

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
(NPDES) PROPOSED WASTE DISCHARGE PERMIT NO. WA-002465-1

PORT OF SEATTLE
SEATTLE-TACOMA INTERNATIONAL AIRPORT

RESPONSE TO COMMENTS

Public Meeting Held:
Burien, WA – November 3, 1997

Public Hearing Held:
Burien, WA – November 10, 1997

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INTRODUCTION

The Department of Ecology has issued National Pollutant Discharge Elimination System (NPDES) Permit No. WA-002465-1 to the Port of Seattle for discharge of treated industrial wastewater and stormwater from Seattle-Tacoma International Airport (Sea-Tac Airport).

Public notice of application was published on 5/26/97 and 6/2/97 in the Seattle Times South Edition and the Highline Times to inform the public that an application had been submitted and to invite comment on the reissuance of the permit.

The Department published a Public Notice of Draft on 10/10/97 in the Seattle Times South Edition and on 10/18/97 in the Highline Times to inform the public that a draft permit and fact sheet were available for review.

A Public Meeting was held at the Burien Public Library on Monday, November 3, 1997, for the public to ask questions and find out more about the permit. A Public Hearing was held at the Burien Public Library on Monday, November 10, 1997, to receive formal public testimony regarding the draft permit. Public Notice of the public meeting and public hearing were published with the Public Notice of Draft. The written comment period on the permit closed on December 10, 1997, 30 days after the public hearing.

As a result of questions and concerns raised in the public meeting, public hearing, and written comments, the draft permit was re-examined and some revisions were made to the permit and fact sheet. This responsiveness summary is intended to reflect substantive comments, concerns and recommendations on the proposed permit raised during the public hearing and written comment period and to state the Department of Ecology's response to those same substantive comments, concerns, and recommendations.

ORGANIZATION OF THE RESPONSIVENESS SUMMARY

Letters in response to the draft permit and comments made in the public hearing often contained similar questions or addressed similar issues with the draft permit. To reduce needless repetition and to avoid confusion in the responsiveness summary, similar comments have been grouped into a single comment category and each category has then been answered once. The categories follow the organization of the draft permit and fact sheet.

The comment letters and the transcript of the comments made during the public hearing are available for viewing at the Department of Ecology's Northwest Regional Office, 3190 160th Ave. SE in Bellevue, WA (call (425) 649-7190 to make an appointment) and at the Burien Public Library. The comments letters and transcript have not been attached to this Responsiveness Summary in order to save paper.

TABLE OF CONTENTS

ACRONYMS..... 7

1. PERMIT COVER PAGE 8

2. SUMMARY OF SCHEDULED PERMIT REPORT SUBMITTALS 8

3. S1.A INTERIM EFFLUENT LIMITATIONS - INDUSTRIAL WASTEWATER 8

4. S1.B FINAL EFFLUENT LIMITATIONS - INDUSTRIAL WASTEWATER 14

5. S1.C MIXING ZONE DESCRIPTION - OUTFALL 001 16

6. S1.E STORMWATER DRAINAGE SYSTEM 17

7. S1.F GROUND WATER DISCHARGES..... 20

8. S1.G CONSTRUCTION RELATED DISCHARGES 25

9. S2. MONITORING REQUIREMENTS - GENERAL 26

10. S2.A MONITORING REQUIREMENTS - INDUSTRIAL WASTEWATER 27

11. S2.B MONITORING REQUIREMENTS - STORMWATER..... 28

12. S2.C CONSTRUCTION STORMWATER/DEWATERING MONITORING 37

13. S2.D GLYCOLS USAGE 39

14. S2.E ANNUAL STORMWATER MONITORING SUMMARY REPORT 40

15. S2.F SAMPLING AND ANALYTICAL PROCEDURES 41

16. S2.G FLOW MEASUREMENT 42

17. S2.H LABORATORY ACCREDITATION 42

18. S3.B REPORTING - STORMWATER 43

19. S3.C RECORDS RETENTION 43

20. S3.E ADDITIONAL MONITORING BY THE PERMITTEE 44

21. S3.F NONCOMPLIANCE NOTIFICATION 44

22. S4 COMPLIANCE SCHEDULE 47

23. S5 INDUSTRIAL WASTEWATER SYSTEM (IWS) OPERATIONS AND MAINTENANCE
MANUAL 54

24. S5.B BYPASS PROCEDURES 55

25. S6. SOLID WASTE DISPOSAL..... 57

26. S7 SPILL PLAN..... 58

27. S8.A ACUTE TOXICITY - EFFLUENT CHARACTERIZATION 59

28. S8.B ACUTE TOXICITY - EFFLUENT LIMIT FOR ACUTE TOXICITY 61

29. ACUTE TOXICITY - MONITORING FOR COMPLIANCE WITH AN EFFLUENT LIMIT FOR ACUTE TOXICITY 63

30. S8.D ACUTE TOXICITY - RESPONSE TO NONCOMPLIANCE WITH AN EFFLUENT LIMIT FOR ACUTE TOXICITY 64

31. S8.E ACUTE TOXICITY - MONITORING WHEN THERE IS NO PERMIT LIMIT FOR ACUTE TOXICITY 64

32. S8.F ACUTE TOXICITY - SAMPLING AND REPORTING REQUIREMENTS 64

33. S9.A CHRONIC TOXICITY - EFFLUENT CHARACTERIZATION 65

34. S9.C CHRONIC TOXICITY - MONITORING FOR COMPLIANCE WITH AN EFFLUENT LIMIT FOR CHRONIC TOXICITY..... 66

35. S9.D CHRONIC TOXICITY - RESPONSE TO NONCOMPLIANCE WITH AN EFFLUENT LIMIT FOR CHRONIC TOXICITY..... 67

36. S9.E CHRONIC TOXICITY - MONITORING WHEN THERE IS NO PERMIT LIMIT FOR CHRONIC TOXICITY 67

37. S9.F CHRONIC TOXICITY - SAMPLING AND REPORTING REQUIREMENTS 67

38. S10. ACUTE TOXICITY – STORMWATER..... 68

39. S10.A EFFLUENT CHARACTERIZATION 71

40. S10B SAMPLING AND REPORTING REQUIREMENTS 72

41. S11 SEDIMENT MONITORING (MARINE) 72

42. S12 STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR AIRPORT OPERATIONS..... 74

43. S12.A SWPPP FOR AIRPORT OPERATIONS – OBJECTIVES..... 75

44. S12.B SWPPP FOR AIRPORT OPERATIONS – GENERAL REQUIREMENTS 76

45. S12.C SWPPP FOR AIRPORT OPERATIONS – IMPLEMENTATION 79

46. S13 STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR CONSTRUCTION ACTIVITIES 79

47. S13.A SWPPP FOR CONSTRUCTION ACTIVITIES - OBJECTIVES 83

48. S13.B SWPPP FOR CONSTRUCTION ACTIVITIES - GENERAL REQUIREMENTS 83

49.	S13.C SWPPP FOR CONSTRUCTION ACTIVITIES - SWPPP CONTENTS AND REQUIREMENTS.....	87
50.	S14 STORMWATER DRAINAGE REPORT	88
51.	S15 IWS HYDROGEOLOGIC STUDY	89
52.	G1 SIGNATORY REQUIREMENTS	93
53.	G3 PERMIT ACTIONS	93
54.	G4 REPORTING A CAUSE FOR MODIFICATION	93
55.	G5 PLAN REVIEW REQUIRED	94
56.	G6 COMPLIANCE WITH OTHER LAWS AND STATUTES	94
57.	G9 REDUCED PRODUCTION FOR COMPLIANCE	94
58.	G15 PENALTIES FOR VIOLATING PERMIT CONDITIONS	94
59.	FACT SHEET – SUMMARY/INTRODUCTION	95
60.	FACT SHEET – DESCRIPTION OF THE FACILITY	95
61.	FACT SHEET – PERMIT STATUS	108
62.	FACT SHEET – SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT	108
63.	FACT SHEET – INDUSTRIAL WASTEWATER AND STORMWATER CHARACTERIZATION	109
64.	FACT SHEET – PROPOSED PERMIT LIMITATIONS	111
65.	FACT SHEET – TECHNOLOGY-BASED EFFLUENT LIMITATIONS	111
66.	FACT SHEET – SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS	113
67.	FACT SHEET – GROUND WATER QUALITY LIMITATIONS	124
68.	FACT SHEET – OTHER PERMIT CONDITIONS	127
69.	FACT SHEET - PERMIT ISSUANCE PROCEDURES.....	128
70.	FACT SHEET – REFERENCES FOR TEXT AND APPENDICES	128
71.	FACT SHEET – APPENDIX B	128
72.	GENERAL COMMENTS - APPLICATION	129
73.	GENERAL COMMENTS – PROTECTION OF THE AQUIFER	130
74.	GENERAL COMMENTS – INADEQUATE PERMIT	131
75.	GENERAL COMMENTS – INADEQUATE STAFF	136

76. GENERAL COMMENTS – PUBLIC PARTICIPATION 137

77. GENERAL COMMENTS – PENALTIES/COSTS 138

78. GENERAL COMMENTS – AGREED ORDER/CLEANUP ACTIVITIES 138

ACRONYMS

AKART – All known, available and reasonable methods of prevention and treatment
ACC – Airport Communities Coalition
ACEC – Acute critical effluent concentration
AOMA – Airport Operations and Maintenance Area
BMP – Best Management Practices
BOD – Biochemical oxygen demand
BOD₅ – Five day biochemical oxygen demand
CASE – Citizens Against Airport Expansion
CCEC – Chronic critical effluent concentration
CWA – Clean Water Act
DAF – Dissolved air flotation
DMR – Discharge monitoring report
DO – Dissolved oxygen
FOG – Fats, oil and grease
IWS – Industrial wastewater system
IWTP – Industrial wastewater treatment plant
LAET – Lowest apparent effects threshold
MGD – million gallons per day
MTCA – Model Toxics Control Act
NPDES – National Pollutant Discharge Elimination System
POS – Port of Seattle
RCAA – Regional Commission on Airport Affairs
RCW – Revised Code of Washington
RPZ – Runway protection zone
SDS – Stormwater drainage system
SEPA – State Environmental Policy Act
SWPPP – Stormwater Pollution Prevention Plan
TBD – To be determined
TPH – Total petroleum hydrocarbons
WET – Whole effluent toxicity

RESPONSE TO QUESTIONS AND COMMENTS

1. Permit Cover Page

Comment: We request that the receiving water be described as the City of SeaTac Storm Sewer because that is the actual discharge point. We do not believe it is appropriate or necessary to list the "ultimate receiving water" when other permits issued by Ecology only identify the actual point of discharge. For the same reason, we object to designating the water body ID number as WA-09-1020. While we understand that water body numbers are unavailable for storm sewers, it is inappropriate to assign the "ultimate" receiving water body ID number to a storm sewer discharge.

Response 1: Although the discharge from the Engineering Yard and Taxi Yard are to the City of SeaTac's storm sewer system, the ultimate receiving water body is Gillian Creek and the Green River. The words "tributary to" make this clear. This wording was requested by the public during the modification to the permit in 1996 and remains in the final permit.

2. Summary of Scheduled Permit Report Submittals

Comment: Why has Ecology allowed so many delays in the submittals of required reports? How will Ecology assure that reports will be submitted in a timely fashion from now on? With the budget, staff power, and consultants available to POS there is no excuse for the chronic violation of report submission deadlines.

Comment: The previous permit period evidenced many delays in the submittals of required reports. What incentives are there to make sure permittee does not again abuse this permit?

Response 2: Each request for delay in submittal of a report is evaluated at the time of the request. Typically, a delay in submittal is caused by unforeseen circumstances and is approved to allow for a better submittal. The report submittal dates in the final permit have been set with consideration of the Port's ability to meet these dates and therefore should avoid the need for frequent extensions.

3. S1.A Interim Effluent Limitations - Industrial Wastewater

Comment: Although the definition of industrial wastewater contained in footnote a of S1.A states that industrial water includes "stormwater contaminated with deicing/anti-icing agents," it exempts from this classification, without explanation, stormwater runoff that contains "minor amounts of deicing/anti-icing agents that shear from aircraft." The application of deicing/anti-icing agents is an industrial activity conducted at the Airport with regular, seasonal frequency. Such agents that shear from aircraft constitute industrial process waste or wastewater. When such a waste comes into contact with

water of the State, industrial wastewater unquestionably has been discharged. The exclusion of this category of contaminated stormwater from industrial wastewater is unsupported by any explanation, either in the Draft Permit or in the Fact Sheet. The Fact Sheet uses the same definition of "industrial wastewater" on page 6.

Comment: Statements by Ecology that "minor amounts" of glycols are inconsequential and are not even an industrial process waste are ludicrous. Ecology is in effect 'looking the other way' and providing the permittee with a 'permit shield'. The draft permit should be corrected to include the use of standard Clean Water Act language definitions for industrial wastewater and remove the language that currently constitutes an abuse of authority and is arbitrary and capricious.

Comment: Ecology will be violating the anti-degradation policy and will be "backsliding" by permitting the discharge of glycols from sheeting off of aircraft and the overflows from the IWS system. To quote Ecology "discharge of industrial wastewater to the storm drainage system is prohibited".

Comment: The Port's existing NPDES waste discharge permit defines industrial wastewater as "water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses or dairies. The term includes contaminated stormwater and, also, leachate from solid waste facilities." The existing permit includes all contaminated stormwater in industrial wastewater. Accordingly, the definition of industrial wastewater in the Draft Permit appears to be backsliding - a practice expressly prohibited under the Clean Water Act and WPCL.

Comment: Nowhere in the Draft Permit or Fact Sheet does Ecology explain the basis for its determination that the amount of deicing/anti-icing agents that shear from aircraft is "minor." Similarly, no data, analysis, or explanation is provided concerning how that amount is expected to change over the proposed permit term in the event that the number of flight operations at the Airport changes. All documents, data, and analyses relied upon by Ecology in making these determinations must be made available to the public as part of the administrative record.

Comment: It is requested that Ecology correct the Draft Permit to use standard Clean Water Act definitions for industrial wastewater and remove the language in the Draft Permit that constitutes backsliding, abuse of authority, and arbitrary and capricious action.

Comment: The foot note, and thus the permit, determines that industrial wastewater does not include deicing/anti-icing agents in "minor" amounts that shear from aircraft. If Ecology is refusing to set effluent limits for glycols out of outfall 001 due to reluctance to set effluent limits without complete information, then there must be an equal reluctance to define discharges as non-industrial without adequate information. Application of glycols to aircraft is beyond doubt an industrial process of the airport under their permit.

Shearing of glycols from airplanes is beyond doubt an industrial wastewater generation process. This industrial process waste is currently being discharged to surface waters of the state. Ecology's attempt to dismiss this discharge of industrial waste via storm waters to waters of the state, with vague language about non-defined "minor amounts" based on no data is arbitrary and capricious and further fails to be protective of waters of the state. Ecology has failed to set an effluent limit or require elimination of the discharge for glycols and other pollutants known to part of the industrial discharge for SeaTac airport. The use of the language in foot note a, of the Draft Permit also constitutes backsliding as it introduces a permit shield permitting or otherwise allowing a discharge that is not permitted or allowed in the in force permit

Comment: Footnote (a) to industrial wastewater eliminates glycols that shear from aircraft as industrial waste when discharged into surface waters. This is very bad policy for a number of reasons. First, it takes one of two primary industrial waste generating activities (fueling and deicing/anti-icing) and says that one of the processes generating this waste is exempt from the Clean Water Act. Second, it creates a precedent that it is acceptable to discharge process wastewater into stormwater without treatment. Third, it defines sheeted glycol concentrations as "minor", but provided no process by which the determination was reached. This exemption did not appear in the previous permit and this is more lenient than the former permit.

Comment: I understand that the permit does not consider glycol that sheets off the airplane body or wings as hazardous waste. The glycol that falls off while being sprayed onto the planes and that is discharged during takeoff is 80% of the glycol released into the environment for de-icing. Why is this large quantity not covered in the permit?

Comment: Regarding footnote a, we very much appreciate the refinements that Ecology has made to the "industrial wastewater" definition. We do have the following concerns, however. First, we are concerned that deicing and anti-icing agents are characterized as industrial wastewater because potassium acetate, calcium magnesium acetate, and sand are used to deice and anti-ice the runways, taxiways, and roadways at the airport. Some of these deicing chemicals that are applied to these ground surfaces discharge to the SDS. By including deicing and anti-icing agents within the industrial wastewater definition, these discharges would be prohibited. In this regard, we suggest that the word "aircraft" be inserted before the words "deicing/anti-icing agents."

Comment: The last sentence, which refers to aircraft shear, presents some problems. When glycols are applied to aircraft at the gates, cargo areas, and hangars, the glycol that drips from aircraft at these areas is routed to the IWS. As aircraft are pushed back from these areas and taxi down the taxiways and runways, however, glycol may drip from the planes and find its way into the SDS. The Port has no control over these non-point source discharges. Additionally, we are uncomfortable with the word "minor" because it is susceptible to numerous interpretations. Finally, through circumstances outside of the Port's control, we have encountered problems securing electrical power for the snow storage area pumps. Until the pumps are powered, we cannot pump stormwater from

these areas to the IWS, and thus cannot avoid glycol discharges to the SDS from the snow storage areas.

Response 3A: The definition of industrial wastewater contained in footnote a of Special Condition S1.A has been modified in the final permit as follows:

^aIndustrial wastewater is water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater, non-contact cooling water, or stormwater associated with industrial activity. Industrial wastewater may result from any process or activity of industry, manufacture, trade or business, and includes, but is not limited to: water used for industrial processes such as pipe integrity pressure testing and vehicle and aircraft wash water; stormwater contaminated with fuel, oil, fire foam, cleaning agents and aircraft deicing/anti-icing agents; contaminated construction dewatering waters; excess water from ground water well construction and monitoring; and leachate from solid waste facilities. Industrial wastewater does not include stormwater runoff that contains ~~minor amounts of~~ deicing/anti-icing agents that shear or drip from aircraft in the storm drainage system.

The definition for industrial wastewater was changed in order to clarify the difference between industrial wastewater and stormwater associated with industrial activity. Industrial wastewater is the wastewater and stormwater that is collected by the Industrial Wastewater System (IWS). The IWS collection area was expanded during the previous permit cycle to include all of the areas where aircraft deicing/anti-icing occurs and where glycol-contaminated snow is stored. The Department does not agree to allow the storage of glycol-contaminated snow in the SDS due to the problems securing electrical power for the snow storage area pumps.

Stormwater associated with industrial activity is the stormwater that is collected in the Stormwater Drainage System (SDS). It is incorrect to assume that no pollutants are discharged in the stormwater. It is appropriate to require that the permittee implement a Stormwater Pollution Prevention Plan (SWPPP) to minimize the amount of stormwater contamination due to the association with industrial activity.

The final permit requires the Port to monitor the stormwater outfalls for ethylene and propylene glycols, biochemical oxygen demand (BOD₅), and whole effluent toxicity. If the stormwater monitoring shows that the dripping and shearing of deicing/anti-icing agents into the SDS causes a significant amount of pollution, Special Condition S12.B.2 requires that the SWPPP be modified to address the source of the pollution.

Neither the Federal Water Pollution Control Act, also known as the Clean Water Act (33 U.S.C. § 1251, et seq.) or the Water Pollution Control Act (RCW 90.48) contain a definition of industrial wastewater. The implementing regulations for both of these laws contain definitions. "Process wastewater" is defined in 40 CFR § 122.2 as any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product". The definition for industrial wastewater used in the

previous permit is located in chapter 173-240 WAC, Submission of Plans and Reports for Construction of Wastewater Facilities. Industrial wastewater is not defined in the State National Pollutant Discharge Elimination System Permit Program regulation (chapter 173-220 WAC).

The clarification of the definition of industrial wastewater contained in the final permit does not constitute backsliding. The previous definition stated that industrial wastewater included contaminated stormwater, but did not clearly state that stormwater associated with industrial activity is not considered industrial wastewater. The Department has never considered the stormwater collected in the SDS, after the improvements made through the implementation of the SWPPP during the previous permit cycle, to be industrial wastewater and therefore is not now "exempting" this discharge or backsliding.

Comment: The Draft Permit fails to include glycol among the pollutants for which interim and final effluent limitations are established, nor does the Draft Permit require elimination for the discharge of glycols. The Fact Sheet provides an explanation in this regard that is wholly unsatisfactory. The Fact Sheet States on page 10 that waste containing more than ten percent ethylene glycol is generally considered a "dangerous waste" in Washington State, but that Ecology "has certified that waste aircraft deicing fluids containing ethylene glycol generated at the Airport are not dangerous wastes." The Fact Sheet does not explain the basis for this certification, nor does it provide a clear, understandable explanation for why the effluent limitations include Biochemical Oxygen Demand rather than limiting glycol concentration directly. Ecology must modify the Draft Permit to provide complete, detailed explanations for the basis for its certification concerning deicing fluids at the Airport, and for its decision to regulate BOD₅ rather than glycol.

Comment: A review of the literature should be done to determine if other states or countries have set effluent limits for glycol discharges. An interim limit should be set for glycols based on the literature review until such time as a facility specific standard can be adopted, after appropriate agency consideration and public comment.

Comment: Ecology has failed to set an effluent limit or require elimination of the discharge for glycols and other pollutants known to be part of the industrial discharge for this facility.

Response 3B: The Department cannot set an interim or final effluent limitation for glycol or Biochemical Oxygen Demand (BOD₅) at Outfall 001 until all known, available and reasonable methods of prevention and treatment (AKART) has been determined. An effluent limitation for glycol or BOD₅ must be based on the technology chosen to treat these pollutants.

Determining the BOD of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD is used to measure the potential reduction of dissolved oxygen in a receiving water after effluent is

discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment.

The primary source of BOD in the industrial wastewater is aircraft deicing/anti-icing fluids (glycols), although plane and vehicle wash water also exert BOD. Therefore, limiting the BOD in the IWS effluent will limit the discharge of glycols and wash water. BOD is a common parameter used to design wastewater treatment systems. When a technology-based BOD effluent limitation is determined, it can be used to model the decrease in dissolved oxygen in the receiving water that would be caused by the BOD. If the modeling shows that dissolved oxygen would be lowered below the water quality standard, then the BOD effluent limitation would be lowered to protect the dissolved oxygen water quality standard. An effluent limitation for glycol would be more difficult to derive and would not be as protective of aquatic life. There is no water quality criteria for ethylene or propylene glycol.

Hazardous wastes are regulated in Washington State by the Department's Hazardous Waste and Toxics Reduction Program through chapter 173-303 WAC, the Dangerous Waste Regulations. The Department has determined that wastes containing more than ten percent ethylene glycol book-designate as state-only dangerous waste (DW) under WAC 173-303-100(5)(b). While that determination was made in the context of evaluating the toxicity of waste ethylene glycol-based automobile and truck antifreeze, it may be sufficiently broad to apply to aircraft deicing fluids as well. Wastes containing propylene- or diethylene glycol are not included in the state-only waste designation. In September, 1995 the Port of Seattle applied for certification of the waste aircraft deicing fluids generated at Sea-Tac Airport under WAC 173-303-075. The application included static acute fish and acute oral rat bioassays in accordance with the requirements of WAC 173-303-110(3)(b). Based on the results of the bioassays, the Department certified that waste aircraft deicing fluids containing ethylene glycol generated at Sea-Tac Airport are not dangerous wastes on October 20, 1995.

The Fact Sheet has been modified to clarify these issues.

Comment: S1A footnote e - Is this a minor or major permit modification? Will there be opportunity for public review and comment on the data generated and the decision contemplated by Ecology?

Response 3C: This will be a major modification with opportunity for public review and comment.

Comment: The Midway Sewer District is currently constructing a new 48-inch outfall. This will increase the capacity of the outfall by over 250% or to 31,250 gpm. With this capacity, it is perceivable that the discharge allowance from the IWS could be increased from 2,500 gpm to the maximum of 4,900 gpm, which is Midway's estimate of the capacity of the IWS trunkline. With this increase of capacity, the Port's capital improvement program should include increasing the IWTP's size to accommodate the treatment of storm flows (and to minimize the potential for plant overflow). It should be

noted that currently no discussion have taken place with the Midway Sewer District concerning the increase of the flow above the 2,500 gpm maximum limit.

Response 3D: The final permit limits the IWS effluent flow to 4,800 gpm. This effluent flow limit is based on the design peak loading rate for the DAF units in the IWTP after the addition of two new DAF units is complete. This flow rate is essentially the same as the capacity of the IWS trunkline. The discharge flow rate should also not exceed the discharge rate specified in the Midway Sewer District discharge agreement (flow shall not exceed 2,500 gpm whenever the combined flow from the IWS and Midway Sewer District exceeds 90% of the outfall's present capacity of 12,500 gpm). If the Midway Sewer District and the Port of Seattle update the discharge agreement based on the capacity of the new outfall, that agreement will automatically be incorporated into the NPDES permit.

