 448 (1982), and is required to include only a "reasonably thorough discussion of the significant aspects of the probable environmental consequences," e.g., OPAL v. Adams County, *supra*, 128 Wash. 2d at 875, and provide "sufficient information to make a reasoned decision." Citizens Alliance v. Auburn, *supra*, 126 Wash. 2d at 362.

4. Under the "rule of reason," an EIS is not required to identify or analyze impacts that are "remote and speculative." E.g., Cheney v. Moundake Terrace, 87 Wash. 2d 338, 344, 552 P.2d 184 (1986)

5. The lead agency's determination that potential environmental impacts are remote or speculative and need not be addressed in an EIS is entitled to substantial weight in an appeal of EIS adequacy. RCW 43.21C.090. E.g., OPAL v. Adams County, *supra*.

6. Under the rule of reason, only a "reasonable" number and range of alternatives need be addressed in an EIS, e.g., Citizens Alliance v. Auburn, *supra*; SWAP v. Okanogan County, 66 Wn. App. 439, 444-446, 832 P.2d 503 (1992), and the word "reasonable" is intended to limit the number and range of alternatives. WAC 197-11-440(5)(b)(i).

7. An agency has discretion to choose the reasonable alternatives to be addressed in an EIS. SWAP v. Okanogan County, *supra*. Under RCW 43.21C.090, an agency's choice of reasonable alternatives should be given substantial weight. *Id.* at 66 Wn. App. at 445.

8. Under the rule of reason, an agency has broad discretion in deciding what potential mitigation measures should be included in an EIS. SWAP v. Okanogan County, *supra*; Robertson v. Methow Valley Citizens Coun., 490 U.S. 332, 359, 109 S. Ct. 1835, 104 L.Ed.2d 351 (1989). Neither SEPA nor NEPA require that an EIS include a complete or detailed mitigation plan or a commitment to mitigate. *Id.*, 66 Wn. App. at 447; 490 U.S. at 359.

9. An agency determination of the nature and extent of potential mitigation to include in an EIS is entitled to substantial weight. RCW 43.21C.090. SWAP v. Okanogan County, *supra*, 66 Wn. App. at 447-448.

**B. Conclusions Of Law Relating to the Aviation Forecast Issue.**

10. Washington courts have followed federal NEPA cases when construing SEPA. Eastlake Community Council v. Roanoke Associates, 82 Wn.2d 475, 488 (fn. 5), 513 P.2d 36 (1973).

11. The Port and the FAA are agencies with expertise in forecasting aviation demand and should be granted deference in choosing the appropriate methodology for forecasting aviation activity. City of Grapevine v. Dept. of Transportation, 17 F.3d 1502, 1507 (D.C. Cir. 1994) (court deferred to the agency's expertise in choosing the appropriate way to measure noise); Seattle Community Council Federation v. Federal Aviation Administration, 961 F.2d 829, 833-34 (9th Cir. 1992) ("[I]t is within an agency's discretion to determine which testing methods are most appropriate."); Citizens Against Burlington v. Busey, 938 F.2d at 200-201 (FAA's choice of methodology to measure the impacts of noise on the environment was an informed decision to which the court should defer); Sierra Club v. Dept. of Transportation, 753 F.2d 120, 128 (D.C. Cir. 1985) (it is within the expertise and discretion of the FAA to determine the proper method to measure airport noise); Florida Wildlife Federation v. Goldschmidt, 506 F. Supp. 350, 376-77 (1981) (the traffic forecasting methodology used in an EIS was adequate where the modeling was consistent with the state of the art at the time). The United States Supreme Court has agreed that a reviewing court must be its most deferential when examining the decision of an expert agency which is making predictions within its area of special expertise. Baltimore Gas and Electric Co. v. Natural Resources Defense Council, 462 U.S. 87, 103, 76 L.Ed.2d 437, 103 S. Ct. 2246 (1983).

