

Executive Board Workshop

Thursday, May 30, 1996

NOTE TIME

→ 9:00 a.m. ←

NOTE LOCATION

Bellevue Conference Center
121 107th Avenue NE
Bellevue, WA
See Attached Map...

Agenda

9:00 a.m.

1. **President's Remarks** - Executive Doug Sutherland, *President*
 - Purpose, Background and Workshop Procedures (see Attachment 1)*
2. **Introduction of Agency and Community Resources**
3. **Regional Council Response to Expert Panel Recommendations***
4. **Summary of Responses to Expert Panel Recommendations** (see Attachment 2)*
5. **Board Dialogue on Expert Panel Recommendations**

10:50-11:00 a.m. - Break

6. **Continued Dialogue**

12:30-1:00 p.m. - Lunch Break

7. **Continued Dialogue**

2-2:10 p.m. - Break

8. **Review of Discussion, and Direction to staff on Preparing Draft Metropolitan Transportation Plan Amendment, including Refined List of Noise Reduction Measures, for Public Review prior to June 27 action by Executive Board**
9. **Announcements** (see Attachment 3)*

Note Dates and Times

Next Executive Board Meeting Date and Time - Thursday, June 27, 1996,

Public Hearing, 9 a.m. - noon - Seattle Center Flag Pavilion

Executive Board Meeting, 1:30-3:30 p.m. - Seattle Center Flag Pavilion

General Assembly Meeting - Thursday, July 11, 1996, 2-5:00 p.m. -

Seattle Center Flag Pavilion

3:00 p.m.

Adjourn

*Supporting materials attached. For additional copies of the complete agenda packet, please contact Sylvia Nelson, (206) 464-7518.

Sign language and communication material in alternate formats can be arranged given sufficient notice by calling Grace Foster at (206) 464-7090; TDD/TTY (206) 464-5409.

BELLEVUE CONFERENCE CENTER

121 - 107th Avenue NE • Bellevue • 206-451-9995

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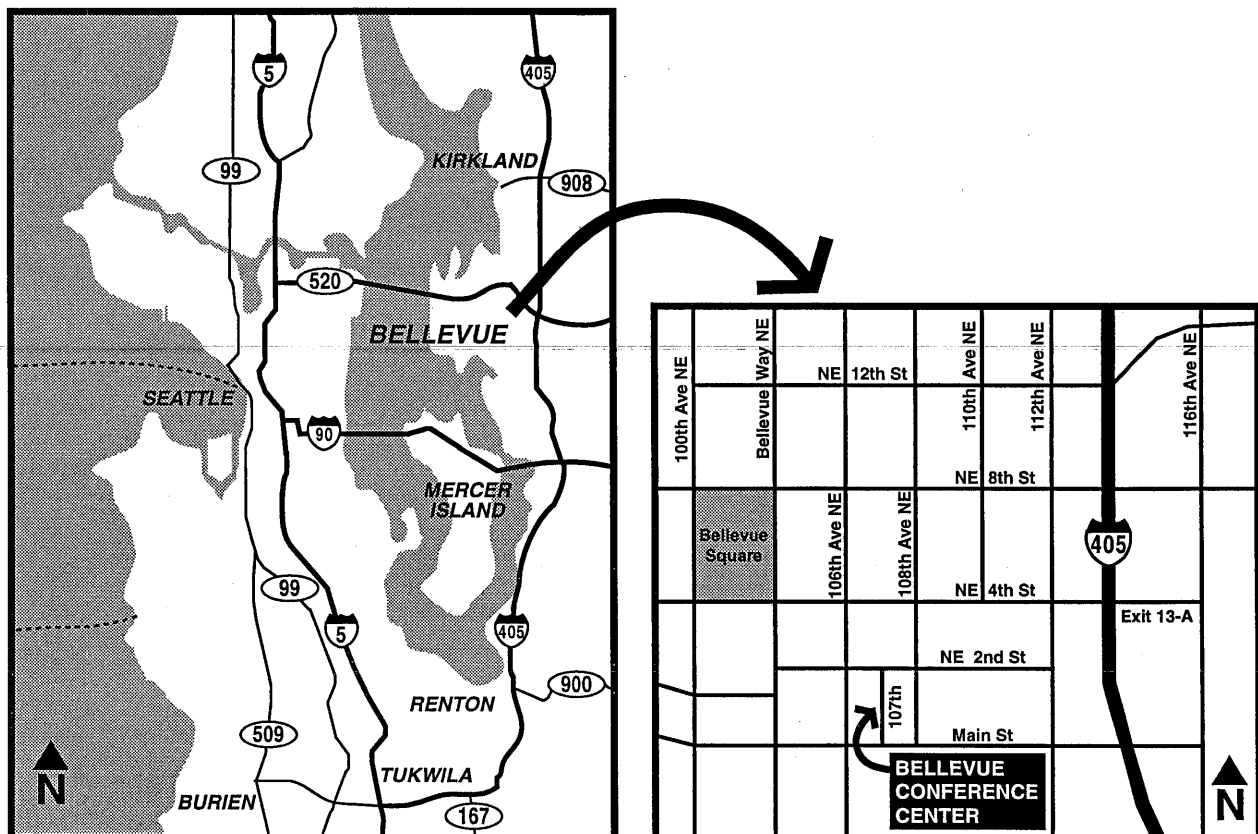
- Take the NE 4th Street Exit (#13-A).
- Turn left (west) at the light. Travel 3 blocks.
- Turn left at 108th Avenue NE. Travel 1 block.
- Turn right at NE 2nd Street.
- Turn left at 107th Avenue NE.

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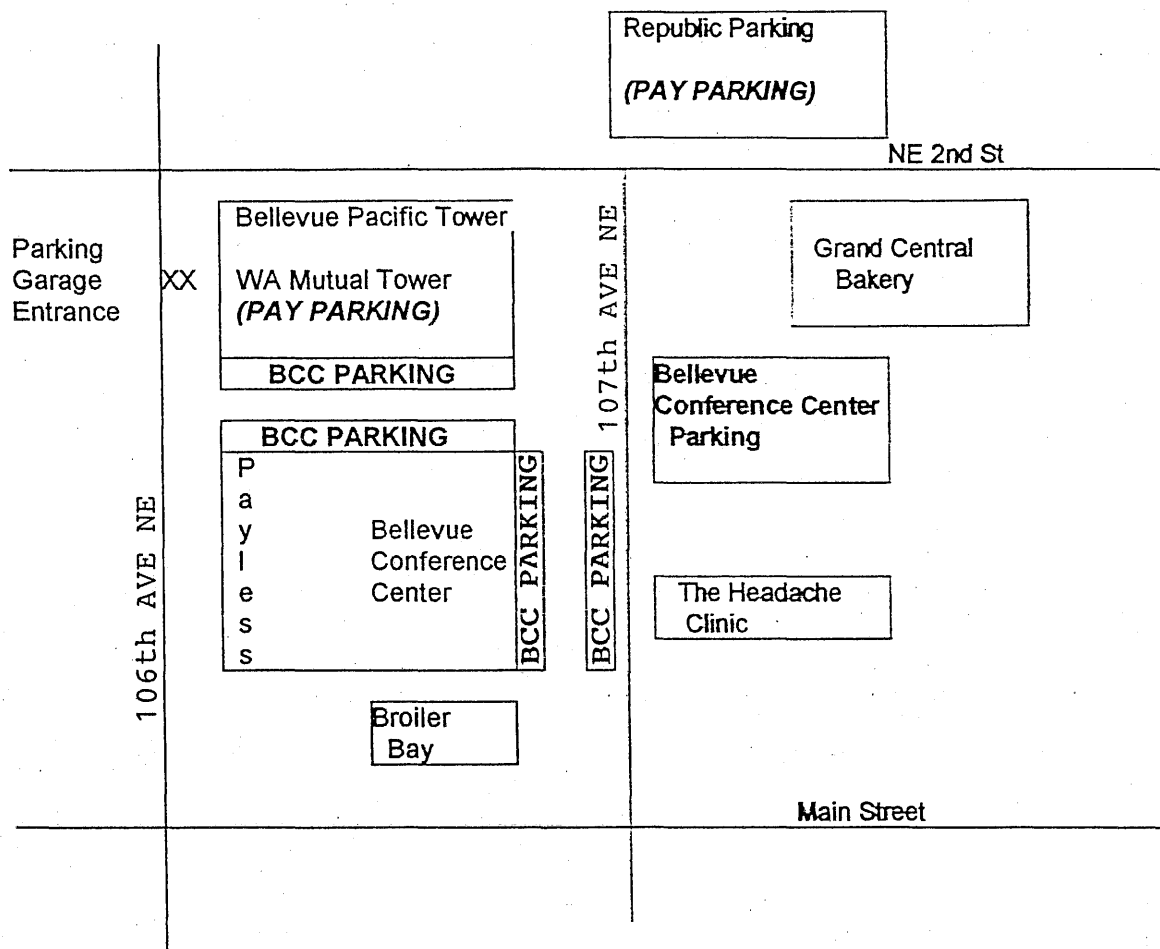
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Limited parking is available on a first come first serve basis and those are marked as "BCC Parking".
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Attachment 1

EXECUTIVE BOARD WORKSHOP -- May 30, 1996

Purpose: The purpose of the workshop is to identify specific noise reduction measures as part of an amendment that would include a third runway at Sea-Tac Airport in the Metropolitan Transportation Plan (MTP). Based on the workshop discussion, the Board will direct staff to develop a draft amendment to the MTP, which will be made available for public comment beginning June 10.

Background: The Regional Council has supported construction of a third runway at Sea-Tac Airport, provided the impact of noise on surrounding communities can be reduced. The Expert Panel that looked at the noise issue indicated that the Port of Seattle had not met the threshold for noise reduction to satisfy the Regional Council's conditional approval of the third runway, but also indicated that the outcome could have been different, had some additional noise reduction measures been implemented. The Panel made some specific recommendations for consideration as additional noise reduction measures.

At its meeting on April 25, the Executive Board agreed to use the Panel's recommendations as the basis upon which to decide what additional, feasible, noise reduction measures could be implemented. The agencies and communities that would be responsible for implementing these recommendations have been asked to review the recommendations and provide an assessment of which are feasible, their cost, their benefits, the period of time needed for implementation, including milestones, potential obstacles and how they might be overcome, and methods for monitoring compliance and enforcement. The information submitted to the Board in response to this inquiry will be the basis for the Board's discussion at the May 30 workshop. Written public comments were also accepted on these recommendations.

Procedures: This will be a working session of the Board, and will not include a public comment period.

The affected agencies and communities have been asked to attend the workshop and be available to answer questions from Board members. These agencies and communities include: the Port of Seattle; the Federal Aviation Administration; the Washington State Department of Transportation; King County (as operator of King County Airport); the Airport Communities Coalition -- Cities of Burien, Des Moines, Federal Way, Normandy Park, Tukwila and the Highline School District; the City of SeaTac; Alaska Airlines; and the Regional Council. Each of these parties will be asked to identify a principal spokesperson to respond to Board inquiries.

Staff will present a brief summary of the responses of these agencies and communities.

The Board will then go through each of the recommendations, discussing the responses and directing questions through the chair to the affected agencies and communities.

After going through all of the recommendations and responses, the Board will review the discussion and provide direction for refining this information into a draft amendment to Resolution A-93-03 (which is incorporated in the MTP) and the Metropolitan Transportation Plan.

MEMORANDUM

May 20, 1996

To: Executive Board

From: Mary McCumber

Subject: **Regional Council Response to Expert Panel Recommendations**

As you will recall, at its April 25 meeting, the Executive Board agreed to use the recommendations of the Expert Panel as the basis for deciding what additional noise reduction measures should be a part of including the third runway as an amendment to the Metropolitan Transportation Plan (MTP). A number of the Panel recommendations identified the Regional Council as the lead or co-lead agency for implementation.

Staff reviewed the recommendations and, developed a draft response to each of them (which is included in *Responses by Potential Implementing Agencies and Communities to Expert Panel Recommendations*, enclosed), along with a general response to others for which the Council could have monitoring or other responsibility. These responses, along with the responses from the other potential implementing agencies and communities, will be the basis for the discussion at the Board's workshop on May 30.

It is important to note that each of these draft responses would require approval by the Executive Board, including authorization for appropriate budget action, as part of the Board's action on a draft MTP amendment at its meeting on June 27. As the attachment notes, **the Council currently has no funds budgeted for additional air transportation-related activities in the Budget and Work Program for Fiscal Year 1997 (July 1, 1996-June 30, 1997).**

If all these recommendations were adopted, and all the associated costs (such as the costs of mediation or arbitration noted in items 1 and 8) were borne by the Council, the total budget impact could be approximately \$140,000 to \$220,000 for staff costs, and up to \$50,000 for mediation/arbitration expenses, although this latter cost could be borne by the Port of Seattle as project sponsor. As for the staff costs, the Council already has allocated \$60,000 of the \$100,000 FY 1997 contingency fund for air-transportation work in preparation for the July 11 General Assembly. With the exception of the remaining contingency fund, restrictions on the grants the Council is expecting and the matching costs that come out of local dues mean that there would not be additional funds that could be shifted to cover all these costs. The additional costs *could* potentially be eligible for FAA funding, but this is certainly not guaranteed. Thus, some other mechanism such as a special dues assessment may need to be considered to pay these costs, if they are to be incurred.

MEMORANDUM

May 22, 1996

To: Executive Board

From: Mary McCumber, Executive Director

Subject: Summary of Responses to Noise Reduction Recommendations

On April 25, the Executive Board agreed to use the Expert Panel's recommendations as the basis for deciding what additional, feasible noise reduction measures could be part of an amendment to include a third runway at Sea-Tac Airport in the Metropolitan Transportation Plan. To follow up, staff asked the agencies and communities that would be responsible for implementing the Panel's recommendations to assess which recommendations could be feasible, how much they could cost, what effect they could have, and how their implementation might be monitored and ensured. The responses from these entities are compiled in a separate document titled *Responses by Potential Implementing Agencies and Communities to Expert Panel Recommendations* (enclosed). Written comments by citizens and other organizations or groups were also accepted, and these are included in the packet titled *Correspondence Received for Executive Board Members, May 10 Through May 22, 1996* (also enclosed).

Responses were solicited from the Port of Seattle; the Federal Aviation Administration; the Washington State Department of Transportation; King County (as operator of King County Airport); the Airport Communities Coalition -- Cities of Burien, Des Moines, Federal Way, Normandy Park, Tukwila and the Highline School District (which submitted a separate response); the City of SeaTac; Alaska Airlines; and the Regional Council. The City of SeaTac and Alaska Airlines did not respond.

To assist the Board in evaluating the recommendations and responses at your workshop on Thursday, May 30, staff prepared a summary and matrix (Attachment 2) that generally describe responses and major positions. The affected agencies and communities have been asked to attend the workshop, and be available to answer questions from Board members.

General Context

It should be noted that, while none of the issues regarding noise is simple, some are highly technical in nature, and others are less technical and more a matter of policy. Many of the technical issues are proposed by the Port and FAA to be addressed in a "Part 150 Study," which the Port is planning to begin this fall, and which could take two to three years. This is a federal process that establishes a noise plan that is eligible for federal funds. Recommendations that could be dealt with as part of a Part 150 Study are noted in Attachment 2 with an asterisk(*)).

As the Port noted in its responses, "evaluation of a proposed action (through a Part 150 Study) does not necessarily imply it will be implemented" because FAA has final authority for approving Part 150 recommendations, and must agree that they are consistent with safety and other considerations. The Airport Communities Coalition is opposed to a "traditional" Part 150 Study (see Responses, Recommendation #6).

Also, it should be noted that the ACC prefaced its comments by restating its objections to the Council moving forward to pursue the MTP amendment to include Sea-Tac expansion with additional noise reduction measures, in light of the Expert Panel's finding that the noise condition in General Assembly Resolution A-93-03 was not met. In addition, the ACC stated that "it is unrealistic to expect any party to assess the impacts, cost and effectiveness of a multitude of actions potentially resulting in reduced Airport noise in such a short period of time," adding that "the abbreviated timetable...casts serious doubt on the PSRC's motives in undertaking this exercise."

Summary of Responses from Others

As noted on page 1, comments received from others on the Panel recommendations are included in the *Correspondence* packet. These responses included letters in support of Council action, a letter from the City of Tukwila expressing concerns about the process and its discussion about a potential withdrawal from the Regional Council, a detailed response from the Seattle Community Council Federation that also expressed concerns about the process and called for attention to noise reduction measures that could benefit communities beyond those represented by the ACC, and a letter from City of Medina Mayor Dewey Taylor that supported examination of moving flight tracks as a potential noise reduction strategy.

Emerging Implementation Issues

In light of the Executive Board's direction to look at "establishment of a plan for implementation" of noise measures as part of the MTP amendment, two significant issues have emerged during the review of responses to the Expert Panel recommendations:

1) Since the Part 150 Study would begin this fall and take two to three years to complete, **how could implementation of noise reduction measures that are considered as part of the Part 150 Study be ensured?** Based on information from the Federal Interagency Committee on Noise, implementation of recommendations may be best ensured by including the specific noise reduction measures approved by the Regional Council's Executive Board in the FAA's Record of Decision on the Final Environmental Impact Statement for the Sea-Tac Master Plan. The Record of Decision is expected to follow action on the MTP amendment by the Regional Council.

2) Since, as the Port notes in its responses, some recommendations, if pursued, could require additional financial resources beyond what is currently anticipated from federal sources, **are there additional sources of funding that could/should be made available?** This is a question that can be raised at the workshop; the Port, the FAA, the consultant hired by the Regional Council to assist with these issues, and others, could provide Board members with insights on whether there are other sources of potential funds, including how other airports have dealt with this issue.

Attachment 2

Summary of Responses by Potential Implementing Agencies and Communities to Expert Panel Recommendations

In the following summary, the “Responses” are meant to highlight major issues and points of agreement or disagreement, not offer every party’s comments on each recommendation. (See *Responses by Potential Implementing Agencies and Communities to Expert Panel Recommendations* for full text of each response.)

Recommendation #1: Resolve the impasse between the Highline School District and the Port of Seattle on noise insulation for schools.

Responses: All parties responding, including the Port, the Highline School District, the FAA, etc., agree that a method of resolving this impasse should be developed. The first difficult question to resolve is, what means will be used to resolve this impasse? The Regional Council staff suggests three alternatives: a committee of the Executive Board working with the two parties to resolve the issues, use of an outside mediator, or an agreement between the parties on an arbitrator. The Port and the District would have to agree to one of them or some similar mechanism for this recommendation to be achieved.

***Recommendation #2: The Port should implement its plan to upgrade its noise monitoring system, with no fewer than 25 permanent monitoring stations, using three types of measurement.**

Responses: The Port agrees to upgrade the system, with the technical specifications (number of monitors, locations, measurements, etc.) to be developed in conjunction with its Part 150 Study (beginning this fall and extending over two to three years).

Recommendation #3: The Port and organizations representing affected communities should jointly sponsor social surveys at regular intervals to assess the effectiveness of noise reduction/mitigation efforts in terms of perceived noise impacts.

Responses: The Port does not support the recommendation; the Airport Communities Coalition supports it. Both acknowledge the difficulties in reaching agreement on how surveys would be conducted. The Port says surveys would “add to confusion and contention” and “not in any way improve the noise environment” or improve prospects for federal funding of noise reduction efforts. The ACC says surveys could be “extremely useful for monitoring the actual effect and progress (if any) of noise reduction” efforts.

Recommendation #4(I): **The Port should address ground-related aircraft noise by taking steps to assess and if possible reduce the use of “thrust reversers.”**

Responses: The Port agrees to analyze the potential for reducing thrust reverser use, noting that any changes in guidelines or rules on the restrictions of thrust reversers must be approved by the FAA and pilots (discussions of these/related issues over next 18 months).

***Recommendation #4(ii):** **The Port should also address ground-related noise by working to minimize the number, level and duration of daytime engine run-ups.**

Responses: The Port says reducing the number of run-ups is not possible, saying that these testing procedures are essential for aircraft maintenance and safety (and are largely prohibited at night); however, *where* the tests occur “and other operational changes which may reduce their impact” are allowable and will be evaluated as part of the Part 150 Study (beginning this fall, over two to three years).

***Recommendation #5a:** **The Port should obtain a commitment from the FAA to enforce compliance with the North Flow Nighttime Departure Noise Abatement Procedures.**

Responses: The Port and FAA both say they agree that these procedures should be followed and are enforced, but the Port’s “nighttime” is 10 a.m.-7 p.m.; the FAA, which refers to this as the “low activity” period, uses 11 p.m.-5 a.m, and thus “daytime” activities extend into the 10-11 p.m. and 5-7 a.m. periods. The FAA notes that this issue could be studied further as part of the Part 150 study.

Recommendation #5b: **Work to eliminate the two nighttime Alaska Airlines Stage 2 flights from Boeing Field.**

Responses: All parties responding agree with this recommendation; however, Alaska Airlines did not respond. King County proposes to fund a study and rule-making process with which it could ban such flights by all operators (this would be over a period of about 18 months, and depends upon County Council approval). The County notes that Alaska has committed to changing its schedule this summer to eliminate one of the flights; it will be shifted back to Sea-Tac to a time before the noise curfew begins. Federal rules require phase-out of all Stage 2 aircraft by the year 2000, though the FAA can allow waivers for up to four years.

Recommendation #5c: **Work with the airlines to minimize the total number of flights in the middle of the night (e.g., 1:30-5:30 a.m.)**

Responses: The Port agrees to discuss voluntary rescheduling of flights during these hours with the airlines. However, the Port notes that it assumes that flight

schedules, “especially those in the nighttime hours, are responding to important and time sensitive cargo or passenger demands.”

Recommendation #5d: Continue to minimize the number of variances issued for the Nighttime Limitations Program

Responses: The Port agrees, noting that there currently are no variances.

Recommendation #5e: Work with foreign air carriers to ensure that Stage 3 aircraft continue to be used for nighttime international flights.

The Port agrees, noting that currently all such flights are Stage 3.

Recommendation #5f: Work with owners/operators of Stage 2 aircraft under 75,000 pounds (which are currently exempt from the Nighttime Limitations program) to limit or eliminate their use.

Responses: The Port agrees to work with the owners/operators to voluntarily minimize or eliminate the use of such aircraft during nighttime. The Expert Panel noted that there were, on average, 13 exempt Stage 2 nighttime flights per month in the second and third quarter of 1995.

Recommendation #5g: Continue to work with the airlines to minimize nighttime engine run-ups.

Responses: The Port notes that restrictions have been in place for many years, that the number of nighttime run-ups is only two to four per month, and that, “the Port does not believe that they can be further reduced.”

***Recommendation #6: The Regional Council, FAA, and communities affected by airport noise participate actively and constructively in the Port’s upcoming Part 150 study (to include items listed in recommendations 6a-e).**

The Port will initiate this study, the FAA will monitor it; with Executive Board approval, the Regional Council could participate. The ACC “does not believe that there is any significant value to a traditional Part 150 study,” and that only a study with the ACC as a “co-equal partner” would be productive, and then only if the Port commits “a defined share of federally authorized financial resources” to implement the study recommendations. The Part 150 Study would begin this fall, and would extend over a period of two to three years.

***Recommendation #6a: Evaluate actions needed to ensure that the North Flow Daytime Departure Duwamish/Elliott Bay Noise Abatement Procedures are enforced and, if possible, use this corridor during periods of lighter activity.**

- Responses: The FAA says these procedures are in use, but they will take action to review these procedures. Both the Port and FAA say use of these procedures during periods of lighter activity has been evaluated and is not feasible; therefore, there's no reason to include it in a Part 150 study. The ACC says it is feasible and could be implemented without a Part 150 study.
- *Recommendation #6b: Evaluate the feasibility of extending the use of North Flow Nighttime Departure Noise Abatement Procedures (10 p.m.-6 a.m.) to 8-10 p.m. and 6-7 a.m.**
- Responses: The Port and FAA say this has been evaluated and is not feasible; the ACC says it is feasible and could be done immediately.
- *Recommendation #6c: Re-evaluate the use of minimum exposure flight tracks. (See also Recommendation 8-b.)**
- Responses: The Port says this issue is very complicated, that it "would not take the lead on this recommendation, and that it "advises careful consideration of a number of issues" before the PSRC or FAA pursue a detailed study of changing flight tracks. The FAA says the current flight tracks "provide the best possible balance" between efficient aircraft flow and concerns of communities affected by aircraft overflights, and does not believe that any of the three specific Panel recommendations are feasible. The Port would participate in an FAA-initiated study to evaluate minimum population flight tracks; the FAA said it would participate in a Part 150 Study to evaluate other flight track proposals. The ACC says the Port should immediately initiate such a study.
- *Recommendation #6d: Evaluate using a steeper angle of climb and, if this procedure is feasible, initiate an expanded residential acquisition and insulation program if this procedure results an increased in the 75 dB noise contour in the immediate vicinity of the airport.**
- Responses: The Port agrees to look at this as part of its Part 150 study, which would begin this fall and extend over two to three years; the FAA says it does not think such a procedure is reasonable, but would participate in the study. The ACC says a procedure of this type is in use in California and should be studied.
- *Recommendation #6e Evaluate the potential net benefits of preferential runway use during low activity periods.**
- Responses: The Port and FAA agree that this should be part of the Part 150 study; the ACC agrees that it should be studied.

Recommendation #7a: **Begin a rapid, full-scale insulation program as soon as the impasse with the Highline School District is resolved.**

Responses: (See #1, above) All parties agree that this should be done; however, the Port notes that “Eligibility does not ensure availability of federal funds” (underline in original text). The Port notes that its policy has been to ensure that such programs are eligible for with federal funds and Passenger Facility Charges, the use of which must be approved by the FAA. Under current lease agreements, the airlines also must approve programs such as insulation and must review any proposal to use PFCs for such projects.

***Recommendation #7b:** **Complete the pilot insulation program for public buildings and an insulation program for multi-family dwellings.**

Responses: The Port addresses Recommendations #7b, #7c and #7e together, since each would require expenditure of funds for, respectively, the insulation program for public buildings, an expanded residential acquisition program, and increasing the current rate of insulating homes. Again, the Port’s policy has been to ensure that such programs are eligible for (and are paid for) with federal funds and Passenger Facility Charges, the use of which must be approved by the FAA. And under current lease agreements, the airlines must approve programs such as insulation and must review any proposal to use PFCs for such projects. The Port notes that it must assure it can complete current commitments before agreeing to new ones, and adds that “priorities must be established, as the likelihood that everything can be done, especially simultaneously, is decreasing with each federal fiscal year...total available funding, including federal funds, may be significantly less than it has been historically.” Specific to Recommendation #7b, the Port notes that the pilot public building program indicates that “insulation for multi-family buildings will cost four to five times the original estimates” and that “what other sources may be available for funding programs” would be looked at in the Part 150 study (beginning this fall, over two to three years).

Recommendation #7c: **Evaluate the possibility of an expanded residential acquisition program.**

Response: In addition to restrictions noted in the response to #7b, above, the Port notes that this “would mean moving into areas where the Port and FAA have already been investing resources in home insulation...(and) the existing program commitments may be in excess of the \$110 million the Port has already committed for insulation.”

Recommendation #7d

Work with the PSRC and affected communities to design and implement alternative, noise-compatible land uses within the current acquisition zone.

Response:

The Port says it will develop a land use plan for compatible re-use of acquisition property, and notes that it is already working with the City of SeaTac and other interests on using these properties for economic development and job creation. The Regional Council could assist. The ACC says the Port could provide "financial assistance to stimulate suitable development of transitional zones."

***Recommendation #7e:**

Further accelerate, if possible, the rate of insulation of homes, and consider expanding the area eligible for noise insulation.

Response:

The Port notes that it is insulating 100 homes per month and "it would be both unwise and unrealistic to set a higher standard as a requirement." It notes that each home requires careful, meticulous individual attention to ensure satisfactory results, which creates "a very real and practical limit to the number of homes that can be treated at once." As to expanding the eligible area, the Port's policy has been to ensure that its mitigation programs are eligible for federal funding, which would preclude using federal funds for insulating homes beyond the 65 Ldn contour, which is the FAA boundary for eligibility for federal funding.

Recommendation #7f:

Investigate possible modifications to the program to mitigate the impacts of low frequency noise and vibration.

Responses:

The Port notes that the FAA must approve the way the Port spends federal funds and PFC charges on its insulation program, and modifications must meet FAA criteria. The Port will modify its existing contract with noise experts to specifically mention these items upon which to receive information that could be used to improve the insulation program. The FAA was not asked to address this recommendation.

Recommendation #8a:

That the Regional Council and Coordinating Committee take the lead in working to coordinate efforts by all parties to alleviate the issues that are undercutting the effectiveness of current noise reduction efforts, and eliminate roadblocks to resolving issues.

Responses:

Regarding cross-jurisdictional issues, the Port responds that, for some issues, it is possible to clearly identify roles for differing entities, and for issues that "are less program specific...the Port will support the PSRC in efforts to address such issues."

***Recommendation #8b: Create guidelines or other equitable procedures for dealing fairly with conflicting views and needs of different communities when a proposed noise reduction strategy results in a net improvement but causes a transfer of noise impacts.**

Responses: The Port and the FAA note that the Part 150 Study (starting this fall, over two to three years) would help identify how to deal with these possibilities.

Recommendation #8c: Take effective action to minimize the introduction of incompatible land uses and to facilitate compatible redevelopment of currently incompatible land uses, including implementation of AIRTRAC recommendations.

Responses: AIRTRAC recommended state policies for land use compatibility around airports, and WSDOT notes that legislation of this nature regarding general aviation airports was approved during the 1996 session. With Executive Board approval, the Regional Council could seek member support for such legislation applying to commercial airports. The ACC says that its cities "must be the sole lead agencies in the implementation of any program involving the development of alternative, noise compatible land uses and the prevention of additional noncompatible land uses. The ACC notes further that areas within the 65 Ldn contour "are already highly developed for residential uses," and other mechanisms must be found, such as the Port providing "financial assistance to stimulate suitable development of transitional zones."

Recommendation #8d: Investigate creative ways of linking noise reduction objectives with airport demand and system management strategies.

Responses: WSDOT indicates that system management -- high speed rail -- is not a feasible noise reduction strategy; that even with optimistic numbers of passengers diverted from Sea-Tac, if high-speed rail is implemented, there would be a minimal impact on Sea-Tac operations. The Port indicates it is willing to work on both demand and system management options.

**SUMMARY OF POTENTIAL
IMPLEMENTING AGENCIES AND COMMUNITIES
RESPONSES TO EXPERT PANEL RECOMMENDATIONS**

	I M P L E M E N T	P O S	F A A	W S D O T	K C I A	A C C	H S D	P ¹ S R C
1. Resolve the impasse between the Highline School District and the Port on noise insulation.	YES	X	X				X	X
	NO							
2. Upgrade noise monitoring system.	YES	X						
	NO							
3. Sponsor social surveys.	YES					X		X
	NO	X						
4i. Implement thrust reversal noise reduction.	YES	X						
	NO							
4ii. Minimize daytime engine run-ups.	YES							
	NO	X						
5a. Work to enforce compliance with current North Flow Nighttime Departure noise abatement procedures.	YES	X	X					
	NO							
5b. Work to eliminate Alaska Airlines Stage 2 flights from Boeing Field.	YES	X	X		X			
	NO							
5c. Work with airlines to minimize 1:30 to 5:30 am flights.	YES	X						
	NO							

	I M P L E M E N T	P O S	F A A	W S D O T	K C I A	A C C	H S D	P S R C
5d. Continue to minimize number of Nighttime Limitations Program variances.	YES	X						
	NO							
5e. Work with foreign carriers to ensure Stage 3 aircraft are used for nighttime international flights.	YES	X						
	NO							
5f. Work with owners/operators of Stage 2 aircraft under 75,000 lb. to minimize or eliminate use at night.	YES	X						
	NO							
5g. Continue work with airlines to minimize nighttime engine run-ups.	YES							
	NO	X						
6. PSRC, the FAA, and affected communities participate actively in the Port's upcoming Part 150 review.	YES	X	X					X
	NO							
6a. Evaluate actions needed to enforce North Flow Daytime Departure Duwamish/Elliott Bay Noise Abatement Procedures.	YES		X*			X		X
	NO	X						
6a (cont). Investigate, and, if possible implement use of this corridor during periods of lighter activity during the day.	YES							
	NO	X	X					

	I M P L E M E N T	P O S	F A A	W S D O T	K C I A	A C C	H S D	P S R C
6b. Evaluate the feasibility of extending the nighttime hours of use for the North Flow Nighttime Departure Noise Abatement Procedures to the evening and morning shoulders.	YES					X		
	NO	X	X					
6c. Reevaluate use of minimum population exposure flight tracks:	YES	X				X		
	NO							
(i) over-water southern corridors for all south departures where the east turn does not occur until the aircraft reach Commencement Bay or beyond.	YES					X		
	NO		X					
(ii) north-flow arrival procedures that route aircraft over the water.	YES					X		
	NO		X					
(iii) use north-flow stream more often at night, coupled with tightly enforced, high compliance nighttime departure routes.	YES							
	NO		X					
6d. Evaluate benefit of departure profiles, coupled with expanded acquisition and insulation.	YES	X	X			X		
	NO							
6e. Evaluate benefits of preferential runway use during low activity periods.	YES	X	X			X		
	NO							

	I M P L E M E N T	P O S	F A A	W S D O T	K C I A	A C C	H S D	P S R C
7a. Begin rapid full-scale insulation program for the Highline School District upon resolution of impasse.	YES	X						
	NO							
7b. Fund and implement a program for insulating public buildings and multi-family dwellings.	YES	X*						
	NO							
7c. Evaluate the possibility of a expanded residential acquisition program.	YES	X*						
	NO							
7d. Design and implement alternative, noise-compatible land uses for land in the current acquisition zone.	YES	X				X		X
	NO							
7e. Further accelerate, if possible, the rate of insulation for homes now included in the residential noise insulation program and consider expanding the eligible area.	YES	X*						
	NO							
7f. Investigate modifications to insulation program to mitigate impacts of low frequency noise and vibration.	YES	X						
	NO							
8a. Initiate and coordinate remedial actions to address roadblocks to achieving full potential of noise programs.	YES	X					X	X
	NO							

	I M P L E M E N T	P O S	F A A	W S D O T	K C I A	A C C	H S D	P S R C
8b. Develop guidelines for dealing with conflicting views when a proposed noise reduction strategy results in a net improvement but causes a transfer of noise impacts.	YES	X	X					X
	NO							
8c. Implement the recommendations of the AIRTRAC Final report for compatible airport land uses.	YES	X		X		X		
	NO							X
8d. Develop ways to link noise reduction objectives with airport demand and system management strategies.	YES	X						
	NO			X				

* Partial Implementation

AGENCIES/COMMUNITIES:

POS Port of Seattle
 FAA Federal Aviation Administration
 WSDOT Washington State Department of Transportation
 KCIA King County
 ACC Airport Communities Coalition - Cities of Burien, Des Moines, Federal Way, Normandy Park, and Tukwila
 HSD Highline School District
 PSRC Puget Sound Regional Council

NOTES:

1. All PSRC actions are subject to Executive Board approval.

Public Participation Process for 1996 Amendment to the Metropolitan Transportation Plan

I. ACTION:

Adopt an amendment to the Metropolitan Transportation Plan (MTP) to include the third runway at Sea-Tac Airport with specific noise reduction measures.