Comment: We would like language stating that the permit regulates the area within the property boundary and the acquisition boundary.

Response 3E: Language stating that the permit regulates the area within the property boundary and the acquisition boundary has been included in the first paragraph of Special Condition S1.

Comment: How do the interim effluent limitations in this permit assure protection of Puget Sound from the full range of pollutants known to be discharged by POS at Outfall 001?

Response 3F: The interim limitations have been established to regulate the Permittee's industrial wastewater discharge prior to completion of a new or improved industrial wastewater treatment system. Interim effluent limitations are based on the existing treatment plant's capabilities for removal of the pollutants oil and grease and total suspended solids. The interim effluent limitations assure that the existing plant is operated properly to maximize the removal of pollutants that the plant is designed to treat. Interim effluent limitations are not based on protection of water quality standards in the receiving water.

The only pollutant discharged in the IWS effluent that is not treated by the IWTP is BOD (see the discussion in Response 3B above). When the compliance schedule expires, a final effluent limitation for BOD will be established to protect the dissolved oxygen water quality standard in Puget Sound.

4. S1.B Final Effluent Limitations - Industrial Wastewater

Comment: The final effluent limits for flow should be based on the performance monitoring of the new DAF units and not the design treatment rate of 2,400 gpm. This item should be listed as "to be determined - TBD" with the limitation of the Midway Sewer District agreement. Eventually, the IWTP should be upsized to treat a flow of 4,900 gpm, which is the limitation of the IWS trunkline.

Comment: The Port requests that the flow limit be changed to 4,800 gpm. This is the appropriate limit based on the design peak loading rate for the DAF units in the IWTP and is identical to the interim flow limitation.

Response 4A: The final flow limitation will be either: 1) the design peak flow rate of the AKART treatment system; or 2) the flow limitation contained in the Midway Sewer District Agreement. The final flow limitation will be set at the more stringent of these two values. A flow limit based on the design peak flow rate of the existing IWTP (4,800 gpm) is not acceptable because that assumes that the current IWTP constitutes AKART. A technology-based flow limitation will be determined after the AKART determination has been made. If that value is lower than the flow allowed by the Midway Sewer District Agreement, then that value will become the final flow limitation. So, in a sense, the final flow limitation is "To Be Determined."

Comment: The Port requests that the same changes to footnote a from Special Condition S1.A discussed above be added to this condition.

Response 4B: Footnote a in Special Condition S1.B has been changed to match Special Condition S1.A.

Comment: Regarding footnote d, the Port requests that the language clarify that both the AKART determination and the effluent limitations will be set by a major permit modification.

Response 4C: The AKART determination will be made by the Department. The final effluent limitations will be developed from the AKART determination and then the permit will be modified. The permit modification will be a major modification subject to public notice requirements.

Comment: Fill in the TBD's before issuing a Revised Draft.

Response 4D: It is not possible to determine the final effluent limitations until an AKART determination has been made. Reissuing the permit prior to the AKART determination is necessary to implement the other conditions of the permit which will provide more protection for the environment than the previous permit.

Comment: Footnote e to Special Condition S1.B states that Ecology will establish final effluent limitations after approval of the engineering report required in Special Condition 4, which is intended to provide the information necessary to finally determine All Known, Available, and Reasonable Methods of Prevention and Treatment (AKART) for the IWS. We object strongly to Ecology's failure to establish AKART in a timely fashion for the IWS.

Response 4E: The Department agrees that AKART should be established as soon as possible. The IWS Engineering Report was submitted to the Department on December

30, 1995 as required by the previous permit. The Department had several concerns with the report. One issue was the appropriate method to treat the deicers and plane wash water that are discharged to the IWS. The Port performed a pilot program during the winter of 1996/1997 to investigate the feasibility of collecting spent deicing fluid at the gates using vacuum sweeper trucks. This pilot program showed that vacuum sweeper trucks would not constitute AKART for BOD. The Port is preparing an addendum to the IWS Engineering Report that will include feasible alternatives for BOD treatment and will submit the addendum to the Department within two months of the issuance date of the final permit.

5. S1.C Mixing Zone Description - Outfall 001

Comment: Since there is no mixing zone allowable until after an AKART determination is made, do all discharges from Outfall 001 meet the surface water quality criteria applicable to Puget Sound?

Comment: Special Condition S1.C implies that the Port will be allowed to use a mixing zone in connection with Outfall 001, although under state law, a mixing zone may not be authorized unless the facility is operating under technology-based controls that satisfy AKART. The Fact Sheet state on page 26 that the Port has conducted a mixing zone study and proposed dilution factors have been determined, to be recalculated if necessary when AKART is fully determined. Ecology must explain the basis for its decision to make a determination before AKART is determined for the IWS, and thus well before the Port is operating under controls that satisfy AKART, that a mixing zone is appropriate for the IWS. In addition, Ecology must address the status of current discharges from Outfall 001 during the period in which a mixing zone is not legally authorized. Ecology must modify the Draft Permit to ensure that as long as the Port is not meeting the requirements to qualify for a mixing zone, all discharges from Outfall 001 must satisfy water quality criteria applicable to Puget Sound without a mixing zone.

Comment: This condition states that the size of the mixing zone will be established through a major permit modification. It is unclear from the terms of the Draft Permit and the corresponding discussion in the Fact Sheet whether permitted discharge limitations that necessarily can be derived only once the mixing zone is defined (e.g., dilution factors) also will be subject to public scrutiny and comment via a major permit modification. This issue should be addressed expressly in all relevant sections of the Draft Permit and Fact Sheet.

Response 5A: The water quality standards are not applied to a discharge during a compliance schedule. Compliance schedules are allowed under WAC 173-201A-160(4) for the construction of the treatment necessary to bring a discharge into compliance with the water quality standards.

Once the AKART determination is made, technology-based effluent limitations can be developed. The technology-based effluent limitations will then be compared to the corresponding water quality standards. If the technology-based effluent limitations

would cause a violation of the water quality standard, then a mixing zone will be allowed. The dilution factors derived from the mixing zone will then be applied to the technology-based effluent limits to determine if a reasonable potential to violate the water quality standard still exists. If not, then the mixing zone is granted and the technology-based effluent limitation is used for the final effluent limitation. If so, then the mixing zone is granted and a water-quality based effluent limitation is developed to protect the water quality standard at the edge of the mixing zone. If the technology-based effluent limitation does not have a reasonable potential to violate the water quality standards without a mixing zone, then a mixing zone will not be granted and the technology-based effluent limitation will be used for the final effluent limit.

Since the mixing zone study performed during the previous permit cycle did not include an analysis of the new Midway Sewer District outfall, the mixing zone analysis will be updated prior to the development of the final effluent limitations, if the Midway outfall is part of the final AKART decision. All of the calculations which contribute to the determination of the final effluent limitations will be included in the permit modification, which will be subject to public notice.

Comment: Ecology also must modify the Draft Permit to clarify how Ecology intends to address the mixed discharge from the Port and the Midway Sewer District if a mixing zone is established.

Response 5B: The Department will address this issue in the permit modification if a mixing zone is used in the development of final effluent limits.

6. S1.E Stormwater Drainage System

Comment: Disallow "authorized bypasses" in paragraph S1.E. Since the design is totally inadequate, bypasses are inevitable if you're an honest engineer.

Comment: Overflows from the IWS system in excess of the design criteria should not be exempted in this section. There is already language that allows bypasses in the case of excessive storm events, making this language in the Draft Permit duplicative and not necessary. It would also make the new permit weaker than the inforce permit, violating the anti-backsliding provision of the Clean Water Act. The language in the Draft Permit does not require any effort on the part of POS to minimize releases and make every effort possible to reduce discharges. If stormwater flows exceed the design criteria for any reason, including those which are the fault of the permittee, this section exempts the discharge from any regulation as an authorized bypass. The language fails to implement AKART for the IWS lagoons which would include covering the lagoons to prevent uncontaminated stormwater intrusion. This section constitutes a violation of the anti-degradation policy.

Comment: The first sentence of Special Condition S1.E states that discharge of industrial wastewater to the stormwater drainage system is prohibited. The last sentence, however, exempts overflows from the IWS system attributable to stormwater flow in

excess of design criteria. Under this provision, if stormwater flows exceed the design criteria for any reason, including those which are the fault of the permittee, the discharge is an authorized bypass and therefore exempt from the treatment requirement normally associated with industrial wastewater. This exemption sharply reduces the Port's incentive to minimize releases and make every possible effort to reduce discharges. The provision also fails to implement what we understand to be AKART for the IWS lagoons, which would include covering the lagoons to prevent uncontaminated stormwater intrusion. Moreover, the Existing Permit does not include this exemption. As a result, the exemption provided in this condition constitutes backsliding, as well as a violation of Washington's States anti-degradation policy. Ecology must modify the Draft Permit to enforce appropriate controls on the discharge of industrial wastewater to the stormwater drainage system.

Response 6A: Stormwater treatment system sizing criteria are dictated by regulatory agencies to provide treatment to all of the runoff volume from a site except that from relatively rare storm events. The language in Special Condition S1.E defines stormwater flows in excess of the design criteria set by the Department to be authorized bypasses. This language was placed in the final permit to clarify that the IWS system is not designed to treat all storm events and when a storm event larger than the design criteria occurs, the Port is not in violation of the prohibition of discharge of industrial wastewater to the SDS. When a bypass event is reported to the Department, we will determine if it is an allowable bypass or if the bypass was caused by the error of the Port. This language does not excuse bypasses that are caused by the error of the Port, nor does it constitute backsliding.

The sizing of the IWS collection system, the IWS lagoons, and the IWTP is addressed in the IWS Engineering Report. The existing IWS conveyance piping was originally designed for the 10-year, 24-hour storm event, consistent with the stormwater regulations in effect at that time. Currently, storm drainage systems are designed for the 25-year, 24-hour storm event. Computer modeling of the conveyance system determined that portions of the system may be overloaded during 25-year, 24-hour storm events. Overloading may cause local ponding in the area of manhole tops during the storm event. As result of this analysis, the Port installed 5 water-tight manhole covers to prevent flooding in areas that would pose a safety problem or may overflow to the SDS.

A continuous rainfall model using National Oceanic and Atmospheric Administration (NOAA) data from 1974 to 1994 showed that the existing lagoon volume is sufficient to prevent an overflow when the IWTP treatment rate is 4 million gallons per day (mgd), assuming that the contributing area stays as it is after the SWPPP improvements. The addition of two new DAF units has increased the IWTP treatment capacity to 3.5 mgd at the normal design flow rate, with a peak flow rate treatment capacity of 6.9 mgd.

During the previous permit cycle, there were two releases of stormwater from the bottom of Lagoon 3 during a large, 7-day storm event (16 inches of snow and 5.1 inches of rain). The first release occurred on December 30, 1996, and the second occurred on January 1, 1997. The bypasses occurred when the operation of the IWTP was reduced to lower the

discharge flow rate in accordance with the discharge agreement with the Midway Sewer District for Outfall 001. Another bypass occurred on February 8, 1996, from the lagoon diversion manhole when the influent flow rate was greater than the capacity of the storm sewer pipe to Lagoon 3. The capacity of this pipe has been increased to prevent this bypass from occurring in the future.

Comment: This section is confusing. The first sentence says that discharge of industrial wastewater to the storm drainage system is prohibited. Ecology however through this permit is allowing discharge of glycols from sheeting off of aircraft (obviously an industrial process waste) to be discharged through the stormwater systems into the areas creeks. These discharges have been monitored at levels that exceed eighty times the Canadian standard.

Response 6B: Glycols were detected in stormwater prior to the complete implementation of the SWPPP, which connected several problem SDS areas to the IWS in order to contain the deicing/anti-icing fluids. The final permit does not include stormwater impacted by the dripping or shearing of glycols in the SDS with industrial wastewater. This is considered stormwater associated with industrial activity. If the monitoring conducted for this permit shows high levels of glycols due to dripping or shearing, then the Department will require the Port to collect and treat the glycols in the stormwater.

Comment: The draft permit allows overflows of untreated industrial wastewater flows from the IWS collection system or lagoons due to stormwater flows in excess of the design criteria. However, the Fact Sheet does not clearly characterize these conditions to determine the impacts to Des Moines Creek. What sampling protocols, if any, are being followed when overflows occur? Does the Operation and Maintenance Manual indicate which inflows are to be diverted when the IWTP must be bypassed during peak storm events? Inflows with the highest potential to contain pollutants should still be treated during these extreme events.

Response 6C: The sampling protocols for spills or bypasses from the IWS system to Des Moines Creek (and Miller Creek) are contained in the Spill Prevention Control and Countermeasure (SPCC) Plan. The SPCC Plan includes potential sampling locations in Des Moines Creek depending on the location of the spill or bypass. The frequency and period of sampling is determined based on the severity of the spill and the stream flow. The frequency of sampling ranges between 1 and 8 hours and the period of sampling ranges between 24 and 72 hours. The analytes and other observations to be made at each sampling station include: dissolved oxygen, temperature, flow (estimated), conductivity, pH, hardness, FOG, TPH, BOD, and other analytes relevant to the type of chemical that has entered the drainage system. If the spill is an overflow from the IWS, then glycols are also measured. The stream is inspected at and between sampling points for stressed and dead organisms.

The SPCC Plan also contains response guidelines for Lagoons 1, 2, or 3 overflowing into Des Moines Creek.

The IWTP Operations and Maintenance Manual includes a description of how the system operates during a rainfall event. Lagoons 1 and 2 are allowed to fill-up first, then the excess runoff is diverted to Lagoon 3. This allows the most contaminated runoff to be collected and treated. Bypasses will occur from Lagoon 3 when all three lagoons are full and the stormwater inflow rate exceeds the IWTP peak flow treatment capacity. Modeling has shown that bypasses are very unlikely to occur with a 4 mgd treatment capacity and no discharge flow restrictions from the Midway Sewer District.

7. S1.F Ground Water Discharges

Comment: Ecology is proposing that discharge of industrial wastewater to ground water is allowable if it is not "intentional". This is not a provision in the State ground water law and has no business in this permit.

Comment: The wording of the first sentence allows discharge of industrial wastewater to groundwater, as long as the discharge is not "intentional". Such language does not meet the requirements or intent of the State's groundwater law. Discharges which are not "intentional" are covered by State law, as well as those which are intentional.

Comment: Eliminate the "intentional" working in S1.F.

Comment: The language in this section prohibits only the "intentional" discharge of wastewater to ground water. What it in fact does in context with the rest of the permit is allow discharge of wastewater to ground water without a permit (required by state law) and without meeting the monitoring and study requirements that are required where an actual permit is not required. The reason for doing this appears to be avoiding monitoring ground water across the area impacted, or potentially impacted by the IWS collection and transmission system. There is no basis or precedent for imposing a permit condition prohibiting "intentional" discharges to ground water.

Response 7A: The intention of Special Condition S1.F in the draft permit was to prohibit the disposal of industrial wastewater to ground water. Since industrial wastewater is not discharged to ground water, but is discharged to surface water, this limitation is not necessary. The Special Condition S1.F in the final permit has been modified to include the following condition: "The Permittee shall apply all known, available, and reasonable methods to prevent the unintentional release of industrial wastewater to ground water."

The only disposal of industrial wastewater to ground water is from Lagoon 3 during the compliance schedule. This discharge will be eliminated when Lagoon 3 is lined. Special Condition S15 requires the Port to perform a hydrogeologic study to evaluate the potential for this discharge to impact ground water. This requirement is in compliance with the Department's Implementation Guidance for the Ground Water Quality Standards.

The Implementation Guidance for the Ground Water Quality Standards states that if an activity is covered by a general permit, regulation, policy, guideline or BMPs which have ground water protection provisions, then a hydrogeologic study and monitoring plan are waived.

Comment: It is definitely necessary to stop the industrial wastes currently being discharged into our potential water supply resources. This includes stopping the discharge of fecal coliform from human sources and hazardous glycols.

Comment: There may also be discharges of glycols to ground water that can result in the creation and release of hazardous constituents.

Comment: The likelihood of wastewater discharging into the ground water from an unlined wastewater storage lagoon is very great. The Washington State Waste Discharge Program prohibits the discharge of any waste into waters of the State, including ground water, except pursuant to a permit issued by Ecology. The Draft Permit does not appear to authorize the Port to discharge waste into the ground water from Lagoon 3, nor does the Draft Permit require the Port to obtain a state waste discharge permit in connection with such discharge. Ecology must modify the Draft Permit to rectify this deficiency.

Comment: Ecology must modify the Draft Permit to require that Lagoon 3 be lined by a date certain within a reasonable time period.

Response 7B: The final permit requires that the discharge of industrial wastewater to ground water through Lagoon 3 be eliminated with the implementation of the AKART technology. The final permit requires a hydrogeologic study to evaluate the potential for this discharge to impact ground water. Please note that domestic sewage is not included in the industrial wastewater discharge, therefore fecal coliform from human sources are not present. Domestic sewage from the terminal is discharged to the Midway Sewer District's Wastewater Treatment Plant.

Comment: It is imperative that Ecology revise and reissue the Draft Permit properly denominated also as a state waste discharge permit, as well as comprehensively revise both the Draft Permit and the Fact Sheet to address fundamental ground water quality-related issues of concern to the public:

1. Specifically, what activities/facilities at the Airport have the potential to degrade ground water activity?
2. Is the Draft Permit a state waste discharge permit? If not, why not (with reference to the specific activities/facilities at the Airport that have the potential to degrade ground water quality as defined by the Ground Water Quality Standards)?
3. Precisely what is the regulatory/permitting status of each such activity/facility with reference to the applicability of the Ground Water Quality Standards and associated permitting requirements?

4. If a particular activity/facility at the Airport is exempt from application of the Ground Water Quality Standards and associated permitting requirements, explain the scope of such exemption. Specifically, what ground water discharge monitoring and effluent limits (including schedule) are applicable to such activity/facility in light of such exemption?
5. What ground water resources are affected by activities/facilities at the Airport?
6. What is the ambient ground water quality of such ground water resources?
7. What existing and future beneficial uses are applicable to such ground water resources?
8. Specifically, what monitoring and enforcement limits are applicable to each such activity/facility to protect such beneficial uses and comply with the State's antidegradation policy?

Response 7C: Ground water issues at NPDES-permitted facilities are addressed in the NPDES permit. WAC 173-200-100(3) states:

“This chapter shall be enforced through all legal, equitable, and other methods available to the department including, but not limited to: Issuance of state waste discharge permits, other departmental permits, regulatory orders, court actions, review and approval of plans and specification, evaluation of compliance with all known, available, and reasonable methods of prevention, control, and treatment of a waste prior to discharge, and pursuit of memoranda of understanding between the department and other regulatory agencies.”

The Implementation Guidance for the Ground Water Quality Standards states on page 4:

“NPDES permits are required for discharges to surface water bodies. If there is also a discharge that impacts ground water, then the requirements of a state waste discharge permit must also be incorporated into the NPDES permit.”

As stated on the cover page of the final permit, the permit is issued under the authority of chapter 90.48 RCW, and therefore includes impacts to ground water as well as surface water.

Following are the responses to your numbered questions:

1. The only discharge to ground water of industrial wastewater is from Lagoon 3. This discharge will be eliminated when the lagoon is lined. There are two systems that could potentially contaminate ground water through unintentional releases: (1) the IWS collection and treatment system, and (2) underground storage tank (UST) systems including the hydrant fuel distribution systems.

AR 026828

2. The final permit is an NPDES permit that incorporates ground water considerations.
3. The final permit contains a compliance schedule to eliminate the discharge from Lagoon 3. No permits are required for the potential of unintentional releases. The final permit includes a requirement to implement AKART to prevent unintentional releases. The operational UST and hydrant systems at the airport have implemented applicable BMPs, including various methods of leak testing, to detect and prevent releases. Depending on the nature of the individual system, several requirements of the federally-mandated UST regulations apply to the operations and closure of these systems. A proposed agreed order between the Department and the Port stipulates that additional pollution prevention practices that could prevent future releases from the UST systems will be investigated and implemented.
4. There are currently no areas at Sea-Tac Airport that are exempt from chapter 173-200 WAC, the Ground Water Quality Standards. WAC 173-200-010(c) excludes clean up actions approved by the Department under the Model Toxics Control Act, chapter 70.105D RCW. Since there are no cleanup actions at the airport that discharge wastewater to ground water, this exclusion has not been triggered.

The Ground Water Quality Standards are designed to be preventative in nature and protect ground water from contamination. They are not intended to be used as remediation standards. There are other state and federal cleanup regulatory programs, such as MTCA and CERCLA, which specifically regulate environmental remediation activities. The exemption in WAC 173-200-010(3)(c) includes the re-injection of water as a part of pump and treat activities. These cleanup activities are exempt from the Ground Water Quality Standards to avoid regulatory duplication and to apply more appropriate standards to areas which have been previously degraded and are currently being remediated.

5. Perched zones of ground water, above the unconfined regional water table (Qva aquifer) have been unintentionally impacted at the airport. The perched zones are typically shallow, discontinuous, and often seasonal. The Qva aquifer has also been impacted at some discrete locations within the Aircraft Operations and Maintenance Area.
6. The boundaries of ground water contaminant impacts are known at most locations and typically there is localized contaminant migration in ground water from the original source areas. Ambient ground water quality data may exist for the general area of the airport, but is not readily available.

The IWS Hydrogeologic Study required in Special Condition S15 of the final permit will include an assessment of the current condition of the ground water in vicinity of the IWTP and lagoons.

7. The Implementation Guidance for the Ground Water Quality Standards states that, at a minimum, all ground water is protected as a potential source of drinking water. Not all ground water is presently used for drinking water, nor do the standards presume that all ground water is suitable as a drinking water source. However, the Ground Water Quality Standards recognize the potential for future uses of these sources to be used for drinking water purposes if other sources become diminished or the demand for water increases. Additional beneficial uses may include, but are not limited to the following: domestic, stock watering, industrial, commercial, agricultural, irrigation, mining, fish/wildlife maintenance and enhancement, recreation, generation of electrical power, preservation of environmental and aesthetic values, and all other uses compatible with the enjoyment of the public waters of the state (WAC 173-200-020(4)). Ground water cleanup standards under the MTCA also assume all ground water is a source or potential source of drinking water, unless specific conditions for yield, natural background, contaminant transport and current use can be demonstrated.
8. Special Condition S15 contains a requirement for a hydrogeologic study to evaluate the potential for the IWS to impact ground water quality. The scope of work will define the extent of monitoring. The IWS Hydrogeologic Study will comply with the requirements contained in the Implementation Guidance for the Ground Water Quality Standards.

Comment: The ground water discharge-related provision of the Draft Permit and Fact Sheet are wholly deficient and must be revised and reissued for public comment. The Draft Permit prohibits the intentional discharge of industrial wastewater to ground water. By contrast, the Draft Permit expressly provides that discharge of stormwater to ground water is permitted. Thus, it appears that while the Draft Permit properly denominated a state waste discharge permit, subject to the standards and public participation requirements associated therewith.

Comment: The Draft Permit allows both intentional and non-intentional discharge of stormwater to groundwater, irrespective of the level of contamination in the stormwater. Due to the industrial nature of the operation of this facility and the known level of contaminants in the stormwater flows historically, Ecology has failed to be protective of waters of the state by adding this condition. Ecology has failed to take into account that glycols break down into toxic aldehydes in the sub-surface soil and groundwater. This section constitutes backsliding. This section constitutes a violation of the anti-degradation policy. This section constitutes arbitrary and capricious action on the part of Ecology as Ecology has substituted a different and inferior definition of discharge to waters of the state than what is in state statute. This section constitutes an abuse of authority as Ecology does not have the authority to include conditions related to groundwater in an NPDES permit, but must include such conditions under a State Waste Discharge permit as laid out in chapter 173-200 WAC and the related Permit Writers Hand Book.

Response 7D: Both the Ground Water Quality Standards and the Implementation Guidance for the Ground Water Quality Standards state that discharges to ground water should be incorporated into NPDES permits when a facility has a surface water discharge and a ground water discharge.

The final permit requires a SWPPP for stormwater discharges from both the airport operations and construction projects. Implementation of an approved SWPPP will protect ground water from contamination due to stormwater infiltration.

Comment: You must make them comply with the Federal Clean Water Act already existing for the State of Washington without waivers by analysis. Sea-Tac Airport will likely argue that the Agreed Order #97-TC-N122 (the proposed analysis of groundwater flow at Sea-Tac) will resolve all ground water issues and will supplement the permit.