12. When an agency is presented with conflicting expert opinion on an issue, it is the agency's job and not the job of the reviewing appellate body, to resolve those differences. Webb v. Gorsuch, 699 F.2d 157, 160 (4th Cir. 1983).

13. The Port and the FAA used a forecasting methodology for the SEIS that was consistent with industry-accepted standards and was proven reliable over time. The Master Plan Update forecasts were reviewed and approved by the FAA's Northwest Mountain Region and the Forecast Branch of the FAA Headquarters in Washington, D.C. The decision to measure aviation demand by the aviation forecast methodology chosen is legally adequate under the rule of reason.

14. Under the rule of reason, the Port and FAA reasonably exercised their discretion in determining that, during the planning horizon for the Master Plan Update, (a) the construction of the proposed improvements, including the third runway, would not cause significant new growth in aviation demand and (b) not constructing the proposed improvements would not cause significant decrease in demand. Therefore, the aviation demand forecasts that served as the basis for the SEIS analysis did not understate aviation activity under the With Project scenario and did not overstate activity under the Do Nothing scenario.

15. The EISs analyzed the potential impacts of a higher aviation forecast and compared these impacts to those of a constrained forecast in Appendix R to the FEIS and Appendix D to the

FSEIS. Based on the difficulty to reasonably conduct aviation demand forecasting beyond the year 2010, this analysis was sufficient under the rule of reason.

16. The difference of opinion between the ACC's expert witness and the Port's expert witnesses was discussed in the EISs, which allowed the decision-makers to be informed on this issue prior to making their decisions. The lead agency's decision of which expert opinion to follow and which forecasting methodology to adopt was legally sufficient under the rule of reason.

**C. Conclusions of Law Relating to the Lead Agency's Decision to Limit Detailed Environmental Impact Analysis to the 2010 Planning Horizon.**

17. Under SEPA, the contents of environmental review depend on the lead agency's existing planning and decision-making process, and on the time when alternatives can be most meaningfully evaluated. WAC 197-11-060(2)(a)

18. SEPA's provisions relating to analyzing the long-term impacts of a proposal over the life-time of the project must be viewed and applied in the context of related SEPA provisions such as WAC 197-11-060(4)(a), which require consideration of impacts that are "likely, not merely speculative."

19. SEPA only requires a reasonably thorough discussion of the probable environmental consequences of an agency's decision. OPAL v. Adams County, 128 Wn.2d 869, 875, 913 P.2d 793 (1996).

20. When discussing potential impacts, an EIS is only required to consider impacts that are "likely, not merely speculative" and remote or speculative impacts need not be discussed. WAC 197-11-060(4)(a); Mentor v. Kitsap County, 22 Wn. App. 285, 289, 588 P.2d 1226 (1978); Cheney v. Mountlake Terrace, 87 Wn.2d 338, 346, 552 P.2d 184 (1976).

21. The decision in the SEIS to limit the detailed analysis of impacts to the 13-year planning horizon, or the year 2010, was a reasonable decision and was legally sufficient under the rule of reason.

22. The conclusion in the SEIS that detailed analysis of environmental impacts beyond the year 2010 would not be capable of meaningful evaluation was a reasonable decision and sufficient under the rule of reason, particularly given the extent to which subsequent environmental review and additional mitigation, if appropriate, would take place under both state and federal processes.

23. The purpose of SEPA was well served with this SEIS. Even though detailed evaluation beyond the year 2010 was speculative and thus not likely to lead to meaningful evaluation, the drafters of the SEIS included at Appendix D an extrapolated estimate of possible impacts in the year 2020 in order to provide decision-makers with the analysis of possible impacts through the year 2020 prior to their taking action. The confirmation in Port Resolution 3245 by the Port Commissioners of the information in the EIS through the year 2020 indicates that this goal was accomplished. Moreover, the discussion of the information contained in the EIS at Attachment A to

Resolution No. 3245 shows that SEPA's goal of providing decision-makers with information to ensure an informed decision was well served in this case.