II. SEPA COMPLIANCE:

The Regional Council will be using two Environmental Impact Statements previously published for this project: *The Flight Plan Project Final Environmental Impact Statement* (1992) and the *Final Environmental Impact Statement for Proposed Master Plan Update Development Actions at Seattle-Tacoma International Airport* (1996). The Regional Council plans to publish an Addendum on or about May 28, 1996, which will provide additional information and/or analysis, but which does not substantially change the analysis of significant impacts and alternatives in the existing environmental documents. The Addendum will include information on noise developed during the proceedings of the Expert Arbitration Panel on Demand/System Management and Noise.

Copies of the Flight Plan FEIS and the Master Plan Update FEIS were sent to area libraries and other public places and are available for public review, along with information developed during the proceedings of the Expert Panel, at the Regional Council Information Center, 1011 Western Avenue, Suite 500, Seattle. For a list of the libraries and other public places to which the FEISs were sent, or to set up an appointment to review these documents, and/or the Expert Panel information, at the Regional Council Information Center, call the Information Center at (206) 464-7532.

III. SCHEDULE:

- | | |
|-----------|---|
| May 13 -- | Notice of Intent to publish Addendum (noted under SEPA compliance, above), placed in daily newspapers, each county |
| May 17 -- | Written responses to Expert Panel Noise Reduction Recommendations due to Regional Council from Potential Implementing Agencies and Communities (These responses were solicited by letter dated April 30, 1996) |
| May 28 -- | Issue Addendum (noted above under SEPA COMPLIANCE) |
| May 30 -- | Executive Board Workshop on Noise Reduction Measures , 9 a.m.-3 p.m., Bellevue Conference Center, 121 107th Avenue, NE, Bellevue (Public participation will be limited to responding to questions, if asked, by Executive Board members) |

- June -- Council staff to brief countywide organizations in each county
- June 10 -- **Distribution of draft amendment to Metropolitan Transportation Plan (MTP)**
- June 12 -- Deadline for Requests for Supplemental Environmental Impact Statement (SEIS), based on substantial changes to the project or significant new information related to the MTP amendment and not included in the Flight Plan FEIS and the Master Plan Update FEIS (As per the Council's SEPA procedures, EB 92-02 [7])
- June 27 -- **Public hearing on draft MTP amendment, 9 a.m.-noon, Seattle Center Flag Pavilion; Executive Board meeting, action on draft MTP amendment, 1:30-3:30 p.m., Seattle Center Flag Pavilion**
- July 11-- **General Assembly meeting, action on draft MTP amendment, 2-5 p.m., Seattle Center Flag Pavilion -- Public comment period 2-3:30 p.m.**

All written comments should be sent to: **Puget Sound Regional Council, RE: Third Runway, 1011 Western Avenue, Suite 500, Seattle, WA., 98104-1035.** For more information, contact Richard Milne at the Regional Council, (206) 587-5060.

**CORRESPONDENCE RECEIVED FOR
EXECUTIVE BOARD MEMBERS**

MAY 10 THROUGH MAY 22, 1996



RECEIVED

MAY 21 1996

PUGET SOUND REGIONAL COUNCIL

May 20, 1996

Mr. Doug Sutherland
President, Puget Sound Regional Council
1011 Western Ave. Suite 500
Seattle, WA 98104-1035

Dear Mr. Sutherland,

I support the accompanying letter by Dr. Robert Rudolph, President of Eastside Citizens Against Aircraft Noise (ECAAN). The City Council of Medina and I are in full agreement with its content and urge the implementation of proposals suggested.

The PSRC, as it evaluates further noise reduction suggestions by the Port of Seattle and FAA to determine if a third runway can be built at Sea Tac, must be certain that jet noise pollution over Medina is mitigated.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Taylor", is written over a horizontal line.

Dewey Taylor
Mayor

cc: Mary McCumber
Executive Director, PSRC

1455 Evergreen Pt. Rd.
Medina, WA 98039
May 19, 1996

Mr. Doug Sutherland
President, Puget Sound Regional Council
1011 Western Ave. Suite 500
Seattle, WA 98104-1035

Dear Mr. Sutherland,

I am writing to you as President of Eastside Citizens Against Aircraft Noise (ECAAN), a nonprofit organization incorporated in the state of Washington which represents citizens in the residential communities of Medina, Clyde Hill and central Bellevue. This organization was formed in 1987 to address the greatly increased noise from east turn jet departures from Sea Tac during north flow conditions. Prior to 1987 these communities had little jet noise. By 1989 the impact was so great that ECAAN had been established and had collected petition signatures from 3000 people requesting relief. These petitions were presented to the Port of Seattle and the FAA. In addition the City Councils of Medina, Clyde Hill and Bellevue sent resolution letters to the Port and FAA requesting jet noise reduction.

In 1988 I joined the Port of Seattle Mediation process and served as one of the eight "at the table citizen representatives" for the two year duration of mediation and I continue to serve on the Port of Seattle Noise Abatement Committee. A number of things were accomplished in the Mediation Process such as more rapid phase out of Stage Two planes, curtailment of Stage Two jets nighttime use and increased insulation for homes in communities next to Sea Tac. However, nothing was done to address the problems of the north flow east turn pathway. The reason others from our area and I signed the mediation agreement in 1990 was because the FAA assured us that it would tighten the East Turn to take advantage of the open water between the communities of Medina and Mercer Island. But now six years later, the problem remains and is getting worse. More than 180 jets per day in north flow conditions fly directly over the communities of Medina, Clyde Hill and central Bellevue (flight track map enclosed). The FAA has been experimenting with a flight management system (FMS) to better utilize the open water of Lake Washington, but no change is anticipated soon and if and when it does occur the FAA anticipates that airlines will acquire the necessary equipment slowly.

At the request of the FAA, noise modeling of use of the Lake Washington open water corridor was done by Rob Knott, formerly of the Port of Seattle Noise Abatement Office. His work confirmed overall noise reduction on the Eastside with no concomitant increases over residential areas. It is time for the FAA and Port of Seattle to establish a procedure which achieves this noise reduction.

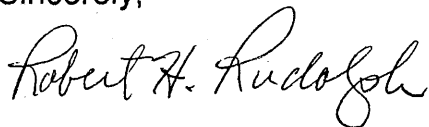
In addition to the above, greater use should be made of the Duwamish industrial noise

abatement corridor. It is the most obvious industrial open water corridor out of Sea Tac to the north, and in the past was the pathway used by all departing jets. The numbers of jets have grown over the years, but why should approximately 60% of departing jets take the east turn over residential communities while only approximately 40% use the industrial open water corridor from 6AM to 10PM? In fact, greater use of the Duwamish corridor is suggested by the expert panel in their recent report to the PSRC in their recommendations in sections 6A and 6B. In 6A it stated, "Investigate and if possible, implement, use of this corridor during periods of lighter activity during the day such as mid morning and mid afternoon." And in 6B, "Evaluate the feasibility of extending the nighttime hours of use for the North Flow Night time Departure Noise Abatement Procedures (currently 10PM to 6AM) to the evening 'shoulder' (8PM to 10PM) and if possible to the early morning 'shoulder' (6AM to 7AM) as well".

The above measures would reduce jet noise not only for the Eastside communities but also in Leschi and Madrona in Seattle.

I want the members of the PSRC to understand that the jet noise concerns of the people living in Medina, Clyde Hill and central Bellevue have been ignored. As the PSRC evaluates further suggestions about noise mitigation by the Port of Seattle and FAA to determine the outcome of the proposed third runway, the problems of our communities must be addressed. Simply insulating more homes around the airport is not sufficient.

Sincerely,

A handwritten signature in cursive script that reads "Robert H. Rudolph". The signature is written in dark ink and is positioned above the printed name.

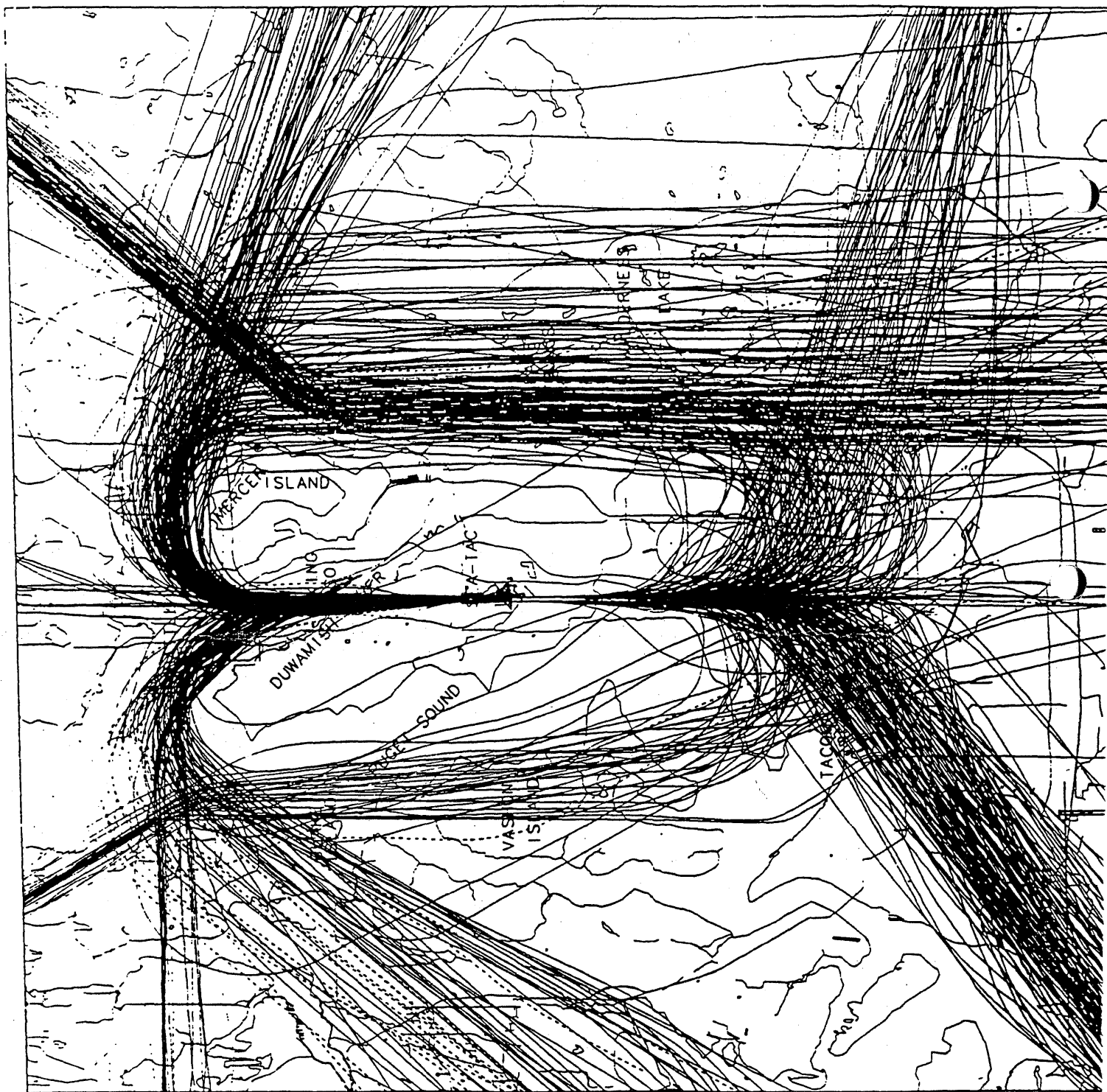
Robert H. Rudolph M.D.

cc: Mary McCumber
Executive Director, PSRC



Port

Sea-Tac Jet Operations
2/15/96
06:00 - 22:00
North Flow



Henry Hopkins
3720 Serene Way
Lynnwood, WA 98037

May 8, 1996
Puget Sound Regional Council
1011 Western Avenue
Seattle, WA 98104

RECEIVED
MAY 15 1996
PUGET SOUND REGIONAL COUNCIL

RE: Sea Tac 3rd Runway—Council's Resolution A93-03 and Proposed Amendment Action

Dear Council Member,

I commend the Puget Sound Regional Council for their recent action taken on the Sea Tac airport issue. Please know that there is a silent majority of the region and state that wants to see the 3rd runway completed as soon as possible.

There is no other affordable and practical solution to answer the short and long range needs of our community. Too many distractions from items of substance have been publicized without focus on the basic needs of our community. Vancouver B.C. is working hard to take away important commercial benefits from Seattle region. They have just opened their new additional runway. Already carriers are planning to increase their equipment and frequency of service.

Safety concerns due to delays and the ripple effect from them should be regarded as important and in need of an answer now. Since growth rates used in the FAA EIS exceed 10% per year, the impact of delays will cause even more noise in holding patterns and safety is jeopardized.

Some of our neighbors near the airport must deal with impacts of this project on their respective properties. With respect to the impacts from construction, I suggest that the PSRC require the Port of Seattle to use the Wescot Company conveyor system identified in the Final EIS. This method of providing materials to the project has the following benefits:

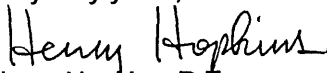
- Eliminates over 1,000,000 (1 million truck loads) from roads.
- Public safety is greatly enhanced by less traffic without trucks.
- Air quality is better without exhaust emissions stated in EIS.
- Time for construction of the 3rd runway is significantly shorter than any other method, about ½ the time of using on-site borrow with trucks hauling off-site borrow.
- Earthquake or seismic characteristics of completed embankment is better with using off-site borrow of clean granular materials.
- Community parks and other tangible improvements are possible depending on the level of cooperation of local municipalities; such as, City of Des Moines.

The most important factor in PSRC's decision by vote of the General Assembly is not to place conditions concerning the "Independent Panel's" findings on sound which will be unreasonable to achieve. Specifically, conditions which could be interpreted outside of conventional science or practices of industry.

I strongly recommend that great care be taken with regard to the amendment language to provide answers which will yield as much real mitigation to the impacted communities without financially burdening the project. If the amendment language is reasonable, the general support of the communities will remain as solid as in the past several years of this expensive process.

The Sea Tac 3rd runway is the most important issue facing this community.

Very truly yours,


Henry Hopkins, P.E.

May 21, 1996

Puget Sound Regional Council
Doug Sutherland, Pres. Executive Board
1011 Western Ave., Suite 500
Seattle, Wa., 98104-1035

Fax number:

587-4825

Dear Sir:

We are disgusted with the political shenanigans that seem to be relentlessly leading up to approval by the PSRC of a 3rd runway at Seatac in spite of the fact it is a very bad idea.

First of all, the search for another airport has never been seriously carried out. The Puget Sound Regional Council caved in to every squeak and squawk by prospective neighbors of a new airport to the north, east and south of Seattle in places where population is now relatively sparse.

Experts have said all along that a new airport will be needed for metropolitan Seattle in 20-30 years even if the 3rd runway is built at Seatac. How will land be found then if it's impossible to locate a site now?

Many U.S. cities have more than one airport. The delights and convenience of being close to an airport should be shared by other Puget Sound residents as population grows. It's a fairness issue. The people who settled around Seatac were promised by the Port of Seattle when the 2nd runway was built in 1973, that the airport would not expand beyond that. They were told that after there were 20,000,000 annual passengers, another airport would be built elsewhere. People trustingly bought property for homes and businesses and built a lot of schools. Now it is a very densely populated area.

Is it fair to decimate a city like Burien and seriously lower the quality of life for thousands of families already living and going to school in a wide area including a swath through the heart of Seattle? In order to build the most expensive runway in the United States, it will be necessary to truck or barge in unbelievable quantities of dirt to fill in a valley next to the existing airport. The federal and local funds should be spent instead on a new airport away from the ground transportation snarl of Seatac.

Let's let reason and fairness prevail. Seattle needs an auxiliary airport while sites are still available. No one should be supporting the infamous 3rd runway regardless of where one lives. Our regional leaders need to gather up political courage and lead.

*Marsha Campbell, member at large
North Highline Unincorporated Council
All council*

RECEIVED

MAY 17 1996

PUGET SOUND REGIONAL COUNCIL

MAY 15 1996

Mr. Jim Sullivan
9 Newell St.
Seattle, WA 98109

Dear Mr. Sullivan:

This is in response to your April 27 letter to State Senator Jeanne Kohl regarding your concerns about the Seattle-Tacoma International Airport.

Recent studies have shown that, in order to meet growing demand, especially during poor weather operating conditions at Seattle-Tacoma International Airport, some form of airport expansion will be necessary. This expansion was approved by the Puget Sound Regional Council (PSRC), subject to a determination that certain conditions had been met.

Most of the conditions have been met. However, it has not yet been determined that there has been adequate noise impact reduction implemented by the Port of Seattle, owner and operator of the airport. In a recent meeting, the PSRC determined it should further investigate the potential for additional noise reduction measures. The PSRC's proposals are to be made public soon and considered at a public hearing on June 27, at 9:00 a.m. You may wish to participate in that public process and make your views known.

Please be assured that the Federal Aviation Administration's (FAA) role is to protect the interests of the entire community, as far as aviation-related issues are concerned. I have the greatest confidence that the FAA will continue to work toward the best solution to this issue. If I may be of further assistance, please contact my office.

Sincerely,

**ORIGINAL SIGNED BY
FREDERICK M. ISAAC**

Frederick M. Isaac
Regional Administrator
Northwest Mountain Region

cc:

The Honorable Jeanne Kohl
Puget Sound Regional Council

MAY 15, 1996

RECEIVED
MAY 17 1996
PUGET SOUND REGIONAL COUNCIL

PSRC RE: THIRD RUNWAY
1011 WESTERN AVE. STE. 00
SEATTLE, WASH. 98104-1035

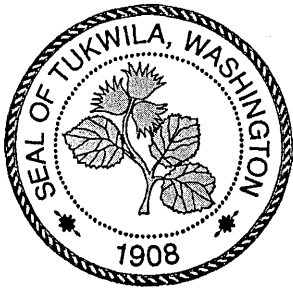
DEAR SIR,

IN REGARD TO THE THIRD RUNWAY
AT SEA-TAC INTERNATIONAL
AIR PORT WE FEEL OUR HOME SHOULD
BE SOUND PROOFED AS FLIGHTS FROM
THE RUNWAY WILL PASS OVER OUR
HOME. THE NOISE LEVEL WILL BE
DEAFENING.

SINCERELY

Richard G. & Dorothy L. Wilson

RICHARD G. & DOROTHY L. WILSON
24711 11TH AVE. SOUTH
DES MOINES, WA. 98198-3859
PHONE- 206 824-7767



City of Tukwila

6200 Southcenter Boulevard • Tukwila, Washington 98188

RECEIVED
MAY 17 1996

John W. Rants, Mayor

PUGET SOUND REGIONAL COUNCIL

May 15, 1996

Ms. Mary McCumber, Executive Director
Puget Sound Regional Council
1011 Western Avenue, Suite 500
Seattle, Washington 98104

Dear Ms. McCumber:

This letter is written to express our extreme disappointment in the Puget Sound Regional Council Executive Board's decision to disregard the findings of the Expert Arbitration Panel. When Resolution A-93-03 was promulgated, the City of Tukwila understood that the decision would be final and binding. We expected that the Executive Board, the very entity that created the review process and the rules by which it would operate, would certainly abide by that process.

The Board's decision to in effect, change the rules to override the findings of the Expert Panel, points out a critical weakness in the PSRC itself. Cities rely on it as an honest broker for the region. This application of a situational ethic causes rise to the question of the value of the PSRC. In that the south King County cities have traditionally enjoyed little in the way of their political position, it now appears clear that there may be no value to remaining part of PSRC.

While the City of Tukwila has not made a decision concerning withdrawal from the PSRC, it certainly has been a matter of discussion. The Executive Board has severely damaged the credibility, and in our belief, the ethical foundations of the PSRC itself. We will wait until the General Membership vote on the RASP amendment before considering our continued membership. We remain hopeful that the General Membership will understand the flaw in the manner in which the Executive Board has acted and react appropriately.

Sincerely,

John W. Rants
Mayor

Pam Carter
Council President

FAX 206 587 4825

Puget Sound Regional Council
Growth Management Policy Board
1011 Western Avenue, Suite 500
Seattle, Wa 98104-1035

May 1, 1996

Pier 66

Perhaps the Port of Seattle will name their Pier 66 project the GOLDEN FLEECE as a CLASSIC model of the extravagant waste and mismanagement of public money. The purpose of the project appears to be a landmark eyesore to satisfy the personal egos' of some of the Port Commissioners.

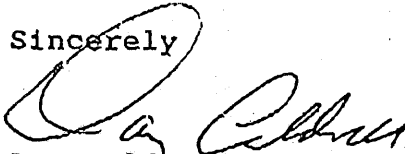
The \$97 million expenditure represents the total passenger revenue, \$28.9 million, the Port takes from the 9.6 million passengers using Sea-Tac Airport each year for the next three years.

With the assurance of "about \$100,000 annually" return on the Ports investment of public money in the project will break even in only 970 years.

For over 20 years the Highline School District has been trying to obtain \$80 million from the Port to insulate and repair the airport noise damage to the schools. The Port Commissioners have acted like deadbeats by buying toys rather than paying off outstanding Port debts. A decent education in quiet schools must have precedence over a doubtful small boat parking facility.

The residents in south King County have had eleven years of games and actions by the Port to play off regional groups against each other. It is time for the City of Seattle and The King County Council to obtain legislation to takeover the Port and straighten out that mess before the regions entire economy moves to California and Canada. Enough is enough!

Sincerely



Dan Caldwell
Member of CASE
19547 Second Ave. S.
Des Moines Wa 98148
(206) 824-0736

RECEIVED
MAY 16 1996

PUGET SOUND REGIONAL COUNCIL

May 15, 1996

PSRC
1011 Western Ave.
Ste. 500
Seattle, WA 98104-1035

Re: Third Runway

Gentlemen:

The airplane noise that I find most irritating is the incessant drone and roar of the airplanes when they are being revved up on the ground at night. Could this problem be alleviated by a high wall around the area (which I notice has been used for freeway noise)? Or could testing be done underground? I am using the term "testing" because that was the reply my neighbor received when he called to complain. He was told that the planes were being "tested" for safety and he certainly shouldn't be against that. He replied that he was also concerned about his own safety in that he had a bad heart.

Your reply will be appreciated.

Sincerely,


Norma Thomasson
16432 - 32nd Ave. So.
SeaTac, Wa 98188

May 15, 1996

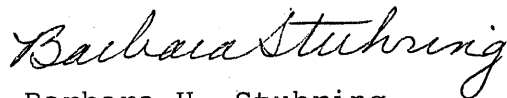
To: Ms. Mary McCumber

Subject: Public Notice concerning PSRC and the third runway and its inclusion in the MTP

Dear Ms. McCumber:

Please copy and distribute the attached to the executive committee of PSRC. While in the process of including noise mitigation in the MTP, PSRC should also consider air quality mitigation for the third runway and also mitigation for the planned landside facilities. The airport communities are as concerned about air quality as they are about increase in jet noise. We would like PSRC to help allay those concerns.

Sincerely yours,



Barbara H. Stuhling
24828 9th Pl. S.
Des Moines, WA 98198



Council to Discuss Air Quality Conformity with Federal Transportation Department For Proposed Interchange Near Dupont

The Puget Sound Regional Council will meet with representatives of the U.S. Department of Transportation to discuss the Council's air quality conformity analysis process for amending the Regional Transportation Improvement Program (TIP). The meeting, from 10 a.m. to noon on Friday, October 6, will be in the Regional Council's 6th Floor Board Room at 1011 Western Avenue in Seattle.

This scoping meeting is being held to discuss the conformity analysis to be conducted in response to a proposal to amend the 1996-1998 TIP to include a new interchange on Interstate 5 near Dupont. The conformity analysis is scheduled to begin in October 1995. Consistent with federal and state statutes, the Regional Council's Executive Board is expected to issue a determination on conformity of the proposed TIP amendment at its November 1995 meeting.

The Regional Council is the designated Metropolitan Planning Organization representing King, Kitsap, Pierce, and Snohomish counties, and is required by federal and state laws to conduct an air quality conformity analysis to determine if projects and programs in the TIP conform with the State Implementation Plan for air quality. Conformity analyses must be performed whenever the TIP is developed or amended. Federal and state laws encourage the Regional Council to meet with the U.S. Department of Transportation to discuss and come to agreement on the methodology and assumptions to be used in the conformity analysis.

The Council has also invited the U.S. Environmental Protection Agency, the Washington State Departments of Transportation and Ecology, the Puget Sound Air Pollution Control Agency, and other interested parties. The meeting is open to the public.

Copies of the meeting agenda can be obtained from Nick Roach, Puget Sound Regional Council, 1011 Western Avenue, Suite 500, Seattle, WA 98104-1035, or (206) 464-6843.

reduction at Sea-Tac, and the adequacy of its noise reduction goals. The Panel will also study whether improvements in existing rail service can help alleviate some of the increased demand for travel through the airport.

Under Resolution A-93-03, passed by the Regional Council's General Assembly in April 1993, the Panel needs to determine by April 1, 1996, whether feasible demand management, system management and noise reduction efforts have been "scheduled, pursued and achieved." The Council's resolution endorsed the proposed third runway at Sea-Tac, subject to the conditions related to demand and system management and noise reduction.

For more information on air transportation capacity issues, contact Jerry Dinndorf at the Regional Council, (206) 464-6663.

What Others Are Doing...Portland, Maine

A citizens' committee in Portland, metropolitan population of 221,095, has created Maine's most comprehensive and ambitious transportation plan. The committee of 45 citizens and local officials worked 18 months on the plan with help from local planners and consultants. The City Council will now consider adopting the transportation plan as part of Portland's comprehensive plan. The plan sets specific implementation goals and time lines: By the year 2000, the plan aims to cut citywide commuting by single-occupant vehicle from 68% to 50% of all work trips (just under the share briefly achieved following the oil crisis of the late 1970s), and increase bicycling from 1% to 5%, walking and telecommuting from 15% to 20%, carpooling from 12% to 15%, and transit ridership from 4% to 10%.

The plan emphasizes integrated transportation and land use planning, a coordinated regional transit system, and transportation demand management strategies. The plan also calls for traffic calming measures, such as narrowed street widths using curb bulbs, mid-block cross walks, lower speed limits, and speed bumps, to make streets more pedestrian friendly. These concepts are being developed in several pilot projects highlighting ways of implementing the overall strategy. Successful pilot projects will receive further funding.

For more information contact: Sarah Hopkins, Portland Planning Office, City Hall, Portland, Maine, 04101; (207) 874-8300

Source: Evergreen Community Environmental Success Stories.

May 15, 1996

Dennis Ossenkop
FAA
1601 Lind Ave.
Renton, WA 98055

Subject: Sea Tac Airport Master Plan Update and a Third Runway
Extension of Public Comment Period on Conformity to the
Clean Air Act

Dear Mr. Ossenkop:

Concerning your first Public Notice dated 2-17-96 about the above mentioned conformity, I wish to make the following important comment:

The question is - "what siting of a new runway and landside facilities will do to air quality in the local communities surrounding the airport". The question is NOT - "what siting will do to air quality in the REGION" (i.e. averaged over four counties).

The "Final Report: Air Quality Survey Sea Tac Airport, January 1995" is a consultant's study from which you draw your conclusion that there will be no delay in "timely attainment of the ozone or CO standards in the Puget Sound REGION", or in other words, a third runway will not adversely impact air quality. Besides disagreeing with the regional thrust, I find several weaknesses in this "Final Report". Such as follows:

1. The "Final Report" on air quality consisted of 4 days of air sampling in 1993 - on one Monday morning, one Tuesday morning, one Tuesday afternoon and one Friday afternoon. All four days were near the end of the year. The obvious weakness here is failing to sample in the four seasons and conclusions drawn from only 4 half days of sampling.

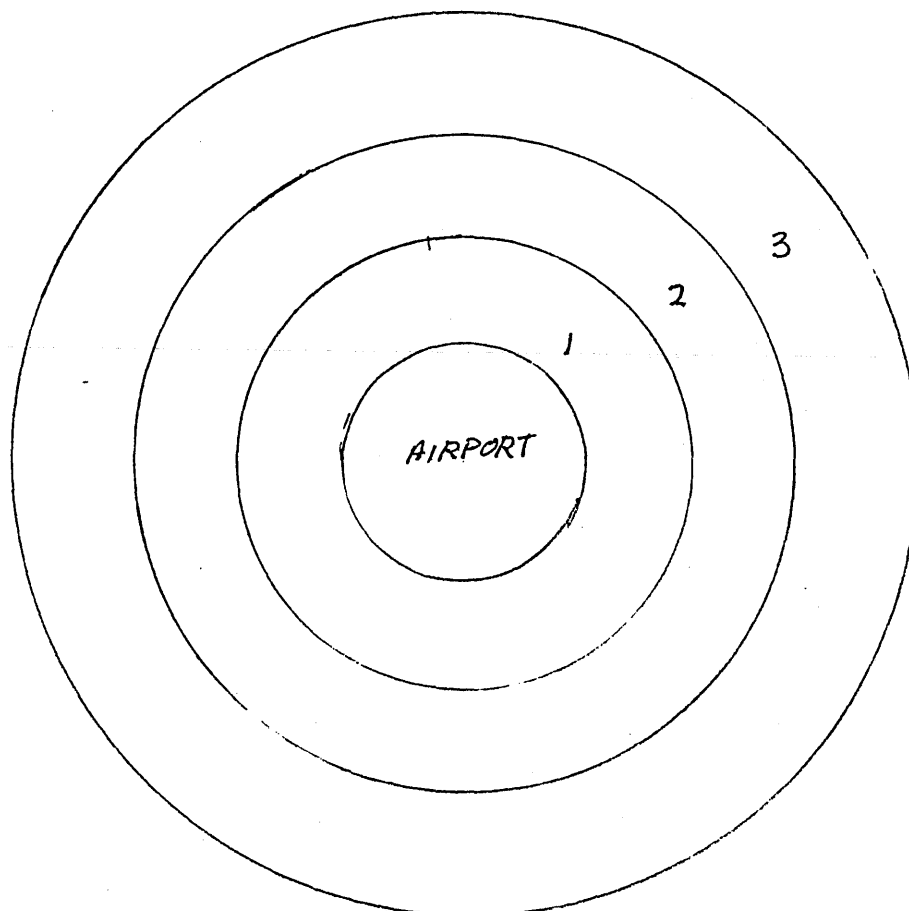
2. The reason given for this "Final Report" study was to allay community concern about decreasing air quality. Yet, of the 10 locations at which sampling was done on those 4 days, only one location was in a residential area. And that residential sampling was 2 miles from airport property. On 3 sides and within a 2 mile radius of the airport live thousands of people much closer to the airport than the residential site chosen for sampling. Some schools are also located within this 2 mile radius. One obvious weakness here is limited sampling in the impacted residential areas. One location site for sampling was at Gate 3, others were on or at the edge of airport property. People don't live in these locations, so what's the point of this kind of sampling in order to "allay community concern"?

3. Toxic pollutants tested were VOC's (including benzene), CO, and carbonyls (including formaldehyde). Benzene was found in every sample. Formaldehyde was found in all samples. Many of the samples exceeded the ASIL's (acceptable source impact levels).

4. In the "Final Report, whenever the data show higher concentrations of toxic aircraft emissions than conformity standards, our community is told not to worry, we are no worse off than "other urban areas". To be no more polluted than other polluted areas is no comfort and no excuse.

In my opinion, although the report is called a "Final Report", it is a preliminary assessment which establishes a need for additional, more in-depth information about the possible perils of living in a community next to an airport.

Our community asks for further, extensive, definitive air quality studies. And in these studies keep any comparisons within our own residential area around the airport. I suggest a map be drawn as a circular plot:



Page 3

and in each concentric area, a risk factor be determined. That is, if a resident in an area is exposed to a certain number of jet operations, then his chances of getting cancer or lung disease (or other illness) are one in so many thousands. This study and an explanatory map to go along with it will show if health risks are greater if one lives nearer Sea Tac Airport.

Sincerely yours,

Barbara Stuhling

Barbara H. Stuhling
24828 9th Pl. S.
Des Moines, WA 98198

cc: EPA
PSRC ✓

P.S. Mr. Ossenkop - Please send me information about the Federal Air Quality Conformity Determination which is mentioned at the beginning of the Final EIS. Is there an actual certificate form which you will have to check off and sign? What is the procedure you will have to follow? Thank you for this information.

**NOTICE OF AVAILABILITY
FINAL ENVIRONMENTAL
IMPACT STATEMENT
MASTER PLAN UPDATE
SEATTLE-TACOMA
INTERNATIONAL AIRPORT
SEATTLE, WASHINGTON**

Lead Agencies: Federal Aviation Administration (FAA) and the Port of Seattle

The Port of Seattle, operator of Seattle-Tacoma International Airport, has prepared a Master Plan Update for the Airport. The Plan shows the need to address the poor weather operating capability of the Airport through the development of a third parallel runway (Runway 16X/34X) with a length of up to 8,500 feet, separated by 2,500 feet from existing Runway 16L/34R, with associated taxiways, utilities, and navigational aids. Other proposed development includes: extension of Runway 34R by 600 feet; establishment of standard Runway Safety Areas for Runways 16R/34L and 16L/34R; development of a new air traffic control tower; Main Terminal improvements and terminal expansion; development of a new unit terminal located to the north of the existing main terminal; parking and access improvements and expansion; development of the South Aviation Support Area for cargo and/or maintenance facilities, and relocation, redevelopment, and expansion of support facilities. A Final Environmental Impact Statement has been prepared by the FAA and the Port of Seattle which addresses the impact of alterna-

tive airport improvements. The proposed improvements would be completed during the 1996-2020 period, with initial 5-year development focused on the new parallel runway, and existing passenger terminal, parking and access improvements. As is noted in the Final EIS, the preferred alternative and all development alternatives will result in wetland filling, floodplain encroachment, stream relocation and property acquisition.