Response 7E: The Federal Clean Water Act applies to waters of the United States, which do not include ground water. Ground water is a water of the state. The State of Washington Water Pollution Control Law (chapter 90.48 Revised Code of Washington) applies to waters of the state. The final permit and the proposed Agreed Order both address ground water issues at Sea-Tac Airport. The proposed Agreed Order includes an investigative study of the ground water at Sea-Tac Airport to assess the contamination of ground water from past practices by facilities at the airport. The final permit addresses discharges to ground water from the IWS and treatment plant operations.

8. S1.G Construction Related Discharges

Comment: As the state is allowed to implement standards stricter than the federal standards, and the federal government is planning to change the limit from five acres to one acre, it makes sense to just change the acreage to one acre now and be done with it. The section should have language added that states the permit only authorizes those discharges that are in full compliance with the construction activity related SWPPP.

Comment: Ecology must modify this section to state that the Draft Permit authorizes only those discharge that are in full compliance with the Stormwater Pollution Prevention Plan (SWPPP) adopted for construction related activities.

Comment: Eliminate the 5 acres escape clause in S1.G since the area is so sensitive and the Port is renowned for breaking projects into smaller segments to escape wetlands rules, etc. I recommend it be less than 0.05 acres over a three year period of not located in an area marked as "sensitive" on a map and a map that identifies sensitive areas accompany it that can identify areas that all construction requires a SWPPP.

Response 8A: The Department does not believe it is necessary to lower the acreage limit from five acres to one acre prior to promulgation of the federal regulation. The acreage limit will automatically lower when the federal standards are lowered.

The suggested language does not make sense. Discharges cannot be in compliance with a plan; the construction project should be in compliance with the plan. The final permit requires the plan to be prepared and implemented prior to the commencement of the discharge from the construction activity.

Comment: The addition for the requirement for public review and comment is essential for construction stormwater/dewatering monitoring. The recent disasters impacting Miller and Des Moines Creeks have heightened the public desire to see this vital component of protection included in this proposed permit.

Response 8B: The following condition has been added to the final permit in Special Condition S3.G:

The Permittee shall make all plans, reports and manuals required by this permit available upon request to local agencies, interested members of the public, local government officials, or to the operator of a municipal separate storm sewer receiving discharges from the site. Viewing by the public shall be at reasonable times during regular business hours (advance notice by the public of the desire to view the plan may be required, not to exceed two working days). The permit does not require that free copies of the plan be provided to interested members of the public, only that they have reasonable access to view the document and copy it at their own expense. The copies of the plans, reports, and manuals may be kept onsite or may be made locally available.

Comment: We would appreciate it if the language could be added to state that a SWPPP for construction activity is required only if the activity disturbs 5 acres or more and there is a point source discharge of pollutants to surface waters of the state or to municipal storm drains. This is consistent with the federal regulations that govern stormwater discharges at this facility. We know of no other facility that is expected to prepare a SWPPP for non-point source discharges to surface or groundwater.

Response 8C: The Department disagrees with the Port's proposed change to this Special Condition. The State of Washington Water Pollution Control Law requires the Department to incorporate permit conditions which require all known, available, and reasonable methods to control toxicants in an applicant's wastewater (RCW 90.48.520). The requirement to implement a SWPPP for discharges of stormwater to ground water is then a requirement of state law and remains in the final permit.

9. S2. Monitoring Requirements - General

Comment: All testing should record the weather since it impacts the results so dramatically.

Response 9A: Special Condition S2.B requires a monthly summary of daily rainfall to be included in the Annual Stormwater Monitoring Summary Report.

Comment: Provision for side-by-side sampling by ACC, RCAA, and CASE should be allowed.

Response 9B: The Department does not have legal authority to require a permittee to allow citizens to perform sampling on the permittee's property, the permittee must do this voluntarily.

10. S2.A Monitoring Requirements – Industrial Wastewater

Comment: Requirements for sampling glycol and BOD allow POS to avoid sampling for the worst case scenario first flush of high glycol discharge without large volume storage capacity.

Response 10A: The IWS lagoons act as equalization basins. This means that as they collect the runoff during a storm event, the wastewater is mixed together. Therefore, there is no "first flush" with the IWS effluent.

Comment: Monitoring of BOD5 is linked strictly to glycol, this is not appropriate, as there are many other sources of BOD5, in particular food handling and food waste operations. BOD5 should be monitored concurrently in those months that deicing or anti-icing occurs and as part of standard sampling in those months deicing or anti-icing does not occur. There is no provision for monitoring fecal coliform. Fecal coliform should be monitored and there should be a requirement to do RNA testing of fecal coliform found to determine its source. Data of this kind has been developed specific to Des Moines Creek by the King County Water and Land Resource Division, which found the fecal coliform to be primarily human related. The additional fecal coliform RNA testing requirement for POS is necessary due to long standing, unsubstantiated claims by POS that fecal coliform found at the airport is the result of birds.

Comment: Special Condition S2.A lacks a provision for monitoring fecal coliform. Fecal coliform should be monitored and there should be a requirement to analyze the fecal coliform to determine its source. We understand that data of this kind, specific to Des Moines Creek, has been developed by the King County Water and Land Resource Division. This additional testing requirement is necessary to resolve heretofore unsubstantiated claims by the Port that fecal coliform found at the Airport is the result of bird droppings.

Comment: Special Condition S2.A of the Draft Permit provides that BOD5 is to be monitored only when glycol is monitored, i.e., once permit month upon notification that aircraft deicing or anti-icing has taken place. This is not appropriate, as there are many other sources of BOD5, in particular, food handling and food waste operations. BOD5 should be monitored concurrently in those months that deicing or anti-icing occurs and as part of standard sampling in those months deicing or anti-icing does not occur.

Response 10B: Special Condition S2.A has been modified in the final permit to remove footnote d from the BOD frequency. BOD₅ will be monitored monthly, and in those

months that deicing/anti-icing occurs, the BOD sample should coincide with the glycol sample.

Special Condition S2.A has been modified in the final permit to add monthly fecal coliform monitoring. This monitoring requirement may be eliminated with Department approval if the Port can show that fecal coliform from human sources are not present.

Comment: Regarding glycols monitoring, we believe that our previous data has demonstrated that only a very small quantity of glycol is discharged to the IWS from June-September. During 1995-96, only 0.7% of the total glycol used at the airport was discharged to IWS during these months. In 1996-1997, only 0.2% was discharged. Monitoring during June-September generates no useful data as the quantities of glycol applied is extremely small. In this regard, we request that monitoring only be required for the months of October-May.

Response 10C: The Department denies this request. Monitoring shows that glycols have been detected in the IWS effluent during these months, although at low levels. It is important to collect this data for the AKART determination.

11. S2.B Monitoring Requirements - Stormwater

Comment: Instead of the requirement that we compile a summary of daily rainfall, we request that we prepare a monthly summary of daily rainfall, which will be submitted with the Annual Stormwater Report.

Response 11A: Special Condition S2.B.1 has been modified to make this change. The Department would appreciate if the data were presented in a graphical format in the Annual Stormwater Report.

Comment: Ecology's planned requirements for monitoring are wholly inadequate and there is no provision for monitoring fecal coliform at all. Data collected to date shows fecal coliform discharge exceeding surface water quality criteria is continuing and demonstrates that actions by permittee and Ecology have been ineffective. Plans for quarterly monitoring at best are ineffective since quarterly monitoring is easily manipulated to conveniently miss potential high pollutant discharge periods. Monitoring should be performed every month for at least one year or until data demonstrates that Best Management Practices and corrective actions taken to eliminate in particular glycols and fecal coliform and in general all pollutants have been effective. Monitoring for stormwater discharge at Outfalls 004, 010, 014, and 015 must be done on at least a quarterly basis. Further, all samples should be taken at "first flush", which is where a majority of the toxicity to surface waters would be expected.

Comment: Monitoring is only quarterly in spite of the fact that the highest concentrations of glycols discharged to date occurred last winter after 3 years of Best Management Practices (BMPs) had been implemented. The data reported in the Fact Sheet for discharge concentrations of glycols was more than 3 orders of magnitude lower

that what sample data actually showed. This casts serious doubt on the water quality reports and assumptions made in the draft permit based on those reports. The airport is also discharging fecal coliform at levels that exceed the surface water quality criteria (state law) by a large magnitude, and frequently by orders of magnitude. Sampling quarterly does not allow tracking of discharges in violation of water quality standards with enough definition to determine if corrective actions taken are reducing and eliminating the violations. Until fecal coliform compliance is achieved, sampling of stormwater should be monthly. Stormwater flows are currently estimated. Ecology should require flow monitoring devices be installed on a specified schedule.

Comment: Monitor and reduce the fecal coliform count in creeks that can be orders of magnitude higher than allowed. RNA testing has shown that the government's earlier assumptions that the fecal coliform was avian in source are incorrect. It is human waste. It is logical to assume that the disposal process of aircraft toilet waste into the Midway Sewer system is flawed and somehow it gets into the stormwater and creeks. We must assume airport human fecal coliform is dangerous and stormwater/creeks must be monitored under this permit for fecal coliform until the method of contamination is established. Once the method of contamination is established, it may come under a different permit.

Comment: Sampling of Des Moines Creek indicates high levels of fecal coliform. Upon testing, the Port's claim that it was bird droppings was proven inaccurate. The fecal coliform was found to be human. This makes me wonder whether this human waste is somehow connected with airplane toilet waste that is not being properly handled from the plane to the sewage treatment plant pipe, or the pipe may be leaking or the toilets washed out into stormwater or waste is splashing around. Whichever is the case, this is a hazardous situation and potentially a life threatening situation since children play in the water of Des Moines Creek and its tributaries as they flow through a public and State park. We desire that some independent expert can more closely examine the clearing and washing of waste from the airplane toilets or whatever someone can determine is the likely cause of the problem and as CASE has previously requested, that signs be posted along the public access areas of these creeks warning people and their pets, mothers and their children of the potential hazards of playing or swimming in these waters.

Comment: Stormwater discharges should be monitored more frequently than annually for fecal coliform in Miller Creek and Des Moines Creek. The creeks should be checked more frequently than quarterly for deicing chemicals especially this winter.

Comment: Standards for fecal coliform have repeatedly been violated in Des Moines Creek. The Port places most of the blame on bird droppings. One source can be improper handling of waste food meant to be contained in dumpsters. Will the permit include testing for fecal coliform at outfalls in the vicinity of all food handling services?

Comment: The requirements for monitoring of stormwater outfalls is inadequate. For example Des Moines Creek is currently (as of 1996) water quality limited for fecal coliform and listed as such on the Ecology 303(d) list. POS is discharging fecal coliform

to Des Moines Creek and/or Miller Creek at a level far in excess of the surface water quality criteria. Quarterly sampling is not protective of waters of the state as the data on fecal coliform would be generated at a rate that would not allow pinpointing and correcting the fecal coliform discharges. For example, November Discharge Monitoring Reports from POS indicate fecal coliform in the chronically contaminated outfall 002 (basin SDE-4) at >1600 organisms/100 mL. As there have been no samples taken in at least the last three months from this outfall, there is no way to tell if the sample taken reflects a short term or long term problem. As there are no effluent limits for this outfall for fecal coliform, in spite of Des Moines Creek being on the 303(d) list, POS did not and was not required to resample. Outfall 002 will not be sampled again for another three or more months, making it impossible to determine if the fecal coliform source is intermittent, ongoing, or if and when attempted (assuming there has been any) corrective action has reduced or eliminated the fecal coliform source in the discharge. The conditions in the Draft Permit and available data make it clear that the conditions in the Draft Permit are not protective of waters of the state and will continue to allow degradation of waters of the state with fecal coliform from Sea-Tac Airport at levels violating the Chapter 173-201A surface water quality criteria for fecal coliform. To date the only fecal coliform discharges that have been positively identified are those related to industrial discharges of the airport. Effluent limits for fecal coliform should be set in the permit and enforced for discharges to surface waters. While Ecology to date has tried to use BMPs to address fecal coliform discharges, data collected to date shows fecal coliform discharge exceeding surface water quality criteria have continued. This shows the actions taken by POS and Ecology have been ineffective. Reduction in sampling frequency will increase the probability of discharge of fecal coliform levels that violate surface water quality criteria without detection or corrective action. The result is a failure to be protective of waters of the state and fails to implement the antidegradation policy.

Comment: The Draft Permit contains inadequate requirements for the monitoring of stormwater outfalls. The State listed Des Moines Creek in 1996, pursuant to Section 303(d) of the CWA, as water quality limited for fecal coliform. As a result, Ecology must protect Des Moines Creek from fecal coliform contamination. Information on file with Ecology indicates that the Port currently is discharging fecal coliform to Des Moines creek at a level far in excess of the water quality criteria. In this circumstance, quarterly sampling is not protective of waters of the State, because data on fecal coliform would be generated at a rate that would not allow pinpointing and correcting fecal coliform discharges.

Comment: To date, the only fecal coliform discharges that have been positively identified relate to industrial discharges from the Airport. Accordingly, effluent limits for fecal coliform should be established in the Draft Permit and enforced for discharges to surface waters. While Ecology historically has prescribed Best Management Practices (BMPs) to address fecal coliform discharges, information in Ecology's files shows that fecal coliform discharges exceeding surface water quality criteria have continued. This indicates that the actions taken by the Port and Ecology have been ineffective. The reduced sampling frequency provided for in the Draft Permit would increase the

probability of discharge of fecal coliform levels that violate surface water quality criteria without detection or corrective action.

Comment: The Draft Permit would continue to allow degradation of waters of the State with fecal coliform at levels violating Chapter 173-201A WAC surface water quality criteria for fecal coliform. The Draft Permit must be modified to require more frequent monitoring at outfalls that have shown glycol or excessive fecal coliform discharges. Such monitoring must be required at a minimum frequency of every month for at least one year or until data demonstrates that the BMPs and corrective actions taken to eliminate fecal coliform, as well as glycols and other pollutants, from stormwater have been effective.

Response 11B: The Fact Sheet has been corrected to state that Des Moines Creek is on the 303(d) list for fecal coliform. Data included in Appendix B of the Des Moines Creek Basin Plan supports this listing. Fecal coliform counts during both storm and baseflows exceeded Washington State Class AA Standards, reaching levels high enough to be of human health concern. Based on this information, King County Surface Water Management (SWM) initiated a fecal coliform source tracing effort using ribosomal RNA typing to identify the source of the fecal contamination. The RNA procedure matches the RNA of the sampled coliforms with those from known sources. For the samples collected at South 200th Street, below the Tyee Golf Course, 10 percent of the strains matched human/septage sources, 10 percent matched avian sources, 20 percent matched dog sources, and 50% were unmatched. This sample point includes drainage from the golf course, other commercial areas, roadways, the Northwest Ponds and Bow Lake as well as the airport.

Domestic wastewater from the airport is discharged to the sanitary sewer. The chemical toilet waste from the airplanes is discharged to the "Biffy Dump Transfer Station," which is a sanitary sewer manhole underneath a roof with a wash rack. The Department has inspected this facility and does not believe it is a source of fecal coliform in stormwater.

Special Condition S2.B.1 has been modified to require monthly sampling at Outfalls 002, 005, 006, and 011. These outfalls are representative of the different types of industrial activity at the airport – terminal, runway and roadway. Outfalls 003, 004, 008, 009, 010, 014, and 015 are included in S2.B.2, which requires annual monitoring. A footnote has been added to allow the elimination of fecal coliform monitoring if it is determined that fecal coliform in the airport's stormwater discharges is not of human origin. The updated SWPPP required in Special Condition S12 is required to address fecal coliform in the stormwater discharges. The Port should perform additional testing to determine the source of fecal coliform for the updated SWPPP.

Comment: I understand that a new storm sewer system pipe now carries all discharged glycol to the IWS system rather than to surface water and streams. I do not have any proof that this is true. Monitoring should confirm that this new pipe works. Monitoring should be done weekly or whatever time period is suggested by Greg Wingard to determine the effectiveness of the new re-routing of storm water. However, even if this

does prove effective, it has been documented that the IWS does not treat glycol. The new permit is allowing the Port five years to upgrade or replace the IWS. If the IWS can operate another 5 years without treating glycol, what good does it do to reroute the storm water through it? Is this a way to keep glycol away from public scrutiny, by dumping into the Puget Sound, nearer to a protected Coastal Zone? What effect will raw glycol going directly into the Puget Sound have on beach, aquatic, shellfish and other life?

Comment: It is noted that POS has made some level of progress in rerouting industrial waste discharges from the SWS to the IWS. Ecology and POS are encouraged to continue this progress and have at least one year of increased monitoring frequency to demonstrate the effectiveness of the measures implemented.

Response 11C: Glycols have not been detected in any of the stormwater discharges from the airport since July, 1997. Special Condition S2.B.4 has been added to the final permit to verify that the SWPPP improvements for glycol diversion to the IWS has been successful. This condition requires monitoring for glycols at Outfalls 003 and 007 during a precipitation event that coincides with a deicing or anti-icing event. This monitoring requirement may be eliminated after four sampling events at each outfall if glycols are not detected.

The IWS discharge occurs 1,400 feet from the shore at a depth of 178 feet. The discharge of glycols through this outfall has much less impact on aquatic life than in Miller Creek or Des Moines Creek because it receives more dilution at the Midway Sewer District outfall. See the discussion in Response 3B above for the potential effect of the IWS effluent on the receiving water.

Comment: I understand it that this permit would treat Sea-Tac Airport differently than other airports in the state and other industrial discharges with regard to stormwater monitoring. I believe the Department must hold the Port to a very high standard. Sea-Tac is an enormous facility, it's expansion plans are extremely controversial in nearby communities. But again, I would ask the Department to take a hard look at the precedent being set by this permit which diverges significantly from the whole notion of regulatory uniformity by treating Sea-Tac Airport different than other industrial activities and other airports. I'm also concerned about the message this sends. The Port of Seattle has devoted enormous resources to improving the industrial wastewater treatment system, it has taken a number of steps voluntarily. Sea-Tac has a comprehensive stormwater program in place, a program that has made stormwater discharges from Sea-Tac significantly cleaner than those from elsewhere in the area. Given these facts, it seems unusual that the proposed permit would contain so many exacting conditions and complicated requirements.

Response 11D: The conditions of the final permit are appropriate to protect waters of the state from the potential impacts of a major international airport.

Comment: Ecology is also failing to meet its own explanation for the reason for routine stormwater monitoring. In the Sea-Tac Airport Responsiveness Summary, prepared by

Lisa Zinner, Ecology on August 22, 1996, Ecology responded to a question about stormwater monitoring. The response, found at the bottom of page 8 and continued on page 9 states, "Routine stormwater sampling is meant to assess the need for and the effectiveness of Best Management Practices to prevent the contamination of stormwater by ongoing industrial activities." The BMPs put in place to prevent the discharge of glycols into stormwater were completed this summer. The highest levels of glycol discharge monitored in stormwater at the airport were monitored last winter. So the last available relevant data shows the highest levels of glycol monitored in the airports history are recent occurrences. The last BMPs to correct these discharges were installed in July, well after the last period of relevant data collection. There is a similar profile for fecal coliform discharges, in that discharges far in excess of water quality criteria have been ongoing, including in the last available set of Discharge Monitoring Reports. In particular the outfall that has had chronic fecal coliform discharges known to be caused by POS industrial activity, outfall 002 in the SDE-4 drainage basin, discharged in excess of 1600 organisms/100 milliliters (mL). The applicable criteria defined in Chapter 173-201A WAC, for comparison, is 50 organisms/100 mL. This means that to date, no data is available to demonstrate the effectiveness of the BMP's in place after last winter, or to show that corrective actions have had the desired impact on improvements in stormwater discharge quality. By Ecology's own admission, this is exactly the wrong set of conditions to decrease stormwater sampling frequency or do only quarterly sampling. Quarterly samples taken at POS discretion will not be adequate to provide the data the agency, the public and POS needs to determine that any notable success has in fact been achieved. Please change the monitoring schedule in the permit to require more frequent analysis at a minimum frequency of every month for at least one year, or until data demonstrates that the BMPs and corrective actions taken to eliminate in particular glycols and fecal coliform and in general all pollutants have been effective.

Response 11E: Please see Responses 11B and 11C above.

Comment: Sampling for 5-day BOD as well as glycols for outfalls 002, 003, 005, 006, 007, 008, 009, and 011 should coincide with storms during and following de-icing events. It is not specific under what conditions and storm size this sampling should occur.

Response 11F: BOD sampling will occur at the same time as glycol sampling because each outfall is sampled one time per monitoring period. The sample volume must be large enough to analyze all the parameters in the list.

The sampling protocol is outlined in the approved Procedure Manual for Stormwater Monitoring. Sampling must occur at least once during the required time period (monthly, quarterly, or once per year). The storm events targeted for routine sampling are 0.20 inches or more total precipitation depth during a discrete rainfall event, and a 48-hour antecedent period having no discrete rainfall events greater than 0.10 inches. Monitoring for deicing events may take place during any type of precipitation event, including snow, sleet or hail, target rain storms, or other rain storms of undefined depth and antecedent conditions. If no rain event occurs within the monitoring period, but there is a base flow in the outfall, then that flow must be sampled for glycols.

Comment: All individual test results need to be reported and individual minimum values set. In addition, the averages can be reported. For example, averaging glycols taken four times over the day and only reporting the average serves to underestimate the pollution. Until the outfall numbers are sorted out with regard to their real locations, it is not possible to comment on what tests and what frequencies should be used with any certainty. It appears that pollutants identified as huge problems for airports are not covered by this permit.

Response 11G: Sampling protocol for stormwater discharges is very complicated. It is much more difficult to characterize a discharge with variable flow rate and concentration than a typical wastewater discharge. Composite samples are used to characterize the quality of the storm water discharge over the duration of the storm event. Analysis of grab samples characterizes the quality of a stormwater discharge at a specific moment. The goal of the stormwater monitoring at the airport is to obtain representative stormwater samples at each outfall that are comparable over time and space. Generally, a grab sample and a flow-weighted composite sample are taken at each outfall on each sampling occasion. The grab sample is taken during the rising limb of the hydrograph (the "first flush"). The constituents that must be analyzed in a grab sample are pH, oil and grease, TPH, and fecal coliform. All other constituents are analyzed from the flow-weighted composite sample. It isn't appropriate to assume that the water quality measured in a grab sample is representative of the entire storm event. This is why flow-weighted composite samples are used.

The Department is unaware of other pollutants of concern at airports that are not included in this permit.

Comment: An updated Procedures Manual should accompany the Permit and all changes should be subject to the approval of the DOE. Remember recent hauling in uncovered double haul trucks gave over 25% of the population respiratory problems but the project was officially "Nonsignificant" in the eyes of the Port.

Response 11H: The final permit requires an updated Procedures Manual to be submitted to the Department within three months of the issuance date of the permit.

Comment: A number of large pipes conduct water off airport property into ditches on the east side of 12th or the pipes conduct water under 12th to a branch of Miller Creek. This is along a stretch of airport property more than a mile long. These pipes lay under the impervious surface used for taxiways and the west runway. Why is not the outfall from one or more of the pipes tested?

Response 11I: All of the stormwater runoff from the existing runways and taxiways is discharged from the outfalls listed on the final permit to either Miller Creek or Des Moines Creek. The only stormwater that discharges to 12th Ave. S. comes from the wooded, sloped area west of the runways. Because this area was not include industrial activity, it was not included in the previous permit. This area will be impacted by

construction of the third runway during this permit term. Stormwater runoff discharged during construction is regulated by the final permit through Special Conditions S1.G, S2.C, and S13. When construction is completed, any new permanent outfalls will be have to be added to the permit.

Comment: The North Cargo Pump Station is fully operational. Based on the continuous operation of the pump station, the Port requests that monitoring of Outfall SDN-2 (007) be deleted from the permit. The pump station diverts the majority of the stormwater from SDN-2 to the Industrial Waste System (IWS). This diversion makes it extremely difficult to capture a storm sample from this outfall. The pump's capacity of 2,700 gpm is designed to divert discharges up to the peak flow rate from the six month, 24-hour storm. This means that more than 99% of the storms at Sea-Tac produce rainfall intensities less than the design capacity of the SDN-2 pump station. Even if rainfall intensities exceed the design criteria, discharges from the SDN-2 outfall will be very limited in duration and total volume. This means that it would be very difficult, if not impossible, to gather a flow-weighted composite storm sample.

Comment: Regarding outfall 007, the recent capital BMP makes quarterly monitoring unnecessary. Verification monitoring should be sufficient. In this regard, we suggest monitoring through March, 1999 for glycols only for the months October-March during discharge events when there is an aircraft deicing event. Also, due to the BMP, only grab samples are possible.

Response 11J: As documented in Appendix AI-2.1 of the Stormwater Management Manual for the Puget Sound Basin, a stormwater facility designed for the 6-month, 24-hour storm event will capture 91 percent of the total runoff volume, not 99 percent. Therefore it is probable that the pump station will be bypassed with some frequency. The drainage area for SDN-2 also includes a small area that acts as a contractor staging area that is not pumped to the IWS. The final permit has been modified to require semi-annual monitoring for TPH and TSS at Outfall 007, to require quarterly glycol monitoring at least four times at Outfall 007 during a precipitation event that coincides with a deicing or anti-icing event, and that each bypass event from the SDN-2 IWS pump station be reported.