**D. Conclusions of Law Relating to the Alternatives Issue.**

24. Rather than require agencies to discuss every possible option repetitiously and at length, SEPA gives agencies great discretion in how to discuss alternatives and encourages agencies to simplify that discussion by using benchmark or representative alternatives. WAC 197-11-440(5).

25. The amount of space devoted to each alternative may vary. One alternative (including the proposed action) may be used as a benchmark for comparing alternatives. The EIS may indicate the main reasons for eliminating alternatives from detailed study. WAC 197-11-440(5)(c)(v).

26. A range of alternatives or a few representative alternatives, rather than every possible reasonable variation, may be discussed. WAC 197-11-440(5)(c)(vi).

27. An EIS need not discuss alternatives that are not reasonable, and reasonable alternatives include actions that could feasibly attain the project's goals with a lower environmental cost. WAC 197-11-440(5)(b).

28. The evidence shows that the ACC's proposed alternative is not a reasonable alternative (i.e., not practically feasible) and the Port was not required to consider it in the EIS.

29. In the alternative, assuming that the ACC's proposed alternative is a reasonable alternative, the EIS/SEIS considered representative shorter runways, including runways with staggered north thresholds, and identified their impacts to the decision-maker to the extent those impacts differed from the preferred alternative. Under the rule of reason and under the SEPA Rules that allow the lead agency to consider a few representative alternatives, rather than every possible configuration of runways that could possibly be placed on the STIA site, the Port's consideration of alternatives in the EIS/SEIS is legally sufficient. Here, the Master Plan EIS/SEIS clearly considered a reasonable range of runway lengths and configurations, including shorter-length runways and runways with staggered north thresholds, and correspondingly lesser construction fill impacts. This satisfies SEPA's rule of reason.

30. Under the rule of reason, the EIS/SEIS adequately disclosed the potential for less fill hauling from a staggered north threshold runway configuration.

31. The EIS adequately disclosed the potential numbers of truck trips from construction fill. With respect to the "swell factor" issue, the only relevant difference is the "swell" or "shrink" factor difference between the compacted in-place volume at the construction site and the volume in the trucks bringing the material to the construction site. The difference in volume between the in-bank material at a mining site and the product carried by a truck is not relevant in determining how many truckloads of fill material will be required to construct the proposed new runway improvements. With respect to the difference in "swell factor" between the compacted in-place volume at the STIA construction site and the volume in the trucks hauling the dirt to that construction site, the Port's analysis of construction impacts was legally adequate under the rule of reason. The Port's EISs used a

"swell factor" of 15 percent, which was reasonably based on regional conditions, empirical evidence from local contractors and material suppliers, and their experience obtained in similar projects. Moreover, the construction traffic analysis in the Master Plan EIS/SEIS used an overall conservative approach.

32. An EIS is not required to include a completed mitigation plan. Therefore, the ACC's argument that a final dirt haul mitigation plan is not in place has no legal merit. In addition, the Examiner concludes that the Best Management Practices proposed by the Port to mitigate potential impacts from construction hauling is more than adequate under SEPA's rule of reason.


33. Socioeconomic impacts are not "environmental" impacts cognizable under SEPA. Based on the evidence presented, the Port's EIS/SEIS was not legally required to discuss socioeconomic impacts. SEAPC v. Cammack II Orchards, 49 Wn. App. 609, 615-16, 744 P.2d 1101 (1987); WAC 197-11-448.

34. Any finding of fact deemed to be a conclusion of law is hereby adopted as a conclusion of law.

#### DECISION

Based upon the Findings of Fact and Conclusions of Law set forth above, it is the decision of the Hearing Examiner to uphold the adequacy of the Port's Master Plan Update EIS and SEIS and deny the appeal of the ACC.

DATED this 30<sup>th</sup> day of January, 1998.



\_\_\_\_\_  
GREG SMITH  
PORT OF SEATTLE HEARING EXAMINER