Copies of the seven volume Final EIS are available for review at the following locations:

- * Federal Aviation Administration, Airports Regional Office, Room 540, 1601 Lind Avenue SW, Renton Wa
- * Port of Seattle, Aviation Planning, 3rd floor - Room 301, Terminal Building, Sea-Tac Airport, and Pier 69 Bid Office, 2711 Alaskan Way, Seattle
- * Puget Sound Regional Council, Information Center, 1011 Western Avenue, Seattle
- * Beacon Hill Library, 2519 - 1st Avenue South, Seattle
- * Bellevue Regional Library, 1111 - 110th Ave. NE, Bellevue
- * Bothell Regional Library, 9654 NE 182nd, Bothell
- * Boulevard Park Library, 12015 Roseberg South, Seattle
- * Burien Library, 14700 - 6th SW, Buri-

Saturday, February 17, 1996 **THE NEW**

en

- * Des Moines Library, 21620 - 11th South, Des Moines
- * Federal Way Regional Library, 34200 - 1st South, Federal Way
- * Foster Library, 4205 South 142nd, Tukwila
- * Kent Regional Library, 212 - 2nd Ave. N., Kent
- * Magnolia Library, 2801 - 34th Ave. W., Seattle
- * Rainier Beach Library, 9125 Rainier Avenue S., Seattle
- * Seattle Public Library, 1000 - 4th Avenue, Seattle
- * Tacoma Public Library, 1102 Tacoma Ave. S., Tacoma
- * University of Washington, Suzallo Library, Government Publications, Seattle
- * Valley View Library, 17850 Military Road South, SeaTac
- * Vashon Ober Park Library, 17210 Vashon Highway, Vashon
- * West Seattle Library, 2306 - 42nd Ave. SW, Seattle

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Published in the Highline News/Des Moines News on February 17, 1996.

H36

**NOTICE OF AVAILABILITY
DRAFT CLEAN AIR ACT
GENERAL CONFORMITY
DETERMINATION
SEATTLE-TACOMA
INTERNATIONAL AIRPORT
SEATTLE, WASHINGTON**

Lead Agency: Federal Aviation Administration (FAA).

Action: FAA's proposed action includes: 1) approval of the Airport Layout Plan (ALP) for the proposed improvements at Sea-Tac International Airport; 2) provide possible federal funding for eligible projects contemplated within the planning horizon as il-

lustrated on the ALP; 3) development or revision of air traffic control procedures for the proposed improvements; and 4) establishment of navigational aids. The Port of Seattle, as operator of the airport, will design and build the proposed improvements. Because these actions are necessary for federal-funded public use airports, the FAA is required to meet the Clean Air Act (CAA) general conformity requirements under 40 Code of Federal Regulations, Part 93, Subpart B for the federal action for this undertaking.

Abstract: The Port of Seattle, operator of Seattle-Tacoma International Airport, has prepared a Master Plan Update for the Airport. The Plan shows the need to address the poor weather operating capability of the Airport through the development of a third parallel runway (Runway 16X/34X) with a length of up to 8,500 feet, separated by 2,500 feet from existing Runway 16L/34R, with associated taxiways, utilities, and navigational aids. Other proposed development includes: extension of Runway 34R by 600 feet; establishment of standard Runway Safety Areas for Runways 16R/34L and 16L/34R; development of a new air traffic control tower; Main Terminal improvements and terminal expansion; development of a new terminal located to the north of the existing main terminal; parking and access improvements and expansion; development of the South Aviation Support Area for cargo and/or maintenance facilities, and relocation, redevelopment, and expansion of support facilities. A Final Environmental Impact Statement has been prepared which assesses the impact of alternative airport improvements. The proposed improvements would be completed during the 1996-2020 period, with initial 5-year development focused on the new parallel runway, and existing passenger terminal, parking and access improvements.

Based on the conformity applicability criteria and the attainment status of the affected area, the conformity determination focuses on potential air emissions of carbon monoxide (CO), and ozone. Based on the air quality analysis provided in the Final Environmental Impact Statement, the Federal Aviation Administration has determined that the proposed improvements at Sea-Tac International Airport conform to the Washington State Implementation Plan (SIP) and Ambient Air Quality Standards. The analysis of the proposed improvements at Sea-Tac has demonstrated that, with mitigation, the proposed improvements will not cause or contribute to new violations of any ambient air quality standards, nor increase the frequency or severity of an existing violation; nor delay timely attainment of the ozone or CO standards in the Puget Sound Region, and that the action is in compliance or consistent with all relevant requirements and milestones contained in the SIP. This conclusion of a positive general conformity determination fulfills the FAA's obligation and responsibility under 40 CFR Part 93, Subpart B. This General Conformity Determination has been prepared as specified in Section 176(c)[42 USC 7506c] of the Clean Air Act Amendments of 1990.

mouse, rat NTPTR* NTP-TR-289,86. EPA Genetic Toxicology Program. Reported in EPA TSCA Inventory. On Community Right-To-Know List.rm

OSHA PEL: (Transitional: TWA 10 ppm; CL 25 ppm; Pk 50 ppm/10M) TWA 1 ppm; STEL 5 ppm; Pk 5 ppm/15M/8H; Cancer Hazard ACGIH TLV: TWA 10 ppm; Suspected Human Carcinogen; BEI: 50 mg(total phenol)/L in urine at end of shift recommended as a mean value.

DFG TRK: 5 ppm (16 mg/m³) Human Carcinogen.

NIOSH REL: TWA 0.32 mg/m³; CL 3.2 mg/m³/15M

DOT Classification: Flammable Liquid; Label: Flammable Liquid.

SAFETY PROFILE: Confirmed human carcinogen producing myeloid leukemia, Hodgkin's disease, and lymphomas by inhalation. Experimental carcinogenic, neoplastigenic, and tumorigenic data. A human poison by inhalation. An experimental poison by skin contact, intraperitoneal, intravenous, and possibly other routes. Moderately toxic by ingestion and subcutaneous routes. A severe eye and moderate skin irritant. Human systemic effects by inhalation and ingestion: euphoria, somnolence, changes in REM sleep, changes in motor activity, nausea or vomiting, reduced number of blood platelets, other unspecified blood effects, dermatitis, and fever. Experimental teratogenic and reproductive effects. Human mutation data reported. A narcotic. In industry, inhalation is the primary route of chronic benzene poisoning. Poisoning by skin contact has been reported. Recent (1987) research indicates that effects are seen at less than 1 ppm. Exposures needed to be reduced to 0.1 ppm before no toxic effects were observed. Elimination is chiefly through the lungs. A common air contaminant.

A dangerous fire hazard when exposed to heat or flame. Explodes on contact with diborane, bromine pentafluoride, permanganic acid, peroxomonosulfuric acid, and peroxodisulfuric acid. Forms sensitive, explosive mixtures with iodine pentafluoride, silver perchlorate, nitril perchlorate, nitric acid, liquid oxygen, ozone, arsenic pentafluoride + potassium methoxide (explodes above 30°C). Ignites on contact with sodium peroxide + water, dioxygenyl tetrafluoroborate, iodine heptafluoride, and dioxygen difluoride. Vigorous or incandescent reaction with

hydrogen + Raney nickel (above 210°C), uranium hexafluoride, and bromine trifluoride. Can react vigorously with oxidizing materials, such as Cl₂, CrO₃, O₂, NClO₄, O₃, perchlorates, (AlCl₃ + FClO₄), (H₂SO₄ + permanganates), K₂O₂, (AgClO₄ + acetic acid), Na₂O₂. Moderate explosion hazard when exposed to heat or flame. Use with adequate ventilation. To fight fire, use foam, CO₂, dry chemical.

Poisoning occurs most commonly via inhalation of the vapor, although benzene can penetrate the skin and cause poisoning. Locally, benzene has a comparatively strong irritating effect, producing erythema and burning, and, in more severe cases, edema and even blistering. Exposure to high concentrations of the vapor (3000 ppm or higher) may result from failure of equipment or spillage. Such exposure, while rare in industry, may cause acute poisoning, characterized by the narcotic action of benzene on the central nervous system. The anesthetic action of benzene is similar to that of other anesthetic gases, consisting of a preliminary stage of excitation followed by depression and, if exposure is continued, death through respiratory failure. The chronic, rather than the acute form, of benzene poisoning is important in industry. It is a recognized leukemogen. There is no specific blood picture occurring in cases of chronic benzol poisoning. The bone marrow may be hypoplastic, normal, or hyperplastic, the changes reflected in the peripheral blood. Anemia, leucopenia, macrocytosis, reticulocytosis, thrombocytopenia, high color index, and prolonged bleeding time may be present. Cases of myeloid leukemia have been reported. For the worker, repeated blood examinations are necessary, including hemoglobin determinations, white and red cell counts, and differential smears. Where a worker shows a progressive drop in either red or white cells, or where the white count remains low, 5,000/mm³ or the red count <4.0 million/mm³, on two successive monthly examinations, the worker should be immediately removed from benzene exposure. Elimination is chiefly through the lungs, when fresh air is breathed. The portion that is absorbed is oxidized, and the oxidation products are combined with sulfuric and glycuronic acids and eliminated in the urine. This may be used as a diagnostic sign. Benzene has a definite cumulative action, and exposure to a relatively high concentration is not serious from the point of view of causing damage to the blood-forming system,

provided the exposure is not too high. In case of poisoning, the worker who becomes dizzy, complains of tightness of chest, and of pressure over the head, should be taken into a stage of excitement by exposure to fresh air. If exposed, he quickly lapses into coma. In no case is usually complete recovery. In chronic poisoning, the symptoms are vague: fatigue, loss of appetite, nausea and loss of weight, and weakness are common. Later, pallor, nosebleeds, menorrhagia, petechiae develop. There is great increase in signs and symptoms of poisoning.

BBL500 CAS: BENZENEACETALD
mf: C₈H₈O mw: 120

PROP: Oily, colorless liquid and grows more viscous with age. Color varies from lilac to hyacinth blue.
mp: 33-34°, d:(25/25) 1.525-1.545, bp: (10) 152-154°F, flash p: 154°F. Soluble in alc, ether, propylene. Miscible in two parts of 80% alc.

SYNS: FEMA No. 2874 *
* PHENYLACETALDEHYDE
ALDEHYDE * PHENYLET
HYDE * α-TOLUIC

CONSENSUS REPORT
TSCA Inventory.

SAFETY PROFILE: Moderate irritant. Human skin irritant. When heated to decomposition, it emits acrid smoke and irritating fumes.

BBP000 CAS: BENZENE-1,3-DIISOCYANATE
mf: C₈H₄N₂O₂ mw: 140

SYNS: 1,3-DIISOCYANATOCYCLOHEXADIENE
400 * m-PHENYLENE DIISOCYANATE

CONSENSUS REPORT
TSCA Inventory. Cyanates are on the Community Right-To-Know List.

slightly sol in water; insol in
alc, chloroform, ether.

SYN: 1-N-((2-AMINO-4-HYDROXY-
METHYL)METHYL)AMINO)BENZOYL
ACID * FOLACIN * FOLATE *
NSC 3073 * PTEGLU * PTEROYL
ACID * PTEROYL-1-GLUTAMIC ACID
MONOGLUTAMIC ACID * PTEROYL-
1-GLUTAMIC ACID * USAF CB-13 * VITA
MIN M

CONSENSUS REPORTS: Rep
TSCA Inventory.

SAFETY PROFILE: Poison by
and intravenous routes. Exper
genic and reproductive effects
reported. When heated to decom
oxic fumes of NO_x .

FMU045 CAS: 944-22-9

FONOFOS

mf: $\text{C}_{10}\text{H}_{15}\text{OPS}_2$ mw: 246.4

SYNS: O-AETHYL-S-PHENYL-AETHYL

PHONAT (GERMAN) * DIFONATE

* DYPHONATE * ENT 25,796

NYL ETHYLDITHIOPHOSPHONATE

NYL ETHYLPHOSPHONODITHIOATE

* STAUFFER N 2790

CONSENSUS REPORTS: EP
cology Program. EPA Extrem
Substances List.

OSHA PEL: TWA 0.1 mg/m

ACGIH TLV: TWA 0.1 mg/m

SAFETY PROFILE: Poison by
cc it, and possibly other ro
cide. When heated to decom
very toxic fumes of PO_x and

FMU059 CAS: 2650-3

FOOD BLUE 1

mf: $\text{C}_{37}\text{H}_{36}\text{N}_2\text{O}_9\text{S}_3 \cdot 2\text{H}_3\text{N}$

SYNS: ACID BLUE 9 * ACILA

AE * A.F. BLUE NO. 1 * AIZE

FCF * ALPHAZURINE * AMA

* BLEU BRILLIANT FCF * ILL

LIANT BLUE * BUCACID AZUR

CID BLUE EG * C.I. 671

BLUE 9, DIAMMONIUM SALT

78, DIAMMONIUM SALT * C.I.

* D&C BLUE NO: 4 * DISULF

ERIOGLAUCINE
FENAZO BLUE XR * HHD-
H.K. FORMULA NO. K. 7117
MAPLE BRILLIANT BLUE
SEPTINE BLUE BRA CONCENTRATION
PEACOCK BLUE X-1756
TRIANTINE LIGHT BROWN
VIOLENE BLUE VSG

CONSENSUS REPORTS: Community Right-
List. Reported in EPA TSCA Inven-
EPA Genetic Toxicology Program.

SAFETY PROFILE: Human poison by intrave-
Human systemic effects by intrave-
muscle contractions or spasticity
Questionable carcinogen with ex-
neoplastic and tumorigenic data.
When heated to decom-
emits very toxic fumes of NH_3 , NO_x ,
and H_2O .

CAS: 50-00-0

HR: 3

FORMALDEHYDE

UN 1198/UN 2209

mw: 30.03

Clear, water-white, very slightly acid gas
pungent odor. Pure formaldehyde is
available commercially because of its ten-
to polymerize. It is sold as aqueous solu-
containing from 37% to 50% formaldehyde
and varying amounts of methanol.
solns are used industrially and
physical properties and hazards may be
influenced by the solvent. Lel: 7.0%,
autoign temp: 806°F, d: 1.0, bp:
flash p: (37% methanol-free): 185°F,
(15% methanol-free): 122°F.

FORMALDEHYDE (FRENCH) * AL-
ITALIANI * BFV * FA
FORMALDEHYD (CZECH, POLISH)
solution (DOT) * FORMALIN
FORMALIN (DOT) * FORMA-
FORMALINE (GERMAN)
FORMALIN (GERMAN) * FORMALITH
FORMOL * FYDE
KARSAN * LYSOFORM
METHYL ALDEHYDE * METHO-
METHYLENE OXIDE * MORBO-
OPLOSSINGEN (DUTCH)
OXYMETHYLENE * PARA-
HYDROXYMETHYLENE GLYCOLS
NUMBER U122 * SUPERLYSOFORM

CONSENSUS REPORTS: IARC Cancer Re-
view: GROUP 2A; IMEMDT 7,211,87; Human
Inadequate Evidence IMEMDT 29,345,82; Ani-
mal Sufficient Evidence IMEMDT 29,345,82.
NTP Fourth Annual Report On Carcinogens,
1984. EPA Genetic Toxicology Program. Re-
ported in EPA TSCA Inventory.

OSHA PEL: TWA 1 ppm; STEL 2 ppm (For
certain industries: TWA 3 ppm; CL 5 ppm;
Pk 10 ppm/30M)

ACGIH TLV: TWA 1 ppm; Suspected Human
Carcinogen (Proposed: CL 0.3 ppm; Sus-
pected Human Carcinogen)

DFG MAK: 0.5 ppm (0.6 mg/m³); Suspected
Carcinogen.

NIOSH REL: (Formaldehyde) Limit to lowest
feasible level.

DOT Classification: Combustible Liquid; La-
bel: None; ORM-A; Label: None; Flammable
or Combustible Liquid; Label: Flammable
Liquid.

SAFETY PROFILE: Confirmed carcinogen with
experimental carcinogenic, tumorigenic, and
teratogenic data. Human poison by ingestion.
Experimental poison by ingestion, skin contact,
inhalation, intravenous, intraperitoneal, and
subcutaneous routes. Human systemic effects
by inhalation: lacrimation, olfactory changes,
aggression and pulmonary changes. Experimen-
tal reproductive effects. Human mutation data
reported. A human skin and eye irritant. If swal-
lowed it causes violent vomiting and diarrhea
which can lead to collapse. Frequent or pro-
longed exposure can cause hypersensitivity lead-
ing to contact dermatitis, possibly of an eczema-
toid nature. An air concentration of 20 ppm is
quickly irritating to eyes. A common air contam-
inant.

Combustible liquid when exposed to heat
or flame; can react vigorously with oxidizers.
A moderate explosion hazard when exposed to
heat or flame. The gas is a more dangerous
fire hazard than the vapor. Should formaldehyde
be involved in a fire, irritating gaseous formal-
dehyde may be evolved. When aqueous formal-
dehyde solutions are heated above their flash
points, a potential for an explosion hazard exists.
High formaldehyde concentration or methanol
content lowers the flash point. Reacts with NO_x
at about 180°, the reaction becomes explosive.
Also reacts violently with perchloric acid +
aniline, performic acid, nitromethane, magne-
sium carbonate, H_2O_2 . Moderately dangerous,

Study finds ozone in smog poses health threat to kids

By A.J. Hostetler
Associated Press

ATLANTA — One in four children is at risk for health problems because ozone in their communities exceeds government standards, health officials say.

The risk to minorities is greater because they are more likely to live in cities where ozone limits are exceeded, such as Los Angeles, New York City, Atlanta, Houston and Detroit, the federal Centers for Disease Control and Prevention reported yesterday.

Although ozone in the upper atmosphere forms a protective barrier against ultraviolet radiation, at lower levels it is a major component of smog and causes respiratory problems and irritation of the eyes and

mucous membranes.

Levels of the pollutant dropped by 12 percent from 1984 to 1993, but 104 counties and cities still exceeded the limit during 1991-1993, according to the Environmental Protection Agency.

About 12.1 million children ages 13 and younger, or 24 percent of the nation's total in that age group, lived in those polluted communities, the CDC said.

"Children, even healthy children, are at risk because they're exposed to ozone when their lungs are still developing," said Mary White of the CDC's Air Pollution and Respiratory Health Branch.

The health hazard to children is also higher because they spend more time outdoors, she said.

(8) CLEAN AIR ACT CONFORMITY

The Clean Air Act Amendments of 1990 require Federal agencies to ensure their actions conform to the appropriate State Implementation Plan (SIP). The SIP is a plan which provides for implementation, maintenance, and enforcement of the National Ambient Air Quality Standards (AAQS), and includes emission limitations and control measures to attain and maintain the AAQS. Conformity is defined as demonstrating that a project conforms to the State Implementation Plan's purpose of "eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards".

The purpose of the air quality analysis, therefore, is to demonstrate that the proposed Master Plan Update alternatives at Sea-Tac conform to the SIP requirements for the Puget Sound Region. Conformity applies to Federal actions occurring in areas designated non-attainment for any of the criteria pollutants. A criteria pollutant is a pollutant for which an air quality standard has been established under the Clean Air Act.

Because the proposed Master Plan Update alternatives include proposed changes to the airfield, landside, terminal and off-airport roadways, two forms of conformity have been addressed: Transportation and general conformity. Transportation conformity applies to all roadway and transit projects to be funded or approved by the Federal Highway Administration (FHWA) or Federal Transit Administration (FTA). Non-roadway transportation projects, such as the proposed development at Sea-Tac, are governed by the "general conformity" regulations stated above.

The USEPA has issued rules for determining general conformity of non-transportation related projects. The Federal general conformity rule will govern conformity determinations for non-transportation projects until the USEPA approves the State's rules for general conformity. The USEPA has also issued rules for determining conformity of transportation projects funded by FHWA or FTA. The Federal transportation conformity will govern conformity determinations for transportation projects until the USEPA approves the State's transportation conformity rule.

It is anticipated that the draft conformity statement will be presented in the Final Environmental Impact Statement.

(9) AIR CERTIFICATION

49 USC 47106(c)(1)(B) requires that Airport Improvement Program applications for airport projects involving the location of a new runway may not be approved unless the Chief Executive Officer of the state in which the project is located, or the appropriate state official certifies in writing that there is "reasonable assurance" that the project will be located, designed, constructed, and operated in compliance with applicable air quality standards (the AAQS). Therefore, certification from Washington State's Governor's Office is required indicating that the proposed project will comply with all applicable air quality standards. Certification is issued in the form of a Governor's Air Quality Certificate.

It is anticipated that the Governor's Certificate will be issued before completion of the FAA's Record of Decision.

Michael P. Mehlhoff
512 Aaby Drive
Auburn, WA 98001

RECEIVED
MAY 13 1996

PUGET SOUND REGIONAL COUNCIL

May 13, 1996

Executive Doug Sutherland
Puget Sound Regional Council
Via fax 587-4825

Subject: Sea-Tac Airport Expansion - Please Distribute To All Council Members

As the Puget Sound Regional Council begins the process to amend Resolution A93-03, I respectfully request that a condition be included in the amendment to require the Port of Seattle to use the conveyor system as proposed by Wescot Company to transport the fill dirt needed to build a third runway. The following benefits to Puget Sound area residents would result from using the conveyor transport system:

1. Eliminate truck traffic to avoid:
 - Potential collisions and life safety hazards
 - Noise in neighborhoods
 - Private property access disruptions
 - Exhaust emissions
 - Added traffic signals
 - Purchasing properties along the truck route
 - Roadway paving wear repair
2. Fill Material brought in by conveyor would have higher quality than identified Port owned sources. This will allow year-around construction with material having superior structural strength. The project would be completed earlier than planned by the Port and on or under budget.
3. Control and drastically reduce fugitive dust.
4. The conveyor project will create more net jobs than trucking through companion capital improvement projects benefiting King County and local communities near the Airport.
5. A direct cost savings of 20% on dirt transportation compared to the most cost effective trucking alternative identified in the draft EIS assuming equal quality material.

Sincerely,


Mike Mehlhoff

SEATTLE COMMUNITY COUNCIL FEDERATION
2511 W. Montlake Pl.E.
Seattle, Washington 98112
17 May 1996

RECEIVED
MAY 17 1996
PUGET SOUND REGIONAL COUNCIL

B y H a n d

Mary McCumber
Executive Director
Puget Sound Regional Council
Suite 500
1011 Western Avenue
Seattle, Washington 98104-1035

Dear Ms McCumber:

We hand you herewith our comments responsive to the order of 25 April 1996 of the Executive Board of the Puget Sound Regional Council, as prepared by our special task force at the direction of our Executive Committee.

Yours truly,

SEATTLE COMMUNITY COUNCIL FEDERATION

By: *Jorgen Bader*
Jorgen Bader *or [signature]*
President

Encl: Response

PhD 4: LR96-129

SEATTLE COMMUNITY COUNCIL FEDERATION
2511 W. Montlake Pl.E.
Seattle, Washington 98112

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MAY 17 1996
PUGET SOUND REGIONAL COUNCIL

Comments on PSRC Executive Board resolution of 26 April 1996

Summary

(1) Upon our review of the Resolution of the PSRC Executive Board adopted on 26 April 1996 and of the PSRC mailing of 30 April 1996, Seattle Community Council Federation recommends to the Puget Sound Regional Council that it not amend its Resolution A-93-03.

(2) The Federation concurs in most of the recommendations of the Expert Arbitration Panel for further noise-abatement and noise-mitigation measures (Final Order, pp. 37-41). We note that most of the proposed actions would not involve PSRC.

(3) The recommended actions will not cure the noise problems caused by the last round of expansion at Sea-Tac International Airport, nor will they cure the noise problems that the presently-proposed expansion would cause. Contrary to the thrust of the Executive Board's resolution, & the public statements of Mr Sutherland, the Panel did not rule, state, suggest, or hint that adoption of those recommendations will cure the noise problem at the Airport. The Panel did not rule, state, suggest, or hint that it would have issued a different final order if those recommendations had been implemented prior to the Panel taking up its work.

(4) With the exception of some items in part 6 of the Panel's recommendations, the recommended actions do not address the Airport's present or projected noise impacts on the residents of Seattle, Mercer Island, or the greater Bellevue communities, or any area outside the so-called airport communities, & therefore do not provide hope of relief to those "outlying" areas. Part 150 proceedings by definition exclude the larger share of the population impacted by overflight noise, including most of Seattle and all of the the other

"outlying" areas mentioned above. Therefore, even fullest implementation of the Panel's recommendations will not provide meaningful, objectively measurable reduction of noise impacts on the ground in the most populous parts of the area adversely affected by Airport-generated noise.

Discussion

(1) The PSRC should NOT amend Resolution A²93-03. The Expert Arbitration Panel has fully reviewed the effectiveness of Port of Seattle noise-abatement and noise-mitigation measures, with the Port actively participating in every step of that review, putting its best foot forward. The Panel has ruled that those measures are inadequate under Resolution A93-03, spelling out the reasoning for its conclusion in fullest detail. We are not aware of any reason to find that the Panel's conclusion was erroneous.

The issue now raised by the Executive Board was referred to the Expert Arbitration Panel for a full review and a final, binding decision. There was nothing wrong with the process, and the final result is in complete accordance with the evidence. It would be utterly inappropriate to set aside the Panel's decision.

The memorandum of the dissenting member of the Panel offers no ground for disregarding the decision. The dissenter had apparently come to believe, quite belatedly, that the Panel erred in its earlier, unanimous, order of 9 January 1995 interpreting its terms of reference and setting the standards for deciding the issue. His opinion indicates that he would have used a much looser set of criteria. But under the criteria previously adopted by the Panel after thorough public discussion, the Port was unable to offer "reliable evidence, based upon actual measurements of on-the-ground noise ... [showing] an objectively measureable, meaningful reduction in aircraft noise impacts". The dissenter felt

that this standard was too rigorous, especially in its insistence that measureable reductions be meaningful. The dissenter appears to believe that the Port met the burden of A93-03 by showing that its long-delayed program for insulating private homes was now well underway. The majority of the Panel concluded that this one partially successful aspect of noise mitigation did not suffice to outweigh the other, unmitigated impacts.

(2) The Federation generally concurs in the recommendations of the Expert Arbitration Panel for further noise-abatement and noise-mitigation measures (Final Order, pp. 37-41). We note that most of the proposed actions would not involve PSRC.

The Panel's Final Order spelled out numerous measures, large and small, that the Panel believed might be useful in reducing the future noise impacts associated with the Airport. Most of these, the Panel noted, had been suggested by one or more of the participants in the proceedings. Some, indeed, are steps to which the Port is committed but which, somehow, have not been implemented.

While, on the surface none is controversial, in fact some are likely to be resisted strongly by the Port, the FAA, or both. Most have little to do with the PSRC, but the PSRC's endorsement of the recommendations could be helpful in achieving implementation.

Some of the recommendations are far outside our geographical area of concern, & so we do not comment on them here (e.g., the impasse between the Port and Highline School District). (We will consider them individually, briefly, in Part 3, infra, when we discuss cost & effectiveness issues.)

Of particular interest to us are measures to direct flight paths to noise-abatement corridors (see Recommendations 5 and 6). Our member groups are well aware that noisy flights are routed over the most populous parts of the

metropolitan region, that noise-abatement procedures are routinely ignored, and that there are no sanctions for violations of those procedures.

We strongly support the Panel's suggestions that noisy operators & noisy operations be curtailed. See Recommendations 5.b through 5.f.

We disassociate ourselves from all parts of Recommendation 8, for we are not persuaded that PSRC, or the Co-ordinating Committee, are appropriate bodies to take a lead position on reduction of noise impacts (Recommendation 8), airport demand management (8.d), or intermodal solutions (8.d). We are especially uneasy about entrusting any of this important work to PSRC in light of your President's, and the Port's, efforts to undercut the work of the PSRC's own Expert Arbitration Panel. Further, we fear that Recommendation and its subparts do not recognize the constitutional and statutory authority of King County, or the paramount interest, & authority, of the State, in these matters. As a general proposition, we prefer that decisions of this sort be made by elected officials acting in their elected capacities (such as the Legislature), rather than by officials acting in unelected, secondary & politically non-responsible rôles (such as PSRC &, even more so, the Co-ordinating Committee).

(3) The recommended actions will not cure the noise problems.

The actions recommended by the Expert Panel, if fully implemented, will not cure the noise problems caused by the last round of expansion at Sea-Tac International Airport, nor will they cure the noise problems that the presently-proposed expansion would cause.

To make our argument, it is convenient to discuss each recommendation separately (including analysis of costs & effectiveness) & then review the general noise situation.

1. Highline School insulation. While this is a problem that should have been

addressed more forthcomingly by the Port two or three decades ago, & while it is important to the District, its staff, patrons, and pupils, in the broader context solving it will do nothing for all the other affected communities. The cost will be high, especially if the Port continues to restrict its program to retrofitting of obsolete structures.

2. Noise monitoring. We strongly support more & better monitoring, with more accurate extrapolations from the monitoring data. This subject is discussed in detail in Part 4, infra. We believe that accurate monitoring, together with use of reporting methods that include very loud single events, would show significant aircraft noise impacts in many parts of Seattle and other communities not included in the Port's estimated 65 dB (DNL) zone). The cost of monitoring, analysis of the results, & dissemination of periodic reports could reasonably be done, we would suppose, for less than \$200,000 per annum.

However, the General Assembly should recognize that accurate monitoring and reporting of noise does not reduce noise.

3. Social surveys. We support periodic surveying of the population, & ask that the definition of "affected communities" not be constrained to areas within Port-determined 65 db (DNL) contours (see discussion in Part 4, infra). We suppose the cost of such surveying, including analysis & publication, would approximate the cost of expanded & better noise monitoring.

However, the General Assembly should recognize that accurate surveying and reporting of the results of surveys does not reduce noise.

4. Ground-related aircraft noise. Like Highline Schools insulation, this is an important issue to the relatively small numbers affected, but curing the problem

entirely will do little for the bulk of the population, for whom overflight noise is the primary noise issue. The cost would appear to be trivial.

5. Night-time noise abatements. We support each of the measures suggested by the Panel. We agree with the comments made by many participants at the Panel's various hearings to the effect that for many people night-time noise, with attendant sleep interruption, is an important type of adverse noise impact. We note, however, that for many other people, day-time noise is at least as important. We note, further, that day-time noise is for some segments of the population their night-time noise: shift workers, the ill, the elderly, children of nap-time years, and so on. Fixing night-time noise does not mean an end to serious noise disruption for most of us. We are not aware of any costs associated with any of these items, except 5.e (attempting to restrict foreign carriers to Stage III aircraft). Here, we would expect such carriers, & the Port, to argue that it is more cost-effective for Third World carriers (especially freight haulers) to deploy used, obsolescent aircraft acquired on the cheap. Cost analysis should include consideration of the adverse results from not only noise but also safety hazards resulting from acceptance of potentially dangerous aircraft.

6. Part 150 reviews. See our comments on Part 150 issues in our part 4, infra: Part 150 is far too restrictive in its scope. No non-trivial additional costs would be associated with this recommendation. The effectiveness of this measure will be slight in the communities near the airport, very slight to non-existent for other communities.

As to the particular recommendations 6.a - .e, we are in full accord. We are of opinion, however, that with the best will in the world, the noise-abatement corridors & procedures, the "minimum population exposure" tracks, &c.,

will not suffice. See our General Comments following discussion of Recommendation 8.

Alterations of flight paths to minimize the number of adversely affected people on the ground are encompassed by Recommendations 6.a - c, as well as 5.a. Studies of possible alterations should be done. We are hopeful that over-water routes will provide relief, but we are aware that only a small fraction of the present and project future volume of operations can be accommodated by such routes. We doubt that alterations of over-land flight paths will actually reduce the number of affected people. Given general topography and the lay-out of the Airport, all flights must take north-south directions. North of the airport means Seattle, Mercer Island, Bellevue; South means Auburn, Federal Way, and Tacoma. The studies will not be cheap, if done correctly, but in terms of the over-all local budgets of the FAA, the local volume of business of commercial airlines using Sea-Tac, & the Port, the costs will be a tiny fraction of annual expenditures.

Steeper departure angles-of-climb (Recommendation 6.d) should certainly be evaluated, and Seattle neighborhood organizations would welcome the opportunity to participate in such evaluation. Cost of implementing such measures would have to be determined by the proposed studies. Everyone should understand, however, that steeper climb angles mean more noise close to the Airport. That is why the Panel couples its recommended study with expanded programs for property acquisition and insulation.

7. Port's Noise Remedy Program. We support our neighbors in the immediate vicinity of the Airport in their long-standing efforts to secure full implementation of the Port's long-delayed Noise Remedy Program (property acquisition & population removal; insulation), & so we support Recommendation 7,

as far as it goes. The General Assembly should be aware that the program is artificially constrained to the areas defined by the Port's dubious measurement of the 65 dB (DNL) contour. See Part 4, below. Thus, it offers nothing to the more populous parts of the affected communities in Central Puget Sound. Within the 65 dB (DNL) contour, the program for removal of residents ends the direct noise impacts on the displaced population (though there are other, indirect impacts). Insulation, however, is at best only a partial, incomplete, & unsatisfactory mitigation. The Port is in the best position to estimate the financial costs of these programs.

8. More complex systems issues. See our comment in Part 2 supra as to the inappropriateness of having PSRC or the Co-ordinating Committee take on the rôles that more properly belong to the constitutionally created jurisdictions having primary responsibility. As to item 8.b, we cannot conceal our skepticism as to the impartiality or good faith of any of the three actors that you propose to deal with this matter, although the general idea deserves discussion. But, as we suggest below, we fear that there is very little room for re-adjustment of flight paths in such a way as to achieve any actual lessening of impacts on the ground.

Item 8.c, land-use regulation does not commend itself as a means of noise-impact reduction, partly because the PSRC seek to exclude King County (the chief actor, by statute, in growth-mangement issues) from the process. In our view, land-use regulation as a means of noise mitigation is not feasible for two reasons.

* First, there are no reliable estimates of future noise levels. Members of the General Assembly may have seen noise projections in the Final Environmental Impact Statement for the Sea-Tac Airport Master Plan Update: Be

advised that these projections are not reliable. The actual noise measurements made by the Port are suspect, the projections made from those measurements are suspect, the Port's guesses as to future volume of traffic are just that -- guesses.