Comment: Because of recent BMPs implemented for outfall 003, monitoring should be limited to that which is necessary to verify effectiveness of the BMPs. In this regard, we suggest monitoring for TPH and TSS for three quarters, with annual monitoring thereafter.

Response 11K: The final permit requires that Outfall 003 be monitored for glycols for a minimum of four quarters. All other parameters shall be monitored annually.

Comment: We believe that quarterly monitoring for outfalls 005, 008, 009, and 011 is inappropriate. These are substantially equivalent air side outfalls. The data from the Annual Stormwater Monitoring Report and the Stormwater Receiving Water Environmental Monitoring Report show that sampled parameters are far below any

relevant criteria or comparators, which justifies reducing the sampling to once a year for these outfalls.

Comment: The wording should be more specific and read glycol and potassium acetate and calcium magnesium acetate (deicing agents) is required at Outfalls 006, 008, and 009. Sampling shall occur during a precipitation event that coincides with deicing or anti-icing event.

Comment: We suggest monitoring for glycols only from outfalls 002, 005, and 011, which will provide sufficient representative monitoring. Monitoring should be targeted to those areas of the airfield where glycol shear or drip may occur. Therefore, it is appropriate to delete 003 and 007 because no shear or drip could be discharged from these outfalls because of BMPs that have been implemented.

Response 11L: The final permit requires glycol and BOD₅ sampling at Outfalls 002, 005, and 011. These outfalls represent where glycols may impact stormwater by dripping or shearing. The impact of potassium acetate and calcium magnesium acetate is monitored with BOD₅. No glycols are used in the drainage area for Outfall 006. Outfalls 008 and 009 are comparable to Outfall 011 and will therefore be monitored annually.

Comment: Reduced monitoring is also appropriate for outfall 006 because the only activities are roof tops and public roads. Recent monitoring and investigations show that certain pollutants which have been observed in past monitoring are the result of non-Port activity.

Response 11M: The Department disagrees with this request. The monitoring at Outfall 006 has shown impact from traffic. It is important that the Port acknowledge road runoff can impact stormwater and to implement BMPs to treat this runoff to the extent possible.

Comment: The Port requests that fecal coliform monitoring be deleted from S2.B.2 because there are no known sanitary sewers or waste handling activities in these subbasins.

Response 11N: The final permit includes a footnote to allow the removal of the fecal coliform monitoring requirement if the Port can show that it is not of human origin.

Comment: The Draft Permit specifies that the outfalls listed in S2.B.2 are to be monitored annually. We understand that there have been and continue to be waste disposal activities in most of these basins, therefore this provision is inadequate. The Draft Permit must be modified to require monitoring of these outfalls on at least a quarterly basis.

Comment: Monitoring for stormwater discharges at Outfalls 004, 010, 014 and 015 - Monitoring of these outfalls on an annual basis is inadequate. Monitoring should occur at least quarterly as there have been and continue to be waste disposal activities occurring in most of these basins.

Response 11O: The Department does not agree that these outfalls need to be monitored more frequently. Very little potential stormwater impacts exist in these drainage basins. It is unclear what “waste disposal activities” are referred to in these comments. The monitoring data from the previous permit does not show impact from “waste disposal activities”.

Comment: No monitoring should be required for Outfall 004 because off-site runoff dominates this outfall. Non-port road, shoulder, and S. 188th Street surfaces generate substantial vehicle activity and parking. The road shoulders (City of SeaTac Streets) are not paved and are a source of sediments and oils/fluids from leaky vehicles.

Response 11P: The final permit requires annual monitoring of Outfall 004, which is the minimum frequency of monitoring allowed. The Port may sample the off-site runoff that dominates the outfall to characterize its contribution.

Comment: What chemicals are in deicing sand? Will the permit include monitoring for these chemicals?

Response 11Q: No chemicals are used in deicing sand; it is just sand. Total suspended solids (TSS) is the monitoring parameter used to detect the presence of sand and other dirt in the stormwater.

Comment: No monitoring should be required at Outfalls 012 and 013. The Port has sampled these subbasins 14-16 times. Virtually all parameters measured at these outfalls were below regional stormwater comparators. Former Special Condition S3.C.3, footnote b, allowed the Port to request that monitoring be removed from the permit after reporting four events. The Port has far exceeded this requirement. The data show that the BMPs implemented by the Port are successful. Under these circumstances, no monitoring should be required for these outfalls. The Port, however, recognizes that Ecology may determine that monitoring should be continued at these outfalls. If that is the case, the Port requests that monitoring be conducted on a semi-annual basis.

Response 11R: Monitoring is required at Outfalls 012 and 013 to assess the ongoing effectiveness of BMPs. The sampling frequency has been reduced to semi-annually.

Comment: Outfall 013 should not require monitoring because the only activity is vehicle parking. Vehicle wash water has been diverted to the sanitary sewer. Parking lots are not regulated for stormwater discharges.

Response 11S: Federal regulations allow employee parking lots to be exempted from stormwater regulations, not taxi yards. The Department considers the taxi yard to be industrial activity related to the airport.

12. S2.C Construction Stormwater/Dewatering Monitoring

Comment: The Draft Permit requires the Port to submit a monitoring plan for stormwater and construction dewatering discharges at least 30 days before the start of construction for any construction project that is required under Special Condition S13 to have a SWPPP. A small construction project currently underway at the Airport has resulted in at least two instances of sedimentation in Miller Creek due to inadequate erosion control at the site, demonstrating the need for rigorous controls. Central to the protection of Miller Creek and Des Moines Creek, construction monitoring plans should be available for public review and comment. The Draft Permit must be modified to provide for full public participation in connection with the approval of such plans.

Comment: A requirement needs to be added for public review and comment on these monitoring plans. It is obvious from the recent series of disasters from the North Employee Parking Lot construction project in the Miller Creek water shed that the public and local government jurisdictions want more involvement in the protection of local waterways. Monitoring plans are a vital component of protection for Miller Creek and Des Moines Creek that need to be subject to public review and comment.

Response 12A: The following condition has been added to the final permit (S3.G):

The Permittee shall make all plans, reports, and manuals required by this permit available upon request to local agencies, interested members of the public, local government officials, or to the operator of a municipal separate storm sewer receiving discharges from the site. Viewing by the public shall be at reasonable times during regular business hours (advance notice by the public of the desire to view the plan may be required, not to exceed two working days). The permit does not require that free copies of the plan be provided to interested members of the public, only that they have reasonable access to view the document and copy it at their own expense. The copies of the plans, reports, and manuals may be kept onsite or may be made locally available.

Comment: The Port objects to this condition as being more stringent than the Construction General Permit. All other construction projects in the state are regulated under the Construction General Permit, which only requires a SWPPP, with no required monitoring or limits. The SWPPP consists of BMPs, which Ecology has acknowledged is AKART for construction activities. (Fact Sheet to Stormwater General Permit Associated with Construction Activities). During the public hearing, several citizens and businesses expressed concern that the airport was being regulated more heavily than any other construction site in the State. Ecology has provided no basis for including this monitoring condition in the permit, which we believe exceeds the authority of Ecology and is without federal or state statutory or regulatory precedent.

Response 12B: The Department believes that the potential impacts to the sensitive receiving waters of Miller Creek, Walker Creek, and Des Moines Creek from the construction projects included in the Master Plan Update justify the construction stormwater monitoring plan requirement.

Comment: Ecology has previously determined that monitoring for construction projects is not required. Instead, BMPs, which are implemented through the SWPPP are the appropriate method of regulating stormwater discharges. See Response to Construction Activity Permit Comment #13, page 22. Ecology admits that there is no national guidance on how to determine compliance with standards for episodic events such as stormwater discharges and Ecology has not yet developed such guidance. Response to Construction Activity Permit Comment #17, page 25. Under these circumstances, a monitoring plan should not be required and this condition should be deleted. The Port incorporates by reference all of its comments to Special Condition S13 and requests that Special Condition S2.C be deleted.

Response 12C: The responses referred to in this comment apply, in general, to construction projects covered under the Baseline Construction Permit. Sea-Tac Airport is covered under an individual NPDES permit, and therefore the responses referred to above do not apply to Sea-Tac Airport. Construction stormwater monitoring is justified given the extent of construction that will occur at Sea-Tac Airport during the term of this permit and the potential impacts to Miller Creek, Walker Creek and Des Moines Creek.

Comment: If Ecology decides to keep this condition in the permit, Port requests that language be added to this condition setting a reasonable time frame within which Ecology must respond to the monitoring plan submitted by the Port. In this regard, we propose that the following language be added to this condition: "The plan shall be deemed approved if Ecology does not respond to the plan at least 5 days prior to the scheduled date of construction. Ecology shall not unreasonably withhold approval of the plan."

Response 12D: The following language has been added to Special Condition S2.C:

"The plan shall be deemed approved if Ecology does not respond to the plan at least 5 days prior to the scheduled date of construction."

13. S2.D Glycols Usage

Comment: The Draft Permit requires that all deicing and anti-icing activities for aircraft or runways be reported no later than June 1 of each year, including the volumes and type of materials used each day by each airline. We believe that this requirement does not provide for adequate reporting. We understand that historically, the quality of information supplied with regard to glycols usage has varied depending on which airline or contractor generated the baseline data. The Draft Permit must be modified to require uniform methods of generating the relevant data, which will form the basis for useful, understandable reporting.

Comment: The manner in which glycols and other anti or deicing materials are used and reported needs to be improved. To date the quality of information supplied has varied depending on which airline or contractor is generating the baseline data POS incorporates

into their report. Ecology should require adequate quality assurance/quality control measures that the data is uniform irrespective of which party is generating the baseline data. It is requested Ecology also require the report to provide complete formulation information for deicing/anti-icing products. Some products, like propylene glycol, are far more toxic to aquatic organisms than what Ecology is assuming in the Draft Permit and Fact Sheet. The data provided in Attachment F, make it clear that full disclosure of product formulation as a report requirement is vital.

Response 13A: The Department believes that the reporting procedure is adequate. The annual summary includes the number of aircraft deiced/anti-iced each day, the total volume of product applied, and a summary of the total volume of each type of deicing/anti-icing fluid applied by type for each airline, as reported by the airlines. The Port requests that each airline provide the volume of pure product applied. Since the product is diluted 50% for application, if the airlines report the volume of diluted product applied, then the volumes are over reported by 50%. The Department has copies of the Material Data Safety Sheets for each product used. The report also includes a summary of the deicing products used on the runways by the Port.

Comment: Add potassium acetate and calcium magnesium acetate usage.

Response 13B: The final permit requires that all deicing and anti-icing events be reported, including the volumes of each type of deicing and anti-icing material used each day by each airline and the Port. This includes potassium acetate and calcium magnesium acetate used on the runways. The title of this report has been changed to Deicing/Anti-icing Fluids Usage.

Comment: MD80's use more glycols than most other aircraft and their use should be restricted and the permit should contain a phase out plan as part of the permit's mitigation strategy.

Response 13C: The Department does not have the authority to restrict the use of a type of airplane.

14. S2.E Annual Stormwater Monitoring Summary Report

Comment: The Draft Permit requires the Port to submit a report by October 1 of each year, summarizing stormwater monitoring results for the previous 12 months. The Draft Permit must be modified to require that this report include the data points from the outfalls in graph form so the public can easily assess when data was collected and what it indicates. Furthermore, the Port must be required to include more detail in the section of the report describing what the Port has learned from the data -- the Port should be required to be more specific and to assess how measures instituted under the SWPPP have or have not affected the data on pollutants entering waters of the State through stormwater flows.

Comment: The report should include the data points for the outfalls in graph form so the public can easily assess when data was collected and what the data is showing over the year of data collection for each outfall. The section on what POS has learned from the data should be more specific, to require an assessment of how measures instituted under the SWPPP have or have not influenced the data on pollutants entering waters of the state through stormwater flows.

Response 14A: The Annual Stormwater Report for the period July 1, 1996 through May 31, 1997 contains 35 figures which are graphical representations of the stormwater data. Each monitoring sample result is available in a table in Appendix B. The Department will suggest to the Port that the monitoring parameters required in the final permit be presented in graphical representations in the Appendix along with the table, but the final permit has not been modified to require this.

The Annual Stormwater Report contains very specific analysis of how BMPs have affected the stormwater discharge water quality. The final permit has not been modified to require "more specific analysis".

Comment: We understand that the monitoring required by Special Condition S2.B and voluntary monitoring conducted pursuant to Special Condition S3.E should be included in the Annual Stormwater Monitoring Summary Report. We believe, however, that the language is ambiguous in this regard. In order to ensure clarity, we suggest the following revised language:

"On or before October 1 of each year, the Permittee shall submit a report to the Department summarizing the results of stormwater monitoring conducted pursuant to Special Condition S2.B or S3.E of this permit . . ."

Response 14B: The final permit has been modified with the suggested language.

15. S2.F Sampling and Analytical Procedures

Comment: S2F Sampling and Analytical Procedures - The last paragraph of this section refers to conditions to be met for groundwater monitoring. A cover sheet needs to be added to the front of this permit to indicate that it is also a State Waste Discharge Permit.

Response 15A: The final permit is an NPDES permit, not a State Waste Discharge Permit. The Department may address ground water issues in an NPDES permit.

Comment: Neither federal nor state regulations require compliance with the "latest revision" of Standard methods or the Guidelines contained in 40 CFR Part 136. Additionally, the Port objects to the last paragraph which references the Implementation Guidance for Ground Water Quality Standards as being beyond the scope of RCW 90.48 and WAC 173-200.

Response 15B: The Department disagrees with this comment. The final permit has not been modified in response to this comment.

16. S2.G Flow Measurement

Comment: Thank you for clarifying that this language applies to the modeling used to measure stormwater flow. As written, however, it appears to require both flow measurement devices and methods consistent with accepted scientific practices. We suggest that, for stormwater the word "or" be substituted for the word "and" so that modeling used to estimate stormwater flow is acceptable under the permit.

Response 16A: The final permit has been modified to say "and/or"

Comment: The section refers to flow measurement devices and methods and specific requirements related to the flow devices. Is Ecology requiring flow monitoring devices be installed to measure stormwater related discharges? If so, what is the schedule for installation of the devices? If not, why not? It is requested that Ecology require approved flow devices to be installed on all outfalls to monitor the volume of discharge, within one hundred and twenty days of the issuance date of the new permit.

Comment: This section of the Draft Permit addresses flow measurement devices and methods. The section does not, however, provide sufficient information to reasonably assess its provision. The Draft Permit fails to clarify (i) whether the permit would require the Port to install flow monitoring devices to measure stormwater-related discharge; (ii) if so, the prescribed schedule for installation; and (iii) if not, the basis for the decision not to impose such a requirement. The Draft Permit must be modified to require the installation of approved flow monitoring devices to monitor the volume of discharge, within 120 days of the issuance of a new permit.

Response 16B: The final permit requires appropriate flow measurement devices and/or methods consistent with accepted scientific practices be used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. Flow measurement devices are used on both the IWTP and the stormwater outfalls. Flow meters are used in conjunction with automatic samplers at the stormwater outfalls to obtain flow-weighted composite samples. Total runoff volumes are estimated using a model that was calibrated with flow meters, in conjunction with rain gage data. This is an appropriate method for measuring total runoff volume.

17. S2.H Laboratory Accreditation

Comment: All testing should require calibrated labs.

Response 17: This special condition requires that testing occur at a laboratory accredited by the Department of Ecology. The only parameters exempted from this requirement are those that may be measured in the field by the Permittee.

18. S3.B Reporting - Stormwater

Comment: Quarterly monitoring is not frequent enough. In spite of all the measures including BMPs instituted under the last permit, the highest levels of glycol discharge ever monitored by POS happened last winter. This is after the majority of the BMP's to prevent glycol discharge had been instituted. The last three sets of Discharge Monitoring Reports did not include sample data for the storm water outfalls, despite major rainfall events and glycol use. With the present quarterly sampling scheme there is no way to confirm the effect of BMPs on stormwater discharges of glycols and fecal coliform except for the unsupported assertions of POS and DOE (like the assertion in the Fact Sheet that only "minor" amounts of glycol sheet off airplanes). It is requested that Ecology require monthly sampling of storm water outfalls that have shown glycol or excessive fecal coliform discharge (greater than 50 organisms/100 mL) for one year. The purpose of the monitoring is to determine if BMPs have effected the reduction or elimination of contaminants as intended. On a demonstration that such measures have been effective, the sampling frequency can be reduced to quarterly.

Response 18A: The final permit requires monthly sampling at Outfalls 002, 005, 006, and 011. See the responses in Section 11 above for further discussion.

Comment: All testing should record if double haul trucks are hauling fill to the airport on that day. The traffic and pollution the trucks created was bad this year. By 1999, the number could be over 15 times the current quantity. A log of construction activities should be kept and cross referenced for any exceedances in requirements.

Response 18B: This NPDES permit does not regulate the hauling of fill and therefore cannot require reporting of the number of double-haul trucks hauling fill to the airport. The SWPPP for Construction Activity required in Special Condition S13 addresses the water quality impacts due to construction.

19. S3.C Records Retention

Comment: A copy of the data should be on file at a location, such as a public library, where the public can easily access and review the data without the hassle of complicated document requests, delays and copy charges. This would assist both the state and POS in meeting legal obligations to have public documents readily available to the public and decrease expenditure of public funds in dealing with public requests for this kind of data. Consultation with the public could determine where and how this data could be made available and stored.

Comment: The Draft Permit requires the Port to retain monitoring records for at least three years, and prescribes additional related requirements. The Draft Permit should be modified to require that this data be maintained on file at a location such as a public library, where the public can easily access and review the data. This modification would assist both Ecology and the Port in meeting their legal obligations to make monitoring

information available to the public, and would decrease the expenditure of public funds associated with processing requests for such data from members of the public.

Response 19: Special Condition S3.G has been added to the final permit in response to this comment:

The Permittee shall make all plans, reports, and manuals required by this permit available upon request to local agencies, interested members of the public, local government officials, or to the operator of a municipal separate storm sewer receiving discharges from the site. Viewing by the public shall be at reasonable times during regular business hours (advance notice by the public of the desire to view the plan may be required, not to exceed two working days). The permit does not require that free copies of the plan be provided to interested members of the public, only that they have reasonable access to view the document and copy it at their own expense. The copies of the plans, reports, and manuals may be kept onsite or may be made locally available.

20. S3.E Additional Monitoring by the Permittee

Comment: A sentence should be added that when monitoring is done using methods and or locations other than specified by Special Condition S2 of this permit, POS shall provide notice with the DMR for the month or quarter such monitoring takes place and will provide such data on request.

Comment: Special Condition S3.E addresses any monitoring that the Port may perform in addition to that required by the Draft Permit. The Draft Permit should be modified to specify that if the Port performs monitoring using methods and/or locations other than those specified in Special Condition S2, the Port must include in the relevant Discharge Monitoring Report notice of same during the month or quarter in which it takes place, and must provide the data upon request.

Response 20: The final permit includes the following condition in S2.E:

If the Permittee performs monitoring using methods and/or locations other than those specified in Special Condition S2, the Port must include notice of this monitoring with the Discharge Monitoring Report for the month in which the monitoring occurred, and must provide the data upon request.

21. S3.F Noncompliance Notification

Comment: Regarding S3.F.2 and S3.F.3, Noncompliance Notification, it is essential that out of compliance discharges be resampled in order to determine if the discharge is an aberration, upset event, or ongoing. Spills, even though contained in the IWS, should never the less be reported, particularly those which the IWTP is not capable of treating. Further, it is essential that the public have ready access to incident reports on spills and other non-compliance.

Comment: The Draft Permit requires the Port to notify Ecology of any failure to comply with permit terms within 24 hours, except spill event "that are contained by the IWS." These need not be reported. This provision is unacceptable, because it removes any incentive to find and eliminate the cause of spills. Many substances used at the Airport are not susceptible to treatment or removal by the IWS. Accordingly, we believe that this provision increases the potential for the discharge of toxic substances into Puget Sound without notification to Ecology or the public. The provision also eliminates an important check on the effectiveness of BMPs and SWPPP implementation. The draft Permit should be modified to require the Port to report all spills to Ecology, particularly when substances that the IWS cannot treat are involved.

Comment: As there are many substances used at the airport that would not be treated or removed by the IWS this language also increases the possibility of toxic discharge to the Puget Sound while eliminating any potential for the agency or the public being notified. It also eliminates an important check on the effectiveness of BMPs and SWPPP implementation, an area that we know from recent history, is in serious need of quality control and oversight measures. The present language in the Draft Permit would allow POS and its tenants to knowingly allow a discharge of a substance the IWS can not treat to the Puget Sound with no requirement to notify Ecology that such a release has occurred and with no requirement to determine whether such release has the potential of causing harm to the receiving water. It is requested Ecology correct the language in the Draft Permit so POS is required to report spills to the IWS, particularly of substances which the IWTP is not capable of treating.

Comment: This section allows POS to not report spills that are contained by the IWS. This language should be removed. The language removes incentive to find and eliminate the causes of spills.

Response 21A: The final permit requires that spill events that are contained by the IWS be reported to the NPDES permit manager, but not the Spill Response Team.

Comment: The Port objects to this condition as exceeding the noncompliance notification language contained in all the Permit Writer's Manual. There are no federal or state statutes or regulations authorizing this language. In particular under the applicable NPDES regulations, 24-hour reporting is required only for noncompliance that may endanger health or the environment. 40 CFR § 122.41(1)(6). All other non-compliance is to be reported at the time the DMRs are submitted. 40 CFR § 122,41(1)(7).

Comment: The Port objects to reporting spill events to the permit manager within 24 hours of becoming aware of the spill because there is no legal authority for imposing this requirement unless the spill endangers health or the environment. For the same reasons, we object to a permit term requiring us to notify the permit manager within 24 hours of any non-compliance.

Comment: The Port objects to reporting to the Spill Response Team any spill that does not involve a spill of hazardous waste or other spill triggering spill reporting under

applicable law. There is no legal basis for requiring all "spills" to be reported to the Spill Response Team.

Comment: The Port objects to the reporting requirements to the extent that they supersede MTCA and other reporting requirements. The additional reporting requirements are unnecessary and confer no environmental benefit.

Comment: The Port objects to subparagraph S3.F.4, which exceeds the scope of any federal or state regulation.

Comment: Ecology is given very specific regulations that pertain to reporting requirements. For all of the foregoing reasons, this condition should be deleted as a special condition and replaced as a general condition with the following language, which is taken from the Permit Writer's Manual and other permits recently issued by Ecology:

If, for any reason, the Permittee does not comply with, or will be unable to comply with, any of the discharge limitations or other conditions specified in the permit, the Permittee shall, at a minimum, provide the Department with the following information:

- A. A description of the nature and cause of noncompliance, including the quantity and quality of any unauthorized waste discharges;
- B. The period of noncompliance, including exact dates and times and/or the anticipated time when the Permittee will return to compliance;
- C. The steps taken, or to be taken, to reduce, eliminate, and prevent recurrence of the noncompliance.

In addition, the Permittee shall take immediate action to stop, contain, and clean up any unauthorized discharges and take all reasonable steps to minimize any adverse impacts to waters of the state and correct the problem. The Permittee shall notify the Department by telephone so that an investigation can be made to evaluate any resulting impacts and the corrective action taken to determine if additional action should be taken.

In the case of any discharge subject to any applicable toxic pollutant effluent standard under Section 307(a) of the Clean Water Act, or which could constitute a threat to human health, welfare, or the environment, 40 CFR Part 122 requires that the information specified in Conditions G4.A, G4.B, and G4.C, above, shall be provided not later than twenty-four (24) hours from the time the Permittee becomes aware of the circumstances. If this information is provided orally, a written submission covering these points shall be provided within five (5) days of the time the Permittee becomes aware of the circumstances, unless the Department waives or extends this requirement on a case-by-case basis.

AR 026852

Response 21B: The Department disagrees with all of the Port's comments on the Noncompliance Notification requirements of the permit. RCW 90.48.180 grants the Department the authority to specify conditions necessary to avoid pollution. Notification of noncompliance allows the Department to track noncompliance and thereby require preventative measures to eliminate pollution of waters of the state. The final permit has not been modified in response to these comments.

Comment: The Draft Permit requires repeat sampling and analysis of any violation of the terms of the permit and submission of the results to Ecology within 30 days following the Port's becoming aware of the violation. This provision does not adequately address parameters for which monthly monitoring is already required; in effect, it requires resampling for parameters that normally are monitored only on a quarterly or annual basis. This would fail to serve the purpose of demonstrating whether the violation was an aberration or represented an ongoing noncompliant discharge. The Draft Permit should be modified to require resampling of all discharge that show a lack of noncompliance with the permit terms.