* Second, and more important, it is too late -- at least half a century too late -- to tailor land use in King & Pierce Counties to accomodate the Airport & its present dreams of massive expansion. Impacted areas in Seattle, such as the Leschi and Columbia City neighborhoods, were platted and settled a century ago. Normandy Park, Burien, Des Moines and environs were highly desirable, built-up, residential neighborhoods when the passenger aircraft of choice was the DC-3. Much of the growth in south-western King County took place when Sea-Tac was a one-runway operation; massive further growth took place on the assurance that Sea-Tac's second runway was the last big expansion.

As long ago as the end of World War II, professional demographers and geographers were predicting huge population growth in Central Puget Sound for the next next six or seven decades. Those predictions were highly accurate. Sea-Tac was unfortunately sited at the very center of the growth area. Land-use regulation to achieve accomodation between aircraft and people should have taken place in the mid-to-late 40s, but did not.

It is too late to do now what perhaps could have been done half a century ago. Effective retroactive land-use regulation to accomodate present and anticipated noise levels from Sea-Tac would require a property acquisition program of unprecedented scope and the removal of hundreds of thousands of people, virtual depopulation of several cities.

Minor land-use adjustments may be marginally helpful close to the runways. But in Seattle, Mercer Island, Bellevue, Hunts Point, &c., the existing

land-use patterns are well-established. Prospective changes, unaided by programs of acquisition and removal, will not take effect in any significant way during the lifetime of anyone now coping with the Sea-Tac noise issue.

* * *

General comments on the "package" of recommendations.

What, then, are the prospects that the Panel's recommendations (or other measures), if implemented, will reduce Sea-Tac noise in an objectively measurable, meaningful way? As the Expert Panel has warned (Final Order, p. 37), not many "easy actions" remain that can significantly reduce noise.

Some actions, desirable in themselves, would have only very local effects (Highline School insulation, ground-noise remedies). Completion of the property-acquisition and insulation programs, promised long ago as remediation for the adverse impacts of the second runway, will be of some benefit in the areas closest to the Airport, but will not permit normal life to be lived in the residential and recreational portions of those areas.

Phasing-out of the remaining older, noisier planes ("Stage II) will provide some slight relief. That relief will likely not be noticed amidst the increased noise from the ever-increasing number of operations.

Further restrictions on night-time operations, while desirable, will do nothing to alleviate impacts during the larger part of each day.

No practical land-use measures will reduce impacts except in a few marginal cases. The existing patterns of settlement cannot be significantly altered.

Alterations of flight paths to minimize the number of adversely-affected people on the ground are unlikely to have a significant effect, owing to the constraints discussed above.

In short, neither changes in land-use rules nor any other suggested remedy or

combination of remedies that permits continuation of present traffic levels at the Airport can work an objectively measureable, significant short-term improvement in noise impacts experienced on the ground. The requirements of Resolution A-93-03 cannot be satisfied by adoption of the Panel's recommended actions, as useful as they may be individually.

* * * * *

It is noteworthy that the Panel did not rule, state, suggest, or even hint that adoption of its recommendations (let alone adoption of only some of them) would cure the noise problems caused by Sea-Tac operations, or would result in objectively measurable noise reductions of a significant character. We urge that General Assembly members read with great attention the remarks of the Panel on p. 37, introducing the individual recommendations. Nor did the Panel rule, state, suggest, or even hint that if all of these recommendations had been implemented before 1996, its decision would have been different. Nor did the dissenting member suggest otherwise. The recommendations for further action are simply suggestions for some continued progress, not a prescription for achieving the requirements of Resolution A-93-03.

* * * * *

We expect the Port to argue that implementation of the Panel's recommendations would be a cure-all. The Panel was not so persuaded, nor are we or many other observers & participants. It would be imprudent of the PSRC General Assembly to accept the Port's arguments without a practical showing of effectiveness. We therefore urge that if the General Assembly is disposed to consider the implementation of the recommendations as a sufficient way to meet the Sea-Tac noise problem, then the General Assembly should require a trial period, during which the recommendations could be implemented (as they should be,

anyway), the Expert Panel should then re-convened to consider the results of the trial, a new expert opinion rendered, & the matter then brought before the Assembly for further consideration.

* * *

General comments on the present process.

We deplore the apparent exclusionary character of this process. We agree with our member group, Ravenna Bryant Community Association, that the Executive Committee's order was wrong to exclude State legislators, Seattle School District No. 1 (and, we would add, many other districts), Seattle and King County housing authorities, King County in its general-government rôle & as proprietor of various public hospitals, the governing boards of the relevant community colleges, the Department of Ecology, and, most important, the public at large.

(4) There is almost nothing in the Recommendations for Seattle, Mercer Island, and many other communities.

With the exception of some items in part 6 of the Panel's recommendations, the recommended actions do not address the Airport's present or projected noise impacts on the residents of Seattle, Mercer Island, or the greater Bellevue communities, or any area outside the so-called airport communities, & therefore do not provide hope of relief to those "outlying" areas. Part 150 proceedings by definition exclude the larger share of the population impacted by overflight noise, including most of Seattle and all of the the other "outlying" areas mentioned above. Therefore, even fullest implementation of the Panel's recommendations will not provide meaningful, objectively measurable reduction of noise impacts on the ground in the most populous parts of the area adversely affected by Airport-generated noise.

Most of the recommendations are aimed at conditions very near the Airport.

Yet aircraft noise has become a problem for communities far removed from the Airport, including various neighborhoods throughout Seattle, Mercer Island, many areas in the communities east of Lake Washington, to say nothing of communities lying South of Sea-Tac.

From our Seattle point of view, the most obvious Sea-Tac noise problem not addressed by the Panel's recommendations is The pernicious "East Turn". That single change in operations has probably caused more problems in Seattle and the east-of-lake communities than any other. The "West Turn" is perhaps addressed in Recommendation 6.a, perhaps not. The use of 15th Ave. So. on Beacon Hill as the center line for fair-weather approaches to the Airport from the North is not addressed.

Most of Seattle will not be included in official noise studies conducted by the Port and the FAA, and thus will not be assisted in any way by such studies, which are mentioned in Recommendation 6 ("Part 150 Review"). The same is true for Mercer Island, Bellevue, and the other east-of-lake communities.

Members of the PSRC General Assembly may not be familiar with such reviews: "Part 150" refers to a Part of the Code of Federal Regulations dealing with Federal financial assistance to airport operators for noise-mitigation programs. The regulations restrict such assistance to narrowly-defined geographic areas, and most airport operators, including Port of Seattle, historically do nothing by way of noise mitigation outside the areas where Federal money is available: that is, the Port will not spend its own money for noise mitigation, and is narrowly restricted as to where it can spend Federal money. The Federally-financed noise-mitigation programs of airport operators are subject to review from time to time —these are "Part 150 reviews". On these occasions, citizens, organizations, municipalities, &c., have opportunities to comment on the programs.

However, as the FAA chooses to define noise-impacted areas, & as the Port chooses to measure them, most "outlying" areas, such as Seattle, are excluded from consideration. The Port's measurements are highly suspect, based as they are on a handful of ill-maintained permanent monitoring sites very close to the runways. The Port's conclusions from its monitoring are also suspect, based as they are on dubious computer models.

But even if the Port (or others) were to do more complete & more accurate monitoring and the results were to be interpreted more stringently, most of noise-impacted Seattle would still be outside the reach of noise-mitigation programs because of the peculiar noise-measurement standard adopted by the FAA (and the Port). Assuming that members of the General Assembly may not be familiar with this issue, a short explanation follows. Customarily, ambient noise data can be calculated and presented in several different ways, and can be physically measured by scientific instruments in several different ways. The measurement techniques used by the Port under-measure & under-report some of the most annoying noise. The FAA requires that noise-measurements for Part 150 purposes be reported as annual averages, with extra weight being given in the averaging process to night-time noise. This measurement is known as the DNL (day-night level) or L_{dn}. The FAA's regulations treat areas having less than an average (on the DNL basis) of 65 decibels (dB) as having no noise impact. The Port uses noise-measuring instruments at a few fixed locations near its runways, and processes the noise data by means of a mathematical formula to prepare maps that estimate the areas receiving more than 65 dB (DNL).

Other accepted noise-measurement techniques report other averages, maximum individual noises (SEL, for single-event level), and so on. Citizen annoyance from industrial, highway, and aircraft has been studied and reported in DNL terms, but

rarely in single-event terms. However, citizen groups, many independent experts, and public officials representing areas close to airports believe that single-event noise is, in the case of jet aircraft, a much more reliable indicator of the seriousness of noise impact. World-wide, and here in the Central Puget Sound area, very high noise readings from individual overflights are reported in areas far, far outside the areas receiving noise measured as 65 DNL or more, and are regarded as highly annoying. The Expert Panel recommends (Recommendation 2) that Sea-Tac-generated noise be reported by three different methods.

From our point of view, monitoring at representative sites throughout Seattle, in consultation with neighborhood organizations and with the advice of independent experts, is highly desirable. The public, and the Expert Panel, have called for more and better monitoring, at sites in residential areas far removed from the runways. Some monitoring of this type was done during the latter part of the Panel's existence. There were too few sites in Seattle, and a curious change in flight paths over South-East Seattle began simultaneously with additional monitoring near there, resulting in flights being moved away from a critical monitor.

It is likely that better monitoring and more accurate methods of interpreting monitoring data would show that more of the southern part of Seattle should be included in the 65 db DNL zone, and thus become eligible for insulation programs. That would be of some benefit. However, we do NOT believe that insulation is an acceptable solution to aircraft noise in residential areas, especially in single-family and duplex zones. Outdoor noise remains unaffected. We believe it is unacceptable to tell people that their problems have been solved when they are unable to use their yards, gardens, patios, decks, swimming pools, parks, playgrounds, and so on without enduring high noise levels.

Conclusion

While the individual recommendations of the Panel are, in general, worthy of implementation, their implementation will not result in the necessary objectively measurable and significant noise reductions on the ground, the standard that PSRC wisely made a pre-condition of its approval for the Port's plans for expansion of Sea-Tac (to the extent that those plans were made public in 1993).

The General Assembly can properly endorse the implementation of the Recommendations, but should not accept the suggestion that it also amend Resolution A-93-03 to provide that promises by the Port to implement some of those recommendations relieves the Port of its burden -- not met -- of showing significant noise reduction before its new expansion is approved.

Resolution A-93-03 was a prudent and appropriate action when adopted and nothing has occurred since its adoption to make it less appropriate. The General Assembly should decline to alter, amend, suspend, or disregard it. After the fullest and fairest of proceedings, the Port has failed to meet an essential precondition for approval of its expansion plans. Approval accordingly stands as denied, and that denial should remain in place.

x x x

**RESPONSES BY POTENTIAL
IMPLEMENTING AGENCIES
AND COMMUNITIES
TO EXPERT PANEL RECOMMENDATIONS**

Puget Sound Regional Council



MEMORANDUM

May 20, 1996

To: Mary McCumber

From: Regional Council Staff

Subject: Response to the Expert Panel Recommendations identified for PSRC action

Listed below is the staff draft of Regional Council responses to the Expert Panel's recommendations on reducing noise related to air transportation activities at Sea-Tac Airport. The responses are limited to those recommendations for which the Council may have some responsibility, and are provided in the same order as listed by the Panel. A complete response is provided for each recommendation for which the Council could have lead or co-lead responsibility, except for item 8-d, which would be primarily a responsibility of the Washington State Department of Transportation and Port of Seattle. For recommendations for which the Council could have some responsibility as identified by the Panel, we have also made comments.

Going forward on any of these actions would require Board authorization and approval of necessary resources. Currently, there are no funds in the Budget and Work Program for Fiscal Year 1997 (July 1, 1996-June 30, 1997) for any of these activities.

1. Resolve the impasse between the Highline School District and the Port of Seattle on noise insulation for schools.

Approach. Three options for resolving this impasse have been identified: 1) the Executive Board could appoint an ad hoc committee to work with the District and the Port; 2) the Council could provide for an outside mediator to work with the two parties; or 3) the Council could reach an agreement between the two parties on issues that would be decided in a process of binding arbitration administered by an appropriate outside arbitrator. Negotiations between the two parties to date have been unsuccessful. The District could also work directly with the Federal Aviation Administration to secure funding for noise insulation of the affected schools.

The mediation role could be similar to what has been developed by Council staff as part of a draft process for resolving issues related to siting regional capital facilities. This process has been discussed by the Growth Management Policy Board and Regional Staff Committee, but it is still being refined and has not been presented to or acted upon by the Executive Board. Either the Board's committee or a neutral, experienced mediator could try to help the parties identify the interests that need to be represented, establish their willingness to participate in a consensus process, identify issues that need to be resolved, determine whether the issues can be mediated, and conduct meetings between the parties. The result would be a recommended resolution to noise insulation issues as agreed to by the parties.

Estimated Cost of implementation. In this case, the cost of implementation would be for the process itself, rather than the actual cost of insulating the schools. The cost is dependent upon the rate of the mediator or arbitrator selected, the issues to be resolved, and the time it takes to resolve them. The costs for mediation/arbitration by an outside party could range between \$10,000 and \$50,000. Note that this same approach could be utilized in response to item 8 (below); in such case, costs for mediation or arbitration would be at the high end of the costs noted above, and could perhaps be higher. The Council's draft regional capital facility siting process provides that these costs *could* be paid by the project sponsor, which in this case would be the Port. The actual cost of the school insulation program would be determined as part of the process.

Time period for implementation plus milestones. Selection of a mediator or arbitrator could take about two months, and the process itself could take several months. Once an agreement was reached, it would take a number of years to complete and would be contingent upon the source and availability of funding identified to support the program. A schedule could be established that would indicate which schools would be insulated in any one year and would serve as the milestones for the program.

Benefit. The benefit would be directly related to the number of pupils and teachers shielded from noise.

Obstacles. Both the Port and the District would have to agree to one of the options noted above for this process to work. The obvious obstacles are the complexity of the noise issue, different levels of expectation between the parties, and the strong feelings on this subject.

Monitoring Method. Monitoring the results of this process could be accomplished by comparing the actual schools insulated to the schedule for insulation.

Action. If agreed to by the Executive Board, the Council could work with the parties in attempting to reach agreement on one of the options noted above.

6-a-e. Participate in the Port's upcoming Part 150 review.

Approach. The Port of Seattle and the FAA have the lead responsibility for implementing these recommendations and therefore are expected to provide the detailed information requested. The Regional Council could participate in a Part 150 study if requested and could serve as a conduit for information to our member jurisdictions. If the Port and the FAA agree to undertake a separate study of the flight track changes proposed in 6-c, the Council could help facilitate that process with our membership, convening meetings, circulating information, etc. The Council could also provide population data for various flight track proposals.

The Council previously undertook such an effort. In response to direction in Resolution A-93-03, the Council asked the FAA to consider changes to its Four-Post Plan. The FAA conducted an internal review of the Plan and proposed two minor modifications for north departures. One of these recommendations has been implemented and the other has not.

The FAA indicated a willingness to consider other modifications to the Four-Post Plan if the affected communities north of Sea-Tac could agree on alternative flight tracks. (The FAA had taken a similar approach with communities south of Sea-Tac and is continuing to work with them in evaluating alternative flight tracks.) For the communities north of Sea-Tac, the Council determined through a meeting and follow-up letter to members that there was insufficient interest in forming a task force to pursue Four-Post modifications, and that individual jurisdictions that had particular issues could work directly with FAA. The Council could assist those jurisdictions through the provision of population data.

Estimated Cost of implementation. As noted in the responses to the remaining recommendations, the Council could commit a staff person to work on this and other issues. The total budget impact, if all the remaining recommendations were agreed to, could involve one principal-level staff person, working half time, for two to three years, plus direct project costs, for a total cost of between \$140,000 and \$220,000 from FY 1997-FY 1999. These costs may be eligible to be funded with an FAA grant.

Action. If agreed to by the Executive Board, staff resources could be committed to participate in Part 150 or Flight Track studies under the direction of the FAA.

7-d. Design and implement alternative, noise-compatible uses of the land within the current acquisition zone.

Approach. This recommendation refers to lands that have been acquired by the Port and are under the land use authority of local jurisdictions. It is expected that the Airport Communities Coalition, the City of Sea-Tac and the Port will prepare a detailed response for the requested information. The Regional Council's role could be to work with these jurisdictions and the Port to propose noise compatible uses that are consistent with VISION 2020 and the Metropolitan Transportation Plan. Also the Council is in the process of developing a Regional Industrial Siting Strategy which could provide some insight into the identification of compatible land uses.

Action. If agreed to by the Board, staff could assist in identifying compatible land uses.

8-a. Initiate and coordinate remedial action for factors outside the direct authority of the Port that are undercutting the effectiveness of the Port's current efforts to reduce noise impacts

Approach. The approach outlined in item 1 for resolving the impasse between the Highline School District and the Port could also be used to resolve other noise reduction issues. The costs, timeline, benefits, obstacles and monitoring method would be dependent upon the particular issue to be resolved. However, issues that fall within the purview of a Part 150 study should be addressed through that process and will be discussed by the lead agencies in their response to item 6. Beyond the issues referred to in the responses to items 1 and 6, above, the only *other* issue referred to by the panel in item 8-a. is the noise impact of Alaska Airlines' two nighttime cargo flights. The Port of Seattle and King County International Airport will be responding to that issue.

Action. If agreed to by the Board, the Council could work with the parties in attempting to reach agreement on a mediation or arbitration process (note potential costs and obstacles in item 1, above.).

8-b. Develop procedures for dealing with conflicting views when a proposed noise reduction strategy results in a net improvement but causes a transfer of noise impacts.

Approach. Some noise reduction techniques, such as changing flight tracks, could shift noise from one populated area to another but result in an overall net reduction in noise. There are existing processes in place such as Part 150 studies and preparation of an environmental assessment or an environmental impact statement for assessing the impacts of noise on people. Through the conduct of these studies, the trade-offs between different noise reduction measures can be assessed. The public participation procedures included within these processes provide the affected communities the opportunity to have their concerns addressed. The Final Environmental Impact Statement for the Sea-Tac Master Plan Update assesses the potential noise impacts of the third runway and identifies mitigation measures.

These processes could be used to identify guidelines or other equitable procedures for dealing fairly with impacted communities. As part of the Port's upcoming Part 150 study, or if the FAA decides to reassess flight tracks, specific guidelines or principles could be drawn from the procedures required by these studies and previous efforts if, in fact, these studies resulted in recommendations that would shift noise impacts.

As noted in item 6, above, the Council could participate in these studies and would work with the other study participants to develop guidelines, if required.

Estimated cost of implementation. The cost for developing the guidelines would be included as part of the studies (see costs in item 6a-e, above).

Time period for implementation plus milestones. These guidelines would be implemented during the course of the potential studies described above and would be a product of the study.

Benefit. The benefit would be to have standard procedures in place for assessing the tradeoffs on noise reduction. Potentially, if such reductions are possible, there could be a net benefit of reduced noise to the region.

Obstacles. Getting any community to accept more noise with or without mitigation would be extremely difficult. Obtaining broad agreement on the guidelines would be difficult.

Monitoring Method. Monitoring would not be required since the guidelines would be implemented as required.

Action. The Regional Council would assist in the development of guidelines through participation in the Port sponsored Part 150 study or FAA sponsored flight track evaluations.

8-c. Implement the recommendations of the AIRTRAC *Final Report* for compatible airport land uses.

Approach. In contrast to item 7-d, which refers to land acquired by the Port, this refers to other lands in the vicinity of the airport. AIRTRAC's policy recommendation regarding land use called for requiring "land-use compatibility elements in comprehensive plans for areas surrounding airports and a mechanism to enforce them." WSDOT and the communities around the airport, which have been identified as the lead agencies for this recommendation, will respond in detail to this recommendation. Since State legislation would be required to implement the AIRTRAC recommendations, the Regional Council's role would be one of seeking support of its members for such legislation.

The legislation could include, as part of the Council's Regional Transportation Planning Organization (RTPO) responsibilities for certifying the transportation elements of local comprehensive plans for consistency with state legislation and the regional transportation plan, the requirement to monitor the plans for incompatible land uses within high noise impact areas

Action. The Regional Council would seek support of its members for legislation that implements the recommendations of AIRTRAC for compatible airport land uses.

8-d. Develop ways to link noise reduction objectives with airport demand and system management strategies.

Approach. The Port will address airport demand issues and WSDOT will address system management issues. The Regional Council's role is limited to one of coordinating any implementing actions with the demand and system management strategies and requirements of the Regional Transportation Plan.

City of Burien
City of Tukwila
City of Des Moines
City of Federal Way
City of Normandy Park
Highline School District

**AIRPORT
COMMUNITIES
COALITION**

Kenneth B. Reid
Executive Director

RECEIVED
MAY 17 1996
PUGET SOUND REGIONAL COUNCIL

May 17, 1996

BY FACSIMILE; ORIGINAL BY OVERNIGHT MAIL

Honorable Doug Sutherland
President
Puget Sound Regional Council
1011 Western Avenue
Suite 500
Seattle, Washington 98104-1035

Re: Evaluation of Recommendations for Additional Noise Reduction
Measures for Seattle-Tacoma International Airport

Dear Mr. Sutherland:

On behalf of the cities of Burien, Des Moines, Federal Way, Normandy Park and Tukwila and the Highline School District, the Airport Communities Coalition ("ACC") submits the following response to the Puget Sound Regional Council ("PSRC") Executive Board's request for the ACC's review and assessment of selected recommendations made by the Expert Arbitration Panel on Noise and Demand/System Management ("Expert Arbitration Panel" or the "Panel") for abating and mitigating noise from Seattle-Tacoma International Airport ("Sea-Tac" or the "Airport").

GENERAL RESPONSE

PSRC Resolution A-93-03 provides that construction of a third runway at Sea-Tac would be authorized by April 1, 1996, if three preconditions were met.^{1/} One of the preconditions would be satisfied "[w]hen noise reduction performance objectives are scheduled, pursued and achieved based on independent evaluation, and based on measurement of real noise impacts."^{2/}

As all the members of the PSRC are aware, one of the most controversial issues surrounding the proposal to construct a third runway at Sea-Tac centers on the noise effects of expanding the Airport. Local officials of communities in the vicinity of the Airport, community groups and individual citizens have long complained about the excessive noise which results from the Airport's present operations and about the Port of Seattle's (the "Port") failure to implement aggressively the noise reduction measures it committed to undertake in order to abate and mitigate the noise attributable to the construction of the second runway in 1973.

Against the backdrop of widespread community concern over the prospect of greatly increased noise effects from a third runway at Sea-Tac, the PSRC decided to authorize expansion of the Airport only if, among other conditions, an independent evaluation determined that the Port's noise reduction performance objectives had been achieved based on the measurement of real noise impacts. The PSRC Executive Board established an Expert Panel to

^{1/} PSRC General Assembly, Resolution Amending the 1988 Interim Regional Airport System Plan (RASP) for Long-Term Commercial Air Transportation Capacity Needs of the Region, Res. A-93-03 at 2-3 (Apr. 29, 1993).

^{2/} Id. at 3 (emphasis added).

Honorable Doug Sutherland
May 17, 1996
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make the independent evaluation and, together with the Port, the Federal Aviation Administration and the Washington State Department of Transportation, declared that the Panel's decision would be "final [and] binding. . . ." ^{3/}

After nearly two years of hearings and the review of reams of written and oral testimony and technical documents, the Expert Arbitration Panel concluded that the Port had not scheduled, pursued and achieved sufficient reductions in noise impacts to satisfy the noise reduction condition in Resolution A-93-03. ^{4/} Having committed themselves to a binding and final process, the jurisdictions in the region -- represented by the PSRC -- can not now simply ignore the results of that process because the outcome disappointed some of the parties. Any attempt by the PSRC to sidestep -- or effectively rewrite -- the Panel's ruling, therefore, would be highly improper.

Notwithstanding the final and binding nature of the Panel's decision, we have been asked to evaluate selected Panel "recommendations" for which the PSRC determined that ACC jurisdictions would have some implementing authority (item numbers 3, 6, 6a, 6b, 6c, 6d, 6e,

^{3/} See Puget Sound Regional Council Exec. Bd., Res. A-93-03: Implementation Steps ("Res. A-93-03 Implementation Steps"), app. A, ¶ 5 (adopted Aug. 26, 1993, revised Sept. 23, 1993); Federal Aviation Admin., Wash. State Dep't of Transp., Puget Sound Regional Council, and Port of Seattle, Memorandum of Understanding ("MOU"), app. D, ¶ 6 (Mar. 1994).

^{4/} See generally In re: Expert Arbitration Panel's Review of Noise and Demand/System Management Issues at Sea-Tac Airport, Final Decision on Noise Issues ("Final Decision on Noise Issues") (Mar. 27, 1996).

7d, and 8c),^{5/} and to identify:

- a) the estimated cost of implementation;
- b) the period of time in which the recommendation could be implemented, including milestones;
- c) the benefit that could result from implementation, including the estimated net number of additional people that could experience reduced noise impacts;
- d) potential obstacles to implementing each recommendation and how these obstacles might be overcome;
- e) appropriate methods for monitoring compliance with each recommendation;
- f) suggested responses to non-compliance; and
- g) a list of preferred recommendations (including the rationale for rejecting any recommendations).

Despite the highly complex, technical and analytical nature of the above-enumerated tasks, we were given only slightly more than two weeks to accomplish them.^{6/} It is unrealistic to expect any party to assess the impacts, scope, cost and effectiveness of a multitude of actions potentially resulting in reduced Airport noise in such a short period of time. Any credible attempt to analyze most of these issues (e.g., the development and effectiveness of alternative flight tracks at Sea-Tac, the net benefits of a noise abatement departure profile employing a steeper angle of climb, the effectiveness of preferential runway use during "low

^{5/} Memorandum from Mary McCumber, Exec. Dir., Puget Sound Regional Council to Potential Implementing Agencies and Communities at 4-7 (Apr. 30, 1996).

^{6/} Id. at 2; Memorandum from Doug Sutherland, Pres., PSRC, to Affected Agencies, Communities and Citizens (Apr. 30, 1996).

Honorable Doug Sutherland
May 17, 1996
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activity" periods, among others) would take considerably more time than the PSRC Executive Board has allotted.

Just as an example, when the Expert Arbitration Panel requested similar kinds of information from the Port, the Port requested and was given five months to respond.^{2/} The abbreviated timetable established by the PSRC for receiving and reviewing comments and taking final actions casts serious doubt on the PSRC's motives in undertaking this exercise.

Notwithstanding the insufficient time in which to conduct any reasonable review and analysis of the PSRC's selected list of recommended noise abatement and mitigation measures, the ACC has retained nationally-recognized noise and airport planning consultants in a bona fide attempt to address each recommendation, item-by-item.^{8/}

The ACC is responding to the PSRC's request for information to the extent to which it is able, given PSRC-imposed time constraints. The ACC, however, lodges a formal objection to what clearly is an improper attempt by the PSRC to negate the "final" and "binding" decision made by the Expert Arbitration Panel^{9/} and to revisit highly technical issues in a cursory and conclusory manner.

^{2/} See Letter from Burr Stewart, Dir. Aviation Planning, Port of Seattle, to Expert Arbitration Panel (May 10, 1995) (stating that October 15 was the earliest possible date for responding to the Panel with a comprehensive and cogent document).

^{8/} Although the Highline School District is a member of the ACC, it has responded separately to the PSRC regarding the items for which it was considered to be an implementing agency (item numbers 1 and 8a). See letter from Dr. Joseph McGeehan, Superintendent, and Mr. Tom Slattery, Pres., Board of Directors, Highline Public Schools, to Doug Sutherland, Pres., PSRC, (May 13, 1996), incorporated by reference into these comments.

^{9/} Res. A-93-03: Implementation Steps, app. A ¶ 5; MOU, app. D ¶ 6.

RESPONSE TO SPECIFIC ITEMS ASSIGNED FOR ACC COMMENTS

ITEM NO. 3 - As discussed in the attached report prepared by Dr. Sanford Fidell,^{10/} periodic conduct of social surveys can be both technically feasible and extremely useful for monitoring the actual effect and progress (if any) of noise reduction programs -- but only if stringent survey protocols are established. That is, the ACC and the Port must first agree upon which specific mitigation measures should be evaluated. The parties must then agree on the specific goals of the surveys. The surveys must be well-crafted, professionally (and independently) conducted, properly timed and adequately funded, if accurate results are to be achieved.

Four major elements must be considered to estimate the cost of the kind of surveys which should be conducted. They are design, execution, analysis and reporting. The costs of each of these elements is difficult to estimate in the abstract, since the amount of effort required for each is highly sensitive to specific survey techniques. For example, defining and selecting specific goals for a social survey can require only several weeks of effort if the issues of concern are not excessively complex or controversial. If, however, the survey must satisfy multiple or disparate interests, if the results are to be unambiguously interpretable and accepted by all parties, or if the survey must be coordinated with complex measurements of aircraft flight tracks and/or noise exposure, a more lengthy and exhaustive survey design process would be necessary. Each of these variables is discussed more fully in Dr. Fidell's report.

^{10/}

Attached hereto as Exhibit 1.

Because of these factors, it would be irresponsible for the ACC to assert that it could provide the PSRC with specific cost estimates at this time. Factors to be considered in assessing probable costs include the following:

- ▶ Factors Affecting Design Costs: Following the identification of detailed goals for a survey, a number of design issues must be resolved: 1) the target (and possibly control) population(s) and time periods of interest must be identified; 2) the size of effects that are to be documented must be estimated; 3) inferential analyses must be designed prior to conduct of the survey; 4) means for representing opinions of target populations in an accurate and unbiased fashion must be developed; and 5) efficient data communication and processing procedures must be devised. Conservatively, we estimate that it could require several weeks to resolve these aspects of survey design.
- ▶ Factors Affecting Data Collection Costs: Preparations for the conduct of a scientifically valid social survey include development, coding and pilot testing of the survey instruments, selection of procedures for administration, training interviewers, and scheduling, supervising and monitoring data collection. As a very general principle, interviewing costs increase by one dollar for each minute of each respondent's time. Thus, for example, \$10,000 is a gross figure for the cost of administering a ten-minute questionnaire one time to 1,000 respondents (e.g., to a sample of 250 households in each of four interviewing areas). Lengthier or more complex questionnaires, larger numbers of interviewing sites, or repeated administrations of the survey instrument can increase these costs accordingly.

Decisions regarding data collection issues may require substantial amounts of time. This particularly is the case if the survey is of large scale, includes contingent, closed-response-category questions, and is to be administered repeatedly, on a tight schedule, over a wide area, in places lacking readily available sampling frames or complete, reliable and computer-compatible geo-information, or in coordination with field measurements of noise exposure.

- ▶ Analysis and Reporting Costs: Costs for data processing and for conducting pre-planned inferential analyses depend directly on the number, complexity and comprehensiveness of such analyses. Several weeks or more may be required simply for the mechanics of processing, and

relating to one another, large volumes of questionnaire and noise data collected in different formats and in different computing environments. Some multivariate techniques must be undertaken either sequentially or iteratively. Post hoc analyses, if needed, can not begin until the conduct of the pre-planned analyses has been completed. Reporting the findings of such a survey will require additional time to accommodate the preparation of multiple drafts and review cycles.

Social surveys provide the best empirical means by which the Port and the region can determine whether, and to what extent, particular noise reduction measures actually are perceived by those for whose benefit these measures have been implemented. In order to derive maximum benefit from the survey findings, such surveys should be conducted at least semi-annually.

ITEM NO. 6 - As discussed in Dr. Fidell's report, an FAR Part 150 study for a large airport, such as Sea-Tac, is an elaborate, professionally staffed effort that can be completed within several months if proper resources are committed to the effort. It entails the development and analysis of the documentation necessary to construct a Noise Exposure Map ("NEM") and to develop a Noise Compatibility Program ("NCP"). The NCP is subject to a six-month FAA review process and both the NEM and the NCP require FAA approval. The analysis necessary for such a study demands consideration of myriad operational scenarios and variants on each, including: forecasting of uncertain economic, population, air traffic, and land development trends into the near and distant future; generation, collection, and manipulation of large quantities of detailed information; and much exercising of noise exposure prediction and other computer models.

The feasibility of conducting Part 150 studies has long been established. The value of such a study in this context, however, is directly related to the extent to which a) the jurisdictions surrounding the Airport (e.g., the ACC member cities) are partners throughout the entire Part 150 study process; and b) implementation of the study recommendations is monitored and enforced. Typically, airport proprietors (and their clients and beneficiaries) are the only substantive participants in the preparation of a Part 150 study. The airport proprietor selects, reimburses and exerts de facto control over the consultant who conducts the daily business of a Part 150 study. The proprietor structures, schedules and approves specific objectives, sets the parameters of the study, sets priorities and ranges for alternatives to be considered, and otherwise fully controls the study agenda. The airport proprietor and its contractors command unique access to large volumes of highly detailed information and complex computer-based analysis tools. Other stakeholders -- such as neighboring jurisdictions and regional planning organizations -- generally are relegated to minor, non-critical and reactive roles, such as providing "input" to pre-determined decisions or commenting on completed sub-studies and draft documents.

The ACC does not believe that there is any significant value to a traditional Part 150 study. Only a Part 150 study in which the ACC would be a co-equal partner with the Port would be productive.^{11/} Moreover, in order to participate "actively and constructively" in a

^{11/} E.g., a productive Part 150 study would be funded by the Port (with available federal financial assistance) but contractors would be retained and supervised by a committee representative of ACC cities. The Port would participate by commenting on technical analysis and assisting in preparing the study, but it would have no authority to direct the preparation of the study.

Part 150 review -- as the Expert Arbitration Panel has recommended^{12/} -- among other things, the Port would have to commit a defined share of federally-authorized financial resources^{13/} to the implementation of the study recommendations. For example, in order for a Part 150 study to be responsive to the Panel's recommendation, the Port would have to make resources available for the ACC:

- ▶ to define study goals and alternatives to be considered, and to retain the expertise needed independently to forecast air traffic, economic, population and regional land development trends;
- ▶ to model, predict and otherwise assess the consequences of alternate airport traffic management, aircraft routings and traffic patterns;
- ▶ to have fully independent and unimpeded access to historical and current noise exposure, flight track and other operational information on the same basis as the Port; and
- ▶ to acquire and operate the tools needed to collect, process, manipulate, analyze and display the same information on which the Port and its consultants rely.

Most importantly, the recommendations set out in Item 6 should not be subject to the implementation restrictions traditionally attached to a Part 150 study. Even to begin to address the issues identified by the Expert Arbitration Panel, the recommendations listed under Item 6 must be fully implemented prior to any final PSRC approval for the construction of a

^{12/} Final Decision on Noise Issues at 39.

^{13/} See, e.g., 49 U.S.C.A. §§ 40117(d)(2)(B) (authorizing the imposition and use of Passenger Facility Charges for airport noise reduction projects), 47505(a) (authorizing Airport Improvement Program grants for the development and implementation of noise compatibility programs) (West 1996).

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third runway at Sea-Tac.^{14/} As the Panel clearly stated, "the bottom line under the Resolution [A-93-03] is results."^{15/}

The ACC responds to the specific measures set forth in Item 6 as follows:

ITEM NO. 6a - This recommendation could be implemented quickly and at minimal cost to the Port. In order to be effective, however, the community must have an active role in enforcing the North Flow Daytime Departure procedure. The ACC, therefore, would need to have direct, real-time access to information produced by the Port's noise monitoring equipment.

Although the Expert Arbitration Panel focused only on north flow departures, south flow air traffic predominates over north flow air traffic at Sea-Tac.^{16/} The Port and the community, therefore, also must determine and implement the most effective mechanisms to reduce noise generated by south flow departures as well. Furthermore, the Panel did not address

^{14/} Some of the recommendations set forth in the PSRC memorandum would require the FAA's approval (or at least acquiescence) for implementation. Although the PSRC cannot order the FAA to take such actions, it can condition its own approval of a third runway upon FAA actions. The FAA often approves airspace actions (e.g., preferential runway use programs, revised flight patterns) when requested to do so by regional planning bodies or airport proprietors, both within and outside of Part 150 studies. The PSRC should direct the Port to obtain whatever FAA approvals are necessary to implement the PSRC's recommendations as a condition precedent to moving forward with the third runway project.

^{15/} Final Decision on Noise Issues at 31.

^{16/} According to data provided by the Port and the FAA, 65 percent of the air traffic is south flow and 35 percent is north flow. U.S. Dep't of Transp., Fed. Aviation Admin., and Port of Seattle, Final Environmental Impact Statement for Proposed Master Plan Update Development Actions at Seattle-Tacoma International Airport at C-11 (Feb. 1996).

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arrivals from either the north or the south. The use of Localizer Directional Aids ("LDA") at Sea-Tac could reduce noise exposure attributable to arrivals from both directions.

ITEM NO. 6b - The Port could obtain implementation of this recommendation immediately at little cost. Demand between 6 and 7 a.m. is low enough to enable the use of the North Flow Nighttime Departure Noise Abatement Procedure. In addition, the evening "shoulder" period (8 to 10 p.m.) is used primarily for arrivals and there are few departures from Sea-Tac during those hours. Thus, implementation of North Flow Departure Noise Abatement Procedure would have little detrimental effect on airport capacity. As mentioned above, consideration also should be given to abating the considerable noise effects of south flow air traffic.

ITEM NO. 6c - As explained in Dr. Stephen Hockaday's report,^{17/} the use of "minimum population exposure" flight tracks could be a feasible noise reduction measure. The development of noise abatement flight tracks involves an iterative process that typically takes as little as several months of study. Working together with the ACC, the FAA and the PSRC, the Port immediately should initiate such a study. A number of alternative flight tracks -- not only the three suggested by the Expert Arbitration Panel^{18/} should be analyzed. Using the INM, noise contours and profiles would have to be plotted to determine the approximate number of individuals who would be exposed to L_{dn} 65 dB or above for each set of flight tracks. The Port and the community then could decide which flight tracks, if any, should be adopted to optimize

^{17/} Attached hereto as Exhibit 2.

^{18/} Final Decision on Noise Issues at 39.

noise reduction. The introduction of LDA procedures also should be considered, because associated flight tracks offer the opportunity to reduce population exposure to noise in both north and south flow.

Dr. Hockaday estimates that the procedure should take about 6 to 9 months, and could cost approximately \$200,000 to \$300,000 for consultants.^{19/}

ITEM NO. 6d - The Port and the FAA immediately should investigate implementation of the noise abatement flight departure profile presently in use at John Wayne Airport in Orange County, California. If used with appropriate flight tracks (determined through the use of modeling), this procedure potentially could have substantial benefit for the reduction of the total population exposed to high levels of airport noise. The successful use of the noise abatement flight departure profile at John Wayne Airport demonstrates the feasibility and efficacy of adopting such procedures at Sea-Tac.

ITEM NO. 6e - Dr. Hockaday's report indicates that use of preferential runway procedures during low activity periods could be an effective method for distributing noise so as to decrease sleep disturbance in the region. An evaluation of the effectiveness of preferential runway use at Sea-Tac would include the following elements:

- ▶ the conduct of delay and noise studies;
- ▶ the definition of times of day when preferential runways would be used;

^{19/} The evaluation of "minimum population exposure" flight tracks involves significantly less effort than a complete revision of the Four Post Plan. The FAA has estimated that the latter effort would cost about \$400,000.

- ▶ the definition of days of the year when preferential runways would be used; and
- ▶ the definition of weather conditions during which preferential runways would be used.

The installation of LDA at Sea-Tac could lower overall noise impacts from the Airport by extending the number of hours for preferential runway use.

ITEM NOS. 7d and 8c^{20/} - The ACC cities have adopted their required comprehensive plans pursuant to the Washington Growth Management Act.^{21/} The ACC cities, therefore, must be the sole lead agencies in the implementation of any program involving the development of alternative, noise compatible land uses and the prevention of additional noncompatible land uses. Land use compatibility often is not easily attained. When areas within the L_{dn} 65 dB noise contour already are highly developed for residential uses, other mechanisms must be employed to mitigate the effects of airport noise.

The ACC cities welcome the opportunity to work with the Port to achieve land use compatibility (where it is feasible to do so) recognizing, of course, that the Port would have to provide financial assistance to stimulate suitable development of transitional zones between

^{20/} The PSRC Executive Board has suggested that the ACC and the Washington State Department of Transportation ("WSDOT") be joint lead agencies on these items. Is is unclear what, if any, role WSDOT properly plays in development of land use compatibility plans for municipalities in the vicinity of the Airport.

^{21/} Chapter 36.70A RCW. The City of Burien has until February 1997 to adopt the comprehensive plan required by the Growth Management Act. Burien, however, has adopted interim planning elements.

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the remaining homes and businesses and future compatible land uses. Any cooperation would be undertaken within the parameters of Growth Management Act requirements.

MONITORING IMPLEMENTATION AND COMPLIANCE

Any program which does not include both enforcement and independent monitoring of compliance would be irresponsible and valueless. As past Port actions have demonstrated, and the Panel explicitly found,^{22/} commitments can easily be made but, if they are not enforced, there is little or no incentive for the Port to follow through on those commitments.

The only effective way to ensure compliance with the measures upon which the ACC has commented is to require complete implementation -- including verifiable monitoring and enforcement -- as a condition to final approval for the Port's third runway project. The PSRC should establish an independent monitoring commission to determine whether the Port has completed implementation. When the Port reports to that commission that implementation has been completed, the commission should conduct an inquiry and report its findings to the PSRC Executive Board and General Assembly, following which, final approval could occur.

^{22/} See Final Decision on Noise Issues at 26 (finding that the Port has not followed through on its commitment to provide an adequate Transaction Assistance Program to residents living near the Airport who are not eligible for buyouts, and that the Port did not begin aggressively to implement its Residential Insulation Program until 1993), 27 (concluding that if the Port had accelerated its Residential Insulation Program 18 months sooner, it could have insulated an additional 2,000 homes by Dec. 1995), 28 (finding that the Port has failed to expeditiously implement its Public Buildings Insulation Program, because it first was doing pilot studies which probably were unnecessary).

As to those measures which contemplate continuing actions by the Port, the PSRC should require that the Port make quarterly compliance reports to the monitoring commission (in a form established by the commission). If the commission determines that the Port has not been in compliance with any required action for more than two quarters in any year, the commission should be empowered to set an appropriate enforcement mechanism to which the Port should be contractually bound to adhere.

CONCLUSION

We must reiterate that the ACC believes that it is improper for the PSRC to ignore the final and binding nature of the decision of the Expert Arbitration Panel. If, however, the PSRC intends to pursue a course of action which attempts to implement the Panel recommendation, then all recommendations of the Panel^{23/} -- and other actions required to accomplish meaningful noise reduction -- must be implemented, completed, and shown to yield the required reduction of noise impacts before the PSRC can authorize the construction of the third runway. To allow the Port to proceed in the absence of the implementation of noise

^{23/} In response to the Port's "invitation," the Expert Arbitration Panel offered specific recommendations for some additional noise reduction measures. During the course of its two-year proceedings, the Panel also made numerous other recommendations of actions the Port could take in an attempt to comply with the requirements of Res. A-93-03. The list reproduced by the PSRC does not exhaust the Panel's recommendations to the Port. The PSRC has not sought the ACC's comments on the Panel's many other recommendations.

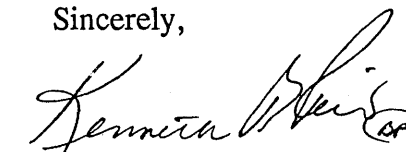
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reduction measures would leave the PSRC and the community with no means of enforcement and no recourse if the Port failed to complete the noise reduction measures to which it had agreed.

Sincerely,



Kenneth B. Reid
Executive Director

Enclosures



**COMMENTS ON EXPERT ARBITRATION PANEL'S RECOMMENDATIONS
FOR ADDITIONAL NOISE REDUCTION MEASURES
AT SEATTLE-TACOMA INTERNATIONAL AIRPORT
PREPARED BY DR. SANFORD FIDELL**

The Puget Sound Regional Council's (PSRC) Memorandum of 30 April 1996 asks the Airport Communities Coalition (ACC) and others to review certain recommendations made by its Expert Arbitration Panel to "assess which are feasible and how much they would cost, and what the effect of their implementation would be...." Although the depth and breadth of information requested by the PSRC cannot be provided within the short time period allowed, I have, nevertheless, reviewed the items assigned to the ACC.^{1/} I have prepared the attached information to assist the ACC in the preparation of its comments to the PSRC.

I have concluded that it would be feasible and efficacious to adopt certain of these recommendations, but only under conditions that guarantee meaningful treatment of the ACC's contributions. As noted below, these conditions must differ considerably from those which typically define relationships among airport proprietors and communities.

Comment on Recommendation 3 ("That the Port and the organizations representing the affected communities jointly sponsor social surveys at regular intervals to assess the effectiveness of future noise abatement and mitigation measures in terms of perceived noise impacts....")

A longitudinal set of social surveys can be both technically feasible and highly useful for monitoring the actual effect and progress (if any) of noise mitigation programs -- provided that there is agreement in advance on which mitigation measures should be assessed for effectiveness; that full agreement can be obtained in advance on the specific goals of the surveys; that the surveys are well crafted and timed, and that adequate resources are available for their conduct.

The four major elements of such surveys for costing purposes are design, execution, analysis, and reporting. Costs for these elements are difficult to estimate in the abstract, since the amount of effort required for each is highly sensitive to specifics. For example, merely defining and selecting specific

^{1/} As we agreed, I did not review items 7d and 8c. The development of compatible land use plans is more properly examined by the ACC's planning and legal experts.

goals for a social survey can require weeks of effort if the issues of concern are complex or controversial, if the survey must satisfy multiple or disparate interests, if the results are to be unambiguously interpretable and accepted by all parties, or if the survey must be coordinated with complex measurements of aircraft flight tracks and/or noise exposure.

Factors Affecting Design Costs

Once detailed goals for a survey are identified, consideration must be given to identifying target (and possibly control) population(s) and time periods of interest, estimating the sizes of effects that are to be documented, determining the required resolution for statistical inference, designing inferential analyses prior to conduct of the survey, developing means for representing opinions of target populations in an accurate and unbiased fashion, and devising efficient data communication and processing procedures. Several calendar weeks may be required to resolve such aspects of survey design, particularly if a large group of planners is involved.

Factors Affecting Data Collection Costs

Preparations for the conduct of a social survey include development, coding and pilot testing of the survey instrument, selection of procedures for administering it, training interviewers, and scheduling, supervising, and monitoring data collections. Decisions about such matters may require substantial amounts of time, particularly if the survey is of large scale, includes contingent, closed response category questions, and is to be administered repeatedly, over a wide area, in places lacking readily available sampling frames or complete, reliable and computer-compatible geo-information, on a tight schedule, or in coordination with field measurements of noise exposure.

A general rule for estimating the costs of reasonable quality data collection -- at least by telephone -- is that interviewing costs (including those for central supervision, monitoring, callbacks, and independent verification of 10 percent of completed interviews) increase by one dollar for each minute of each respondent's time. A cost per interview in the vicinity of \$10 may therefore be anticipated for a single administration of a ten minute questionnaire to a single respondent. Thus, \$10,000 is a gross figure for the cost of administering a ten minute questionnaire once to 1000 respondents (for example, to a sample of 250 households in each of four interviewing areas). Lengthier or more complex questionnaires, larger numbers of interviewing sites, or repeated administrations of the survey instrument can drive these costs considerably higher. Adding "just one more question" to a survey instrument intended to be

administered in five neighborhoods at two points in time can thus add \$5,000 to \$10,000 to interviewing costs alone.

Telephone interviewing costs may be sensitive to the interviewing schedule (e.g., constraints on calendar periods acceptable for the completion of interviews, numbers of hours available during different time periods for interviewing, the order and rate of interviewing in different geographic areas) and to the absolute number of interviews to be completed. Economies of scale are not guaranteed, particularly if a large number of interviewers must be trained to collect great numbers of interviews in short periods of time. It can prove more cost effective in some circumstances to spread large numbers of interviews in multiple communities over a period of weeks rather than days.

Costs for personal (face-to-face) interviewing are often higher than those of telephone interviewing, sometimes without commensurate quality control. Thousands of dollars more must be budgeted if the expenses of remote measurement of aircraft noise exposure for prolonged periods of time with portable instrumentation must be accounted for as well.

Analysis and Reporting Costs

Costs for data processing (simple tabulations, graphics, and calculation of correlation matrices) and for conducting pre-planned inferential analyses depend directly on the number, complexity, and comprehensiveness of such analyses. Weeks or more may be required simply for the mechanics of processing large volumes of questionnaire and noise data collected in different formats and in different computing environments, and then relating them to one another. Furthermore, some multivariate techniques must be undertaken either sequentially or iteratively. Post hoc analyses, if needed, cannot even begin until the conduct of the pre-planned analysis is complete.

In short, a thorough and sophisticated analysis of a complex survey on community response to noise exposure generally requires weeks rather than days to complete. Reporting the findings of such a survey may require a yet lengthier period of time for the preparation of multiple draft and review cycles. The results, however, are worth the effort, and I would recommend that such surveys be conducted in the Sea-Tac vicinity at least semi-annually.

Comment on Recommendation 6 ("That the PSRC, the FAA, and the communities affected by airport noise participate actively and constructively in the Port's upcoming Part 150 review...")

An FAR Part 150 study for a large airport is an elaborate, expensive, and professionally staffed effort that can take a

considerable amount of time to complete. It entails construction and FAA approval of a Noise Exposure Map, a Noise Compatibility Program, and much accompanying documentation. The environmental assessment aspects of such a study demand consideration of myriad operational scenarios and variants on each; forecasting of uncertain economic, population, air traffic, and land development trends into the near and distant future; generation, collection, and manipulation of large quantities of detailed information; and much exercising of noise exposure prediction and other computer models.

Although airport proprietors invite public participation in scoping, prosecuting and reviewing their Part 150 studies, few local governments or civic action groups have the expertise or can afford the long term commitment of resources needed to exert a substantial and continuing influence on the outcome of a large scale Part 150 study. As a result, the airport proprietor (and its agents, clients, beneficiaries, commercial and federal supporters) are generally the only participants in a Part 150 study whose interests are actively pursued. The airport proprietor selects, reimburses and exerts full *de facto* control over the organization that conducts the daily business of a Part 150 study. The proprietor structures, schedules and approves specific objectives, bounds study parameters, set priorities and ranges for alternatives to be considered, and otherwise fully controls the study agenda. The airport proprietor and its contractors command unique access to large volumes of highly detailed information and complex, computer-based analysis tools; schedule meetings and solicit comments on intermediate work products at times and places of their choice; and so forth. Stakeholders -- other than the proprietor and sympathetic organizations -- are generally relegated to minor, non-critical, and reactive roles, such as providing "input" to pre-determined decisions or commenting on completed sub-studies and draft documents.

Considering the great disparity in resources available to the participants in Part 150 studies and the limited and passive role usually afforded public participation, it is hardly surprising that Part 150 studies rarely yield more than a standard recipe with familiar ingredients for rendering a community "compatible" with an airport. The ACC should, nonetheless, be willing to participate in the Port's Part 150 study -- but only as a co-equal partner. The ACC could actively and constructively participate in an updated Part 150 study for Sea-Tac only to the extent that it has access to the resources required to fully explore alternatives of its own devising, independently from the Port's priorities and agenda.

If the PSRC wishes the ACC to participate actively and constructively in the Port's Part 150 study, it must level the

playing field by requiring that the ACC be provided with the resources necessary to do so meaningfully. For example, the ACC should have access to resources on a par with those available to the Port:

1. to define study goals and alternatives to be considered, and to retain the expertise needed to independently forecast air traffic, economic, population, and regional land development trends;
2. to model, predict, and otherwise assess the consequences of alternative airport traffic management, aircraft routings and traffic patterns;
3. to have fully independent and unimpeded access to historical and current noise exposure, flight track and other operational information identical to that which the Port enjoys; and
4. to acquire and operate the tools needed to collect, process, manipulate, analyze, and display the same information on which the Port and its consultants rely.

Comment on Recommendations 6a through 6e (That the Port, the FAA, the PSRC, and the ACC evaluate a) the expanded use and enforcement of North Flow Daytime Departure Noise Abatement Procedures; b) the feasibility of extending use of North Flow Nighttime Departure Noise Abatement Procedures; c) the use of "minimum population exposure" flight tracks; d) benefits of a noise abatement departure procedure; e) benefits of preferential runway use)

The Port and the FAA need not await the completion of a Part 150 study to implement any of the proposed actions listed in 6a through 6e. Since the Expert Panel has determined that the Port has failed to comply with the noise reduction requirements of Resolution A-93-03, implementing these measures immediately could help to stem the erosion of benefits that the Panel also noted.

None of the ideas recommended by the Expert Arbitration Panel is particularly novel, and each has been used -- with some degree of effectiveness -- at other airports. For example, the noise abatement departure profile currently is being used in California at John Wayne Airport.

Each of these measures could have some degree of positive effect on noise levels and noise impacts generated by Sea-Tac. The extent to which each recommendation could effectively abate airport noise levels in communities in the vicinity of Sea-Tac cannot be estimated quantitatively within the schedule specified by the PSRC.

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MEMORANDUM

TO: Airport Communities Coalition

FROM: Dr. Stephen L.M. Hockaday
Consulting Services, Ltd.

DATE: May 8, 1996

RE: Review of Additional Noise Reduction Measures Recommended by the
Expert Arbitration Panel on Noise and Demand/System Management
Issues

I have reviewed the April 30, 1996 memorandum from the Puget Sound Regional Council which requested that the Airport Communities Coalition review and assess selected recommendations made by the Expert Arbitration Panel on Noise and Demand/System Management Issues. In accordance with the ACC's request, I confined my substantive analysis to recommendations numbered 6, 6a, 6b, 6c, 6d, and 6e.

6. **PSRC, the FAA and Affected Communities to Participate in Part 150 Study** The PSRC should not make any commitments with respect to the proposed third runway at Sea-Tac until the completion of a Part 150 study and the full implementation of its recommendations. The ACC should play a lead role in the conduct of the Part 150 study including the development of the Noise Exposure Maps and the formulation of a Noise Compatibility Program.

The individual operational measures listed in items 6a through 6e need not wait until the completion of a Part 150 study. The Port and the FAA could -- and should -- take steps to implement each of them as expeditiously as possible.

- 6a. North Flow Daytime Noise Abatement Departure Procedure** The North Flow Daytime Noise Abatement Departure Procedure could be implemented at Sea-Tac with minimal cost and without much preparation. This procedure could be used effectively to decrease noise impacts in more populated areas. The community must play an active role in monitoring and enforcing compliance with this procedure. The ACC should have direct access to the Port's noise monitoring equipment.

This procedure could be implemented quickly and at minimal cost.

- 6b. Extend Hours of Use for the North Flow Nighttime Departure Noise Abatement Procedures** This recommendation could be adopted with little cost to the Airport in either financial resources or capacity. Demand at Sea-Tac between the hours of 6 and 7 a.m. is quite low. Moreover, there are few departures during evening shoulder hours (8 to 10 p.m.). Arrivals predominate over departures during those hours. This recommendation is feasible, it can be effective in reducing noise, and it is easily implemented at little cost.

Although the Expert Arbitration Panel did not mention south flow departures or north and south flow arrivals in items 6a and 6b, consideration must be given to reducing the noise effects of these flight paths as well. For example, the use of Localizer Directional Aid ("LDA") equipment and procedures could reduce certain noise exposures attributable to arrivals from both directions.

- 6c. Minimum Population Flight Tracks** It is both procedurally and substantively feasible to use "minimum population exposure" flight tracks. The development of alternative noise abatement flight tracks involves an iterative process which should be conducted in close consultation with the community. Working with the FAA and the ACC, the Port should initiate a study to explore the noise impacts of different flight tracks. Using the INM, noise contours and profiles would be plotted in order to determine the noise impacts of each. That is, the noise contours and profiles would reveal the size of the

population in the L_{dn} 65 dB noise contour for each successive flight track that is examined.

A number of alternative flight tracks -- not just the three suggested by the Expert Arbitration Panel -- should be examined using the process set forth above. Until that happens, it will be impossible to identify flight tracks which might be more effective -- with respect to noise abatement -- than those identified by the Port during the development of the Noise Mediation Agreement. With the introduction of LDAs at Sea-Tac, the associated flight tracks would offer the opportunity to reduce total population exposure to noise in both north and south flow. The use of LDAs, therefore could be effective at Sea-Tac both as a capacity enhancement and as a noise abatement tool.

The entire process for identifying "minimum population exposure" flight tracks could be completed in about 6-9 months. It should cost approximately \$200,000 to \$300,000 -- primarily for consultant services.

6d. Noise Abatement Departure Profile The steeper angle-of-climb noise abatement departure profile suggested by the Expert Arbitration Panel presently is being used effectively at John Wayne Airport in Orange County, California. If used with appropriate flight tracks (to be determined through the use of modeling), this operational procedure has the potential for significantly reducing the size of the population exposed to high levels of airport noise at a minimal cost to the Port or the airlines.

6e. Preferential Runway Use During "Low Activity" Periods The use of preferential runways during low activity periods at Sea-Tac could be an effective method for distributing noise in such a way that sleep disturbance would be minimized. The following steps should be followed in order to evaluate the potential effectiveness of this procedure:

- 1) conduct delay and noise studies;
- 2) define the times of day when preferential runways would be used;
- 3) define the days of the year when preferential runways would be used; and

- 4) define the weather conditions during which preferential runways would be used.

When LDA equipment and procedures are used at Sea-Tac, they will lower the overall noise impacts of the Airport by extending the number of hours for preferential runway use.

Overall, there is little doubt that all of the suggested noise abatement measures reviewed above would have some positive effect on the noise levels and the noise impacts generated by the Airport. Although some of these proposals would have a greater positive effect than others, all of them would contribute to the reduction of noise attributable to the present level of operations at Sea-Tac. Moreover, most of these measures would involve little financial cost to the Port. Probably the most costly recommendation would be the development of "minimum population exposure" flight tracks. However, the \$200,000 to \$300,000 estimated cost for this measure must be viewed in the context of the \$500 million that the Port expects to spend to construct a third runway at Sea-Tac.



King County Executive
GARY LOCKE

RECEIVED
MAY 20 1996
PUGET SOUND REGIONAL COUNCIL

May 17, 1996

The Honorable Doug Sutherland
Pierce County Executive
President, Puget Sound Regional Council
1011 Western Avenue, Suite 500
Seattle, Washington 98104

Dear Executive Sutherland:

Thank you for the opportunity to participate in the Puget Sound Regional Council (PSRC) review of additional, feasible noise reduction measures at and around Seattle-Tacoma International Airport (Sea-Tac).

As requested in your memo dated April 30, 1996, King County's response concerns recommendations 5-a and 8-a of the Expert Arbitration Panel Majority Recommendations, found on pages 38 and 41 of the Panel's final order. These recommendations discuss (1) working with the Port of Seattle and Alaska Airlines to eliminate Alaska's nighttime Stage 2 cargo flights at King County International Airport (KCIA) and developing a strategy to avoid additional nighttime Stage 2 flights at KCIA in the future; and (2) working with the Port of Seattle and other parties to recognize the shared responsibility in the region to resolve local noise problems and receive the full benefit of the Port's existing noise reduction programs.

Aircraft noise has become a troublesome issue at KCIA in the past 15 months, due largely to the increase in cargo operations. Alaska Airlines is one of several major carriers operating cargo flights at night, but is the only carrier using Stage 2 aircraft. Because of the increased complaints about noise and its effect on County residents, KCIA has instituted several steps to address air traffic noise, including:

- hiring a noise officer;
- purchasing a noise monitoring system (for installation this summer);
- initiating study of a wide range of noise remedies;
- identifying funding to pursue a federal rule-making process to eliminate Stage 2 nighttime flights;

The Honorable Doug Sutherland

May 17, 1996

Page 2

- staffing an ad hoc citizen committee to assist in the purchase and placement of noise monitoring equipment; and
- establishing a complaints tabulation and response system, including a dedicated noise "hotline".

As part of our ongoing planning, KCIA will implement feasible additional noise remedies to address two major areas:

- Abatement techniques, aimed at reducing noise by use of quieter flying techniques; and
- Mitigation measures, aimed at reducing sensitive land uses in the flight paths by techniques such as zoning and aviation easements.

The KCIA is also pursuing a comprehensive federal rule-making process, Federal Aviation Administration Regulation Part 161 which will provide us the authority to regulate/eliminate Stage 2 aircraft. The effort and funds which have been identified to complete the Part 161 procedures are above what KCIA has already committed to spend for noise programs. Funding is contingent upon the County Council approving a supplemental budget request of approximately \$600,000 which I transmitted to the Council in April. It is tentatively scheduled to come before the Budget and Fiscal Management Committee on May 29.

The Part 161 process, which is our only legal, unilateral remedy to eliminate Stage 2 flights, is an extremely challenging federal process. To my knowledge, it has yet to be successfully completed anywhere in the country. The study requires an extensive cost-benefit analysis. The process also mandates a six-month public notice and comment period, during which the study methodology can be challenged by any interested party. Based on preliminary work at other airports, the County estimates that the study will cost approximately \$300,000 to \$400,000 and will take at least 18 months to complete. If this rule-making is successfully completed and instituted, KCIA will be able to legally prohibit current and future Stage 2 nighttime flights at the airport.

In the short term, the KCIA continues to work with Alaska Airlines to voluntarily limit its nighttime Stage 2 flights, which moved from Sea-Tac to KCIA in March 1995. The two scheduled flight arrivals and departures generally take place between 1 a.m. and 4 a.m. Our discussions with Alaska concern the possibility of schedule changes away from the middle of the night and the airline's willingness to hush-kit these planes, which would reduce the engine noise and allow the flights to move back to Alaska's operations headquarters at Sea-Tac. Alaska is currently unwilling to voluntarily eliminate these flights, but has committed to reducing its schedule to one flight during the summer months in 1996. Alaska also has committed to hush-kitting the eight planes in question, provided it receives advance FAA certification for the hush-kit modification they've requested of the manufacturer. Alaska first estimated that it would be able to hush-kit its fleet as early as 1996. However, with delays in ordering and certification of

The Honorable Doug Sutherland
May 17, 1996
Page 23

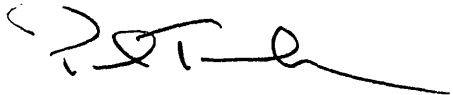
the necessary equipment, it is unlikely that Alaska will meet its revised spring 1997 timeline. This delay is an obvious concern to King County.

King County certainly recognizes the region's shared responsibility to address local noise problems from aircraft. KCIA shares airspace with Sea-Tac, and many of our neighboring communities are affected by aircraft operations at both airports. To meet our responsibility, we have initiated an ongoing planning to address noise issues and have committed funding to future efforts. I would hope that all parties will work together to resolve local problems and increase the benefits to the region.

I have attached a more complete discussion of these issues, along with information regarding noise complaints logged at KCIA and Alaska Airlines' current efforts to restrict the noise impacts of these flights.

Again, King County appreciates the opportunity to comment on these very important issues facing the region.

Sincerely,

A handwritten signature in black ink, appearing to read 'Paul Tanaka', with a long horizontal line extending to the right.

Paul Tanaka
Deputy King County Executive

Efforts To Eliminate Nighttime Flights at KCIA and Other Noise Remedies

KCIA Response to Stage 2 Nighttime Flights

Scale of Problem

The Stage 2 nighttime cargo flights operated at KCIA by Alaska Airlines, which were referenced for action in the Expert Panel's Majority Recommendations to the Puget Sound Regional Council, were responsible for 49% of the 1995 complaints at night, and 31% of all complaints in 1995. In the first quarter of 1996, Alaska drew 57% of the nighttime complaints, and 36% of all complaints (see Attachment 1 for noise complaint statistics.) Stage 2 nighttime flights such as these have a significant impact on the communities around the airport.

Voluntary Agreements

Throughout 1995 and 1996, the airport has met with Alaska to seek a voluntary agreement to reschedule or eliminate the Stage 2 flights, and to keep the airline apprised of the level of complaints. The airport has voluntary agreements in place with other cargo operators such as UPS, Airborne Express and Burlington Express, by which the operators have agreed to operate only Stage 3 aircraft at night from KCIA. If the airport can successfully reach a voluntary agreement of the same nature with Alaska, a timely resolution to this noise issue can be put in place. In the absence of a voluntary

agreement to eliminate these flights, the airport will continue pursuing the federal rule-making process to ban such flights by all operators at KCIA.

Airport staff have met with Alaska to address the issue and find an effective solution, and at the airport's request, Alaska made a presentation to the airport's Ad Hoc Citizen Noise Committee to share information about their operation of the nighttime flights.

In December 1995 Alaska first stated its intention to pursue "hushkitting" the aircraft, which would lessen some of the sound, move the aircraft noise profile from the Stage 2 category to Stage 3, and make the planes' operations somewhat more quiet. Alaska's original public statement issued in December 1995 anticipated hushkitting these cargo planes in spring of 1996. According to an April 1996 update from Alaska, FAA has not yet certified the hushkit modification Alaska wishes to use. The airline's anticipated date to receive certification and begin hushkitting is early second quarter 1997.

The hushkit manufacturer informed airport staff of a further delay in certification, pushing it from June to November 1996. Alaska Airlines has confirmed that it will order the hushkits once the certification is received. Since the manufacturer has several pre-orders in place, it is likely there will be a further delay for Alaska to received the technology, once it is ordered. During the delayed certification period, the manufacturer will make available, free of charge, technology to quiet the plane to close to a Stage 3 (a "12-lobe mixer"), replacing that with a full Stage 3 ("18 lobe mixer")

hushkit once it's certified. At this time, it doesn't appear that the airline is interested in this interim step, nor has it pre-ordered, although it seeks regular updates on the certification progress. The airport has a very strong interest in seeing Alaska pursue even an interim step towards hushkitting, in view of the continued delay in quieting these planes and reducing the noise impact.

Alaska has committed to changing its schedule during the summer of 1996, to eliminate one KCIA flight at night (see attachment 2). However, the flight is being moved back to Sea-Tac, before the night noise curfew begins, so in effect the noise will be shifted to other areas and hours of the evening, not eliminated. According to Alaska, whether it can continue this schedule through the fall will depend on not-yet-determined schedule and aircraft availability factors.

Most cargo operators at KCIA, especially those based on the field, voluntarily operate Stage 3 planes for all flights. This is in response to the airport's updating of operating agreements, and to the approaching national phase-out of Stage 2 aircraft scheduled for December 31, 1999. Although FAA can allow for waivers to this deadline for up to four years, all airlines are currently required to operate all Stage 3 fleets by the year 2000, whether they are original Stage 3 aircraft, or by virtue of hushkitting technology.

Federal Rule-making

By the fall of 1995, KCIA saw tremendous growth in citizen complaints about nighttime noise, and approximately one thousand petition signatures requesting action on nighttime flights at KCIA, in the absence of complete success with voluntary agreements to eliminate Stage 2 nighttime flights. In response, the County Council passed Council Motion 9709 in November 1995. This requested the County Executive to develop night noise restrictions prohibiting all Stage 2 aircraft operations from 10 p.m. to 7 a.m. at KCIA. In the absence of voluntary agreements with airline operators to end nighttime flights by Stage 2 aircraft, the airport must initiate a federal process to impose noise and/or access restrictions on Stage 2 aircraft, known as Code Federal Regulations Part 161 - Notice and Approval of Airport Noise and Access Restrictions.

King County proposes to fund a study and rule-making process to ban such flights by all operators at night (10 p.m. to 7 a.m.) at KCIA. The necessary funding for this rule-making is contained in a supplemental budget request delivered to the County Council in April 1996. Airport staff anticipates a minimum timeline of 18 months, beginning with the circulation of a request-for-proposal to consultants, through consultant selection, performance of analyses, posting of the proposed rule and sanctions/waivers, and successful completion of the mandatory six-month comment period. The estimated cost is approximately \$5-600,000 for study costs, consultants, temporary help and community outreach requirements.

The airport's methodology for completing the study can be challenged by the FAA, airline operators or other interested parties throughout the study and comment period. The Part 161 is an expensive and lengthy process for any airport to undertake, and has not been successfully concluded or implemented at the few airports which have attempted the process. Airports such as Sea-Tac which currently prohibit Stage 2 jets and nighttime flights operate under "grandfathered" restrictions put in place before the 1990 passage of the Aircraft Noise and Capacity Act (ANCA), which set the guidelines for noise or access restrictions at airports.

In April 1996, the County Executive submitted a supplemental budget request to the County Council, in the amount of \$640,507, to fund the two-year study and rule-making. It includes anticipated costs for consultants and temporary staff for the study and community outreach which will be performed. Current airport budget and staff will not cover the anticipated costs and effort of the study. Airport staff will finalize a request for proposal for the study, which will be released upon the approval of the supplemental budget, tentatively scheduled before the Budget Committee on May 29.