Comment: This section is not adequate. Part of the reason for repeat sampling is to determine whether the sample analysis showing a violation is an aberration, upset event or ongoing out of compliance discharge. The language in the Draft Permit would allow POS to forego resampling out of compliance discharges unless the parameter the violation occurred in required quarterly or annual sampling rather than monthly. It is requested Ecology change the language of the Draft Permit to require resampling of all out of compliance discharges.

Response 21C: If the Port shows a violation of an effluent limitation in the IWS discharge, it is to the Port's advantage to resample immediately. It is assumed that a discharge is out of compliance with an effluent limitation until a sample shows that the effluent is in compliance. The Department believes that this is sufficient motivation for the Port to resample as soon as possible. The final permit has not been modified to require this.

22. S4 Compliance Schedule

Comment: We object to Ecology authorizing discharge of pollutants to waters of the state that are known by Ecology not to be treated by the IWS. Ecology has been violating its duty to the people of the State of Washington for the last 30 years by being aware that the IWS was not treating all of the wastes discharged to it, knowing that technology was and is available to allow treatment of the other constituents of the discharge and not requiring POS to implement treatment in a timely fashion.

Comment: We object to Ecology failing to establish AKART in a timely fashion for this facility. Ecology's failure has allowed POS to operate an antiquated system not capable of treating the wastes discharged to it in an adequate manner. Ecology's failure has resulted in releases to the environment including surface water, groundwater and soils. The AKART engineering report was a requirement of the inforce permit which required

the report to be submitted within 18 months of its effective date. That date is now over two years past. The failure to enforce the original deadline has resulted in at least a three year delay in the implementation of adequate treatment of airport wastewater. There has been some forward motion in terms of updating the IWTP and related systems through a combination of citizen and agency action. It is disturbing, however, that the effort has been disjointed or out of context from the larger picture of implementation of a waste treatment system that meets AKART, and treats the wastes being discharged to it.

Comment: Ecology has failed to establish AKART in a timely fashion for this facility. Ecology's failure has resulted in pollutant releases to the environment including surface water, ground water, and soils. The AKART Engineering Report is a requirement of the existing permit and was required to be submitted within 18 months of the effective date of the permit June 30, 1994. That date, December 30, 1995, is now two years past due. A condition of the new permit should be that the AKART be submitted by the end of February, 1998.

Comment: The schedule requires POS to submit an AKART engineering report. The last permit required them to submit this report also. However POS managed to get Ecology to let them miss the deadline and not deal with the AKART issue in the last permit cycle. The language in the draft permit is worded to allow up to a 7 year delay in implementing AKART. IT also extends the implementation of AKART beyond this permit cycle without requiring milestones. Toxicity testing of the IWS discharge is also tied to the implementation of AKART, which could result in a 10 year delay in re-evaluating toxic discharges.

Comment: The compliance schedule gives the Port of Seattle 5 years to implement the AKART determination. Why?? That is even after this permit expires.

Comment: Why is compliance required in paragraph S4 after the permit expires?

Comment: Consider total region costs in establishing mitigation schedules. The high cost of bottled water needs to be considered and the destruction of the aquifer prevented. It's ironic that the Ground water study proposed earlier this year only projects pollution through the time that Seattle Water Department has jurisdiction. It is unknown what body or organization will supply water to the area when they give up that responsibility in about 10 years.

Comment: Paragraph S-4 requires compliance after the permit expires. Other airports are implementing more aggressive mitigation and they don't even have an aquifer underneath to consider.

Comment: Is it an error that paragraph S4 require compliance after the permit expires?

Comment: This new draft permit again acknowledges the need of a new IWS and states this Port must submit a IWS "report", then submit a IWS "plan" and then in 5 years submit a "completed plan". This agenda allows the Port to drag out the process for years

and by then the expiration date of the permit will be passed. Why does DOE describe a process for building a new IWS which extend beyond the expiration date of the permit? Isn't it now time to set a date and get the job done?

Comment: The issuance and implementation of an engineering report that commits to an appropriate IWTP configuration that treats chemicals discharged to it has been unacceptably delayed for decades. Ecology and POS have known since the 1960s that the IWTP did not and could not treat many of the chemicals discharged to it. POS has waged a successful war of attrition against Ecology on this issue. This issue should have been settled in a final manner by Ecology in the previous permit. Instead citizens had to force the issue of IWS upgrades through a citizen suit, under the Clean Water Act. We still do not know what the final IWTP configuration will be or how it will treat non-petroleum discharges from the IWS. What assurance does the public have that Ecology will not continue the delay of adequate treatment of pollutants discharge to the IWS beyond the next permit cycle? If Ecology is going to allow POS to delay adequate treatment of its waste through yet another permit cycle, what milestones are going to be incorporated into the permit, by Ecology, to assure adequate treatment is in place on the fastest possible schedule? Ecology should make the requirement for the submission of the AKART report under the existing permit by order and have the requirement referenced in the Draft Permit, when it is issued as an in force permit. That way irrespective of the exact date the new permit is issued, the AKART report is due on a certain date. POS has already delayed this report and related upgrades needed to the IWS for decades. Any further delay of any kind, by any period of time is unacceptable. Ecology should require the AKART report be submitted by the end of February, 1998, as a condition of the existing NPDES permit, by order, with the requirement carried over to (or incorporated into) the new permit by reference, if it is issued prior to that time.

Comment: This permit leaves nothing to violate, because almost everything in this permit calls for implementation after AKART and AKART is not within the time frame of this permit. AKART must be changed to no more than two years after this permit is issued.

Comment: Since this is a 4 year permit, 5 years would mean nothing in the permit would have to be complied with. I would say this should be one year.

Comment: The time frame for compliance is not within the time frame of this permit. The compliance schedule gives the Port five years to comply with AKART. The Port has already had at least four years to have a new or improved IWS in place. The Port's 1994 Study and financial plan provided over \$17 million for a new IWS. For the DOE to give the Port five more years to complete AKART and bring the Port into compliance with Federal Law is unacceptable. The Port should have no more than two years to have AKART completed.

Comment: The conditions of the permit do not adequately ensure that high levels of glycols in industrial wastewater effluent will be reduced. I believe that the update to the industrial wastewater system engineering report should be completed, a strategy for

reducing glycol levels in industrial effluent be adopted, and effluent levels for BOD5 (and the other parameters) be set prior to issuance of the permit. The Port of Seattle must have a strategy in place to prevent high concentration of this toxic chemical, rather than rely on assurances that a plan will be developed in the future.

Comment: It is wholly unacceptable to defer the imposition of appropriate final effluent limitations on discharges from the IWTP until beyond the proposed permit renewal period of four and one-half years, as contemplated in the Draft Permit. Ecology must provide in the Draft Permit for a more appropriate schedule for implementation of the AKART determination. A five-year implementation period is far too long. Further, the Port must be required to demonstrate specified progress by specified dates, to assure that adequate treatment is put in place as soon as possible.

Comment: It is deeply troubling that Ecology proposes to defer addressing the Port's ongoing violation of its existing permit, namely, its failure to submit an adequate and approvable Engineering Report, into the next permit cycle. The Port's violation of its existing NPDES Permit should be addressed immediately by Ecology through an action to enforce the existing NPDES Permit.

Comment: In several instances in this permit application, the permittee has five years in which to comply and yet, the life of this permit is only four and a half years. Compliance would never be necessary!

Comment: The Port objects to the requirement that it complete all measures required to implement the AKART determination no later than five years from the date of the approval of the Engineering Report. The five-year time frame may be impossible, depending on the AKART determination. Because the five-year time frame exceeds the permit's term, no time for implementation should be specified in this permit. In any event, timing should be determined in the permit modification. The time for completion should run from the date that the permit modification is final, not from the date the engineering report is approved. Until the permit modification is final, there is no assurance that the AKART determination will remain the same. Comments received may alter Ecology's decision. The Port should not be required to expend funds designing a particular alternative that could change. We do not believe that the Stipulated Settlement Agreement, which resolved the permit appeal of the previous permit, requires a five-year compliance schedule. That settlement agreement resolved issues pertaining to the prior permit and specifically pertained to "Condition S5.A" of that permit. After that settlement, the scope of the AKART report was significantly expanded to include alternatives that were not anticipated at the time the agreement was entered into. These alternatives could require substantially longer than five years to implement. Moreover, there is no provision in that Settlement Agreement that its terms are to be incorporated into this permit. There is, therefore, no basis to use the Settlement Agreement as authority to impose a five-year compliance schedule.

Response 22A: WAC 173-201A-160(4) allows the Department to establish compliance schedules for existing discharges to include a schedule for achieving compliance with the

water quality criteria. Schedules of compliance are allowed for construction of necessary treatment capability and are developed to ensure final compliance with all water quality-based effluent limits in the shortest practicable time. Schedules of compliance may in no case exceed ten years, and shall generally not exceed the term of any permit. Decision on schedules of compliance are made on a case-by-case basis by the Department.

The compliance schedule for the IWS discharge was established in the previous permit, which was issued on June 30, 1994. Therefore, the compliance schedule may not go beyond June 30, 2004. The complexity of the AKART determination and the capital improvements that will be necessary to implement the AKART determination make it necessary to go beyond the term of one permit. The final permit requires the Port to implement the AKART determination in the shortest practicable time, but no later than June 30, 2004.

It should be noted that although the final AKART determination has not occurred, many improvements were made to the IWS lagoons and treatment system during the term of the previous permit. These improvements were the first steps in the implementation of AKART, as it was assumed that the IWS lagoons and the IWTP would be a part of the final AKART treatment system.

Comment: Require a new IWS in the immediate future. Require 100% glycol recovery and proper disposal immediately. Require recycling of all glycol and other anti and de-icing agents used at the airport. Required that the Port research alternatives to glycol use, such as infra-red deicing facilities. Require that all release of hazardous waste such as solvents used in washing aircraft, glycol and all other anti and deicing agents be covered, including that which falls off the plane, both on and off airport property, runway deicers, proprietary agents, etc., be controlled, are covered and properly disposed or recycled.

Comment: What can DOE do to finally protect our water resource in Highline from hazardous chemicals the Port regularly disposes into our environment? Can another method of deicing and anti-icing be found? Is there any excuse for allowing this pollution to continue while someone grapples with fixing this problem at some remote, unspecified future date? Would other sources of this type of pollution besides the Port be allowed by DOE to dispose of this untreated hazardous chemical in the Puget Sound?

Response 22B: Minimization and recycling of deicing fluids was considered in the IWS Engineering Report submitted to the Department in December, 1995. The report suggested that vacuum truck collection of deicing fluids (with recycling if the collected fluids contained more than 15 percent glycols) constituted AKART. The Port performed a pilot program during the winter of 1996/1997 to investigate the feasibility of collecting spent deicing fluid at the gates using vacuum sweeper trucks. The pilot program showed that ground recovery collected less than 40% of the glycol generated in dry weather conditions and was significantly less effective in wet weather conditions. This pilot program showed that vacuum sweeper trucks would not constitute AKART for BOD.

The Engineering Report found that enhanced separation of runoff from deicing areas was not feasible due to the current pipe and grading configurations. Centralized deicing pads were eliminated due to the lack of sufficient space at the airport. Alternatives to deicing chemicals may not be considered until the FAA approves these alternatives.

The approved AKART treatment system will include preventative measures for discharges of pollutants such as solvents to the IWS. The Port has already required all of the tenants to implement pollution prevention plans to protect the IWS.

Comment: Regarding S4 Compliance Schedule, the permit must require that Lagoon 3 is lined within one year of the completion of the lining of Lagoon 2.

Comment: The current language in the permit allows POS to submit a proposed schedule for lining IWS Lagoon 3 as part of the engineering report. The permit should require Lagoon 3 to be lined within one year of the completion of the lining of Lagoon 2.

Comment: All of the wastewater ponds hold wastewater and toxic sludge and are located above an aquifer from which drinking water is drawn. Number 3 is the largest and holds 4 times more than the other 2 combined. It has no liner. How long has wastewater pond #3 been in use? Since it is unlined and above an aquifer, has DOE monitored the groundwater to the south and west of this pond? There are 2 wells in the vicinity of this pond. Will the permit set an exact year and month when wastewater pond #3 will be drained and the sludge removed and the lining put in place? Is it normal procedure to place red beacon towers in the middle of wastewater ponds? I have observed this wastewater pond to be full to the brim on the southwest side. Is there a plan to increase its capacity rather than allow a bypass during storms or during construction?

Comment: The airport sits directly on top of a drinking water aquifer and to not require the Port to bring discharges within the federal limits is failure to do the job the DOE is required to do. For the DOE to take costs into account for this project, the DOE must also take into account the costs of cleaning up the Highline drinking aquifer if and mostly when the Port contaminates the Highline aquifer.

Comment: Lagoon 3 shall be lined within one year (or a specific time frame) not in a "few years". For example, 27 years ago they Port was to mitigate the second runway "in a few years" and has not yet been completed.

Comment: The permit should require IWS Lagoon #3 to be lined within one year of completion of lining of Lagoon #2 rather than allowing the Port of Seattle to "submit a proposed schedule for lining Lagoon #3 as part of the engineering report".

Comment: Lagoon number 3 is not lined. This is a very serious condition and must be remedied. Request that this permit give a time frame of no more than one year for the Port to clean and line this lagoon.

Response 22C: Lagoon 3 has been in use since 1979. It has always been used as a last resort; Lagoons 1 and 2 receive the most contaminated runoff from the IWS collection area. The final permit requires the Port to investigate the impact of the unlined lagoon on ground water in Special Condition S15.

The final configuration and sizing for Lagoon 3 will be determined by the final AKART determination. Therefore, the permit does not specify an exact deadline for lining Lagoon 3, but ties it into the Engineering Report approval.

Comment: The Port Commissioners have requested yet another study of glycol usage to be delivered in 1998. Doesn't the DOE agree that enough plans, reports, processes have occurred and it's time to get the job done? Would the DOE set a definite timeline, and if it passes with no action from the Port, then encourage the Port to hook up to METRO?

Comment: Please study the use of METRO.

Response 22D: The Engineering Report does include the possibility of discharge to the King County sanitary sewer (formerly known as METRO). Please note that the Department cannot force a wastewater treatment plant to accept an industrial waste discharge. A discharge agreement must be reached between the industrial waste discharger and the wastewater treatment plant prior to approval of this type of discharge by the Department.

Comment: Would it be possible, as Cabinet to the Governor, to tell the Governor that the Port needs some State help. Like the Federal Cabinet (FAA) granting money to the Port, the State Cabinet (DOE) could give the Port a \$20 million one-time grant to build the IWS system if the State Legislature authorized it. The IWS system would protect the City of Seattle's aquifer for City of Seattle drinkers, and it would protect the impacted creeks surrounding the airport. For years and years King County citizens have granted the Port \$36.5 million a year for economic development for the State. A one-time only \$20 million dollar grant from the State to King County would be a small sacrifice from the State to solve a huge problem for King County citizens. If the State option is not available because the Washington State Constitution will not allow it, maybe the EPA would have some Super-fund clean up funds available. The EPA could work a one-time Super-fund clean-up grant through your office. Your office could oversee building the IWS system with the Port.

Response 22E: It would be inappropriate for the Department of Ecology to lobby the Governor or the legislature on behalf of the Port of Seattle for funding for the IWS. Since upgrading the IWS is a Clean Water Act issue and not a Superfund cleanup issue, the Port of Seattle will need to fund the implementation of AKART.

Comment: As part of the NPDES process in 1994, a document was prepared by Lisa Zinner of the DOE titled "Response to Public Comments". On page 36 of the document, the DOE states: "Three years is the amount of time necessary... for the Port to design and construct a NEW wastewater treatment plant." And on page 37 of this same

document, the DOE states, "The Port is required in the permit... to build a new treatment plant". It is now almost 1998 and no new IWS is in the works. Why did not the DOE enforce the provisions of the previous permit?

Response 22F: The Port submitted the AKART Engineering Report by the due date contained in the previous permit, therefore they were in compliance with this requirement.

Comment: The Port would like to make sure that it is acceptable to submit an "addendum" to the engineering report, instead of an "updated" engineering report and would like three months (3) months from the date the permit is issued within which to submit the AKART report to Ecology.

Comment: The acronym AKART stands for "all known, available, and reasonable methods of treatment." We would appreciate it if this condition could be revised to reflect that fact. Additionally, the permit should reflect that the AKART determination will be made by major permit modification, which will provide the Port and the public with an opportunity to comment.

Response 22G: The final permit allows the Port to submit an addendum to the AKART Engineering Report that was submitted during the previous permit cycle within two months of the permit issuance date. The condition has been changed to require that the engineering report review all known, available, and reasonable methods of prevention and treatment (AKART). Special Condition S1.A of the final permit reflects that the final effluent limitations will be set through a major permit modification

23. S5 Industrial Wastewater System (IWS) Operations and Maintenance Manual

Comment: The cities by the airport, ACC, RCAA, and CASE organizations should be on the distribution for notification of any changes to manual or procedures in the permit or referenced by the permit.

Response 23A: Special Condition S3.G requires the Port to make all plans, reports, and manuals available to the public. The final permit does not require to Port to notify interested members of the public of changes in these plans, reports, or manuals.

Comment: The Port is incapable of defining "substantial". All changes to the O&M Manual should be subject to approval by the DOE. All substantial changes should also be subject to public comment.

Response 23B: The Department disagrees with this comment. No change has been made in the final permit in response to this comment.

Comment: Under number 5, add a requirement to specify handling of solids or wastewaters removed or disturbed during maintenance activities. Also due to the number

of changes in the IWS system, through the summer of 1997, an update of the manual should be required sooner than the proposed year from the date of issuance of the new permit.

Comment: Special Condition S5.A addresses the Port's mandatory IWS Operations and Maintenance Manual, including required contents and annual review. The Draft Permit must be modified to add a requirement that this manual specify proper handling of solids or wastewater removed or disturbed during maintenance activities. Also, due to the number of changes in the IWS system through the summer of 1997, the Port must be required to update the manual sooner than the proposed year from the date of issuance of a new permit.

Comment: The Port asks that it be required to review the O & M Manual only once during the permit cycle, rather than annually.

Response 23C: The requirement to address the handling of solids or wastewater removed during maintenance activities has been added to Special Condition S5.A. The submittal date and review requirement has not been changed.

24. S5.B Bypass Procedures

Comment: More stormwater is now directed way from the creeks to the IWS, more impervious surface has been laid (RPZ) and other airport activities are on the rise. The present capacity of the IWS has been challenged several times this year. Does the DOE acknowledge the present design of the IWS will, in the near future, be less adequate to handle storm events? Will more bypasses occur as IWS capacity becomes less able to handle the increase in wastewater? This draft permit says if the present "design" doesn't hold the wastewater, its OK (page 21). Will DOE change the wording of the permit to allow only so many bypasses before the permit will have to be reviewed?

Response 24A: The IWTP is currently sized to treat the all of the stormwater runoff from the existing IWS drainage area, which does not include the runway safety area. The sizing criteria for the IWS collection and treatment system will be reviewed and approved through the submittal of the IWS Engineering Report.

Comment: As discussed in our comment concerning Special Condition S1.E, allowing overflows of the IWS due to stormwater flows in exceedance of design criteria constitutes backsliding, as well as a violation of Washington State's anti-degradation policy. Ecology must modify the Draft Permit to enforce appropriate controls on the discharge of industrial wastewater to surface water into the stormwater drainage system. In addition, the Draft Permit must be modified to define "stormwater flows in exceedance of the design criteria," as the majority of the public is unlikely to know what this language means.

Response 24B: Allowance of discharge of stormwater in excess of the design criteria approved by the Department does not constitute backsliding. The Department will

determine if the IWS sizing criteria has been satisfied through the review and approval of the IWS AKART Engineering Report. The Fact Sheet has been modified to explain the sizing criteria for the IWS collection system, the IWS lagoons, and the IWTP.

Comment: A sentence needs to be added to the final paragraph of this section of the Draft Permit which states that in the event of stormwater flows in exceedance of the design criteria all possible measures will be implemented to treat and or mitigate the excess flows. Also a section needs to be added to the Fact Sheet that explains exactly what constitutes "stormwater flow in exceedance of the design criteria", as the majority of the public would have no way of knowing what the Draft Permit language means.

Response 24C: Design of the IWS collection and treatment system to the dictated design standard constitutes the extent of required mitigation. The Fact Sheet has been modified to explain the sizing criteria for the IWS collection system, the IWS lagoons, and the IWTP.

Comment: Thank you for including the last paragraph of this condition. The word "exceedance" should probably be replaced with the word "excess." The Port remains concerned with the breadth of this condition and believes that it exceeds the federal and state NPDES regulations. The condition also goes far beyond the general condition language for bypasses, which is placed in other permits.

Response 24D: The word "exceedance" has been replaced with "excess" in the final permit.

Comment: As mentioned in our previous comment letter, the "permit shell" language is not mandatory and can be changed by the permit writer. In this regard, we suggest the following alternate language:

The intentional bypass of wastes to surface water from all or any portion of the Industrial Waste Treatment Lagoons or Industrial Waste Treatment Plant is prohibited unless the following four (4) conditions are met:

- A. Bypass is (1) unavoidable to prevent loss of life, personal injury, or severe property damage; or (2) necessary to perform construction or maintenance-related activities essential to meet the requirements of the Clean Water Act and authorized by administrative order;
- B. There are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, maintenance during normal periods of equipment down time, or temporary reduction or termination of production;
- C. The Permittee submits notice of an unanticipated bypass to the Department in accordance with Special Condition S3.F "Noncompliance Notification," above. Where the Permittee knows or should have known in advance of the need for a

bypass, this prior notification shall be submitted for approval to the Department, if possible, at least thirty (30) days before the date of bypass; and

- D. The bypass is allowed under conditions determined to be necessary by the Department to minimize any adverse effects. The public shall be given an opportunity to comment on the bypass incidents of significant duration to the extent feasible.

"Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent Loss of natural resources which can reasonably be expected to occur in the absence of a bypass.

After consideration of the factors above and the adverse effects of the proposed bypass, the Department will approve or deny the request. Approval of a request to bypass will be by administrative order under RCW 90.48.120.

An overflow of untreated industrial wastewater from the Industrial Wastewater Treatment Facility, IWS collection system, IWS lagoons, or an overflow of stormwater from the stormwater drainage system, pump facilities, or stormwater detention facilities due to stormwater flows in excess of the design criteria shall not be considered a bypass and shall not constitute a violation of this permit. The Industrial Wastewater Treatment Facility includes the Industrial Wastewater Treatment Plant (IWTP), the Industrial Wastewater System Lagoons, and the equipment used to collect, treat, and dispose of industrial wastewater.

Response 24E: The Department denies the request of the Port to insert the language suggested in this comment into the final permit.

25. S6. Solid Waste Disposal

Comment: S6A Solid Waste Disposal / Solid Waste Handling - There is a community concern about past practices regarding solid waste handling and disposal. Better (more complete) POS reporting, with Ecology oversight and enforcement is recommended.

Comment: The Port objects to this condition. The definition of "solid waste" in the fact sheet includes liquid industrial wastes as solid waste. Disposal of liquid industrial waste from the IWS into surface waters is permitted by this permit. Solid waste is amply regulated under solid waste law. This condition is confusing and unnecessary and should be deleted.

Response 25A: Special Condition S6.A has not been modified in the final permit. Proper solid waste handling is important to protect waters of the state from being impacted by leachate. The Stormwater Pollution Prevention Plan should include BMPs for solid waste management. The definition of solid waste contained in the Fact Sheet has been modified to exclude industrial wastewater.

Comment: The Port objects to S6.B because leachate from solid waste facilities is specifically included within the definition of industrial wastewater and therefore authorized to be treated and discharged. This condition is confusing and unnecessary and should be deleted.

Comment: This condition prohibits the Port from allowing leachate from its solid waste material to enter surface waters without providing all known, available and reasonable methods of prevention and treatment, and from allowing such leachate to violate the state Surface Water Quality Standards, Chapter 173-201A WAC, or the Ground Water Quality Standards. The condition further requires the Port to apply for a permit or permit modification "as may be required for such discharges to state ground or surface waters". We understand that Ecology has knowledge that leachate from the Port's solid wastes is discharging to ground water. Accordingly, the Port already should have obtained or applied for a state waste discharge permit for discharge to ground water. Ecology's failure to require the Port to submit an immediate application for a permit to discharge into ground water must be rectified.