The overwhelming majority of the airport's citizen complaints regarding Stage 2 flights are directed toward nighttime cargo operations and charter operations, primarily Boeing 737-200s, which are over 75,000 pounds. Smaller aircraft under 75,000 also operate with Stage 2 engines, and a determination will have to be made whether to

pursue banning all Stage 2 engines at night, or limit the restriction to aircraft over 75,000 pounds.

The airport thus will pursue the Part 161 process as the only regulatory option to eliminate these flights and respond to the citizens' concerns, despite its complexity and cost and the eventual nationally-mandated ban on using Stage 2 aircraft by the year 2000. With the increasing cargo operation at KCIA, the possibility exists that any carrier may come in and operate Stage 2 aircraft, which the airport would be unable to prevent without a successful Part 161 process.

While Sea-Tac Airport does not generally allow Stage 2 operations at night, it does not restrict hushkitted Stage 3 aircraft. If and when a carrier such as Alaska hushkits its aircraft to achieve Stage 3 noise levels, those operations may move back to Sea-Tac. The nighttime noise, although somewhat reduced due to hushkitting, will still impact the region, and absent a successful Part 161 rule-making, any other Stage 2 operation may start up at KCIA. Eliminating new Stage 2 operations at KCIA is the best that can be attempted at this time, in view of strict prohibitions on restricting aircraft. Under the federal rule-making, attempting to restrict Stage 3 engines, even if they are hushkitted (and therefore, more noisy than true Stage 3 engines), is considerably more rigorous, requires FAA approval, and would not be supported by airline operators.

Until successful completion of the comment period, KCIA, unlike Sea-Tac, is prohibited by FAA from banning any Stage 2 nighttime flights or restricting any aircraft from using the field. The airport cannot estimate at this time the number of citizens affected by these noisy nighttime flights, but in 1995, the airport received 403 complaints, 258 of them about nighttime flights. For the first quarter of 1996, the numbers are 200 total complaints, 126 for nighttime flights. The airport will define new noise impact contours in 1996 as part of the Part 161 process and the strategic master plan, which will provide a better indicator of number of additional people that could experience reduced noise impacts.

KCIA's Response to Other Noise Problems

In response to earlier Executive and Council initiatives in 1995, the airport instituted a number of actions related to noise impacts at KCIA, including hiring the airport's first noise officer, establishing a systematic program for receiving, responding to and tabulating complaints, initiating the procurement for the airport's first noise monitoring system, and staffing a citizen advisory committee on the noise monitoring system. In addition, a master plan is underway, which will address noise remedies as part of the airport's future planned development. Airport staff works closely with the Tower and regional air traffic control to investigate noise complaints and methods to reduce noise to neighboring communities, and has scheduled presentations to the Ad Hoc Noise

Committee from various operators, including general aviation pilots, UPS, Alaska Airlines, and Air Traffic Control.

Within the master plan and using significant operator and citizen input, the airport will pursue other noise remedies, in addition to the Part 161 process, including pilot and citizen education, noise abatement and noise mitigation.

Some noise remedies are more feasible than others to implement at KCIA, and the feasibility of options and the airport's next steps will be determined through the master plan process in 1996. Some recommended steps can be implemented with a minimum of analysis, while others may eventually come about through a comprehensive federal planning and review process, FAR Part 150. All proposed measures considered by the airport will receive extensive public review and comment by interested parties.

Pilot and Citizen Education

Various measures could reduce noise impacts through steps such as pilot education for quiet flying techniques, and an increased understanding by citizens of airspace constraints. Over the past year, there has been an ongoing dialogue with community representatives, airport operators and stakeholders, and use of the Ad Hoc Noise Committee as a citizen forum.

Noise Abatement

Noise abatement (reducing noise at the source) will be examined through such measures as steeper climb profiles, a review of flight paths, more accurate use of the Duwamish Bay/Elliott Bay departure corridor, and using the full length of the runway, among others. The airport shares its airspace with Sea-Tac (deferring to Sea-Tac air traffic in all cases), and is very small, which limits the field's ability to absorb on-the-ground and flight noise before it affects surrounding neighbors. Boeing Field did not have many restrictive noise remedies "grandfathered" into place before enactment of the 1990 legislation, making new noise restrictions difficult to implement.

Noise Mitigation

The airport's examination of possible mitigation measures will include soundproofing programs, zoning compatibility, and aviation easements for air space rights. While all of these options are in use at different airports around the country, their appropriateness to KCIA and the surrounding communities will be evaluated as part of a comprehensive Part 150 process, which will involve extensive public comment and review, and submitted for FAA approval and possible funding.

KING COUNTY INTERNATIONAL AIRPORT

SUMMARY OF NOISE DATA

SOURCE OF 1995 COMPLAINTS

CARGO OPERATIONS GENERATED HALF OF THE COMPLAINTS FILED DURING 1995 (50.62%). CITIZENS WERE MOST CONCERNED ABOUT THE OPERATION OF ALASKA AIRLINES WHICH ACCOUNTED FOR 49% OF ALL NIGHT-TIME COMPLAINTS (10:00PM AND 7:00AM.). IN ADDITION, APPROXIMATELY 32% OF ALL COMPLAINTS (REGARDLESS OF TIME OR CAUSE) WERE DUE TO ALASKA AIRLINES.

SOURCE	DAY	NIGHT	TOTAL
CARGO OPERATIONS			
- ALASKA AIRLINES	0	127 (49.22%)	127 (31.51%)
- AIRBORNE EXPRESS	23 (15.86%)	14 (5.43%)	37 (9.18%)
- UPS	10 (6.90%)	9 (3.49%)	19 (4.71%)
- METHOW	0	1 (.39%)	1 (.25%)
- GENERAL	6 (4.14%)	14 (5.43%)	20 (4.96%)
TOTAL CARGO:	39 (26.90%)	165 (63.96%)	204 (50.62%)
BOEING OPERATIONS			
- RUN UPS	16 (11.03%)	1 (.39%)	17 (4.22%)
- WIND TUNNEL	2 (1.38%)	0	2 (.50%)
- AIRCRAFT	12 (8.28%)	2 (.78%)	14 (3.47%)
- MISC.	1 (.69%)	0	1 (.25%)
TOTAL BOEING:	31 (21.38%)	3 (1.16%)	34 (8.44%)
MILITARY	9 (6.21%)	7 (2.71%)	16 (3.97%)
MEDICAL	1 (.69%)	2 (.78%)	3 (.74%)
MEDIA	0	2 (.78%)	2 (.50%)
RUSSIAN AN-124	8 (5.52%)	3 (1.16%)	11 (2.73%)
SONICS	1 (.69)	3 (1.16%)	4 (.99%)
HELICOPTERS	4 (2.76%)	0	4 (.99%)
FLIGHTFEST	2 (1.38%)	0	2 (.50%)
LOW PER FAA (SAFETY)	1 (.69%)	0	1 (.25%)
MISCELLANEOUS:			
- SEA-TAC OVERFLIGHT	5 (3.45%)	3 (1.16%)	8 (1.99%)
- UNIDENTIFIED OVERFLIGHT	5 (3.45%)	7 (2.71%)	12 (2.98%)
- TOO LOW (UNIDENTIFIED)	9 (6.21%)	5 (1.94%)	14 (3.47%)
- TOO LOUD (UNIDENTIFIED)	17 (11.72%)	46 (17.83%)	63 (15.63%)
- TOO MUCH NOISE IN GENERAL	13 (8.97%)	12 (4.65%)	25 (6.20%)
TOTAL COMPLAINTS	145 (100%)	258 (100%)	403 (100%)

KING COUNTY INTERNATIONAL AIRPORT

1995 NOISE COMPLAINTS BY ZIP CODE

COMMUNITY	ZIP CODE	1995 TOTALS
GEORGETOWN, BEACON HILL, SOUTH PARK	98108	134
MAGNOLIA	98199	92
TUKWILA, SEA-TAC	98188	36
RENTON	98055	24
KENT	98031	21
TUKWILA, BEVERLY PARK, WHITE CENTER, FOSTER PARK	98168	18
TUKWILA, SKYWAY, DUWAMISH, ALLEN TOWN	98178	16
BEACON HILL, RAINIER VALLEY	98118	12
WESTWOOD, COTTAGE GROVE, NORTH DELRIDGE, HIGHLAND PARK, PUGET RIDGE	98106	6
MT. BAKER	98144	6
QUEEN ANNE	98119	5
KENT	98042	9
MADISON PARK	98112	3
RENTON	98058	3
MERCER ISLAND	98040	2
ALKI	98116	2
WEST SEATTLE	98126	2
QUEEN ANNE	98109	1
MADRONA PARK	98122	1
FAUNTLEROY	98136	1
RENTON	98056	1
CAPITOL HILL	98102	1
NORTHGATE	98115	1
NORMANDY PARK	98166	1
UNKNOWN	N/A	5
TOTALS		403

**KING COUNTY INTERNATIONAL AIRPORT
SUMMARY OF NOISE DATA
(JANUARY - APRIL 1996)**

KCIA HAS RECEIVED THREE QUARTERS AS MANY COMPLAINTS IN THE FIRST FOUR MONTHS OF 1996 AS WERE RECEIVED IN ALL OF 1995. CARGO IS PRIMARILY RESPONSIBLE WITH ALASKA AIRLINES LIKELY TO SIGNIFICANTLY EXCEED ITS 1995 TOTALS AND AIRBORNE EXPRESS HAVING ALREADY DONE SO.

SOURCE	DAY	NIGHT	TOTAL
CARGO OPERATIONS			
ALASKA	0	90 (50.28%)	90 (30.93%)
AIRBORNE EXPRESS	43 (38.39%)	14 (7.82%)	57 (19.59%)
UPS	8 (7.14%)	9 (5.03%)	17 (5.84%)
BURLINGTON	1 (.89%)	1 (.56%)	2 (.69%)
GENERAL	1 (.89%)	2 (1.12%)	3 (1.03%)
TOTAL CARGO:	53 (47.32%)	116 (64.80%)	169 (58.08%)
BOEING OPERATIONS			
RUN UPS	1 (.89%)	0	1 (.34%)
WIND TUNNEL	0	0	0
AIRCRAFT	1 (.89%)	0	1 (.34%)
TOTAL BOEING:	2 (1.78%)	0	2 (.69%)
MILITARY	5 (4.46%)	1 (.56%)	6 (2.06%)
MEDICAL	0	0	0
MEDIA	0	0	0
RUSSIAN AN-124	1 (.89%)	2 (1.12%)	7 (2.41%)
CHARTERS	1 (.89%)	8 (4.47%)	9 (3.09%)
HELICOPTERS	7 (6.25%)	0	3 (1.03%)
SEATAC OVERFLIGHTS	2 (1.78%)	0	2 (.69%)
UNKNOWN OVERFLIGHTS	22 (19.64%)	39 (21.79%)	61 (20.96%)
TOO LOW	8 (7.14%)	2 (1.12%)	10 (3.44%)
UNKNOWN GROUND NOISE	2 (1.78%)	1 (.56%)	3 (1.03%)
NOISE IN GENERAL	7 (6.25%)	9 (5.03%)	16 (5.50%)
NON-BOEING TESTING	2 (1.78%)	1 (.56%)	3 (1.03%)
TOTAL COMPLAINTS (JAN-MAR)	112 (100%)	179 (100%)	291 (100%)

**KING COUNT INTERNATIONAL AIRPORT
1996 NOISE COMPLAINTS BY ZIP CODE
(JANUARY - APRIL 1996)**

COMMUNITY	ZIP CODE	1996 TOTALS
GEROGETOWN, BEACON HILL, SOUTH PARK	98108	69
RENTON	98055	61
MAGNOLIA	98199	40
TUKWILA, SKYWAY, DUWAMISH, ALLEN TOWN	98178	40
TUKWILA, BEVERLY PARK, WHITE CENTER, FOSTER PARK	98168	21
RENTON	98058	16
KENT	98031	8
ALKI	98116	6
TUKWILA, SEA-TAC	98188	5
BURIEN	98166	4
WEST SEATTLE	98126	3
BEACON HILL, RAINIER VALLEY	98118	3
SHILSHOLE	98117	3
FAUNTLEROY	98136	2
SHOREWOOD	98146	2
KENT	98064	1
INDIANOLA	98342	1
KINGSTON	98346	1
AUBURN	98092	1
HIGHLAND PARK	98106	1
RENTON	98057	1
AUBURN	98001	1
UNKNOWN	N/A	1
TOTAL	N/A	291

ACTIONS TAKEN BY ALASKA AIRLINES

- * NOISE ABATEMENT FLIGHT DEPARTURE PROCEDURES

ACTIONS EFFECTIVE APRIL 8, 1996

- * ENSURE "FLAPS 30" LANDING
- * ELIMINATE REVERSE THRUST FOR NORMAL LANDINGS
- * ENSURE APU START IS DELAYED UNTIL AFTER LANDING

FUTURE

- * SCHEDULE REDUCED TO ONE FLIGHT PER NIGHT EFFECTIVE
JUNE 9, 1996

SEATTLE TO ANCHORAGE

Flt 891 Dept BFI 2:47AM Tue-Sat
 Arr ANC 5:09AM

ANCHORAGE TO SEATTLE

Flt 892 Dept ANC 09:40PM
 Arr BFI 01:57AM

- * CERTIFICATION OF HUSH KIT FOR 737-200 AIRCRAFT
JUNE 1996
- * FIRST AIRCRAFT HUSH KITTED (@ COST \$1.5MILLION) AND
RETURN OF FLIGHT TO SEA-TAC BY SECOND QUARTER 1997



**Washington State
Department of Transportation**

Sid Morrison
Secretary of Transportation

Transportation Building
P.O. Box 47300
Olympia, WA 98504-7300

May 16, 1996

Mr. Jerry Dinndorf
Puget Sound Regional Council
1011 Western Avenue Suite 500
Seattle, Washington 98104-1035

Dear Mr. Dinndorf:

Enclosed is the response from the Washington State Department of Transportation to Doug Sutherland's April 30, 1996 memo on the subject of additional steps to reduce air-transportation-related noise. We have only commented on those items which were identified by PSRC as potential WSDOT responsibilities. In some cases, we have recommended that the identified responsibilities be changed.

Thank you for the opportunity to comment on these additional steps. While we believe that our role is limited in the noise reduction area, we look forward to playing a constructive role in PSRC's process including the May 30 workshop. If you have any questions regarding our submittal, please contact me at 360-705-7958 or Renee Montgelas 206-464-5878.

Sincerely,

A handwritten signature in black ink, appearing to read 'Charles E. Howard, Jr.', written over a horizontal line.

CHARLES E. HOWARD, JR.
Manager
Transportation Planning Office

CEH:dn

cc Renee Montgelas
Bill Brubaker
Theresa Smith

360 705 6813
1996, 05-16 14:11 #510 P.03/04

FROM : PLANNING

MAY 16 96 14:18

360 705 6813
1996, 05-16 14:11 #510 P.03/04

Expert Arbitration Panel Recommendations on Noise Mitigation Items which include WSDOT actions

1. That the PSRC and the "Coordinating Committee" established by MOU pursuant to Resolution A-93-03 (the PSRC, the Port, WSDOT, and the FAA) promptly take steps to mediate and resolve the impasse between the Highline School District and the Port on the issue of noise insulation for schools, to enable the Port to move forward rapidly on its commitment to insulate the schools and significantly reduce classroom speech interference.

PSRC Assigned Responsibility: PSRC (lead), POS, WSDOT, FAA, Highline School District

Feasibility of recommendation: This seems like a feasible recommendation, but it should be carried out by the POS and the Highline School District, with perhaps facilitation by the PSRC. WSDOT should not have a role in negotiating specific insulation programs.

Cost: N/A

Effect of implementation: To be determined by the responsible entities.

7.d. Work with the PSRC and the affected communities to design and implement alternative, noise-compatible uses of the land within the current acquisition zone. We note that the acquisition program has some very strong critics because of its adverse effects on the quality of neighborhoods for the remaining houses and businesses.

PSRC Assigned Responsibility: WSDOT and ACC (Leads); POS

Feasibility of recommendation: This recommendation deals with specific lands that have been acquired by POS, and are under the land use authority of various adjacent local jurisdictions. Since land use is a locally controlled issue, the responsible parties should be the local jurisdictions with acquired land within their boundaries and the POS. WSDOT does not have land use authority, and therefore should not be a responsible agency.

Our assessment is that this is a logical recommendation that should be pursued by the local jurisdictions and the POS. PSRC could play a facilitation role.

Cost: Costs should be determined by the responsible agencies.

Effect of implementation: Implementing this recommendation would help build stronger local communities surrounding the airport, and protect future residents from excessive noise impacts.

8.c. Take effective action on land use issues to minimize the introduction of incompatible land uses and to facilitate compatible redevelopment of currently incompatible land uses, including implementation of the recommendations on land use issues in the 1993 AIRTRAC Final Report.

PSRC Assigned Responsibility: WSDOT and ACC (Leads); PSRC; POS

Feasibility of recommendation: This recommendation could currently be implemented by the local jurisdictions which surround the airport under current land use authority, but seems to conflict with their own policy directions. If the local agencies would choose to implement this recommendation, WSDOT would have a limited role, perhaps only in providing technical assistance. The State Department of Community, Trade, and Economic Development could also serve a strong technical assistance role.

As for a stronger role for the state, the Washington State Legislature adopted legislation (SB 6422) during the 1996 session which makes preventing incompatible land use encroachment of general aviation airports an issue that local agencies must address in comprehensive planning. In addition, the WSDOT Aviation Division is given a technical assistance role, and a plan review role to help implement this policy direction. While the bill does not define "general aviation airport", it is clear that under any adopted functional classification scheme currently used, this would not apply to SeaTac. To apply the same requirements to SeaTac would require additional state legislation. WSDOT has held discussions with the Department of Community, Trade and Economic Development, which has offered their assistance in sorting out this issue as it relates to the state's growth management program.

Cost: If local agencies would pursue this recommendation, they could accomplish it through their existing growth management planning processes for a minimum of additional costs. If state legislation is needed, there will be a delay in implementing, possible local opposition to state pre-emption of local authority, and costs to meet the new legislative mandate.

Effect of implementation: This recommendation has great potential to minimize noise impacts on people, although may change the character of existing communities. If done carefully, the economic bases of these communities could improve, and there would be fewer residents in the noise-impacted zone. This is a long term strategy, with local communities and property owners needing to commit to long term changes.

8.d. Investigate creative ways of linking noise reduction objectives with airport demand and system management strategies, including intermodal solutions to local and regional transportation needs.

PSRC Assigned Responsibility: PSRC and WSDOT (leads); POS

Feasibility of recommendation: WSDOT will address the system management issues. We believe that the Panel was referring to high speed rail implementation, and that possible acceleration of the state's program may have some positive noise impacts. Based on WSDOT's analysis of the impact of high speed rail on reduced operations at SeaTac, we do not believe that this is a feasible noise mitigation strategy. Our analysis indicated that even with optimistic passenger diversion numbers, there was a minimal impact on SeaTac operations. With this low impact on operations, there will be correspondingly low effect on noise impacts. We believe that high speed rail should not be continued to be considered as a noise mitigation measure.

Cost: Potentially high cost for accelerating the program, or even keeping up with a slower twenty year implementation, given that the program does not have a dedicated funding source now, and the low potential impact on noise.

Effect of implementation: Negligible.



U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Colorado, Idaho, Montana
Oregon, Utah, Washington
Wyoming

1601 Lind Avenue, S. W.
Renton, Washington 98055-4056

MAY 17 1996

Ms. Mary McCumber, Executive Director
Puget Sound Regional Council
1011 Western Ave. Suite 500
Seattle, WA 98104

Dear Ms. McCumber:

Thank you for the opportunity to provide comment on the recommendations of your Expert Panel regarding noise impacts related to Seattle-Tacoma International Airport. We have reviewed the Panel Order and the recommendations of the majority and offer the enclosed assessment for your consideration.

We believe the arguments of the minority member more accurately reflect the accomplishments of the Port of Seattle (POS) and the improved circumstances in the airport vicinity. As has been pointed out by the expert panel, the POS's noise control program has been one of the most advanced in the nation. Few, if any, airports can claim the amount of noise impact reduction achieved by the POS. Notwithstanding that, we intend to support the POS and the Puget Sound Regional Council in continuing to reduce the level of airport related noise in the airport vicinity. As an example of that support, this week we have provided a grant of approximately \$6 million, which, with the POS's contribution, will insulate 330 homes and provide transaction assistance to 20 families.

The Expert Panel recommended a variety of measures to reduce noise impact and you have asked that we advise what we may be able to do to respond to some of the recommendations. Our enclosure describes what we can and have done or in some cases are unable to do, to support the Panel's recommendations. Many of the recommendations you have asked us to respond to involve development of new noise control programs, including insulation. Thus, the additional actions we may be able to take and the benefit that may result will not be known until the programs have been developed.

You have requested comments on how compliance monitoring might be performed and conformance assured. The FAA, the POS and the other participants in this process have an interest in doing as much as possible to be good neighbors in the community. Participants, in efforts to improve noise compatibility, have an excellent record in following through on

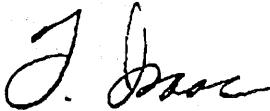
"Expect Excellence"

2

their commitments to the community. The success of the POS's noise control program has been acknowledged and it has been done without the need for external enforcement. A public process of review of agreements and status of compliance will be adequate to assure that the agreements are met.

Once again, we understand and support your attempts to provide maximum improvement in airport-related noise compatibility in the vicinity of the airport. We will provide technical and financial support, to the extent we are able, to future studies and programs for that purpose, including the Noise Compatibility Planning (FAR Part 150) recommended by the Expert Panel. We will consider additional operational changes for the purpose of reducing overall noise impact provided they don't derogate safety and efficiency and are agreed to by all affected communities. Please advise if you would like FAA attendance at your meeting on May 30 for the purpose of providing technical information.

Sincerely,



Frederick M. Isaac
Regional Administrator
Northwest Mountain Region

Enclosure

Recommendation #1: That the PSRC and the "Coordinating Committee" established by the MOU pursuant to the Resolution A-93-03 (the PSRC, the Port, WSDOT, and the FAA) promptly take steps to mediate and resolve the impasse between the Highline School District and the Port on the issue of noise insulation for schools, to enable the Port to move forward rapidly on its commitment to insulate the schools and significantly reduce classroom speech interference.

Response: FAA is prepared to provide technical support, to the extent we are able, in a process towards agreement between the Port and the Highline School District ("District"). FAA can offer information on determining eligibility, program requirements, and identifying funding resources and sponsorship.

The benefit is that the District will have an opportunity to develop a comprehensive noise insulation program. For eligible items, the District will have an opportunity to compete for Port and federal assistance for funding. An appropriate method for studying this is under a FAA FAR Part 150 study.

Recommendation #5. a: Negotiate and obtain a public commitment from the FAA for full cooperation in rigorously and aggressively enforcing compliance with the current North Flow Nighttime Departure Noise Abatement Procedures. The Port, at a minimum, should notify airlines of violations of these nighttime noise abatement procedures. Better, the Port should institute procedures to apply pressure, through enforcement penalties and/or the power of public opinion in the media, to reduce violations (for example, publishing fines and performance scorecards in the Region's newspapers):

Response: FAA reaffirms full cooperation in continuing to follow our previous commitment on the usage of Elliot Bay nighttime noise abatement procedures, to the extent possible, considering operational and safety constraints. In April of 1990, when Four Post procedures were implemented, the FAA agreed to continue to utilize the Elliot Bay procedure during hours of the night when "air traffic is light enough to allow for its safe use" (low activity), as stated on page 3 of our Decision and Order dated April 2, 1990 (attached).

The terms "low activity" and "nighttime" may be misunderstood by the public. Historically, "low activity" was considered to be between 10 p.m. and 7 a.m. At this time, the Port implements "nighttime" procedures which monitor traffic and ensure airlines are complying with Sea-Tac's Stage 2 restrictions. The terms "low activity" and "nighttime" are not synonymous. Because of traffic volumes, weather, and workload, we can normally implement low activity procedures between 11 p.m. and 5 a.m. Low activity procedures allow additional aircraft to be routed through Elliot Bay.

FAA response to PSRC Expert Panel recommendations dated 5/17/96

Even though 10:00 p.m. is considered "nighttime", the airport often experiences an arrival rush with high volumes of traffic and requires the continued use of normal "daytime" procedures in order to ensure safety and expedite arrivals. Similarly, we normally experience an increase in traffic volume and complexity as early as 5 a.m., whereby we are obligated to return to our daytime procedures. At any time, deviations from the Elliot Bay low activity procedures may be authorized for safety reasons and operational necessity. These types of constraints are not quantifiable, but include such items as radar and equipment capabilities, controller staffing, weather, differing aircraft capabilities, differing pilot techniques, emergencies, controller and pilot workload, and of course, conflicting air traffic.

Within such constraints, we will continue our commitment to use the Elliot Bay procedures to the maximum extent possible. As a result of the Panel's recommendations, we have taken action to ensure that our local directives are consistent with our agreements; have committed to providing refresher training of controllers on noise routing issues, concerns and awareness; to encourage development and implementation of Flight Management System (FMS) procedures; and have established more timely reporting requirements with the Port. The FMS is a sophisticated onboard computer system which assists the pilot with the navigation and handling of the aircraft. It allows properly equipped aircraft to be consistently flown between designated waypoints.

The issue of air traffic adherence to noise abatement procedures, including nominal flight tracks, should not be confused with the obligation of an air carrier and its crew to comply with Air Traffic instructions and clearances. The Panel may have misunderstood that an aircraft slightly on either side of a flight track would have been considered a violation of a federal regulation. This is not the case. Rather, violations may occur when a pilot does not follow directions given by Air Traffic control and/or creates an unsafe situation (such as deviating from a procedure, failure in maintaining an assigned altitude, etc.). These incidents may be reported to the FAA Flight Standards Office for investigation and possible enforcement action. There has been no recent case in which a pilot failed to comply with an Air Traffic instruction or clearance to follow the Elliot Bay low activity nighttime procedure.

In recent years, the aviation industry has experienced many changes; aircraft are quieter and climb faster, navigational capability is advancing, and operations are increasing. Given these changing conditions, we feel clarification of what constitutes compliance with nighttime procedures is needed. We will participate in the Port's FAR Part 150 study to further evaluate this issue.

FAA response to PSRC Expert Panel recommendations dated 5/17/96

Recommendation #5. b: Work closely and aggressively with KCIA and Alaska Airlines to eliminate the carrier's two nighttime Stage 2 cargo flight arrivals and departures, which weaken the effectiveness of the Port's nighttime Stage 2 ban; and develop, in conjunction with KCIA and local government officials, a strategy to avoid additional Stage 2 nighttime flights to and from KCIA in the future.

Response: Alaska Airlines moved their stage 2 operations to King County International Airport (KCIA) when the stage 2 restrictions at night were fully implemented at Sea-Tac. It is our understanding that Alaska has agreed to provide hushkits on the aircraft which will result in quieter operations that meet stage 3 requirements. By the end of the year 2000, there is a federal mandate requiring elimination of all stage 2 aircraft.

The FAA has also been working with KCIA on initiating a FAR Part 150 study. KCIA plans to develop a Stage 2 noise level access restriction (FAR Part 161) proposal as a parallel process. In general, the role of the FAA is to ensure that restrictions at individual airports do not separately or in combination create an undue burden on interstate and foreign commerce, unjustly discriminate, are fair and reasonable, and do not conflict with the statutory and regulatory authority of the FAA.

Recommendation #6: That the PSRC, the FAA, and the communities affected by airport noise participate actively and constructively in the Port's upcoming Part 150 review, to propose, evaluate, and assist in implementing any feasible noise reduction measures that will maximize the net benefits for the region and provide meaningful noise mitigation for the impacted areas. The Port's Part 150 process should include, but not be limited to. The following actions:

Response: The FAA will participate in the Port's FAR Part 150 study. As a result of the Panel's recommendations we have or will take the actions listed below.

Recommendation #6. a: Evaluate the actions needed to apply, monitor and enforce the North Flow Daytime Departure Elliot Bay noise abatement procedures specified in the Noise Mediation Agreement.

Response: When we are in a north flow during the day, jet aircraft with destinations southwest through northwest, are routed through Elliot Bay. We are in compliance with previous agreements for this procedure. As a result of the Panel's recommendations we will take the following actions:

- Review consistency of Directives with Agreements - Action completed 5/3/96 and we found our Directives to be in compliance with Agreements.
- Develop a training plan for controllers on noise routings, concerns and awareness - Action to be completed by 7/1/96.

FAA response to PSRC Expert Panel recommendations dated 5/17/96

- Immediately initiate a process to develop and implement additional FMS procedures. This will provide more precise flight tracks for some aircraft. The benefits of FMS will be evaluated in the next FAR Part 150 study. The development and implementation may take up to two years.
- Establish a written agreement with the Port to ensure that apparent variations from noise abatement procedures are reviewed - Action to be completed by 9/15/96.
- FAA will participate on a regular basis in Sea-Tac's Noise Advisory Committee - Action ongoing.

Recommendation #6. a. (cont.): Investigate, and, if possible, implement, use of this corridor during periods of lighter activity during the day such as mid-morning and mid-afternoon.

Response: In April of 1990, when the Four Post procedures were implemented, the FAA agreed to continue to utilize the Elliot Bay procedure during periods of low activity during nighttime hours. Our current Four Post procedures provide the best possible balance between an efficient flow of air traffic, and the needs and concerns of communities affected by aircraft overflights. Changing our traffic flows throughout the day would negatively affect our capacity and efficiency and not provide an equivalent level of safety. This recommendation has been evaluated and determined not to be feasible.

Recommendation #6. b: Evaluate the feasibility of extending the "nighttime" hours of use for the North Flow Nighttime Departure Noise Abatement Procedures (currently 10 p.m. to 6 a.m.) to the evening "shoulder" (8 to 10 p.m.), and, if possible, to the early morning "shoulder" (6 to 7 a.m.) as well.

Response: Again, we wish to reiterate that the panel appears to have misinterpreted the application of Nighttime North Flow Departure Noise Abatement Procedures. They are not applied from 10 p.m. to 6 a.m. As stated before, the term "low activity" vs. "nighttime" are not synonymous. If weather, workload, and operations permit, we normally are able to switch to low activity nighttime procedures during periods between 11 p.m. and 5 a.m. High traffic volumes and other factors don't permit changing our air traffic flows.

For example, during the week of April 24 through April 30, a survey was conducted. The average number of operations between 6-7 a.m. was 45; between 8-9 p.m. was 65; between 9-10 p.m. was 52; and from 10-11 p.m. was 34. These numbers do not account for any other complexity factors, such as conflicting Boeing Field traffic, radar capabilities, or weather. The average numbers for these time periods increase during the summer and are considered to be above a "low activity" threshold. From midnight to until 5 a.m. there are typically fewer than 10 operations per hour.

FAA response to PSRC Expert Panel recommendations dated 5/17/96

This recommendation has been evaluated and determined not to be feasible considering today's traffic volumes and complexities

Recommendation #6. c: Reevaluate, with FAA and community input, the use of "minimum population exposure" flight tracks, in light of the increase in flight operations and the shift in the overall importance of arrival noise as Stage 2 aircraft are phased out. The Port had studied and identified "useful" flight track changes for Four Post Plan during the development of the Noise Mediation Agreement. Any of the following options would be expected to reduce overall population exposure to aircraft noise: (i) over-water southern corridors for all south departures where the east turn does not occur until the aircraft reach Commencement Bay or beyond; (ii) north-flow arrival procedures that route aircraft over the water (with a turn in the Four-Post arrival stream); or (iii) the use of a north-flow stream more often at night, coupled with tightly enforced, high-compliance nighttime departure routes. There are some difficult trade-offs in this process, but we do not accept the contention that all possible changes in flight tracks simply shift noise among communities, with no net reduction in number of people impacted. Flight track changes offer the potential for abatement of aircraft noise impacts once the Port has exhausted the benefits of the Stage 2 phase-out; we note again that Resolution A-93-03 explicitly requested the FAA to consider modifications to the Four Post Plan to reduce noise impacts.

Response: As a result of the PSRC Resolution A-93-03, we were requested by the PSRC on September 17, 1993, to review current flight tracks associated with Four Post procedures. In response, we commissioned a task force consisting of a cross-section of technical representatives with no previous involvement in the development of the Four Post procedure plan. We asked them to examine any modifications that could be made. On December 7, 1993, we responded with two recommendations. One was a modification of the late night north departure which allowed aircraft to turn on course sooner without impacting communities. The other was to reposition the turn point for east bound aircraft when departing to the north, to place more of the flight track over Lake Washington.

The first recommendation fell within the framework of the Noise Mediated Agreement and was implemented. The second recommendation would increase climb gradients to a rate unobtainable by most aircraft. Additionally, there would be a commensurate increase in noise over other communities. For these reasons, the second recommendation was not implemented.

With regard to the specific flight track recommendations, we have the following comments. If we interpret proposal (i) correctly, we assume that it would require south departing turbojets to make an almost immediate right turn over Normandy Park, Des Moines, and new areas of SeaTac – fly over/next to Maury Island and turn east “around” (staying west and south of) Brown’s Point or turn west over Ruston, Tacoma, Tacoma Narrows, Fox Island, etc. This would present a severe operational problem as departures would be held below the arrival stream(s), but have to be above the McChord AFB traffic patterns. The need to restrict and maneuver the departures would back-up the traffic and result in a marked increase in delays. Meanwhile, the climb-then level-then climb scenario would dramatically increase the noise being generated by each flight.

Interpreting the intent of proposal (ii) is more difficult. The wording suggests an over-the-water arrival for runways 34. In instrument conditions an aircraft must be aligned with the runway for at least six to seven miles, which would preclude this option except in visual conditions. Therefore, we assume that the proposal is to develop a visual arrival flow that follows a reciprocal of the flight tracks described in proposal (i) above. This procedure would establish a restrictive, inflexible pathway for arrivals, resulting in delays, new noise problems, and potentially unsafe conditions.

Regarding proposal (iii) – it does not seem reasonable that we would promote the increased use of north flow departures after so much effort to lessen the impacts of north flow departures. If our interpretations are valid, we do not believe any of the three recommendations are viable.

Since 1990, we have had the benefit of the operational experience of the Four Post Plan. The procedures provide the best possible balance between an efficient flow of air traffic, and the needs and concerns of communities affected by aircraft overflights from Sea-Tac Airport. We would participate in the Port’s next FAR Part 150 study to further evaluate other proposals.

We reaffirm our commitment to consider and study any proposed changes that are recommended, provided they are agreed upon by all of the affected communities and do not negatively affect safety and efficiency.