Comment: S6B Solid Waste Disposal / Leachate - The final sentence of this section states "The permittee shall apply for a permit or permit modification as may be required for such discharges to state ground or surface waters". Such leachate has already, as Ecology is aware, been discharged to groundwater. As such POS should, under existing law, already have applied for a Waste Discharge Permit for discharge to groundwater. Failure by Ecology to require POS to submit an application for a Waste Discharge Permit for discharge to ground waters is a violation of a non-discretionary duty and violates Chapter 173-200 WAC.

Response 25B: The sentence: "The Permittee shall apply for a permit or permit modification as may be required for such discharges to state ground or surface waters" has been removed from the final permit. The final permit requires the Port to apply AKART to leachate, and allows leachate to be discharge as industrial wastewater through the IWS.

26. S7 Spill Plan

Comment: A bullet should be added to state; A description of all hazardous waste storage areas including facilities and measures which prevent, contain, or treat spills of hazardous wastes.

Comment: The Draft Permit must be modified to require that the Spill Plan include a description of all hazardous waste storage areas including facilities and measures which prevent, contain, or treat spills of hazardous wastes.

Response 26: "Hazardous waste" has been added to the last bullet under Special Condition S7.

27. S8.A Acute Toxicity - Effluent Characterization

Comment: This condition should be deleted because it is premature. WET testing is not triggered until after the startup date of the new or improved IWS Waste Treatment System. As mentioned in our comments to Special Condition S4 above, the AKART determination must be made by a major permit modification. Therefore, any WET testing requirements are more appropriately included in the major permit modification than in this permit. Moreover, no WET testing should be conducted until an appropriate dilution zone has been set. As mentioned above, the dilution zone must be set through a major permit modification. This is an additional reason why WET testing should not be included in this permit. Finally, any WET limits must be set through a major permit modification.

Response 27A: The inclusion of Whole Effluent Toxicity (WET) requirements in the final permit is not premature. Chapter 173-205 WAC, Whole Effluent Toxicity Testing and Limits, is applicable to NPDES discharges that have a risk for aquatic toxicity. The IWS discharge shows a risk for aquatic toxicity based on WAC 173-205-040(1)(b). This section states that a discharge is considered to have a risk for aquatic toxicity if the effluent contains any toxic pollutants listed in Appendix D of 40 CFR Part 122 for which there are no water quality criteria for aquatic life protection listed in 40 CFR 131.36(b)(1) or WAC 173-201A-040(3). Unless the AKART determination completely eliminates the surface water discharge, this Special Condition will be required. If the AKART determination completely eliminates the surface water discharge, then this Special Condition will be removed in the major permit modification.

The AKART determination will not be made by a major permit modification. The permit will be modified to establish final effluent limitations based on the AKART determination.

WET testing may be conducted prior to the establishment of a mixing zone. As established in Special Condition S8.A, characterization is performed on a dilution series consisting of a minimum of five concentrations and a control to estimate the concentration lethal to 50% of the organisms (LC₅₀). The dilution ratio for a mixing zone is necessary to establish the ACEC, not to characterize the wastewater.

WET limits do not need to be set through a major permit modification. An acute WET limit is automatically triggered by Special Condition S8.B if: (1) the median survival of any species in 100% effluent is below 80%, or (2) any one test of any species exhibits less than 65% survival in 100% effluent.

Comment: The Port urges Ecology to delete this condition in light of the litigation filed by over 100 plaintiffs challenging the WET rule. Edison Electric Institute v. EPA, (U.S. Court of Appeals, D.C. Circuit).

Response 27B: The condition is placed in the final permit to implement the requirements of Chapter 173-205 WAC. This comment lacks any detail, such as what

this litigation is about, what the status of the litigation is, or why we should be concerned with this litigation. The Department does not base permitting decisions on vague references such as this.

Comment: The Port should not be required to conduct acute testing with freshwater species for a marine discharge. Accordingly, the acute testing should be conducted rotating between the following species: mysid and topsmelt. The Port has reviewed the WET guidance and permit writer's manual and does not agree that freshwater species must be used to conduct acute testing for a marine discharge.

Comment: This section of the Draft Permit should be modified to add number 4, oyster larvae and 5, mussels. Ecology should determine that the range of test organisms is reflective of the range of potentially exposed organisms in the receiving water and is protective to the beneficial uses of the receiving waters.

Comment: The Draft Permit should be modified to add to the list of species oyster larvae and mussels, with appropriate test protocols. The Draft Permit also must include Ecology's determination that the range of test organisms reflects the range of potentially exposed organisms in the receiving waters and protects the beneficial uses of those waters.

Response 27C: At the Port's request, the acute WET testing species have been changed to Topsmelt and Mysid Shrimp. The reason that the draft permit used the freshwater species fathead minnow, daphnid, and rainbow trout is that the sensitivities of these species are similar to the marine species and they are usually more readily available at a lower cost. Please note that the species are not rotated during characterization; both species must be used for one year. Pacific oyster or mussels can only be used for chronic WET testing, so they have not been added to Special Condition S8.A.

Comment: Page 22 third paragraph: The following language should be added: "At the option of the Permittee, the fourth quarter characterization report can be combined into the final summary report, or submitted as a separate report, which will then be summarized with all of the quarterly report in the Summary Report."

Response 27D: This request is denied. The written reports for each quarterly monitoring event are detailed reports on the testing protocol and results. The final report is a summary that includes a table of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability which is developed during the period of testing. These two reports may be submitted simultaneously if the Port desires.

Comment: Page 22, fourth paragraph: The following language should be added to the first sentence: "... shall be conducted with the following species or a substitute species approved by the Department." As mentioned above, the species listed in this condition should be mysid and topsmelt.

Response 27E: This request is denied. See Response 27C above.

Comment: Special Condition S8 fails to require adequate testing methodology. Ecology must revise the Draft Permit to require that toxicity testing examine representative and worst-case scenarios. This requirements applies with equal force to the testing requirements for chronic toxicity of industrial wastewater and acute toxicity addressed in Special Conditions S9 and A10, respectively.

Response 27F: Special Condition S8.A requires effluent characterization using a dilution series consisting of a minimum of five concentrations and a control to estimate the concentration lethal to 50% of the organisms (LC₅₀) and 100 percent effluent. The dilution series will examine representative and worst-case scenarios.

28. S8.B Acute Toxicity - Effluent Limit For Acute Toxicity

Comment: This condition states that an effluent limit for acute toxicity will be added to the permit if certain effects are shown in testing. Accordingly, the Draft Permit must be modified to list an effluent for acute toxicity in the "Final Effluent Limitations" condition as one of the limits to be determined. This comment applies with equal force to the potential establishment of an effluent limit for chronic toxicity discussed in Special Condition S9.B of the Draft Permit.

Comment: This section is written in such a manner as to include an acute toxicity limit in the Draft Permit if certain effects are shown in testing. Why isn't an effluent limit for acute toxicity shown under the final effluent limitations as a To Be Determined (TBD)?

Response 28A : The Department has chosen to use this format in all of its NPDES permits. The acute toxicity effluent limit is not really To Be Determined, rather it can be automatically triggered by the effluent characterization.

Comment: Linking the establishment of an effluent limitation for acute toxicity to the anticipated mixing zone creates the potential for serious delays in addressing this vital issue. As discussed elsewhere in these comments, a mixing zone cannot legally be authorized until the IWS is operating consistently with AKART. The Engineering Report is not due for submission until one month after a new permit is issued, then Ecology must approve the Engineering Report, which is likely to take some months, and the Port has five years from approval to implement AKART. Under the Draft Permit, toxicity monitoring is to begin within 60 days after this implementation, and to continue for one year. A written report is due three months later, which will require review by Ecology and, if an effluent limit is to be set, a major permit modification with public participation. As a result, no effluent limit for acute toxicity of industrial wastewater is likely to be established for two more permit cycles. This creates an unacceptably long delay in addressing the toxicity of effluent discharge from the IWS. The Draft Permit must be modified to ensure that the need for an acute toxicity effluent limit is determined no later than the end of the next permit cycle. This comment applies with equal force to the

establishment of an effluent limit for chronic toxicity of industrial wastewater and for acute toxicity of stormwater addressed in Special Conditions S9 and S10, respectively.

Comment: S8 to S10 Toxicity Reports - Provision needs to be made to include representative and worst case scenarios. Toxicity testing and the potential setting of an permit effluent limit for toxicity is a positive step in protection of waters of the state. There is a problem with the timing however. The engineering report assessing AKART is not due until a month after the final permit is issued. Given the potential for extensive public comment and appeal of the permit, in its present form, it could be another six months or more before the permit is issued. After the permit is issued there is another month before the engineering report is submitted. Given the previous engineering reports submitted by POS, it is likely some revision of the report will be necessary after review by Ecology. It is likely this will take another six months. After the engineering report is accepted by Ecology, POS has another five years to implement the report. Two months after the new IWS startup, quarterly toxicity monitoring starts, with the testing running for a year. Three months after the completion of the final testing, a report is submitted to Ecology. After a period of review by Ecology, if toxicity is confirmed, a major permit modification is required with public comment. The likely outcome of this is that the issue of toxicity in the airport discharge will not be addressed in terms of an effluent limit for two more permit cycles. At best this is an unreasonably long delay in addressing the toxicity of effluent discharges from the airport. It is requested that Ecology make provision for including the toxicity component no later than the next permit cycle.

Response 28B: WET limits do not need to be set through a major permit modification. An acute WET limit is automatically triggered by Special Condition S8.B if, after one year of effluent characterization: (1) the median survival of any species in 100% effluent is below 80%, or (2) any one test of any species exhibits less than 65% survival in 100% effluent. If at the time the WET limit is triggered the dilution ratio in the mixing zone is not known, the effluent characterization continues until the time the dilution ratio is known.

The need for WET limits is determined through effluent characterization. It is not automatically assumed that a WET limit is necessary. The effluent characterization must be performed on the effluent, therefore it is necessary to wait until effluent from the final treatment system is available. WAC 173-205-030(4) allows facilities that are on a compliance schedule to implement technology-based controls to delay effluent characterization.

Comment: S8.B states that if an effluent limit is required, the limit will be "no acute toxicity" detected in a test concentration representing the acute critical effluent concentration (ACEC). The draft Permit states that the ACEC means the maximum concentration of effluent during critical conditions at the boundary of the "zone of acute criteria exceedance" assigned pursuant to WAC 173-201A-100 and "authorized" in Special Condition S1.C of the Draft Permit. The ACEC is to be defined by Ecology upon approval of the Engineering report. This provision required clarification. The Draft Permit must be modified to state that a "zone of acute criteria exceedance" is the same

thing as a mixing zone, to avoid unnecessary complication and confusion. Furthermore, the Draft Permit states that the size of the mixing zone will be established in a major permit modification with public participation, but it makes no similar assurance with respect to the establishment of the ACEC. The Draft Permit must be modified to assure that the establishment of the ACEC will be accomplished in a procedure that includes full public participation. This comment applies with equal force to the determination of the chronic critical effluent concentration (CCEC)

Response 28C: The zone of acute criteria exceedance is the acute mixing zone. The zone of chronic criteria exceedance is the chronic mixing zone. The size of the mixing zones, the ACEC and CCEC (which are derived from the acute and chronic dilution ratios) will be established through a major permit modification. If no mixing zone is granted, the ACEC and the CCEC are 100 percent effluent.

Comment: This condition should be revised to add a definition of "acceptable tests." "Acceptable tests" should exclude anomalous tests or those that do not meet EPA or the State's definition for test acceptability (e.g., control mortality). We propose the following revised language be added to subparagraph B(2): "(2) . . . in 100% effluent, and the tests meet EPA or Ecology's criteria for test acceptability and is not considered anomalous as defined under Special Condition S8.D."

Response 28D: Special Condition S8.B(2) has been modified to add: "...and the test meets the Department's criteria for test acceptability and is not considered anomalous by the Department."

Comment: If the Permittee complies with subsection D, failing a test should not be considered a violation of the permit. This should be clearly stated.

Response 28E: The permit states:

"In the event of failure to pass the test described in subsection C of this section for compliance with the effluent limit for acute toxicity, the Permittee is considered to be in compliance with all permit requirements for acute whole effluent toxicity as long as the requirements in subsection D are being met to the satisfaction of the Department."

This means that if the Permittee is not in compliance with the effluent limit, they are in compliance with the permit as long as the Permittee complies with the sections that follow. This language distinguishes between compliance with a limit and compliance with the permit.

29. S8.C Acute Toxicity - Monitoring For Compliance With An Effluent Limit For Acute Toxicity

Comment: Paragraph 1, first sentence: Monthly testing is extremely onerous and expensive. We request quarterly testing.

Response 29A: The Department denies this request.

Comment: We would like to be able to petition for less frequent testing if all species demonstrate low sensitivity. In this regard, we propose the following: "The Permittee may petition for less frequent testing if all species demonstrate low sensitivity. If one species demonstrates more sensitivity, the Permittee may petition to limit testing to this species and discontinue the rotational testing schedule between species."

Response 29B: This language has been added to Special Condition S8.C.

Comment: Check consistency between this section and the other S8 sections.

Response 29C: This section is consistent with the rest of Special Condition S8.

30. S8.D Acute Toxicity - Response To Noncompliance With An Effluent Limit For Acute Toxicity

Comment: Paragraph 1: Beginning additional compliance monitoring within one week is extremely difficult. The Port requests that additional monitoring be required within two weeks.

Response 30A: This request is denied. If the IWS is not discharging when the test results are received, testing should be conducted when the IWTP is started up again.

Comment: Paragraph 2: The term "anomalous" should be defined. In this regard, we suggest the following language: "Anomalous WET tests shall be identified and not used for compliance determinations, in accordance with WAC 173-205-090(1)(d)."

Response 30D: "Anomalous" is defined in Webster's II New Riverside University Dictionary as "deviating from the normal order, form, or rule." The Department does not believe that the suggested language defines "anomalous". As stated in this condition, the Department will determine if a test result is anomalous upon notification from the Permittee. Guidance on identifying anomalous WET tests is given in Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria.

31. S8.E Acute Toxicity - Monitoring When There Is No Permit Limit For Acute Toxicity

Comment: If no effluent limit is required, then no additional acute testing should be required.

Response 31: The Department denies this request.

32. S8.F Acute Toxicity - Sampling And Reporting Requirements

Comment: We request language be added to this condition to allow the effluent dissolved oxygen or salinity to be adjusted in order to keep the test organisms alive. These are all parameters that EPA allows in its test protocols.

Response 32: All testing should follow the specified EPA protocols. Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria, includes a discussion on aeration and salinity. The final permit has been modified to allow modification of the final effluent in keeping with the test protocol.

33. S9.A Chronic Toxicity - Effluent Characterization

Comment: This whole section (a very important section) is nil and void unless DOE requires S4. AKART be completed within the time frame of this permit.

Response 33A: Special Condition S9 is triggered upon the implementation of AKART. If AKART is implemented during this permit cycle, it will be in effect during this permit cycle.

Comment: This condition should be deleted because it is premature. See comments to S.8 above, which are incorporated by reference.

Response 33B: See Response 27A above.

Comment: Testing should be conducted quarterly for a year. If characterization monitoring demonstrates that limits are not required, no further testing should be required.

Response 33C: This request is denied.

Comment: References to ACEC are inappropriate as the ACEC is not applicable to chronic toxicity testing.

Response 33D: The ACEC is applicable to chronic toxicity testing. After completion of the effluent characterization, the Permittee has a chronic WET limit if any test conducted for effluent characterization shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing.

Comment: Testing should be rotated between species and the Permittee should be able to use a substitute species approved by the Department. In this regard, we propose that the following language be added to the first sentence of the second paragraph on page 26: ". . . shall be conducted on a rotating basis with the following three species or a substitute species approved by the Department . . ."

Response 33E: The Department denies this request.

Comment: Language should be added to account for the fact that the reproductive biology of bivalves is such that larvae for the tests cannot always be obtained or spawned.

Comment: In the last paragraph the protocols for bivalves are described. Historically, acceptable oyster tests have been extremely difficult to successfully complete in some years. These problems are due to difficulties in obtaining organisms in good condition from a fairly limited set of suppliers. If such a situation occurs during the term of the permit, the Port requests that the echinoderm test be used instead of the bivalve test.

Response 33F: The historical problems with bivalve testing have not existed for several years, due to the more common use of bivalves for WET testing in recent years.

Comment: Oyster or mussels are included under chronic toxicity test organisms, any reason not to include them for acute testing?

Response 33G: Oysters and mussels testing protocol is only for chronic testing, not acute testing.

34. S9.C Chronic Toxicity - Monitoring For Compliance With An Effluent Limit For Chronic Toxicity

Comment: Limits should be set by a major permit modification.

Response 34A: WET limits do not need to be set through a major permit modification. A chronic WET limit is automatically triggered in Special Condition S9.B if, after completion of effluent characterization, any test conducted for chronic effluent characterization shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing.

Comment: First paragraph, first sentence: Monthly testing is expensive and onerous without any corresponding environmental benefit. The Port requests quarterly testing.

Response 34B: The Department disagrees with the statement that there is no environmental benefit from testing an effluent monthly that has an effluent limit for chronic toxicity. The WET limit is established when it is shown that the effluent has a reasonable potential to violate the water quality standard for toxicity. Environmental benefit is derived from verification that the effluent is not violating the water quality standard. If the testing shows a violation of the WET limit, the permit requires actions to be taken by the Permittee to confirm the toxicity, to identify its source, and to reduce or eliminate it. If the permit allowed quarterly monitoring instead of monthly, the discharge could be toxic without indication for almost three months longer.

Comment: We would like to be able to petition for less frequent testing if all species demonstrate low sensitivity. In this regard, we propose the following: "The Permittee may petition for less frequent testing if all species demonstrate low sensitivity. If one

species demonstrates more sensitivity, the Permittee may petition to limit testing to this species and discontinue the rotational testing schedule between species."

Response 34C: This language has been added to Special Condition S9.C.

35. S9.D Chronic Toxicity - Response To Noncompliance With An Effluent Limit For Chronic Toxicity

Comment: First paragraph: Beginning additional compliance monitoring within one week is very difficult. The Port requests that compliance monitoring begin within three weeks.

Response 35A: This request is denied.

Comment: Second paragraph: The term "anomalous" should be defined. In this regard, we suggest the following language: "Anomalous WET tests shall be identified and not used for compliance determinations, in accordance with WAC 173-205-090(1)(d)."

Response 35B: See Response 30D above.

36. S9.E Chronic Toxicity - Monitoring When There Is No Permit Limit For Chronic Toxicity

Comment: If the characterization monitoring demonstrates that limits are inappropriate, no further monitoring should be required.

Response 36A: This request is denied.

Comment: The requirements in subsection E that the permittee contact Ecology for clarification on testing is unacceptably vague.

Response 36B: If less than one summer and one winter are available between final characterization and the due date for the permit renewal application, the Department will determine whether two effluent toxicity tests should be performed in a shorter time frame. The Port should contact the NPDES permit manager for clarification.

37. S9.F Chronic Toxicity - Sampling And Reporting Requirements

Comment: Language should be added to allow the effluent dissolved oxygen or salinity to be adjusted in order to keep the test organisms alive. These are parameters that EPA allows in its test protocols. The sampling requirement described in this condition is unclear and is susceptible to two different meanings. The language could require composited subsamples to be held at 4 degrees Celsius while awaiting other subsamples

for composting. On the other hand, subsamples should be cooled during the collection process. The Port would appreciate clarification on this issue.

Response 37: All testing should follow the specified EPA protocols. Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria, includes a discussion on aeration and salinity. The final permit has been modified to allow modification of the final effluent in keeping with the test protocol.

Samples should be cooled immediately upon collection. Automatic samplers should be iced or refrigerated to accomplish this. Subsamples should be kept cool until they are mixed, then they should be cooled again.

38. S10. Acute Toxicity – Stormwater

Comment: Boeing does not believe it is necessary to impose stormwater WET testing in this permit when the data generated thus far demonstrates there is no reasonable potential to exceed water quality standards. In addition, reliance on end of the pipe samples, which have not had the benefit of dilution, to support a reasonable potential analysis. EPA's recent stormwater guidance has called into question the usefulness of stormwater WET testing. We urge to Department to delete these requirements from the permit.

Comment: The Port objects to this condition for many reasons. The BMPs and monitoring under the current permit have demonstrated that the stormwater at the airport has no reasonable potential to exceed water quality standards. Thus, WET testing should not be required.

Response 38A : The stormwater data generated during the previous permit cycle shows that the stormwater discharges may have reasonable potential to violate the narrative water quality criteria for toxicity. Acute WET monitoring is therefore required per WAC 173-205-050 during the first year of the permit term.

Please note that mixing zones are not automatic, but must be granted in a permit. Mixing zones may not be granted unless supporting information clearly indicates the mixing zone would not have a reasonable potential to cause a loss of sensitive or important habitat, substantially interfere with the existing or characteristic uses of the water body, result in damage to the ecosystem, or adversely affect public health as determined by the Department. Given the following sizing criteria and the requirement to use critical low flow conditions, the amount of dilution available in a mixing zone in either Miller Creek or Des Moines Creeks is probably very minimal. The maximum size of an acute mixing zone in a stream (assuming no diffuser) is the most restrictive of the following:

- 1) No more than 30 feet downstream or 10 feet upstream,
- 2) Shall use no more than 2.5% of the flow, and
- 3) Shall not occupy greater than 25% of the width of the water body.

Comment: There is a questionable technical basis for conducting toxicity testing on stormwater, particularly for the durations indicated in the permit. Because stormwater discharges are typically on the order of minutes to hours in duration (rarely more than 16-24 continuous hours), exposing test organisms to stormwater discharges for 48 to 96 hours greatly exaggerates the potential exposure of aquatic life in the receiving streams.

Response 38B: WET testing must be consistent with the accepted protocol for the data to be useful. The Department disagrees that two to four days of rain in a row at Sea-Tac Airport is a "great exaggeration".

Comment: Previous monitoring has demonstrated that there is no need for biomonitoring. The Stormwater Receiving Environment Monitoring Report (June 1997) discussed the biomonitoring (Microtox) conducted in Miller and Des Moines Creeks. This monitoring showed that there was little toxicity in any of the samples collected at the outfall, upstream or downstream in Miller and Des Moines Creeks. Little or no toxicity was observed even during deicing events. Even on those rare instances when toxicity was observed, the toxicity was only marginal. Thus, there is no basis to require WET testing for stormwater.

Response 38C: WAC 173-205-050(1)(a) requires the dischargers meeting the risk definition of WAC 173-205-040(1) to characterize the effluent for toxicity during permit application or during the first year of the permit term using multiple species which include at a minimum a fish, and invertebrate, and if deemed appropriate by the department, a plant. The bacterial bioluminescence test (Microtox®) performed in the receiving water does not satisfy this requirement.

Comment: WET testing is not appropriate at outfalls 003, 005, 006, and 007. As acknowledged in the fact sheet (page 11), outfalls 003, 005, and 006 also drain non-Port property. This non-Port property includes public roads and commercial areas capable of generating potential stormwater toxicity, especially from metals. Because runoff from these non-Port areas is commingled with the Port's stormwater at the outfall sampling points, it would be very difficult, and may be impossible, to attribute toxic results to either Port or non-Port activities. Additionally, regarding outfall 003, runoff from industrial activities has been diverted to the IWS by two capital BMPs. The drainage area for this stormwater outfall was reduced from 40 acres to 6 acres, which now consists of mostly rooftops and public roads. therefore, WET testing is not appropriate at this outfall. Likewise, most of the industrial drainage from outfall 007 is diverted to the IWS.

Response 38D: The final permit requires Outfalls 002, 005, 006, and 011 to be characterized for acute WET during the first year of the permit term. If toxicity is detected in these outfalls, the Port should make all effort to determine if the source of toxicity is off-site.

Comment: The additional testing required by this condition is contrary to EPA guidance, which recognizes that BMPs are the appropriate methods for managing

stormwater. (EPA Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits (August 1, 1996)). EPA recommends that state agencies follow this guidance. EPA has recognized that BMPs should be used to manage stormwater because stormwater discharges are highly variable in terms of flow and pollutant concentrations. The relationships between the discharges and water quality can be complex. This makes characterization very complex and difficult.

Response 38E: The EPA guidance referenced in this comment states the following:

“Each stormwater permit should include a coordinated and cost-effective monitoring program to gather necessary information to determine the extent to which the permit provides for attainment of applicable water quality standards and to determine the appropriate conditions or limitations for subsequent permits. Such a monitoring program may include ambient monitoring, receiving water assessment, discharge monitoring (as needed), or a combination of monitoring procedures designed to gather necessary information.”

Special Condition S10 implements this guidance by requiring monitoring to determine if the stormwater discharges from Outfalls 002, 005, 006, and 011 have a reasonable potential to violate the narrative water quality standard for toxicity.

Comment: Ecology has recognized that development of a SWPPP and implementation of available and reasonable BMPs constitutes AKART. Fact Sheet to Stormwater Industrial Activities General Permit and Construction General Permit (pages 10 and 7, respectively). The Port's SWPPP and BMPs have been approved by Ecology and implemented by the Port.

Response 38F: The final permit requires the Port to update the SWPPP to address those contaminants that may pose a reasonable potential to violate the water quality standards, including fecal coliform, copper, lead, and zinc. If the stormwater WET monitoring shows toxicity, the SWPPP must be modified in accordance with Special Condition S12.B.2.

Comment: The Port urges Ecology to delete this condition in light of the litigation filed by over 100 plaintiffs challenging the WET rule. Edison Electric Institute v. EPA, (U.S. Court of Appeals, D.C. Circuit).

Response 38G: This request is denied.

Comment: Toxicity testing is done quarterly. The industrial wastewater delay issue is addressed above. For stormwater Ecology allows POS until the year 2001 to turn in their report, with no date by which POS must start sample collection. For both industrial wastewater and stormwater there are no requirements to assure the samples taken represent the worst case scenario (in general first flush). This is not acceptable. A methodology should be developed and imposed in the permit conditions which require sampling during peak storm events.

Response 38H: The final permit requires the Port to perform the stormwater WET testing during the first year of the permit term. A stormwater WET characterization summary report will be submitted within 90 days after the last monitoring test results are final. Testing is required on composite stormwater samples taken during the first one inch of rainfall, or the entire storm event if it is less than one inch.

39. S10.A Effluent Characterization

Comment: The second paragraph should contain the following additional language: "At the option of the Permittee, the final characterization test report can be combined into the final effluent characterization summary report, or submitted as a separate test report, which should then be submitted with all of the test reports in the Summary Report.

Response 39A: This request is denied. See Response 27D above.

Comment: Only outfalls 002, 005, and 011 should be sampled, which is consistent with our comments to Special Condition S2.B above. Additionally, outfall 011 is substantially equivalent to outfall 007 and should therefore be substituted.

Response 39B: The final permit requires WET testing at Outfalls 002, 005, 006, and 011.

Comment: Why did Ecology fail to include outfall 008 in the testing? The October, 1997, Discharge Monitoring Reports for the airport, shows a highly elevated fecal coliform level (1600/100 ml). As Ecology is aware, the presence of elevated levels of fecal coliform is used as an indicator of potential toxicity to fish and shell fish, as well as humans. The value also grossly exceeds, by orders of magnitude, the surface water quality criteria for fecal coliform. The section specifies that only two characterization rounds need to be done per specified outfalls, why will that take three years? There are no provisions for when samples are taken. Wording should be added to catch the first flush, which is where the majority of the toxicity to surface waters would be expected.

Comment: Special Condition S10.A has at least three deficiencies. First, the Draft Permit must be modified to add Outfall 008 to this list or explain why it is not included. Second, the Draft Permit must be modified to require that this testing be completed within a shorter time period, or to explain why a three-year period is necessary to perform only two tests at each outfall. Third, we believe that the Draft Permit must be modified to require that samples are timed to catch the early part of any release where the majority or the toxicity to surface waters would be expected.

Response 39C: Stormwater characterization for WET is required to determine if there is a reasonable potential to violate the narrative water quality criteria: toxic substances shall not be introduced above natural background levels in waters of the state which have the potential either singularly or cumulatively to adversely affect characteristic water

uses, cause acute or chronic toxicity to the most sensitive biota dependent upon those waters, or adversely affect public health, as determined by the Department.

Fecal coliform is an indicator species used to indicate the presence of pathogens from warm-blooded animals, including humans. Fecal coliform are not toxic to fish, shell fish, or humans. Fecal coliforms reside the intestinal systems of humans. Pathogens indicated by the presence of fecal coliforms may adversely affect public health. WET testing is not designed to monitor the effect of fecal coliform bacteria on human health.

The final permit requires WET testing at Outfalls 002, 005, 006, and 011 to be performed twice during the first year of the permit. Outfall 008 is not included because Outfall 011 is representative of the industrial activity that occurs in the drainage area of Outfall 008.

The final permit requires that WET testing be performed on a composite sample taken during the first inch of a rain event, or less if the total rain event is less than one inch. The Annual Stormwater Report for 1996 – 1997 included a discussion of washoff function for BOD₅ in the SDN2 subbasin. Studies performed during the previous permit cycle found that the first 0.6 to 1.0 inches of precipitation after a major runway deicing event washed off the vast majority of deicing chemicals applied. Although it should not be assumed that the washoff function of other pollutants is the same as BOD₅ from runway deicing chemicals, it is our best guess at what amount of rain might constitute the "first flush".

40. S10B Sampling And Reporting Requirements

Comment: Use of bioassays 48-96 hours in duration to evaluate discharges of considerably less duration (i.e., not continuous) is not appropriate.

Response 40A: The Department disagrees with this comment.

Comment: A clause should be added to allow the effluent DO or salinity to be adjusted in order to keep the test organisms alive. These are parameters that EPA allows in its test protocols.

Response 40B: All testing should follow the specified EPA protocols. Ecology Publication No. WQ-R-95-80, Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria, includes a discussion on aeration and salinity. The final permit has been modified to allow modification of the final effluent in keeping with the test protocol.

41. S11 Sediment Monitoring (Marine)

Comment: The Port objects to this condition. The Port recently submitted an expensive sediment monitoring study and report to Ecology, which demonstrated that "no substance exceeded its respective sediment quality standard or lowest apparent effects threshold value." Fact Sheet at page 31. The data in the study were recent. Concentrations of chemicals in sediments tend to reflect long-term inputs from the water column and do not

change rapidly. Therefore, frequent monitoring of sediments is unnecessary. The IWS improvements that have been made or will be implemented under Special Condition S4, will decrease the sediment chemical concentrations, which would certainly not warrant sediment re-characterization. Under these circumstances, there is no basis to impose a requirement that the Port conduct additional sediment monitoring. This condition should be deleted.

Response 41A: The Department denies this request. Although the sediment monitoring study showed that there is probably no great concern for adverse biological effects in the sediments from the combined discharge at Outfall 001, it was impossible to draw a final conclusion because the detection levels for a number of compounds were too high. The reported detection limits for phthalates, total PCB's, and several other compounds exceeded both the total organic carbon (TOC) normalized sediment quality criteria and the alternate dry weight normalized Lowest Apparent Effects Threshold (LAET) values. Therefore, the final permit requires resubmittal of the report with additional chemical analyses at lower detection levels. Because phthalates and PCB's have been detected in the IWS discharge, and because phthalate and PCB levels seem to be accumulating in the sediments, further sediment monitoring will be required for all 47 compounds in the standard scan, with a focus on phthalates and total PCB's at stations 105-109 (the stations around the diffuser).

Comment: It is important to repeat the baseline sampling of the marine sediment at the Puget Sound outfall from the Midway sewage treatment facility. I understand this is currently included as a condition of the permit, and I believe it should remain a condition of the permit. This is particularly crucial because there are no plans for ongoing monitoring. Puget Sound is a priceless treasure of the Pacific Northwest, and every extra effort should be made to ensure that the Port of Seattle is not contributing to the pollution of the Sound.

Response 41B: Special Condition S11 remains in the final permit.

Comment: S11B Sediment Data Report - Why is it going to take three years to generate the sediment data report?

Comment: Ecology must modify the Draft Permit either to require this report within a significantly shorter period of time, or to explain fully why such a long period of time is necessary.

Response 41C: The final permit requires the sediment sampling plan to be submitted within one year of permit issuance. The final report is due within three years to allow sufficient time for the Department to review and approve the sampling plan, for the actual sampling event, analysis of the data, and report preparation.

Comment: Change the Sediment Report to at least one per year with quarterly updates if violations occur.

Response 41D: Routine monitoring for sediment quality will be required if a sediment quality-based effluent limitation is used for the IWS final effluent limits. If the sediment sampling performed per Special Condition S11 shows sediment contamination, this information will be passed on the Department's Toxic Cleanup Program.

Comment: Does Ecology already have adequate toxicity data on sediments in the vicinity of Outfall 001? If not, toxicity data should be collected in sufficient quantity and of sufficient quality to determine the extent, if any, of toxic impacts related to the outfall. This should include a survey for life forms when divers next examine the outfall. This information would have some bearing on decisions related to the nature and extent of the mixing zone for outfall 001.

Comment: Ecology must modify the Draft permit to ensure that adequate data is available concerning the toxicity of sediments in the vicinity of Outfall 001. We believe that the gathering of such data must include a survey for life forms by divers inspecting the outfall, as this information could influence decisions related to the nature and extent of the anticipated mixing zone for Outfall 001.

Response 41E: Sediment biological testing, including benthic abundance testing, is not required until monitoring shows that the chemical concentration in the sediments exceed an applicable chemical or human health criteria contained in WAC 173-204-320.

42. S12 Stormwater Pollution Prevention Plan (SWPPP) For Airport Operations

Comment: There are some activities that should be exempt from the SWPPP requirements. These exemptions are contained in the Stormwater Industrial General Permit and should be incorporated into this condition. The exemptions are as follows: 1) In accordance with 40 CFR 122.3(d), any part of the facility which is in compliance with the instructions of an On-Scene-Coordinator pursuant to 40 CFR part 300 (the National Oil and Hazardous Substances Pollution Contingency Plan) or 33 CFR 153.10(e) (Pollution by Oil and Hazardous Substances); 2) any part of the facility with a stormwater discharge resulting from remedial action conducted by the USEPA or Ecology or a potentially liable/responsible person under an order, agreed order, or consent decree issued under the Comprehensive Environmental Response, Compensation, and Liability Act, or the Model Toxics Control Act.

Response 42A: 40 CFR Part 122.3(d) excludes any discharge in compliance with the instructions of an On-Scene-Coordinator pursuant to 40 CFR part 300 (the National Oil and Hazardous Substances Pollution Contingency Plan) or 33 CFR 153.10(e) (Pollution by Oil and Hazardous Substances) from the requirement to obtain an NPDES permit. Since Sea-Tac Airport already has an NPDES permit, this exclusion does not apply.

The Baseline General Permit for Stormwater Discharges Associated with Industrial Activities states that any part of a facility with a stormwater discharge resulting from remedial action conducted by the USEPA or Ecology or a potentially liable/responsible

person under an order, agreed order, or consent decree issued under the Comprehensive Environmental Response, Compensation, and Liability Act is not required to apply for coverage under the General Permit, but must still comply with the requirements in the general permit determined by Ecology to be applicable, relevant and appropriate under these laws. Implementation of a SWPPP is applicable and relevant.

Comment: It is requested that Ecology make a copy of the SWPPP available at a public repository to facilitate easy public access.

Response 42B: Special Condition S3.G in the final permit includes a requirement that all plans be made available to the public.

43. S12.A SWPPP for Airport Operations – Objectives

Comment: What happens if such discharges are not eliminated from the stormwater, and on what schedule?

Comment: The first stated objective is to eliminate the discharges of unpermitted industrial wastewater, domestic wastewater, noncontact cooling water, or other illicit discharges to the storm drain system. Ecology must modify the Draft Permit to specify the activities and measures that will be implemented if such discharges are not eliminated from the stormwater, and the schedule for such elimination.

Response 43A: Whenever a self-inspection reveals discharge of industrial wastewater, domestic wastewater, noncontact cooling water, or other illicit discharges to the storm drainage system, the SWPPP should be modified within two (2) weeks of such inspection for noncapital BMPs and within six (6) months of such inspection for capital BMPs. The Port should provide for implementation of any modifications to the SWPPP in a timely manner.

Comment: The second stated objective is to implement and maintain BMPs. As noted above, to date the effectiveness of BMPs has been questionable at best.

Comment: While the concept of having a SWPPP in place is good, it needs to be noted that in spite of having a SWPPP in place for some time at the airport some of the highest pollutant levels discharged to Miller Creek and Des Moines Creek have occurred recently. In particular, data for glycols and fecal coliform are reason for concern and show the limitations of using a SWPPP and Best Management Practices (BMPs) for controlling industrial discharges from the airport to the local creeks. While there are some technical concerns related to how to treat dissolved copper and zinc being discharged to the creeks, those concerns do not apply to fecal coliform and glycols. For both these parameters, there are available means of treatment and control that would be protective of waters of the state. It is not acceptable for POS to continue discharging these pollutants in large amounts to the creeks.

Comment: In spite of the implementation of the Stormwater Pollution Prevention Plan (SWPPP), Best Management Practices (BMPs), during the previous permit cycle (1994 to 1998), unacceptable levels of industrial discharge to waters of the state have continued. The highest level of glycol discharge monitored in storm water were from samples taken last winter, in the final year of the in force permit. In a similar manner there were repeated detections of levels of fecal coliform well in excess of any acceptable discharge to waters of the state. The permit fails to address these discharges or to adequately protect waters of the state from these discharges.

Response 43B: The complete implementation of the SWPPP occurred by July 1, 1997. Stormwater monitoring for glycols since this time has shown that the SWPPP has been effective. The Annual Stormwater Report for 7/96 through 5/97 includes a discussion of special monitoring and investigations that the Port conducted as SWPPP activities intended to reduce and eliminate stormwater pollution. This discussion is a direct example of the effectiveness of the SWPPP requirement. The final permit requires the updated SWPPP to address the presence of fecal coliform, copper, lead, and zinc in stormwater.

Comment: The third stated objective is to prevent violations of water quality, ground water quality, or sediment management standards. Ecology must modify the Draft Permit to make this a requirement, not an objective.

Response 43C: The intent of the entire permit is to prevent violations of water quality, ground water quality, or sediment management standards.

Comment: We understand that currently the Port has little or no control over peak rates and volumes of stormwater for most of the outfalls. Ecology must modify the Draft Permit to include permit requirements to meet this objective, and to specify a schedule for completing those steps.

Comment: At this time there is little or no control of peak rates and volume of stormwater for most of the outfalls. How will this be corrected and on what schedule?

Response 43D: The only stormwater outfall that discharges without detention is Outfall 009. The rest of the stormwater discharges flow through either the Northwest Ponds, Tyee Pond, or Lake Reba. There is no rule requiring retrofitting of stormwater discharges to meet the current detention requirements. Any further detention for the existing facility will have to be developed voluntarily through the basin planning process. All new development will have to comply with the requirements of the Stormwater Management Manual for Puget Sound.

44. S12.B SWPPP for Airport Operations – General Requirements

Comment: 1. Requires an evaluation of SWPPP measures taken to reduce pollutant loadings to assure they are adequate and properly implemented and if additional controls are needed. Is this information available from the current SWPPP? If so, what does the

information show?

Response 44A: The current SWPPP, dated November 27, 1995, includes a discussion of pollutants found in the stormwater monitoring (Chapter 2), a discussion of the potential pollution sources (Chapter 3), and a list of BMPs (Chapter 4) to address the pollution sources listed in Chapter 3. The information in the SWPPP showed that the improvements made in the collection of industrial wastewater in 1996 and 1997 were necessary.

Comment: 2. This language appears to be an equivalent but equal language, i.e., no modification of the SWPPP is necessary as long as alteration of "airfield facilities or their operation or maintenance" does not cause the SWPPP to be "less effective in controlling pollutants". This language is unacceptable for a number of reasons. First the phrase "which causes the SWPPP to be less effective in controlling pollutants", is subjective as the determination is left up to the permittee, without any firm parameters to define what is meant by the phrase that are clearly and mutually understood by POS, Ecology and the public. Second, the language is also inconsistent with the purpose of the Clean Water Act which requires facilities to in an ongoing fashion reduce the discharge of pollutants to navigable waters. Third, there is a need to keep the SWPPP consistent and in sync with other permit documents, such as the operation and maintenance manual. There is already a substantial problem at the airport with inconsistency between drawing sets and information groups as to utilities and facilities. It is important to avoid this problem in the permit. It is also important the permittee consider the SWPPP process whenever changes to existing facilities or new facilities are put in place. The best way to do this is to require POS to update the SWPPP to include what ever changes have taken place, on a regular schedule.

Response 44B: This comment ignores the second paragraph in Special Condition S12.B.1, which requires that the SWPPP be modified whenever a self-inspection reveals that the SWPPP is inadequate. These two paragraphs have been separated into a and b to emphasize that.

Comment: 3. The ability to incorporate "applicable portions of other plans" to reduce paper work and reduce needless expenditure of resources is fine, as long as the incorporated sections are physically in the SWPPP and not by reference.

Comment: Ecology must modify the Draft Permit to require that such additional documents be incorporated into the SWPPP physically rather than by reference.

Response 44C: If other plans are referenced in the SWPPP, they must be made available per the requirements of Special Condition S3.G.

Comment: 4. c. Why is the description of source-control BMP's limited to "selected" BMPs?

Comment: Ecology must modify the Draft permit (I) to require description of all source-control BMPs in the SWPPP, not just "selected" ones, and (ii) to describe all treatment BMPs, without the "when necessary" qualifier.

Comment: Source control BMPs are a vital part of the SWPPP and should be included in a complete fashion.

Comment: 4. e. Why is there a qualifier "when necessary" added to the requirement to describe treatment BMPs? Given the history of this facility and recent data from the discharges and ambient receiving water data the need for treatment BMPs is obvious, with no need for qualifiers.

Response 44D: Special Condition S12.B.4 has been modified to require that the SWPPP include a description of the selected BMPs, including operational, source-control, erosion and sediment control, and treatment BMPs. The SWPPP does not have to include a description of BMPs that are not applicable to the airport.

Comment: The Port objects to notifying the City of SeaTac. If the Port is in compliance with its SWPPP, the City has no basis to be informed of the Port's activities. The Port has recently signed an Interlocal Agreement with the City of SeaTac, which calls for significant information sharing. There is no need to add to that Agreement here.

Response 44E: The Department disagrees with this comment. If the Port is discharging stormwater to the City of SeaTac storm sewer, then the City should be informed of the activities that may impact that discharge and the BMPs chosen to protect the City of SeaTac's storm drainage system. The Department is not aware of the details of the Interlocal Agreement with the City of SeaTac and would appreciate a copy of the agreement if we are to base permitting decisions on it.

Comment: The Port requests that the SWPPP be revised and submitted to Ecology within 12 months from permit issuance. Special Condition S12.B.2 already obligates the Port to modify the SWPPP when there is an alteration of the facilities that causes the SWPPP to be less effective in controlling pollutants. Under these circumstances, requiring the SWPPP to be updated and submitted to Ecology twice during the permit cycle is expensive and unnecessary.

Response 44F: This request is denied. The current SWPPP was submitted to the Department on November 27, 1995 and is outdated.

Comment: The permit should be more aggressive in addressing the problem of high levels of heavy metals in Miller Creek and Des Moines Creek. While I understand that the permit conditions have been designed to satisfy the requirements of state waste discharge statutes, the Port of Seattle has the resources to move much more quickly than the compliance schedule required in the permit conditions. I also recognize that the high levels of copper and zinc are comparable to levels found in studies at other similar sites.

Nonetheless, just because the problem exists elsewhere does not mean we shouldn't be aggressive in solving it here.

Response 44G: The Department agrees that the presence of copper, lead and zinc in urban stormwater are of concern, but not that the levels present in the airport discharges are "high". The final permit requires the updated SWPPP to address metals and to perform acute WET testing on stormwater.

Comment: The timelines for modifying the SWPPP are impractical and appear to be unnecessarily short. The Port should be given at least two months to modify the SWPPP for non-capital BMPs and one year for capital BMPs.

Response 44H: This condition is based on the General Stormwater Permit and cannot be changed. The conditions in this individual permit must be as stringent as those in the general permit.

Comment: This condition should allow the Port to select BMPs that are appropriate for airports, regardless of whether they are contained in the SWMM or another manual. Site-specific BMPs should be encouraged. In this regard, we propose the following alternate language: "In selecting BMPs, the Permittee shall review the most recent published edition of the SWMM, or other manuals deemed to be equivalent by the Department, available at least 120 days before the selection of the BMPs. The Permittee may develop site-specific BMPs that are appropriate for airport industrial activities, including experimental BMPs."

Response 44I: The draft permit already allowed this.

45. S12.C SWPPP for Airport Operations – Implementation

Comment: The Port objects to being required to conduct four inspections per year. Other permit holders are only required to conduct two inspections per year. This condition should be revised so that two inspections are required each year: one during the wet season and one during the dry season.

Response 45: By "Other permit holders", it is assumed that the Port is referring to facilities covered by the Baseline Stormwater Permit. As discussed previously in this summary, Sea-Tac Airport is not comparable to general permitted-facilities and therefore this permit is more stringent than the General Baseline Permit.

46. S13 Stormwater Pollution Prevention Plan (SWPPP) For Construction Activities

Comment: The Port objects to being regulated more extensively than would be required under the Construction General Permit. Virtually every other construction project in the

state is built under the General Permit. There is no basis to impose more stringent conditions in this permit than are contained in the General Permit.

Comment: In many respects, this condition exceeds the scope of Ecology's statutory and regulatory authority. Our research has revealed no other permit in the state that so extensively regulates stormwater associated with construction activity. In particular, the Port objects to including provisions in this condition based on the Governor's Certification. There is no statute or regulation that specifically authorizes Ecology to include these provisions in this NPDES permit. There are other vehicles within which to enforce the Governor's Certification, such as an Administrative Order under RCW 90.48. This condition should be revised to be consistent with the Construction General Permit.

Comment: I question whether this permit should have more stringent requirements for handling construction stormwater than every other construction project in the state which are regulated under the general permit. I am mainly concerned that there be consistency with regard to regulations and that the Department treat projects similarly.

Comment: With regard to stormwater management, we support the proposed requirement that the Port produce a Stormwater Pollution Prevention Plan for major construction projects and that the plan be attached to bid packages.

Response 46A: The Department believes that the potential impacts to the sensitive receiving waters of Miller Creek, Walker Creek, and Des Moines Creek from the construction projects included in the Master Plan Update justify the requirements contained in Special Condition S13. The State of Washington Water Pollution Control Law requires the Department to incorporate permit conditions which require all known, available, and reasonable methods to control toxicants in an applicant's wastewater (RCW 90.48.520). The requirements contained in Special Condition S13 are then a requirement of state law and remain in the final permit.

Comment: The Port requests language stating that this condition is imposed in lieu of the General Permit Associated with Construction Activities. This is necessary to clarify that there is no obligation for the Port to obtain a General Permit for construction activities conducted at the airport.

Response 46B: This NPDES permit is clearly issued to the Port of Seattle for stormwater discharges from Sea-Tac Airport. The permit clearly defines the areal extent of coverage in Special Condition S1. The Department does not believe that it is unclear that this permit covers stormwater discharges associated with construction activities at the airport within the boundary of the permit. It is not necessary to clarify that the Port does not have to obtain another NPDES permit for construction activities conducted at the airport.

Comment: Ecology's general permit associated with construction activities governs only point source discharges to surface waters that disturb 5 acres or more. The general permit requires that construction BMPs be implemented through a SWPPP. Special Condition

S13, however, goes well beyond the general permit and beyond the EPA and Ecology guidance for construction activities by regulating point and non-point source activities and requiring a monitoring plan for all projects. This type of regulation is unprecedented and is not supported by any federal or state statute or regulation.

Response 46C: This permit is issued under the authority of chapter 90.48 RCW, which governs discharges of pollutants to waters of the state from all activities. RCW 90.48.520 requires the Department to incorporate permit conditions which require all known, available, and reasonable methods to control toxicants in an applicant's wastewater.

Comment: The triggering event for a construction SWPPP is the discharge of stormwater from a point source to surface water or a storm drain. Moreover, many activities should not be included in the construction activity category. Accordingly, the first paragraph of S13 should be revised. The following revisions are consistent with the Stormwater General Permit for Construction Activities: "A SWPPP for construction activity shall be prepared and implemented prior to the commencement of any construction activity which disturbs five (5) or more acres of total land area, including clearing, grading and excavation activities; and those sites or common plans of development or sale that will result in the total disturbance of five acres or more land area and also have a point source discharge of stormwater to a surface water or storm drain.. The following construction activities do not require a Construction SWPPP: 1) construction activities which discharge stormwater only to the ground through infiltration basins, dry wells, drain fields, and any other discharge to the ground and have no point source discharge to surface water or a municipal storm sewer; 2) any part of a facility with a stormwater discharge resulting from remedial action conducted by the USEPA or Ecology or a potentially liable/responsible person under an order, agreed order or consent decree under the Comprehensive Environmental Response, Compensation, and Liability Act or the Model Toxics Control Act, 3) any emergency construction activity required to protect public health and safety, and 4) any construction activity for routine maintenance of existing facilities to maintain original line and grade, or hydraulic capacity."

Response 46D: The Department denies this requested language modification.