Recommendation #6. d: Evaluate, with FAA and community input, the potential net benefits of a noise abatement departure profile employing a steeper angle of climb, coupled with an expanded residential acquisition and insulation program if, as a result of a steeper departure profile, the 75 dB DNL contour expands in the immediate vicinity of the airport while areas further out receive benefits.

FAA response to PSRC Expert Panel recommendations dated 5/17/96

Response: Our current Standard Instrument Departure procedures at Sea-Tac, require very high departure climb gradients on all runways (550 feet per nautical mile (ft/nm)). The climb gradients were established specifically to meet agreed upon noise abatement altitude restrictions. A normal climb gradient is 200 ft/nm. Above this is considered nonstandard. High climb rates affect noise levels on the ground and equate to a cost to the airlines as they may have to reduce payload to meet the high nonstandard climb gradient.

We will participate in studying options in the Port's next FAR Part 150 study within our operational and safety constraints to look at climb profile options; however, we do not believe increasing the current regulatory climb gradients is reasonable. When considering different options, the FAR Part 150 can analyze the noise contour changes and indicate which neighborhoods will benefit and where noise impacts might be redistributed.

Recommendation #6. e: Evaluate, with FAA and community input, the potential net benefits of preferential runway use during "low activity" periods (would more use of the east runway, for example, result in reduced overall population noise exposure?) – coupled with an expanded residential insulation and acquisition program, as needed.

Response: During busy periods, we are currently using 16R as a primary arrival runway and 16L as the primary departure runway. This allows us to operate more efficiently and increases our capacity because we are able to utilize the high speed exits and reduce runway occupancy times. However, we will participate in further study of this option for nighttime activity in the Port's next FAR Part 150.

Recommendation #8. b: Create guidelines or other equitable procedures for dealing daily with the conflicting views and needs of different communities when a proposed noise reduction strategy results in a net improvement but causes a transfer of noise impacts.

Response: For federal actions, we would consider these issues through the FAR Part 150 study and the environmental process. These provide a structured opportunity for the public to express their views, evaluate options and disclose impacts before decisions are made. We would participate in a process that might be established to meet this requirement.



Highline School District 401

Educational Resources and Administrative Center
15675 Ambaum Boulevard SW
Burien WA 98166
(206) 433-0111

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MAY 16 1996

PUGET SOUND REGIONAL COUNCIL

Board of Directors

Tom Slattery
President

Eduardo I. Pina
Vice President

Ben Kodama

Susan Santie

Dr. Shay Schual-Berke

District Managers

Dr. Joseph R. McGeehan
Superintendent

Geraldine L. Fain
Assistant Superintendent
Support Services

Dr. Elizabeth M. Hyde
Assistant Superintendent
Curriculum & Instruction

Linda M. Bymes
Area Administrator

Dominick G. Cvitanich
Area Administrator

May 13, 1996

Honorable Doug Sutherland, President
Puget Sound Regional Council
1011 Western Avenue, Suite 500
Seattle, Washington 98104-1035

Dear Mr. Sutherland:

We have reviewed the recent communications from you and from Mary McCumber, Executive Director of the Puget Sound Regional Council, seeking our views on several of the recommendations made by the Expert Arbitration Panel on Noise and Demand System Management Issues. Both recommendations on which we were asked to comment (items number 1 and 8a) relate to the inability of the Highline School District and the Port of Seattle to reach agreement for the mitigation of existing noise affects of the Seattle-Tacoma International Airport ("Sea-Tac") on school district buildings and programs.

After years of unsuccessful negotiation with the Port of Seattle for full mitigation of the impacts of Sea-Tac, the Highline School District welcomes the assistance of the PSRC, the Washington Department of Transportation, the Federal Aviation Administration and any other agency willing to use its good offices and its influence with the Port to secure a fair agreement for the full mitigation of airport impacts on the schools. Attached hereto, you will find two letters we sent recently which reiterate the Highline School District's interest in reaching an agreement with the Port and our willingness to involve other agencies in the process of bringing such an agreement to fruition.

As you may be aware, in discussions to date, the Port has offered only a partial solution, on a couple of school buildings, to the serious aircraft noise problems which affect our buildings and, more to the point, our students. The Port's unwillingness to fund the full scope of the mitigation required has resulted in what the Expert Arbitration Panel has characterized as an "impasse."

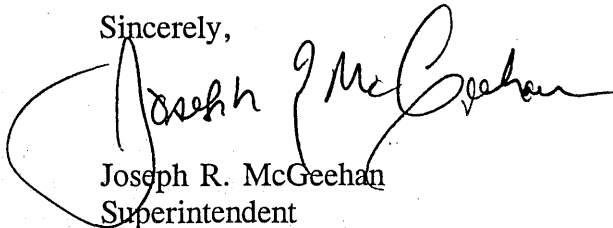
The Highline School District agrees with the Expert Arbitration Panel's conclusion that the Port is responsible for the full mitigation of the impacts of Sea-Tac on the schools. The additional technical information which came to light during the Expert Arbitration Panel's proceedings should facilitate an agreement.

Honorable Doug Sutherland
May 13, 1996
Page 2

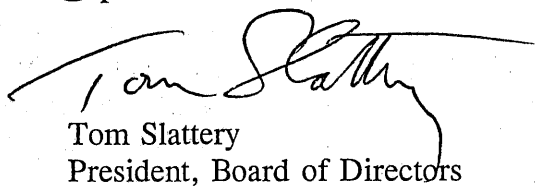
We seek and encourage the involvement of relevant federal, state and regional agencies to assist us to negotiate a fair agreement with the Port to achieve, as expeditiously as possible, full mitigation of the impacts of airport operations to which our schools and students are exposed.

We look forward to working with you on the speedy resolution of this matter.

Sincerely,



Joseph R. McGeehan
Superintendent



Tom Slattery
President, Board of Directors

c: Mary McCumber

Attachments (2)



Highline School District 401

Educational Resources and Administrative Center
15675 Ambaum Boulevard SW
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Geraldine L. Fain
Assistant Superintendent
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Jr. Elizabeth M. Hyde
Assistant Superintendent
Curriculum & Instruction

Linda M. Byrnes
Area Administrator

Dominick G. Cvitanich
Area Administrator

April 19, 1996

Gina Marie Lindsay
Managing Director, Aviation
Port of Seattle
Post Office Box 68727
Seattle, Washington 98168

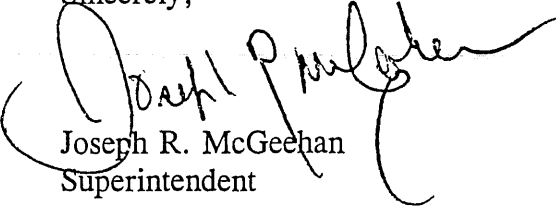
Dear Ms. Lindsay:

As a follow-up to Tom Slattery's letter of April 15, I want to reiterate the Highline School District's continuing interest in pursuing discussions with the Port of Seattle over mitigation of existing noise impacts at the Highline schools.

The additional technical information which was made available through the Expert Panel proceedings should now make it easier for the Port and School District to reach agreement on performance standards. Those standards would then be used to design an acceptable noise attenuation program.

We look forward to hearing from you on developing such standards so we can improve the existing noise environment in our schools.

Sincerely,


Joseph R. McGeehan
Superintendent

c: Highline Board of Directors
Puget Sound Regional Council Members



Highline School District 401

Educational Resources and Administrative Center
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Assistant Superintendent
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Linda M. Byrnes
Area Administrator

Dominick G. Cvitanich
Area Administrator

April 15, 1996

Puget Sound Regional Council
1011 Western Avenue, Suite 500
Seattle, WA 98104-1035

Dear Council Member:

On behalf of the Highline School Board, I reaffirm our support of the recent Final Order of the Expert Arbitration Panel on Noise and Demand/System Management. This Final Order results in the third runway not being authorized. This is consistent with the process established three years ago by the Puget Sound Regional Council (PSRC). We support the decision of the Expert Panel and call upon everyone to endorse the process that the PSRC established.

We are obliged to serve the best interests of our public now and in the future. Consequently, we continue to seek solutions which address the true cost of full mitigation.

Therefore, we endorse the Panel's Order whose ruling clearly states that the airport noise requirement in resolution A-93-03 must be achieved and all stipulations of the Order must be honored. We are ready, willing and able to discuss with you and your staff the mitigation issues faced by this school district.

Sincerely,

Tom Slattery
President, Board of Directors
Highline School District

c: The Honorable Mike Lowry, Governor
Sid Morrison, Washington State Secretary of Transportation



Port of Seattle

May 17, 1996

Mr. Doug Sutherland
President, Executive Board
Puget Sound Regional Council
1011 Western Avenue, Suite 500
Seattle, Washington 98104-1035

Dear Mr. Sutherland:

The Port of Seattle is pleased to respond to the Puget Sound Regional Council's request for information about the feasibility of the Expert Panel's recommendations for additional noise measures in communities around Seattle-Tacoma International Airport. The attached report offers a comprehensive summary of those recommendations the Port can realistically undertake, along with details about costs, schedules, potential benefits and other information you may find helpful.

The safe and efficient management of aircraft operations at Sea-Tac, including effective noise reduction, is a complex challenge shared by the Federal Aviation Administration, the Port of Seattle, the Puget Sound Regional Council, the airline industry, and various local and municipal governments. Many actions recommended by the Expert Panel are not within the Port's jurisdiction or legal authority and must be undertaken by others. Examples include possible changes in local land-use policies, air space procedures, and public school insulation policies. Nevertheless, the Port has done its best to answer all questions and to provide data that will help the PSRC evaluate these recommendations.

The Port Commission has considered each of these recommendations carefully, taking the positive and constructive approach of wanting to do as much as possible within inevitable financial and legal limitations. We are pleased to report that of the 28 actions recommended by the Expert Panel, the Port of Seattle can undertake and accomplish 21, either in whole or in part. For the remaining actions, we have explained why they are not feasible or why the PSRC should approach them cautiously.

As you know, the Port already has spent approximately \$170 million on the nation's most comprehensive noise reduction program. The Port Commission is now ready to commit up to \$113 million more to continue sound insulation in communities around the airport, obtain a new noise monitoring system, complete a major federal noise compatibility study under Part 150 of the Federal Aviation Regulations, and pursue additional actions beyond those that have been accomplished to date. If the PSRC wants to pursue different programs with that money, the Port Commission will work closely with the PSRC and the FAA to address those regional priorities.

P.O. Box 1209
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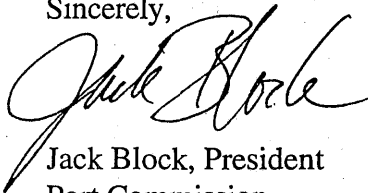
Federal funding will always be an important component in planning runway construction and noise reduction measures at Sea-Tac, but federal funds for airports and other transportation projects are no longer available at the levels they once were. For example, Congress is cutting discretionary money from the federal budget, and the FAA this year placed caps on noise money for airports. While we have been assured that Sea-Tac's noise programs and expansion will continue to be high priorities for the FAA, the Department of Transportation and the majority of Washington state's congressional delegation, it is vital that any PSRC proposal for additional noise reduction be kept affordable and realistic.

Given the changes in federal funding, \$113 million is as much as the Port Commission can firmly commit for additional noise measures. Any proposal that exceeds that amount can only be considered subject to available funding from the federal government or other sources outside the Port of Seattle.

Like the PSRC, the Port Commission must answer to the public for its decisions and its stewardship of public resources. We cannot lose sight of the many other challenges the Port faces in maintaining Sea-Tac as a world-class airport for local residents, visitors and businesses. Meeting this challenge goes far beyond building a new runway. The airport, like other essential infrastructure, must be updated continually to ensure safe and efficient operations in the face of rapidly growing demands for air transportation. Total projected capital costs for the next 10 years are \$1.8 billion.

As a region, we must work together to balance our collective responsibilities to provide safe, quality transportation services, and to mitigate the inevitable effects of a busy and growing international airport -- or any other regional transportation project. Given the Port's commitment to noise reduction, as well as to maintaining a first-class airport, the Commission can only agree to a significant new or expanded noise program if we are convinced that such a program would be affordable, achievable and effective.

Sincerely,



Jack Block, President
Port Commission

Port of Seattle

Response to Recommendations on

Noise Reduction Measures

RECEIVED
MAY 17 1996

Submitted to PUGET SOUND REGIONAL COUNCIL

Puget Sound Regional Council

May 17, 1996

Introduction

The Puget Sound Regional Council Memoranda of April 30, 1996, set out a variety of noise abatement programs to be considered by the Port of Seattle (Port) before it can pursue the addition of a third runway at Seattle-Tacoma International Airport (Airport). The Port's mandate is to operate an efficient transportation facility for goods and people, while working to minimize disruption and providing mitigation which is reasonably possible within its jurisdiction, resources, and authority.

In order to fully and realistically answer the PSRC's questions about the feasibility, cost and timetable of each mitigation option listed by the Expert Panel, it might be helpful to provide a regulatory context clarifying which entity (federal, county, state, municipal, or private) has authority to act on each item. In many cases, actions by more than one entity would be required to implement an individual recommendation.

Regulatory Context

The Port of Seattle was created by the Washington State legislature and is led by a five (5) member commission elected at large within King County. As the owner/operator of Sea-Tac International Airport, the Port has proprietary rights over the airfield facilities. These rights, which can be simply described as those of a landlord, extend to a variety of financial agreements with tenants, regulations of certain airport operations, and the provision of physical infrastructure. The Port's obligations and constraints, which are operational, financial, regulatory, and environmental, are derived and controlled by a variety of federal and state laws and regulations.

Although the Port has jurisdiction over its properties within the context of applicable federal regulations and existing contracts, its authority over activities beyond its own boundaries is generally limited by federal, county and/or local laws and ordinances. These jurisdictional boundaries will become increasingly relevant as the proposed mitigation issues are individually discussed.

Equally important in the jurisdictional definition question is the Federal Aviation Administration (FAA), which is uniquely responsible for the movement of aircraft both on the ground and in the air. The FAA is also responsible for aviation safety nationally. This includes all air traffic control procedures, aircraft flight certification, take-off and landing procedures, flight tracks and airspace design, navigational aids, and review of obstructions within the Airport area.

In addition to its safety mandate, the FAA has a significant environmental and noise abatement role. FAA enforces the national schedule for the phase-out of Stage 2 aircraft*; has written and oversees the Part 150* and Part 161* regulations governing airport noise rule making; sets standards and approves grants and applications for eligible Airport Improvement Program (AIP)* and Passenger Facility Charge (PFC)* programs such as soundproofing; determines allowable noise abatement aircraft take-off and landing power cut-back procedures, and is responsible for preparing environmental review for any noise abatement flight procedures such as flight track changes. In addition, since FAA operates the Terminal Radar System, it is the primary source for determining deviations from established flight procedures.

In addition to control of airspace and air safety, the federal government has imposed strict rules regarding allowable revenue generation and expenditure methods for airports. These are so called "rates and charges" regulations which were mandated by Congress to be enforced by the Secretary of Transportation, and are still being refined before final adoption. Although not final, certain principles contained in these regulations are clear. They include: a limit on airfield revenues determined by actual airfield costs and a total prohibition of airport revenues being "diverted" off airport to non-aviation uses. An exception to this off-airport rule is granted to certain noise mitigation programs such as sound proofing, provided that the projects undertaken are in compliance with FAA eligibility requirements and applicable regulations. The prohibition of diverting airport funds to non-aviation uses means that the federal government can prohibit an airport from expending its funds on certain projects even if no federal funds are used.

Other federal laws including interstate commerce regulations, federal regulations, and international treaties require that the Airport be open and available to all aircraft operations. The Port is severely limited in its ability to control the numbers, types, or schedules of aircraft operations, particularly since Seattle-Tacoma International Airport is the sole primary commercial airport for the region. These restrictions are generally enforced through the FAA.

Commercial air carriers are responsible for procurement and operation of the actual aircraft fleet operating at Sea-Tac, including compliance with the national phase-out of Stage 2 aircraft, the schedule of flights and their itineraries, and compliance with Airport noise restrictions and regulations.

The most restrictive noise reduction programs in place at the Airport, including the Noise Budget and Nighttime Limitations Program, were created during an 18-month consensus-based mediation process involving the Port, Airlines, FAA, citizens, and Airport users. The package of noise reduction measures comprising the Sea-Tac Mediation Agreement included the creation of the Sea-Tac Noise Advisory Committee (SNAC), which was tasked with monitoring the implementation of the programs and monitoring compliance.

Pilots are responsible for operating the aircraft in a manner consistent with approved noise abatement procedures. However, they have unilateral authority to supersede those procedures if, in their view, the safe operation of the aircraft is at all compromised.

Finally, authority at the local level for non-airport property, such as zoning ordinances, building codes, school building location, ownership, and maintenance is the purview of local governments and districts. While the Airport has the responsibility to make noise information available, local governments are responsible for including this information in their land use decisions.

The PSRC's list of potential mitigation measures which has its origins in the Expert Panel's Final Order of March 27, 1996, includes items touching each of these jurisdictional areas. The Port Commission has considered each of these recommendations carefully, taking the positive and constructive approach of wanting to do as much as possible within inevitable financial and legal limitations. We are pleased to report that of the 28 actions recommended by the Expert Panel, the Port of Seattle can undertake and accomplish 21, either wholly or in part. For the remaining actions, we have explained why they may not be feasible or why the PSRC should approach them cautiously. Attachments to this paper include details on costs, schedule, accountability, and benefits.

Recommendations 1 and 7a: Highline School Soundproofing

The Expert Panel has recommended that the Highline School District (District), the Port and others resolve the impasse between the District and Port so that insulation of school buildings can begin as quickly as possible.

Context: The Highline School District has ownership and jurisdiction over the planning, construction, and operation of the District's school buildings. Sound insulation of school buildings is eligible for federal funds if the buildings meet FAA eligibility requirements, including degree of noise exposure, and if specific work proposed has been approved. (Eligibility does not ensure availability of federal funds.) An implementable program for these schools will require the participation of the school district, the FAA, and the Port.

Port Response: Over the past three years, the Port has expressed its willingness to work with the Highline School District, as well as with other school operators. While work has proceeded with other school insulation projects in the area, including Highline Community College and Saint Philomena's Catholic School, the District has declined to participate in continuing discussions with the Port over a public school program. The Port continues to be willing to begin discussions immediately with the Highline School District to resolve issues that are impeding the development of a noise insulation program.

As suggested by the Expert Panel, the PSRC might be the appropriate body to help facilitate an agreement between the parties to establish eligibility, priorities, an implementation schedule, and a funding plan for the next few years. As in other programs, the Port's policy requiring all buildings treated for sound insulation to meet federal eligibility criteria will apply. The Port has a successful record of working closely with the FAA to ensure that its insulation programs are eligible and have a high priority for federal funding. The policy of adhering strictly to federal eligibility and priority guidelines provides security over the long term that the widest range of funding options will be available for projects and that all projects are given consistent treatment. The Port has committed up to \$50 million for eligible public school insulation projects. Thus far, \$7 million has been committed to Highline Community College. The Port would need an aviation easement or agreement with the District, similar to that with Highline Community College and others receiving insulation, to limit liability for noise levels existing at the time the agreement is signed. Future noise increases over 1.5 dB DNL would not be subject to the aviation easement. This is consistent with state law, past Port policies, and other airports.

Recommendation 2: Noise Monitoring System (NMS)

The Expert Panel recommended the Port upgrade its noise monitoring system (NMS) with a minimum of 25 monitors, public dissemination of data, and inclusion of DNL, SEL, and TA* metrics.

Context: This is an area in which the Port has authority. It can issue a specification, procure, install, and manage the noise monitoring system. However, local governments and individual land owners must agree to microphones being installed on public or private land in the communities being monitored.

Port Response: The Port's existing NMS, consisting of 11 monitors, was installed in 1979 and is operating as originally intended. It is, however, an aging system. New technology offers more advanced equipment suited to today's growing data and monitoring requirements.

The Port agrees to upgrade the noise monitoring system, starting with development of specifications and proceeding to procurement. These activities are likely to run in parallel with the Part 150 Study, so that public comment relating to system design can be included in the Part 150 public participation program. The technical specifications will address a number of issues including: the appropriate number of monitors, their locations, the types of data collected, and the types of reports generated. As the Expert Panel requested, noise data including a variety of metrics from the new system will be publicly disseminated at regular intervals.

A new system will include state-of-the art technology allowing easier access to a wider variety of noise metrics, more monitoring locations, more precise information about ground noise, better correlation between flight tracks and single overflights, and better correlation between complaints and individual noise events. The ability to calibrate Integrated Noise Model (INM)* data with actual measured data in a greater variety of neighborhoods is also an important feature which will help validate the relationship between measured and modeled data. This action is part of the Mediation Agreement* and as such is appropriately monitored by the Sea-Tac Noise Advisory Committee (SNAC)*.

Recommendation 3: Jointly Sponsor Social Surveys

The Expert Panel recommended that the Port and organizations representing affected communities jointly sponsor social surveys to assess the effectiveness of future noise abatement and mitigation measures in terms of “perceived noise impacts”.

Context: This proposal does not fall into any obvious jurisdictional category and is not within the range of expertise of any of the current participants.

Port Response: The Port will not be pursuing this recommendation. The Port believes that providing quantitative and easily substantiated data, whenever it is available, is a far more productive and informative method for establishing a factual basis on which to assess the effectiveness of the future noise abatement program than are qualitative surveys. The new noise monitoring system will improve the Port's ability to produce a more detailed record of results, including more information from more communities and with more metrics. In addition, the Port will continue to produce regular reports on the number of nighttime flights, noise budget compliance, homes insulated, percent of Stage 2 versus Stage 3 aircraft, flight track compliance, and other reports of interest to communities, the PSRC and others.

All of the Airport's noise programs have been developed and implemented with extensive public participation, and a number of mechanisms exist for people to let the Airport know how they feel about noise issues. For example, each household that has received insulation is asked to fill out a questionnaire about their satisfaction with the insulation treatment. The Port also sponsors homeowner meetings, open houses on noise programs, and monthly "sound off" meetings. The noise complaint and information line is another mechanism that allows the Port to get direct input from the public on noise abatement programs.

The FAA has included some social criteria in its definition of compatible land use and noise abatement programs within the Part 150 regulations. These include acceptable interior and exterior noise levels for specific land and building uses. The Port intends to begin a new update to its Part 150 Noise and Land Use Compatibility Program in the fall of this year. This study will include an extensive public participation process, public opinions about future programs, intended results and ways to monitor progress toward achieving results. Public comments are collected in a variety of ways, including a public hearing and publication of citizen comments and Port responses.

Social surveying, if it is to be a serious and truly informative endeavor that could be used to guide an airport's future mitigation programs as the Expert Panel suggests, requires considerable expertise in the design of the survey instrument, drafting of the questions, definition of the sample, determination of the method of execution, data reduction and extrapolation of conclusions. Furthermore, surveys would need to be conducted with a consistent format over several years in order to gather a critical mass of comparative data sufficient to be useful over the long-term. Lack of agreement over social surveying methods would inevitably add to confusion and contention rather than clarifying facts or dispelling doubts. Moreover, the results of such surveys would not in any way improve either the noise environment or the likelihood that individual programs are either allowable or eligible for funding.

Recommendation 4i: Use of Thrust Reversers

The Expert Panel recommended that the Port implement the thrust reversal noise impact reduction activities contained in the Mediation Agreement.

Context: Pilots use thrust reversers on the runway to augment the brakes in slowing and stopping aircraft. The amount of reverse thrust used is a function of aircraft type, weight and operating speed, wind speed and direction, runway length, and the specific position of the aircraft on each arrival. Because procedures to slow aircraft are considered flight procedures with distinct safety implications, any changes in guidelines or rules on the restriction of thrust reversers must meet with FAA and pilot approval. Ultimately, the discretion to use thrust reversers in slowing a landing aircraft must be left to the pilot in command.

Port Response: The Port will act on the recommendation related to thrust-reversal noise impact reduction activities called for in the Mediation Agreement. The agreement calls for an analysis of the potential for reducing thrust reverser use given the new taxiway exits completed in fall, 1995. The Agreement directs the Port to work with the pilots once this analysis is complete.

Noise abatement is one consideration of this analysis; airport safety and capacity are additional factors.

Airlines are often unwilling to implement thrust-reverser restrictions due to safety concerns, including possible runway overrun issues. Reducing the use of thrust reversers can potentially reduce airport capacity at the same time. During busy times, air traffic control directs aircraft off the runways as quickly as possible by using high speed taxiway exits rather than the full runway length. The use of these high speed taxiways has allowed the FAA to reduce separation requirements between aircraft, thereby increasing the number of landings and departures in a given time frame and maximizing the Airport's capacity.

For this reason, minimizing the use of thrust reversers, if approved, may only be helpful during the late nighttime hours when traffic is very light, and aircraft can safely make use of the full runway.

Recommendations 4ii and 5g: Daytime and Nighttime Run-Ups

The Expert Panel recommended working to minimize the number, level and duration of daytime engine run-ups and to continue to monitor and minimize nighttime run-ups.

Context: Run-ups are a necessary element of aircraft maintenance and safety. The procedure entails applying power to the engine while the aircraft is stationary. The Port, as part of its proprietary role has designated reasonable rules regarding aircraft run-ups. Changes in these procedures may be considered as an element in the Part 150 Study. However, the airlines which operate the equipment and conduct the aircraft maintenance, are bound to comply with reasonable and officially promulgated rules.

Port Response: Nighttime Run-Ups: The Port has had restrictions in place for many years severely limiting nighttime run-ups between 10pm and 7am. As a result of these restrictions, the number of nighttime engine run-ups is very small: two (2) to four (4) per month. These are generally directly related to early morning

flights scheduled between 7am and 8:30am, and are required to be no longer than two (2) minutes duration, if prior to 6am, to reduce impact. To control run-up scheduling, they must be authorized by an Airport Operations Supervisor. Because the number of run-ups at night is already minimal, the Port does not believe that they can be further reduced.

Daytime Run-Ups: Scheduled maintenance involving engine run-ups occurs during the day at Sea-Tac but is prohibited at night (10pm-7am), unless directly related to an early morning flight. Because performing these testing procedures is not optional, reducing the number of run-ups during the day would not be possible. While realistically it is infeasible to reduce daytime run-ups, there may be improvements possible to the locations where run-ups are allowed and other operational changes which may reduce their impact. Potential changes in rules regarding run-ups will be evaluated in the forthcoming Part 150 Study.

Recommendation 5a: Nighttime North Flow Departure Procedures

The Expert Panel recommended that the Port urge FAA to enforce compliance with the North Flow Nighttime departure procedures and apply pressure through enforcement penalties and/or public opinion to reduce violations.

Context: The FAA has sole authority for the movement of aircraft, and only the FAA can assess fines or penalties of any kind due to nonconformance. The Port may monitor and encourage both the FAA and airlines to conform to procedures, but can take no regulatory action. The pilot in command of an aircraft or an air traffic controller may deviate from any procedure if, in his/her judgment, a deviation is required for safety. Finally, physical compliance with any flight procedure is partially dependent on wind direction and speed, aircraft type, weight and power setting, air temperature and similar environmental factors.

Port Response: The FAA is on record as fully supporting the Sea-Tac noise abatement procedures. The Port monitors these procedures, and reports results, when appropriate, to the FAA, the Sea-Tac Noise Advisory Committee, and to the airlines when appropriate. There is a very high rate of compliance with the initial departure procedures both north and south, but lower levels of compliance exist for procedures over Elliott Bay and over Puget Sound at night. According to the FAA, changing conditions such as increased nighttime activity, a nighttime fleet of all Stage 3 aircraft with faster climb rates and availability of new technology such as FMS, suggest that the nighttime Elliott Bay and Puget Sound procedures be re-evaluated so that realistic compliance goals can be developed and successfully pursued. The Port will work closely with the FAA on this evaluation.

Recommendation 5b: King County International Airport Noise Rules

The Expert Panel recommended working closely and aggressively with King County International Airport and Alaska Airlines to eliminate the carrier's two nighttime Stage 2 cargo flight arrivals and departures.

Context: King County International Airport/Boeing Field (BFI) is owned and operated by King County. The owner and operator of an airport, together with the FAA, has jurisdiction over the promulgation and enforcement of its noise procedures and over noise issues resulting from that Airport's operations, subject to the same constraints discussed in the introduction.

Port Response: BFI is taking aggressive actions to address the issue of Stage 2 aircraft flights at night. The Sea-Tac Noise Advisory Committee (SNAC), which includes the Port, has communicated with Alaska Airlines expressing their concerns that moving these flights from the Airport to BFI was not in the spirit of the Mediation Agreement. The Port currently attends BFI Committee meetings on BFI's master plan and noise issues. The Port is available to work with BFI to ensure conflicting noise procedures are not established.

However, the Port has no jurisdiction to affect operations or noise reduction measures at BFI. King County officials and staff with their advisory committees are best qualified to address and develop noise rules for BFI, and are currently pursuing efforts to address these issues and future use of the Airport.

Recommendations 5c, 5e, and 5f: Minimizing Nighttime Flight Activity

The Expert Panel recommended that the Port work with airlines to address the continued operation of certain nighttime flights. These recommendations included trying to minimize flights between 1:30am and 5:30am, working with airlines to ensure continued use of Stage 3 aircraft* for nighttime international flights, and working with airlines to minimize or eliminate nighttime operations of Stage 2 jets under 75,000 lb.

Context: Airlines are private companies operating in a deregulated business environment. Neither the airport nor any other party has the legal authority to determine an airline's schedule. An airport operator, however, has the ability to impose reasonable noise abatement restrictions on the use of its airport for noise as long as the operator fulfills the requirements of Federal Aviation Regulation Part 161. This rigorous and intentionally intimidating regulation requires the airport to conduct a substantial cost/benefit analysis and public process for restrictions on Stage 2 aircraft, and an even more detailed process for restrictions on Stage 3 aircraft. For Stage 2 restrictions, the airport must go through the extensive process and submit its study to the FAA for review although federal approval is not required. Restrictions on Stage 3 aircraft, however, require a more detailed and extensive cost/benefit analysis, and federal approval is required. If the FAA does not approve the study for any reason, the lengthy approval process is repeated if the restriction is further pursued.

Since the inception of Part 161 in 1990, very few airports have initiated a Part 161 Study and no airport has received approval from the FAA. A small number of airports are contemplating beginning a Part 161 process for Stage 2 aircraft restrictions. No Stage 3 aircraft restrictions have been approved to date. It is important to recognize in this context that the Airport's existing noise abatement and mitigation programs were in existence prior to 1990 and the promulgation of Part 161 and are therefore grandfathered. Sea-Tac's existing program is stricter and considerably more encompassing than any program which would be likely to gain federal approval through the current Part 161 regulatory process.

Further complicating matters, the international nighttime flights are governed by bi-lateral treaties between the United States and foreign governments. These treaties generally determine the number of allowable flights, frequencies and seating capacity on a given route. Any restrictions would need to be consistent with the applicable bi-lateral agreements.

Response to 5c, Work with airlines to minimize flights in the middle of the night: Airlines have made considerable efforts to reschedule flights or to switch to quieter aircraft during the nighttime hours and have successfully met the requirements of the Nighttime Limitations Program. Between 1:30am and 5:30am there are, on average, five (5) departures and ten (10) arrivals each night. Of those flights, two (2) departures and two (2) arrivals, on average, are international operations. All flights scheduled during the nighttime hours are in Stage 3 aircraft. The Port is willing to explore further opportunities to reduce activity during these hours, and agrees to engage in one-on-one discussions with airlines operating during the very late nighttime hours to urge voluntary rescheduling to less noise sensitive times.

There is also the question of regional, economic purpose. Sea-Tac International Airport is the only major air carrier airport in the region. Unless airlines have a suitable alternative, mandatory restrictions on Stage 3 operations during the nighttime hours will limit the overall number of hours the Airport is available for service, thereby effectively reducing the overall capacity of the Airport as well as the competitive advantage of the region. This conclusion is based on the assumption that flight schedules, especially those in the nighttime hours, are responding to important and time sensitive cargo or passenger demands.

Response to 5e, Work with foreign carriers to ensure that Stage 3 aircraft continue to be used for nighttime international flights: The issue of ensuring that Stage 3 aircraft are used in the future on the international routes currently operated during the nighttime restricted period is largely moot. The routes in question are to Asia. Asian carriers have newer Stage 3 aircraft which are better suited to these routes due to the capacity and fuel consumption of the aircraft.

Currently all foreign carriers operating during the nighttime hours use Stage 3 aircraft. The Port will work with foreign carriers to insure that Stage 3 aircraft continue to be used for nighttime international flights.

Response to 5f, Work with operators of Stage 2 aircraft under 75,000 lb. to minimize their use during the nighttime period: The Port agrees to work with the owners/operators of Stage 2 aircraft under 75,000 lb. to voluntarily minimize or eliminate the use of such aircraft during the nighttime hours. Smaller jets under 75,000 lb. that are designated Stage 2 are not subject to the federal noise policy that phases out Stage 2 aircraft, and are jets not covered by the Port's Nighttime Limitations Program. If the Airport were to pursue additional mandatory restrictions through a FAR Part 161 process, the current noise restrictions developed under the

Mediation Agreement would likely be re-opened and included in a Part 161 Study for federal review and approval (nighttime restrictions on Stage 2 aircraft and the Noise Budget which were in place prior to the passage of FAR Part 161). It is impossible to predict the results from such an action, but the possibility of a diminution rather than a strengthening of the program is a likely outcome.

At this time, there is only one operator using these aircraft during the nighttime hours. Given the uncertainty of the outcome of a Part 161 process, the Port believes that a voluntary approach is likely to be more effective, and will certainly be faster and more cost efficient.

Recommendation 5d: Continue to Minimize Nighttime Variances

The Expert Panel recommended that the Port continue to minimize the variances it grants in accordance with the Nighttime Limitations Program.

Context: Variances from the nighttime restricted period fall under the Noise Mediation Agreement terms enforced by the Port.

Port Response: Currently there are no scheduled flights operating with a variance and the Port will continue to minimize the number of nighttime limitations variances. The existing nighttime noise restriction prohibits the use of Stage 2 aircraft between 10pm and 7am at the Airport. The agreement does allow flexibility when unusual and pressing circumstances arise. Airlines may apply for variances to the rules to schedule a Stage 2 flights on a continuing basis, or they may apply for a single exemption for a flight experiencing special difficulty on a particular night. The agreement requires public notification and a comment period when the request is for a variance continuing over four (4) months. A decision whether to grant a variance is made by the Port's Director of Aviation.

Recommendation 6: Part 150 Update

The Expert Panel recommended that the PSRC, FAA, and affected communities participate actively and constructively in the Port's upcoming Part 150 Update to propose, evaluate, and assist in implementing feasible noise reduction measures. They also included a list of recommendations for inclusion in the Part 150 Study to be initiated in the fall of 1996.

Context: The Port has agreed to undertake a Part 150 Study, which it will conduct under the guidelines set out in the Federal Aviation Regulations (FAR)*. The FAA will monitor the proceedings and the constituent groups around and on the Airport will be invited to participate. Evaluation of a proposed action does not necessarily imply it will be implemented.

Port's General Response: As the Expert Panel recommended, the Port will initiate a Part 150 Study with the FAA, affected communities, and other interested parties to evaluate noise reduction measures that provide meaningful noise mitigation for the impacted areas. The majority of the items listed by the Expert Panel as issues to include in this study are appropriate, however some issues have received early evaluation by the FAA.

Response to Recommendation 6a, use of the current nighttime north flow Duwamish/Elliott Bay Noise abatement procedures during periods of lighter activity and **Recommendation 6b**, extension of the time frame for nighttime use of corridors: As a result of the Expert Panel's recommendations, the Port and FAA have discussed including these issues in the Part 150 Update. The FAA has conducted early evaluation of these measures and found them to be infeasible due to activity level and air traffic considerations. Therefore, it is not practical to include additional evaluation of these two recommendations in the Part 150 Study.

Recommendation 6d, benefits of modified climb procedures and **Recommendation 6e**, benefits of preferential runway use program will be included in the Part 150 Study. Other Expert Panel recommendations appropriate for inclusion in this study include actions discussed in this paper that relate to recommendations 7e and 4ii.

Recommendation 6c: Regional Flight Track Study

The Expert Panel suggested that flight tracks be re-evaluated and that "minimum population" flight tracks be considered for adoption.

Context: As stated previously, the FAA has complete authority over the movement of aircraft; only FAA can determine airspace configuration. Since the implementation of the 4-Post Plan*, the FAA has established a method for communities to request flight track changes. To implement any change in airspace below 3000' in altitude requires the FAA to prepare an Environmental Assessment (EA)*. If any significant impact is expected, a full Environmental Impact Statement (EIS) is required. It is fair to assume that an EIS would be required in this instance.

The type of major, regional study suggested by the Expert Panel would be of interest to all neighborhoods that might be affected. Because changes could affect air traffic patterns and airspace configuration over Kitsap, Pierce, and Snohomish counties, such an undertaking would require substantial regional coordination. The PSRC has already worked with the FAA on this issue and would continue to be the most appropriate agency for this type of cross-jurisdictional coordination. The Port would be a participant in any FAA EA and/or EIS study and would almost certainly be a contributor of data on noise, airport capacity impacts, and other relevant issues.

Port Response: The FAA has developed and made available policy and procedures for consideration of flight track changes which include consensus of affected communities. The Port would not take a lead on this recommendation and advises careful consideration of a number of issues prior to FAA or PSRC action. Before encouraging the FAA to launch into a comprehensive airspace/flight track EA/EIS, it would be important to determine the goal(s) of a flight track change or changes. The Expert Panel has defined the issue as "minimum population" exposed to noise under the flight tracks. The Port would like to suggest that the issue is more complex than a simple calculation of numbers of people (even if that calculation were simple, which it is not).

Noise level is at least an equal and perhaps a greater consideration than total population. For example, would a flight track change which reduces the total number of people exposed to noise, but significantly increases the noise exposure level for a smaller number of people be desirable? What if that smaller population is already impacted by noise? Is shifting noise from a neighborhood that is more densely populated to one that is less densely populated desirable or fair? How much of a total population reduction would be considered significant enough to justify exposing a different population to new noise? These are real, not hypothetical questions. The difficulty in answering them is apparent, especially in the absence of an obvious area, such as a desert, expanse of ocean, or large uninhabited area that can be seen by all as compatible with a flight track.

The Port's role in flight track determination is strongest when the issue is closest to the Airport and affects the most impacted communities. Traditionally, the Port's policy in working with the FAA has been to reduce as much as possible the impacts within the 65 DNL contour. At present, rigorous efforts are focused on narrowing departure corridors and sending aircraft straight out for a number of miles before allowing turns to occur. Turning or spreading flights closer to the Airport may conceivably have the effect of decreasing some regional impacts, but a likely corollary impact would be to broaden the area already affected by the highest noise levels.

Recommendations 7b, 7c, and 7e: Expansion of Existing Noise Remedy Program

The Expert Panel has recommended that the pilot insulation programs (schools, public buildings, etc.) be completed and full programs commence soon; the Port evaluate the possibility of expanding the residential acquisition program, the Port further accelerate, if possible, the rate of insulation of homes and consider expanding the existing Noise Remedy single-family insulation program.

Context: The Port of Seattle as the owner and operator of the Airport may develop and initiate noise mitigation programs and may apply for federal AIP funds to assist it in paying for such programs. An airport may also use Passenger Facility Charge (PFC)* funds for eligible projects. Federal approval of a plan to use PFCs for a particular project is required. At the Airport, under the current airline lease agreements, airlines must approve new capital projects such as sound insulation or construction and must review the Airport's proposal to use PFCs to pay for specific projects.

Port Response on general funding issues: As discussed in the beginning of this paper, Port policy has been to ensure that its mitigation programs are eligible for federal and PFC funding. That policy provides both consistency in program implementation and the widest range of funding options over the long-term. Expanding an already substantial mitigation program such as the Airport's both in size and in the speed of implementation carries a set of physical and fiscal limitations which are impossible to ignore.

As described in this submittal, the Port Commission is committing nearly \$113 million to provide insulation, obtain a new noise monitoring system and pursue additional actions beyond that which has been accomplished to date. Of that amount, \$60 million will go to the existing commitment for the single-family residential program (including transaction assistance, insulation pilot programs and assistance to mobile home owners) while \$50 million has been designated for public schools.

The new Part 150 Study will provide the Port Commission with the most recent information on how the noise environment is changing around the Airport and will develop and evaluate options for proceeding with additional noise mitigation measures. Before the Port Commission can commit to any new or expanded program, it must be convinced that its existing commitments can be met, which would logically derive from a

full understanding of the funding eligibility of each program component, as well as a realistic assessment about the availability of funds from all sources. Program eligibility issues will be resolved through the completion of the Part 150 Study, which will update noise contours and provide the Port and FAA with sufficient baseline data to make their determinations.

Funding issues will be ongoing, but certain projections need to be established for each program component individually and jointly. Priorities must be established, as the likelihood that everything can be done, especially simultaneously, is decreasing with each federal fiscal year. For example, the FAA has recently indicated that federal funding for noise projects could be capped annually at \$5 million for insulation, and \$3 million land acquisition for each airport sponsor. Historical FAA funding levels for Sea-Tac would have provided a budget of approximately \$18 million in federal funding each year for the next five (5) years. While the Airport will continue to pursue the highest funding level possible, community and regional support would be helpful in ensuring adequate federal funding for noise mitigation.

Further, the FAA has asked for re-evaluation of program boundaries based on current noise contours for any new soundproofing programs. They have also questioned the eligibility of some homes within existing program boundaries where interior noise levels appear to be lower than FAA criteria. Depending on the resolution of these and other issues, and total available funding including federal funds, may be significantly less than it has been historically.

Response to 7b, Complete public building pilot programs and proceed with full programs: The Port will proceed with completion of the public buildings and multi-family building insulation pilot studies (two churches, one convalescent center, one private school, and one condominium complex) and staff will present the results of the studies to the Port Commission. The pilot study program is in progress, with most buildings scheduled for completion within the next few months. At the start of the pilot studies, the Port estimated the

cost of programs for public buildings (not including public schools) and multi-family buildings as being approximately \$50 million. Preliminary pilot study results indicate that insulation for multi-family buildings will cost four to five times the original estimates. The reason is that it is much more difficult than anticipated to treat multi-family buildings to the level that will meet the FAA criteria.

As discussed above, these revised future costs will need to be integrated into the entire noise program.

Priorities and eligibility need to be established when the information to do so is in hand. At that point, the Port Commission will determine how broad a program it can realistically provide, and what kind of partnerships with the communities can be defined to pursue noise mitigation goals. In the interim, the Port will work with the FAA and others in the Part 150 Study to determine the scope of full programs, including which public and multi-family buildings are eligible for AIP and PFC funds, which ones have priority under FAA guidelines, and what other sources may be available for funding programs.

Response to 7c, Evaluate expansion of the residential acquisition program: The Port's Acquisition Program was substantially completed in 1993 and provided relocation to quieter areas for over 1,300 families from the most noise impacted areas (above 75 DNL) at a cost of \$104 million. As a result of this program and a continued reduction in total aircraft noise, there are no longer any people residing in this high noise zone. Proceeding with an additional acquisition program would mean moving into areas where the Port and the FAA have already been investing resources in home insulation. ¹ Such a program would require that new criteria be developed jointly with the community. It would necessarily involve consensus that the substantial majority of current inhabitants wanted to be acquired, and above all it would entail a new funding source be committed. As the previous discussion has illustrated, the existing program commitments may be in excess of the \$110 million the Port has committed for insulation.

¹ Should the third runway be approved, the Master Plan EIS commits to evaluating an optional additional acquisition program in the runway transition zones at an estimated cost of \$35 million. This evaluation will occur in the Part 150 Study.

Port Response to 7e, Compare 1993 contours and consider expansion of insulation program: While the Port is, in fact, accomplishing its 100 homes per month goal, it would be both unwise and unrealistic to set a higher standard as a requirement. The Port has one of the largest home insulation programs in the country and with the exception of one other airport of which we are aware, is already insulating more homes per month than any other program. Over the life of the program, the Port has made major adjustments to achieve the current rate of 100 homes treated per month.

A residential soundproofing program, which by definition entails working with individual homeowners, coordinating with their schedules, tailoring the construction to their requirements, and above all ensuring that the work in each house is done satisfactorily, requires a great deal of personal attention. Furthermore, as a technical matter, unless the construction is executed in a careful and meticulous fashion (e.g., windows properly installed, caulked, and fitted) the insulation does not achieve its expected noise reduction. Thus, there is a very real and practical limit to the number of homes which can be treated at once, while still maintaining quality assurance and managing the program efficiently.

The Expert Panel also requested that the Port compare existing noise contours to the 1993 contours and consider expanding the area of the residential soundproofing program. During the upcoming Part 150 Study, the Port will develop a new set of noise contours and will analyze how similar they are to the Airport's 1993 65 DNL contour in 2000 that are not included in the current insulation program. This study will determine if there are homes predicted to be within the 65 DNL in 2000 that are not included in the current insulation program. The results of this analysis will be used to determine if the Port should expand its boundaries to include more homes.

It is important to note, however, that noise contours are shrinking as the Stage 2 aircraft fleet is replaced by quieter Stage 3 aircraft (the Airport has an 85% Stage 3 fleet). Today's 65 DNL contours have 31,000 fewer people in them than in 1990. Although there may be specific locations where the area within the contour shifts, large new areas within 65 DNL would not be expected. If expansion of the program into areas beyond the 65 DNL is a recommendation of the Part 150 Study, other funding sources beyond the Port's traditional AIP and PFC programs would need to be identified and obtained.

Recommendation 7d: Compatible Land Use Plan

The Expert Panel has requested that the Port and communities develop and implement a compatible land use plan for properties the Port has obtained through its Acquisition Program.

Context: The Port, in its capacity as planning agency for property purchased through its acquisition program, can develop a land use plan for the compatible re-use of those areas. The FAA has an interest in the property, as it was purchased with federal grants stipulating how monies obtained through selling the properties can be used. Port actions to re-use property must, therefore, be reviewed by the FAA to insure compliance with these grant assurances. Implementation of development plans will be also be affected by local policies and guidelines regarding development, zoning, permitting, street vacations, etc.

Port Response: The Port will develop a land use plan for compatible re-use of property purchased through its acquisition program and make the plan available to the public. As part of its efforts to use these properties for economic development and job creation, the Port is actively working with the City of SeaTac, the Southwest King County Chamber of Commerce, and an economic development effort called the SeaTac Economic Partnership.

Recommendation 7f: Investigate Modifications to Insulation Treatment

The Expert Panel has recommended that the Port investigate modifications to its insulation program to mitigate impacts of low frequency noise and vibrations.

Context: The Port, as the sponsor of the sound insulation program, is able to improve its approaches as new technical methods for noise attenuation are developed. The FAA must approve the way the Port spends money on its insulation program; and modifications must meet FAA criteria for eligibility. Homeowners have the right to review the treatments proposed and to accept or reject proposed modifications to their homes.

Port Response: The Port, in an ongoing contract with noise experts, keeps apprised of technological developments that could be used to improve the insulation program including new information on mitigating the impacts of low frequency noise and vibration. The Port will continue this contract and will modify it to specifically mention these issues in the contract.

Recommendation 8: Cooperative Efforts to Resolve Issues

The Expert Panel has recommended that the PSRC and others initiate and coordinate remedial actions to address road blocks that prevent the region's residents from realizing full benefits of the Port's programs, create guidelines for dealing fairly with conflicting views and needs of different communities, investigate creative ways to link noise reduction objectives with Airport demand and system management strategies, and take effective action on land use issues to minimize the introduction of incompatible land uses.

Context: The Expert Panel has mentioned a number of topics that would require involvement by a multitude of parties including state, federal and local transportation planning bodies, port districts, municipalities, neighborhood organizations, etc. It is not clear who would have jurisdiction and authority in addressing this mix of cross-jurisdictional issues and what approach would be the most productive.

Port response to 8a, b, c, and d: In complying with as many of the recommendations as possible, the Port and others are addressing a number of issues of concern to the Expert Panel. In its findings, the Expert Panel identified recommendations that address cross-jurisdictional issues. Where it has been possible to clearly identify roles for individual participants, the Port in this paper has tried to do so; i.e., flight tracks, Highline School District, FAA funding issues, etc. The Part 150 process will also include participation by a multitude of parties to address many of the topics specifically named by the Expert Panel. These will include discussions on land use compatibility policies in areas surrounding Sea-Tac International Airport, and criteria and factors to be considered in shifting noise when evaluating a noise reduction measure, such as climb profiles. Any significant change in flight tracks will require the FAA to conduct an environmental assessment or EIS that will provide criteria for the evaluation of proposals that shift noise from one area to another. On the topic of land use policies, the Washington State Air Transportation Commission (AIRTRAC) recommended state policies for land use compatibility around airports. The PSRC may wish to review these for possible policy recommendations. Additionally, the State Growth Management Act provides guidance to local jurisdictions in comprehensive planning policies, including consideration for the siting of essential public facilities such as airports. The Port will cooperate with efforts by Washington State Department of Transportation and the PSRC in efforts to link noise reduction objectives with airport demand and system management strategies.

Parts of recommendation 8 are less program specific and as a result are difficult to address in an action plan. They can, however, be viewed as a policy approach to cooperatively addressing major issues as they inevitably arise. The Port will support the PSRC in its efforts to address such issues and suggests that PSRC staff be active participants in the upcoming Part 150 Study and assist the Port in sponsoring the Planners Forum to bring forward planning issues of mutual interest to the Port and surrounding PSRC member communities.

GLOSSARY

FROM PORT OF SEATTLE RECOMMENDATIONS

ON NOISE REDUCTION MEASURES

4-Post Plan - Airspace enhancement plan initiated by FAA in 1991. Primarily affected arrival patterns into Sea-Tac International Airport north of the airport and over the City of Seattle.

65 DNL Contour - The 65 DNL noise contour is used by the Federal Aviation Administration as a threshold for establishing eligibility for federal funds for noise mitigation.

AIP - The Airport Improvement Program (AIP) is a program established by the FAA to help fund aviation related projects at airports. The source of these funds comes from taxes on airline tickets which are deposited in the Federal Aviation Trust Fund.

DNL - Day-Night Average Sound Level (DNL) refers to a noise metric used as the industry standard to determine aircraft and airport noise impacts. The DNL is a 24-hour average of noise with a 10 dBA penalty added to all events that occur between the hours of 10pm and 7am.

FAR Part 150 - Federal Aviation Regulation Part 150 refers to a federal regulation that stipulates the planning and public involvement process that airports must follow in establishing a noise compatibility plan that is eligible for federal funds to finance noise mitigation (see Attachment F).

FAR Part 161 - Federal Aviation Regulation Part 161 refers to a federal regulation that establishes steps airports must go through to plan and implement restrictions on operations by Stage 2 and Stage 3 aircraft.

Federal Aviation Regulation (FAR) - Federal Aviation Regulations are established by the United States Department of Transportation and govern the operation of aircraft and airports in the United States.

Integrated Noise Model (INM) - A software program that models aircraft noise using airport operational data. It was developed by the FAA and approved for use in FAA funded airport land use compatibility studies.

Mediation Agreement - The Mediation Agreement was the end product of a consensus-based process that established the major noise abatement programs at Sea-Tac International Airport. All interested parties were involved in this process including citizens, the FAA, the airlines and pilots, Airport users, and the Port.

Glossary (continued)

PFC - Federal law allows airports to assess a Passenger Facility Charge, a fee added to a passenger's ticket price. This fee can range from \$1 to \$3 dollars depending on the airport. Airports use this source of revenue to fund eligible aviation related products.

SEL - The Sound Exposure Level (SEL) measurement is a noise metric that combines the duration and magnitude of an aircraft noise event into a single event-rating measured in A-weighted sound level.

SNAC - The Sea-Tac Noise Advisory Committee (SNAC) established through the Mediation process monitors the progress and implementation of the noise abatement programs that resulted from the Mediation Agreement. All members were involved in Mediation and represented the range of parties.

Stage 2 Aircraft - A civil subsonic turbojet airplane with a maximum certificated weight of 75,000 lb. or more that complies with federally determined Stage 2 noise levels. Examples include B727-200, B737-200, and DC-9.

Stage 3 Aircraft - A civil subsonic turbojet airplane with a maximum certificated weight of 75,000 lb. or more that complies with federally determined Stage 3 noise levels. Examples include B757, B767, B747-400, and MD-11.

TA - The Time Above (TA) noise metric provides the duration in minutes in a 24-hour period for which aircraft related noise exceeded specified A-weighted sound levels.

ATTACHMENT A

RECOMMENDATIONS THE PORT OF SEATTLE CAN IMPLEMENT

<i>Panel Recommendation</i>	<i>Action by Port of Seattle</i>
1 and 7a - Highline School District, the Port and others resolve the impasse between the District and Port so insulation can begin as soon as possible.	Port continues to be willing to begin discussions immediately to resolve issues. As suggested by the Panel, the PSRC might be the appropriate body to help facilitate an agreement between the parties to establish eligibility, priorities, an implementation schedule, and a funding plan for the next few years.
2 - Implement plan to upgrade permanent noise monitoring system with a minimum of 25 monitors and publicly disseminate data including DNL, SEL and TA metrics at regular intervals.	Port will upgrade the noise monitoring system, starting with development of specifications and proceeding to procurement. Specifications will provide technical requirements for the system, including number of monitors. Noise data in a variety of metrics will be publicly disseminated at regular intervals.
4 (i) - Implement the thrust reversal noise impact reduction activities contained in the Mediation Agreement.	Port will act on the recommendation related to thrust reversal noise impact reduction activities called for in the Mediation Agreement.
5a - Work with FAA to enforce compliance with current North Flow Nighttime Departure Noise Abatement Procedures.	The FAA is on record to fully commit to enforcing Sea-Tac's noise abatement procedures when safety and efficiency allow. The Port will work closely with the FAA to re-evaluate the nighttime noise abatement procedures so that realistic compliance goals can be developed and successfully pursued.
5b - Work closely and aggressively with King County International Airport and Alaska Airlines to eliminate the carrier's nighttime Stage 2 flights.	The Port is available to work with BFI to ensure conflicting noise procedures are not established and attends meetings on BFI's master plan and noise issues. The Sea-Tac Noise Advisory Committee has expressed to Alaska Airlines their concerns that moving the Stage 2 flights from Sea-Tac to BFI was not in the spirit of the Mediation Agreement.
5c - Work with airlines to minimize total number of flights in the middle of the night. (e.g., 1:30 to 5:30 a.m.)	Port agrees to engage in one-on-one discussions with airlines operating during the late nighttime hours to urge voluntary rescheduling to less noise sensitive times.
5d - Continue to minimize number of Nighttime Limitations Program variances.	Port will continue to minimize the number of variances granted in accordance with the Nighttime Limitations Program.
5e - Work with foreign carriers to ensure Stage 3 aircraft are used for nighttime international flights.	Currently all nighttime international flights are in Stage 3 aircraft. Port will work with foreign carriers to ensure their continued use of Stage 3 aircraft.
5f - Work with owners/operator of Stage 2 aircraft under 75,000 lb. to minimize or eliminate use at night.	Port will work with the one operator currently using these aircraft during the nighttime hours to encourage voluntary rescheduling of those flights.

<i>Panel Recommendation</i>	<i>Action by Port of Seattle</i>
5g - Continue work with airlines to minimize nighttime engine run-ups.	The Port will continue to minimize nighttime engine run-ups through the restrictions in the Ground Noise Program.
6 - PSRC, FAA and affected communities participate actively in Port's upcoming Part 150 Update.	Initiate Part 150 Update including active participation with the FAA, affected communities and other interested parties.
6d - Evaluate benefit of departure profiles, coupled with expanded acquisition and insulation.	Evaluate in Part 150 Update.
6e - Evaluate benefits of preferential runway use during low activity periods.	Evaluate in Part 150 Update.
7c - Evaluate possibility of expanded residential acquisition program.	The Port will conduct contour analysis as requested. Analysis will be done through the Part 150 Study.
7d - Design and implement alternative, noise-compatible land used for land in current acquisition zone.	Port can develop a land use plan for compatible re-use of property purchased through acquisition program and make it available to the public.
7f - Investigate modifications to insulation program to mitigate impacts of low frequency noise and vibration.	Port will continue contract with noise experts to keep apprised of technological developments for improving insulation program. Contract will be modified to specifically mention impacts of low frequency noise and vibration.
8a - Initiate and coordinate remedial actions to address road blocks that prevent Region's residents from realizing full benefits of Port's programs. 8b - Create guidelines for dealing fairly with conflicting views and needs of different communities. 8c - Take effective action on land use issues to minimize the introduction of incompatible land uses. 8d - Investigate creative ways to link noise reduction objectives with airport demand and system management strategies.	Port will support PSRC efforts to address these issues and suggests that PSRC staff be active participants of the upcoming Part 150 Study and assist the Port in sponsoring the Planners Forum.

ATTACHMENT B

ESTIMATED COSTS FOR PORT ACTIONS

Nearly \$113 million (\$170 million has been spent to date on the Airport's noise mitigation and abatement programs)

Public School Noise Insulation

- \$50 million for projects eligible for federal funds and PFCs

Noise Monitoring System

- \$100,000 to develop specifications
- \$2 million to procure system

Noise Insulation Program (including single family residential, transaction assistance, pilot programs and assistance to mobile home owners)

- \$60 million

FAR Part 150 Update

- \$500,000 to \$700,000 for study
- Additional funds would be required if Port Commission approves implementation of recommendations

Land Use Plan for Acquisition Program Properties

- \$50,000 for plan development

Contract with Noise Expert

- \$12,000 (at \$2,400 per year to continue contract for five years)

Additional Noise Abatement and Remedy Actions

- \$80,000 for a two-year period. The recommendations will require additional work and study. They can be accommodated through existing noise abatement and noise remedy programs with additional staffing.

ATTACHMENT C

SCHEDULE

- Public School Insulation Discussions - The Port continues to be willing to begin discussions with Highline School District immediately. Initiation of an insulation program could begin once an agreement is made between the parties establishing eligibility, priorities, an implementation schedule and identifies a funding plan for the next few years.
- Upgrade Noise Monitoring System - The Port could begin a study to develop specifications for the new noise monitoring system this year. Procurement of the system will occur following public process, which is likely to run parallel with the Part 150 study, and commission approval. The system could be in place by summer 1998.
- FAR Part 150 Update - The Port will begin a Part 150 Study this year which is estimated to take 2 to 3 years to complete. The scope of this study will include the majority of the items listed by the Panel as issues to evaluate in a Part 150 Study.
- Many of the Panel's recommendations include items the Port can implement as part of existing noise abatement and remedy programs. Some of the more time consuming items include discussions with airlines to minimize nighttime flights, analysis related to reduced use of thrust reversers, and designing and implementing a land use plan for acquisition properties. Staff can incorporate the workload of the recommendations over the next 18 months with additional staffing.
- Single-family building insulation program is expected to be completed by 2001.

ATTACHMENT D

ACCOUNTABILITY

Actions to Ensure Accountability

The Port of Seattle feels the following actions are appropriate ways to monitor compliance with the recommendations.

- A Port Commission resolution formally adopting the package of recommendations to which the Port has agreed, officially and publicly committing the Port to the course of action.
- The Port currently provides reports to PSRC on status and compliance of current noise abatement and mitigation programs. The Port can continue annual reports including those items adopted by the Port Commission.
- The Sea-Tac Noise Advisory Committee (SNAC) was created by the Mediation Committee to monitor the implementation of programs created through the Mediation process. The Port can continue to provide monthly and quarterly reports to SNAC for all Mediation-related actions. This would include actions the Port takes to evaluate the effectiveness of reduced use of thrust reversers and specifications for a new noise monitoring system. The Port can provide results of such evaluation and implementation actions to SNAC.
- The Port will conduct the Part 150 Update under the guidelines set out in the Federal Aviation Regulations (FAR). The FAA will monitor the proceedings, and the constituent groups around and on the Airport will be encouraged to participate. Various Part 150 elements must be officially reviewed, accepted, and/or approved by the FAA.

ATTACHMENT E

QUALITATIVE ASSESSMENT OF NOISE REDUCTION BENEFITS

Introduction and General Discussion:

Given the limited time, the unavailability of details on proposed actions, and the "to be evaluated" status of some of the recommendations, this review must by necessity be qualitative in nature.

The Port's current coordinated and comprehensive noise reduction programs target the major causes of noise, annoyance, and other intrusions on residents, with an important goal of not shifting impacts onto others. As noted by the Panel, the Port has given priority to programs that result in the greatest potential for noise level reduction and which provide overall benefit for airport-impacted communities. These include the Noise Budget and Nighttime Stage 2 restrictions which have eliminated most B727 aircraft (noisiest aircraft at Sea-Tac) and eliminated all Stage 2 aircraft over 75,000 lb. at night. The Noise Remedy program has acquired over 1,300 houses in the most noise impacted area and has already completed sound insulation in over 4,000 homes, with thousands more eligible. Run-up restrictions at night have severely limited these procedures to about two to four nighttime run-ups per month.

What is Needed to Adequately Evaluate Benefits:

Evaluating the benefits of the range of proposed noise impact reduction measures is often complex, as evidenced by the volumes of data and hours of discussion that have occurred over the past several years. While there is a variety of ways to examine benefits, they can usually be classified as a reduction in decibel level or in number of events, which in turn may or may not mean a reduction in the number of people impacted. As has long been acknowledged, some actions may have very little effect in actually reducing the overall noise but are important because they can minimize the type of annoying events that people complain about.

For most of the recommendations, there is insufficient detail at this time about the specific actions or possible program alternatives to allow for a reliable estimate of either the individual or cumulative benefits or other impacts. The probable range of benefits will depend on program element details, locations, timing, and other variables. Given the public interest in this topic, it would not be prudent to raise or lower expectations by guessing at a specific outcome of implementing any particular action or group of actions. The Panel has recommended that the Port initiate a Part 150 Study to evaluate a number of the potential measures. The Part 150 Study allows adequate time for analysis as well as for public involvement and it is, therefore, the appropriate vehicle for quantifying the benefits and impacts of many noise mitigation and abatement proposals and for determining the scope of projects and funding sources.

Potential Benefits of Particular Types of Recommendations:

It is clear that sound insulation of buildings results in decreased interior decibel levels for all occupants or users. This has been proven with the Port's current residential insulation program and several pilot programs for other noise-sensitive uses. The Panel also concluded that the insulation programs, which have specific decibel reduction requirements, provide significant noise reduction benefits that are clearly recognized by occupants. For instance, data analysis shows that the reduction of high end speech interference for Highline Community College students was conservatively estimated at over 90 percent and low end interference at over 50 percent following insulation. Residential occupants benefit from reduced sleep interference as well as less speech and activity disruption.

The Part 150 update study and new noise monitoring system will both play an integral role in the development of new programs and in managing existing and new noise abatement measures that may result from the Part 150 study. The Part 150 process provides the best avenue to analyze potential programs and to involve all interested parties. The public takes an active role in discussing noise program alternatives, options, and priorities. Many of the recommendations suggested by the panel are best suited for a Part 150 study for these reasons.

Some of the Panel's recommendations are aimed at reducing noise levels for some single events rather than the overall noise level. Measures to improve aircraft compliance with the departure corridors, particularly for nighttime north flow over Elliott Bay and Puget Sound, may provide for some reduction in the occasional but potentially disturbing single event overflights in adjacent areas. Locations with the most potential for this benefit are those communities north of Elliott Bay. Voluntary rescheduling of some nighttime flights and operations by Stage 2 aircraft of less than 75,000 lb. may also benefit communities by reducing single event noise. Presently there are approximately 6 flights per night with these aircraft. If such flights are able to be rescheduled, they would likely move to daytime hours and so would not eliminate that noise overall.

Two recommendations were made that address ground noise at the Airport. Ground noise primarily relates to single events on the airfield and affects those communities in the immediate vicinity of the Airport. A reduction in thrust reverser use has the potential to provide some lessening of annoying nighttime noise, when people are more susceptible to being disturbed. Continuing vigilant control of engine run-ups may also result in occasional reduction of single event disturbances particularly at night, but this should be minimal given the already small number of nighttime run-ups.

Potential programs which may relocate noise from one area to another (e.g. flight track or departure profile changes) are particularly complex to evaluate because both positive benefits and negative impacts must be considered. Different communities and numbers of people can be affected by different changes in noise levels and events. While a technical study may provide information about these changes, balancing the positive and negative results is usually a policy decision involving the affected parties. Therefore, the success of such programs is dependent on the agreement of all involved.

Summary

Of the recommendations that the Port has offered, we have summarized their potential value in terms of noise reduction or noise management benefits for each.

1. Most Value in Potential Noise Reduction Benefits:

- The single-family insulation program and sound insulation for schools can yield measurable and demonstrated benefits from reduced interference with speech activity and sleep for all occupants and users. The scope of the single family program includes availability of insulation to 10,000 homes.
- The federally recommended Part 150 Study in and of itself does not reduce noise. However, it is the most appropriate and productive way for pursuing meaningful noise reduction programs within a public forum. The study will involve communities, airlines, FAA, and others. Historically, the Part 150 process (as well as the Mediation project) has produced the type of programs that have made Sea-Tac International Airport a leader in the field of noise reduction.

2. Value in further reducing annoying single events, if possible:

- Working with the FAA on improved monitoring and enforcement of Elliott Bay/Puget Sound nighttime procedures.
- Work with airlines to explore rescheduling of nighttime Stage 2 aircraft under 75,000 lb.
- Pursue thrust reverser reduction actions with airlines and the FAA.
- Continue to minimize nighttime run-ups and variances to noise rules. Reevaluate locations and other operational changes that may reduce impacts.

3. Value in Noise Management:

- Installation of a new and expanded noise monitoring system would provide an improved tool for better access to a wider range of noise metrics, more monitoring locations to better understand noise in a variety of neighborhoods, better correlation between flight tracks, single noise events, and citizen complaints, etc.

ATTACHMENT F

FAR PART 150 STUDIES

Part 150 is the abbreviated name for the Airport Noise Compatibility Planning process outlined in Part 150 of the Federal Aviation Regulations (FARs). The Part 150 Study process was initially established by Congress when it passed the Aviation Safety and Noise Abatement Act of 1979. The Federal Aviation Administration (FAA) further defined the process in Part 150 of the FARs. The Part 150 process serves as the primary vehicle airports use to attain funding for noise mitigation. An airport can only apply for noise funds if an approved Part 150 Study is in place.

The need for noise compatibility planning around airports has its roots in the advent of jet aircraft and the explosive growth of commercial aviation in the 1960s. This was followed in the late 1960s by the development of strong public awareness of the right to environmental quality and the passage of the National Environmental Policy Act (NEPA). Since that time, aircraft noise has become what is probably the single most important barrier to the expansion of airport capacity around the country.

The primary goal of a Part 150 Study is to reduce existing noncompatible land uses around airports and to prevent the introduction of additional noncompatible land uses through cooperation with all those involved through reduction of noise and/or zoning and permitting regulations. The Part 150 Airport Noise Compatibility Planning Program offers a way for airport operators and local communities to implement the necessary avenues for achieving these results. The plan will also provide updated guidance to local land use planners to assist them with the land use development decisions in areas in which there is the potential for noise impacts on homes and other noise-sensitive land uses.

There are several steps to conducting a Part 150 Study. The first step in the study is to identify the issues and problems faced by the Airport as they relate to noise. The next step is to define the levels of noise exposure around the airport for two different time frames, current and five years in the future. The exposure levels are based on the number of residents and noise-sensitive land uses located within the intervals between aircraft noise contours.

The noise metric used is the Day-Night Average Sound Level (normally termed LDN or DNL), which is the required metric of the FAA and is the recognized industry standard. The products of this step are the Noise Exposure Maps, or NEMs.

The next step entails evaluations of various options for abating noise and managing vicinity land uses. Measures suggested by the participants in the study that are found to be feasible are evaluated. Each measure is rated for its effectiveness in reducing noise, as well as its costs, safety, and its implementation feasibility.

A noise compatibility plan is then developed which consists of an optimum combination of preferred noise abatement and land use management measures, as well as a plan for implementation. This last step constitutes the second half of the study process called the Noise Compatibility Program, or NCP.

The Port of Seattle's first Part 150 Study was approved by the FAA in October 1985. This study updated existing noise mitigation such as the acquisition program and added new measures including the insulation and transaction assistance programs. The Noise Exposure Maps and Noise Compatibility Program were based on current and forecast noise levels at that time. Generally, Part 150 studies are updated every five years to take into account changing conditions. The Update scheduled to begin later this year will be the second Part 150 Update since the development of the original plan. This study will take into account the current year (1996) and a future year of 2001. This update will continue the analysis of noise abatement and land use management alternatives to reflect and address the changes that may have taken place at the Airport since the last study update. It is important to note that a number of the current noise programs were developed through an extensive study effort known as the Mediation Project which was completed in March 1990, and which resulted in the Mediation Agreement.