Comment: We believe that more attention needs to be paid to construction activities related to the SWPPP than was evidenced in the last permit cycle. There were substantial discharges to Des Moines Creek from construction activity related to the runway safety area at the south end of the Airport. We understand, in addition, that at the north end of the Airport, a contractor placed a soil stockpile almost on top of a storm drainage monitoring location, so close that the automatic sampler was knocked over and filled with soil, making it impossible to sample that location. We understand, in addition, that the Port may have used coverage under a general permit for construction to justify a lesser level of oversight and prevention than what would have been required under the construction requirements of its existing NPDES permit. Ecology must revise the Draft Permit to require that all construction projects are subject to the pollution prevention controls of the NPDES permit.

Comment: I do not agree that 5 acres or less should be exempt from construction activities "including clearing, grading, filling, and excavation." All of this kind of activity should require procedures to prevent pollution of stormwater.

Comment: Ecology needs to reduce the disturbed land requirement from five acres to one acre. POS has already successfully skirted around this limit by failing to get an Army Corps of Engineers, Section 404, Clean Water Act permit for its North Employee Parking Lot construction. This points out the need for a better mechanism (or better use of existing mechanisms) of coordination between Ecology and the Army Corps of Engineers regarding duties and permitting authority under the Clean Water Act.

Response 46D: The Department does not believe it is necessary to lower the acreage limit from five acres to one acre prior to promulgation of the federal regulation. The acreage limit will automatically lower when the federal standards are lowered.

Comment: Ecology has indicated, to the community, that some changes are being implemented in the approach to monitoring and enforcement related to airport construction activities. To what extent can those changes be incorporated in the language of the permit?

Comment: More attention needs to be paid to construction activities related to the SWPPP than what was evidenced in the last permit cycle. There were substantial discharges to Des Moines Creek from construction activity related to the runway safety area at the south end of the airport. At the north end of the airport, a contractor placed a materials stockpile (soil) almost on top of a storm drainage monitoring location. The stockpile was so close to the storm drain location that the automatic sampler was knocked over and filled with soil, making it impossible to sample that location. There is also a concern that POS used the coverage under the general permit for construction, to justify a lesser level of oversight and prevention than what would have been required under its specific NPDES permit, construction requirements. This led to the Miller Creek disaster this fall. Are there any additional construction projects POS has planned that are outside what Ecology considers to be the industrial activity area of the airport?

Comment: It is requested that Ecology modify the language in this section, to the extent possible to include language that implements changes that Ecology detailed to the surrounding communities.

Comment: We understand that Ecology represented to member of the public that certain changes are being implemented in the approach to monitoring and enforcement related to Airport construction activities. Ecology must modify the Draft Permit to explain and reflect these changes.

Response 46F: The boundary of the final permit should incorporate all the areas in which construction may occur during the term of the permit. The final permit includes quite a few conditions in Special Condition S13 that were not in the previous permit. For

example, the permit requires that the SWPPP be attached to bid packages and that the Port implement procedures for reviewing the SWPPP with contractors prior to initiating construction activities. The permit requires the Port to establish a position for a pollution control officer to advise on and determine compliance with applicable water quality standards.

Comment: Since all new construction is stated in the EIS and the Master Plan, any new construction should be considered as 'part of a large plan of development" (no piece-meal construction to circumvent the "part of a larger plan").

Response 46G: The Department agrees with this interpretation of "part of a larger common plan of development".

47. S13.A SWPPP For Construction Activities - Objectives

Comment: S13A Objectives - 2. Must be a requirement, not an objective. 3. Must be a requirement, not an objective.

Response 47: Although they are requirements of the permit, they are the objectives of the SWPPP.

48. S13.B SWPPP For Construction Activities - General Requirements

Comment: S13.B: As mentioned above, a number of these conditions exceed the requirements of the Construction General Permit. We request that the following language from the General Permit be substituted in place of the current language for Special Condition S13.B:

1. The site owner shall be the permittee and responsible for the implementation of the SWPPP. At construction sites for which a lease, easement, or other use agreement has been obtained from the site owner, the entity obtaining the use agreement shall be the permittee. The SWPPP shall be prepared sufficiently in advance of the construction to allow the contractor sufficient time to plan the implementation of the SWPPP.
2. The permittee shall designate on the SWPPP, a contact person who will be available 24 hours a day to respond to emergencies, and to inquiries or directives from Ecology. The contact person shall have authority over the SWPPP implementation. While the site owner is ultimately responsible for proper activities under this permit and for proper implementation for the SWPPP, both the owner and/or operator of the site may be held liable for any permit violations.
3. The permittee shall retain the SWPPP on-site or within reasonable access to the site and make it available upon request to Ecology and local government agencies with jurisdiction. If stormwater is discharged to a municipal storm drain system, the

SWPPP shall be available to the municipality upon request. The public may obtain a copy of a permittee's SWPPP by request from Ecology.

4. The permittee shall retain the SWPPP, inspection reports and other documents required by this permit for at least three years after the date of final stabilization of the construction sites. The permittee shall make these documents available to Ecology and to the local government agencies with jurisdiction.
5. Reports on incidents, such as discharge of spills and other noncompliance notification shall be included in the records.

Response 48A: The Department denies this request.

Comment: S13B.1 - There needs to be follow-up to assure this is carried out. 2. As evidenced by the North Employee Parking Lot disaster, this area, as of yet needs work.

Response 48B: Comment noted.

Comment: 3. Who is the current "independent qualified construction pollution control officer" for SWPPP construction related activities?

Response 48C: The previous permit did not require an independent qualified construction pollution control officer.

Comment: Ecology must modify the Draft Permit to make the SWPPP for each current construction activity available to the public at a public repository.

Comment: The SWPPP should be available at a public repository. Trying to request the SWPPP from Ecology, who requests it from POS, who then mails it to Ecology, who then mails it to the public is an undue burden and too time consuming.

Comment: A sentence needs to be added that states "The public may obtain copies of these documents by request from the Department".

Comment: Ecology must modify the Draft Permit to provide that the public may obtain copies of these documents from Ecology upon request.

Comment: Under Special Condition 13, General Requirements B.5, text should be changed to require the SWPPP to be sent to the local agencies (within the impacted watershed) at least 30 days prior to construction activity involving land area of 5 acres or more. Discharge of spills and other non-compliance should also be immediately reported to the local agencies with documentation as to the nature of the non-compliance and monitoring results following shortly thereafter.

Comment: Ecology must modify the Draft Permit to ensure that the public has access to such reports.

Comment: It is vital that the public have access to incident reports on spills and other non-compliance. This is an important right of the public and duty on the part of Ecology and POS.

Response 48D: Special Condition S3.G applies to the SWPPP all other reports, plans, and manuals required by the permit.

Comment: 7.c. The SWPPP should be modified whenever there are changes in design, construction, operation, or maintenance of any BMP(s), irrespective of whether it causes the SWPPP to be less effective in controlling the pollutants. It is important for the SWPPP to reflect current reality at the facility to the extent possible.

Response 48E: The Department disagrees that the SWPPP must be changed whenever there is a change in design, construction, operation, or maintenance of any BMP. There are many minor changes that are made during the construction process that are allowable if they don't impact the effectiveness of the BMP. It would be overly burdensome to require the document to be updated to reflect minor changes.

Comment: 7.d. It is not clear what constitutes "actual discharge of or potential to discharge a significant amount of any pollutant". The term significant appear overly subjective and could be easily misunderstood or understood in a variety of ways by different parties. It is requested Ecology better define and provide a better explanation of this language.

Response 48F: The definition of "significant amount" has been added to the Fact Sheet Appendix B. It means an amount of a pollutant in a discharge that is amenable to available and reasonable methods of prevention or treatment; or an amount of a pollutant that has a reasonable potential to cause a violation of surface or ground water quality or sediment management standards.

Comment: 7.a. There needs to be a provision for public notification of permittee non-compliance and any modifications to the SWPPP.

Response 48G: The Department disagrees with this comment. There is no requirement in federal or state law or regulation for public notification of permittee noncompliance or report modification.

Comment: 7.b. It appears that this section make compliance with the various environmental quality standards (chapter 173-201A WAC, 173-204, 173-00 and the National Toxics Rule) optional rather than compulsory. Why is Ecology allowing environmental compliance by the permittee to be optional?

Comment: S13.B.7. The Port objects to this condition because it goes beyond the requirements imposed for all other construction projects regulated under the Construction General Permit. The compliance with water quality and sediment standards is an ultimate

goal of the SWPPP. Ecology and EPA have consistently recognized that compliance with the SWPPP by implementing BMPs constitutes compliance with AKART and the standards on a compliance schedule as authorized under WAC 173-201A. (Fact Sheet to Construction General Permit and Construction General Permit). Also, the point of compliance is crucial in determining compliance with standards. The point of compliance for surface water is determined after a mixing zone is authorized (WAC 173-201A). Likewise the point of compliance for ground water quality standards are determined by applying the provision of WAC 173-200. The point of compliance for sediment management standards is determined by applying criteria set forth in WAC 173-204. The Port requests that this condition be deleted.

Response 48H: This request is denied. The SWPPP for construction sites must be fully implemented prior to construction; there is no compliance schedule for implementation of a construction SWPPP allowed. As stated on page 10 of the Fact Sheet for the Baseline Construction Permit, stormwater discharges associated with construction activity are subject to all applicable state water quality and sediment management standards. The permit does not authorize the violation of those standards.

A mixing zone is not set in this permit due to the wide variety of discharge situations. It would be impractical to include mixing zone language that could account for conditions at all of the construction sites covered under this permit. Since it is not possible to set a mixing zone in this permit, the Department will take a discretionary approach to compliance with standards with respect to dilution zones.

Compliance with the standards will be based in part on the adequacy of the SWPPP and its implementation to prevent the discharge of toxic materials, settleable solids, and to reduce turbidity in the discharge from construction sites.

In determining in-stream compliance with standards, the Department will consider dilution zones on a case-by-case basis. The Department will take into account weather conditions as they relate to design storms for which BMPs are sized, and available dilution and background conditions in the receiving water. Dilution zones will only be considered when adequate SWPPPs have been prepared and implemented.

The point of compliance with the ground water standards will be determined using the Implementation Guidance for the Ground Water Quality Standards.

Comment: Ecology must modify the Draft Permit (i) to provide for notification to the public of any non-compliance and any modifications to a SWPPP; (ii) to make enforcement of the environmental standards listed in 7c a mandatory duty for Ecology, rather than a discretionary decision; (iii) to require modification of the SWPPP to reflect any changes in design, construction, operations, or maintenance of a BMP, regardless of whether the Port considers the change to make the SWPPP less effective in preventing pollution; and (iv) to clearly define, in non-subjective terms, the meaning of "actual discharge of or potential to discharge a significant amount of any pollutant."

Response 48I: See Responses 49A - H above.

Comment: S13.B.8. This condition should allow the Port to select BMPs that are appropriate for airports, regardless of whether they are contained in the SWMM or another manual. Site-specific BMPs should be encouraged. In this regard, we propose the following alternate language: "In selecting BMPs, the Permittee shall review the most recent published edition of the SWMM, or other manual deemed to be equivalent by the Department, available at least 120 days before the selection of the BMPs. The Permittee may develop site-specific BMPs that are appropriate for airport construction activities, including experimental BMPs."

Comment: We do not understand why special requirements are imposed for experimental BMPs. If the BMPs are specifically designed for the airport's construction activities, they should be allowed.

Response 48J: There are no construction BMPs that are unique to airports. The permit already allows for the use of experimental BMPs.

Comment: We believe that the use of experimental BMPs is appropriate, but certain controls are necessary. Ecology must modify the Draft Permit to require that any experimental BMP be at least as effective as the standard BMP being replaced, and to require the Port to state in each request related to an experimental BMP how its use would improve the Port's ability to satisfy environmental statutes and regulations.

Comment: 9. It is appropriate that Ecology consider use of experimental BMPs. The Draft Permit as written, however, lacks any requirement that experimental BMPs be at least as effective as the standard BMPs they are replacing. It is requested that Ecology add a new section k., which would require the permittee to state how the experimental BMP would allow or improve the ability of the permittee to meet applicable environmental statutes and regulations. Add a new 9.k., as indicated in comments under 9.

Response 48K: The Department will make these determinations when the experimental BMPs are evaluated. Not all experimental BMPs may be proposed to replace an existing BMP, they may be completely new or to be used in addition to the existing BMPs. An example of this is chemical treatment for the removal of solids.

49. S13.C SWPPP For Construction Activities - SWPPP Contents And Requirements

Comment: This condition prescribes the contents of a required Erosion and Sediment Control Plan. We believe that these requirements must be more stringent. We understand that the Airport was operating under these same requirements when substantial discharges of sediment into Miller Creek occurred in September and October of this year, and that Ecology has assured members of the local community that stronger preventative approach is planned. This should be reflected in the Draft Permit. At a

minimum, Ecology must modify the Draft Permit (i) to require inspections more frequently than weekly; and (ii) to require pre-storm inspections prior to forecasted large storm events.

Comment: S13C 1.c. Inspection and Maintenance - The requirements of this section need to be stricter. The airport was operating under these same requirements and allowed devastating discharges of sediment into the Miller Creek system. After the initial discharge in September, there was an ongoing four day discharge in October, with additional discharge of sediment to Miller Creek. The requirement for inspections should be more frequent than weekly. There should be a requirement added for a pre-storm inspection. Ecology has already indicated to the community that they are planning to do such a preventative approach. It is requested that Ecology add applicable language to indicate this preventative approach to the permit. As POS keeps track of weather forecasting they should schedule an inspection of BMPs prior to known large storm events to assure the BMPs are in good condition to deal with the storm event. This preventative approach would save a lot of grief.

Response 49A: The Department denies this request. The language in the permit is sufficient. The implementation of the language is what is important.

Comment: S13C 3. Coordination with Local Requirements - POS has signed some kind of agreement with the City of SeaTac in regard to permitting authority. How does that agreement impact this requirement?

Response 49B: The Department is not a party to the Interlocal Agreement between the City of SeaTac and the Port of Seattle and has no knowledge of the details of that agreement.

Comment: This condition should be deleted as it exceeds the scope of the general permit and what is required for other construction projects in the state. The Port incorporates by reference its comments to Special Condition S2.C.

Response 49C: The Department incorporates by reference its response to the Port's comments on Special Condition S2.C.

Comment: S13C 4. Construction Stormwater/Dewatering Monitoring - The monitoring plan should be made available to the public for review and comment.

Comment: Ecology must modify the Draft Permit to allow public review and comment on this monitoring plan before its approval.

Response 49D: This plan is subject to the requirements of Special Condition S3.G.

50. S14 Stormwater Drainage Report

Comment: The Port objects to this condition as unnecessarily redundant of the SEPA requirements. Moreover, the words "adversely affect" are vague, ambiguous, and susceptible to numerous interpretations. For these reasons this condition should be deleted.

Response 50A: Special Condition S14 has been changed to state the following:

All construction actions taken by the Permittee shall provide sufficient detention and/or shall use existing available detention capacity, in accordance with the Stormwater Management Manual for the Puget Sound Basin or its approved equivalent, to prevent an increase in the peak flow rate or flooding frequency of Miller Creek and Des Moines Creek. All detention facilities owned and/or operated by the Permittee shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function.

The Permittee shall submit to the Department within three (3) months of the effective date of this permit an Operations and Maintenance Plan for the Lake Reba Detention Facility.

This condition has been modified to clarify the intent of the Stormwater Drainage Report requirement in the previous permit. This report was required to assess the quantity and peak flow rate of drainage from the airport which is discharged to both Miller and Des Moines Creeks compared to the quantity and peak flow rate of the discharges in October 1974. The report established that the existing SDS basin detention facilities at the Lake Reba Regional Detention Facility, the Northwest Ponds, and Tyee Pond are adequate to meet current detention requirements.

Since the purpose of the report requirement has been satisfied, the final permit condition has been changed to assure that new development at the airport is provided with detention in accordance with the Department's SWMM.

Comment: Ecology must modify the Draft Permit to allow public review and comment on this amendment before its approval.

Comment: S14 Stormwater Drainage Report - Amendments should be made available to the public for review and comment.

Response 50B: See comment 51A above.

51. S15 IWS Hydrogeologic Study

Comment: This condition requires the Port of perform a hydrogeological study to evaluate the potential for the IWS to impact ground water quality, but fails to explain a context for the study or to provide for the imposition of substantive discharge limitations upon the conclusion of the study. We believe that legitimate concerns exist related to impacts of the IWS on ground water, including the collection system and transmission

system, not just the IWTP building and lagoon structures. We understand that past studies have confirmed releases from IWS collection structures to subsurface soils and to ground water. To date, no monitoring system has been implemented to determine if and where leaks are located. Ecology must modify the Draft Permit to provide for the imposition of substantive requirements based on the results of this study. As stated elsewhere in the comments, Ecology also must modify the Draft Permit in several aspects to ensure, as required under WAC 173-200-100, that the permit does not allow any activity that would violate the state Ground Water Quality Standards.

Comment: This is the only condition imposed which purports to comply with the requirements of the state ground water law, Chapter 173-200 WAC. Although there are confirmed releases to sub-surface and/or ground water from the IWS collection and transmission system (sumps, pumps, collection points, and piping, etc.) Ecology proposed eliminating the need to evaluate these actual and potential discharges to ground water from study requirements. Here again use of the term "intentional" provides and inadequate safeguard and is wholly inappropriate.

The concerns related to impacts of the IWS system on groundwater include the collection system and transmission system, not just the IWTP building and lagoon structures. Consultant studies in the past have confirmed releases from IWS collection structures to subsurface soils and to groundwater. To date there has not been a systematic check on the system to determine if and where leaks are located. Such checks are required for Public Owned Treatment Works and should be required of POS as well. The information available to date is a result of consultant activities at co-located facilities that are part of MTCA sites. As an operating facility, IWS (industrial wastewater) discharges to groundwater require coverage by a Waste Discharge Permit. It appears that Ecology is trying to avoid issuing a Waste Discharge Permit for this facility. Hence the lack on the cover page of the Draft Permit any clear identification of the permit as also being a Waste Discharge Permit and instead some vague language about the Draft Permit (identified only as a NPDES permit) somehow meeting the requirements of Chapter 173-200 WAC. There is also an attempt to surgically remove the collection and transmission portion of the IWS system and limit any study or regulatory action to the IWTP and related lagoons. Such an approach is insupportable and unacceptable in light of confirmed releases from the IWS collection and transmission system. The supposition that if any leaks are found (though how they would be when everyone is so busy avoiding looking for them is questionable) they would be dealt with under MTCA is also insupportable. The purpose of MTCA is to cleanup sites that are abandoned, closed or no longer in use. It is not the intent of MTCA to be applied to operational facilities. The IWS collection and transmission system is now, and will be for the foreseeable future, an operational facility, even if the IWPT is modified in some fashion as a result of the engineering report. The failure of Ecology to regulate the IWS collection and transmission systems is a serious breach of duty.

Response 51A: Special Condition S15 requires the Port to perform a hydrogeologic study to evaluate the potential for the Industrial Wastewater System to impact ground water. The Industrial Wastewater Facility is defined in the Fact Sheet as all structures,

equipment, or processes required to collect, carry away, treat, reclaim or dispose of industrial wastewater. This requirement is in compliance with the Department's Implementation Guidance for the Ground Water Quality Standards.

The final permit requires that the Port apply all known, available, and reasonable methods to prevent the unintentional release of industrial wastewater to ground water. The final permit also requires that the IWS O&M Manual include a description of the regularly scheduled inspection and maintenance program for the IWS conveyance system.

Comment: This condition should be removed from the permit because it requires exactly the same work that has already been performed by the Port with Ecology's authorization and approval.

Comment: All the lagoons will be lined. Lagoons 1 and 2 have been cleaned and lined. The Toxic Cleanup Program directed and approved the cleanup plans and monitored and approved the cleanup portion of the Lagoon 1 and 2 upgrades, using MTCA standards for TPH and other parameters. The Lagoon 1 Cleanup Report and Lagoon 2 data (which was developed during the cleaning of Lagoon 2), demonstrate that contamination in the unlined lagoons did not migrate a significant distance into the soil. There has, therefore, been no impact to groundwater even before lining. All data were sent to Roger Nye of Ecology's Toxics Cleanup Program and to Lisa Zinner of Ecology's Water Quality Program. With regard to Lagoon 3, the lining will occur once the AKART determination has been made with respect to the IWS. This is the approach that has been approved by Ecology. Ecology has previously acknowledged that it does not make sense to line Lagoon 3 before that time because the configuration of that lagoon is dependent upon the AKART alternative selected. Because Lagoon 1 and Lagoon 2 are lined, and Lagoon 3 will be lined with the IWS AKART determination, there is very little if any potential impact to groundwater from the IWS.

Comment: The data previously provided to Ecology adequately characterize the environmental conditions associated with Lagoons 1 and 2. That information, together with the information to be generated by the MTCA Groundwater Study, will adequately characterize groundwater issues associated with the IWS plant and lagoon area (particularly Lagoon 3) and is consistent with Director Tom Fitzsimmons' policy that environmental statutes and regulations be employed to achieve environmental results. The Port should not be subject to unnecessary, duplicative studies. This condition should be deleted.

Response 51B: The requirements of Special Condition S15 have not been satisfied by the Port. The focus of the Ground Water Study contained in the proposed MCTA Agreed Order is the AOMA, not the IWS lagoons. Information gathered for the MCTA Ground Water Study may be used in the IWS Hydrogeologic Study. The requirements of Special Condition S15 implement the Department's Implementation Guidance, which applies to the entire state including Sea-Tac Airport.

Comment: Change the second paragraph to: and approval within 4 months (not 6 months) and no later than June 30, 1998.

Response 51C: This request is denied.

Comment: In May the City of Burien wrote to DOE's public involvement coordinator, Marianne Deppman, requesting that the Agreed Order be modified to include, among other things, a much larger area subject to water quality monitoring, that DOE appoint a Citizen's Advisory Committee to monitor, review, and evaluate the results of the ground water quality monitoring program, that the proposed Order identify how, and when identified contaminated sites would be mitigated, and that these activities be coordinated with the proposed expansion of the airport. We have not seen DOE's response to this request and thus do not understand how these recommendations will be incorporated into the NPDES permit.

Comment: A draft ground water study was presented to the public this summer and the public has a limited time to review it and send back comments to DOE. DOE was scheduled to answer these comments at the end of August, but now is saying lack of staff and burden of work prevents getting answers out to the public. What is the status of the ground water study? Has the process been stalled?

Response 51D: The Responsiveness Summary to public comments on the proposed Agreed Order is being prepared. The NPDES permit does not apply to cleanup activities at the airport.

Comment: The NPDES permit does not identify the remedial action required for contaminants found in selected areas set out for ground water sampling. Sea-Tac Airport's facilities sit on top of the main aquifer supplying the Highline Water District, Water District No. 54, as well as other water districts. The proposed NPDES permit does not impose conditions setting forth detailed water quality anti-degradation standards established by WAC Section 173-200.

Response 51E: Special Condition S1.F requires the Port to apply all known, available, and reasonable methods to prevent the unintentional release of industrial wastewater to ground water.

Comment: There is no context given for the IWS groundwater study. If the study confirms release of contaminants to groundwater what happens? What would the time line be? If the time line will take one or more years, what are the mile stones for achieving the end result?

Response 51F: If the IWS Hydrogeologic Study confirms release of contaminants to ground water, the Port will be required to implement AKART to prevent the release of the contaminants to ground water.

Comment: The NPDES permit fails to impose requirements for comprehensive ground water monitoring at stormwater outfalls. Portions of the Agreed Order proposed that ground water be monitored only at pre-designated "receptor" sites in the Airport Operations and Maintenance Area (AOMA) limiting the locations of ground water sampling. We believe this will prejudice the outcome of the ground water study contemplated in the proposed Agreed Order. We also believe that limitations on ground water sampling sites will detrimentally affect inclusion of ground water sampling sites which should be required near stormwater outfalls designated in the NPDES permit.

Response 51G: There is no need to monitor ground water at the stormwater outfalls. Water flowing in surface channels during storm events does not impact ground water.

52. G1 Signatory Requirements

Comment: This condition is written in a way that makes sense for businesses, but not public entities. We would appreciate it this condition could be revised as follows:

- A. All permit applications shall be signed by either the Director, Aviation Division or by the Director, Aviation Professional and Technical Services or by an official at a comparable level after notification to Ecology.

Response 52: The Department will interpret the signature requirements in G1.A in this manner.

53. G3 Permit Actions

Comment: General conditions are conditions that are identical in all permits. As presently drafted, this condition exceeds the scope of the general condition, which is normally entitled "Permit Modification." The Port requests that this condition be revised to conform to the general condition language, by deleting subsection E and by revising the last sentence of the last paragraph as follows: "The Department may also modify . . . revisions of categorical standards."

Response 53: The agency recently revised the General Conditions; this language is consistent with all new permits. This General Condition is based upon RCW 90.48.190, 195, 40 CFR 122.62 and WAC 173-220-150.

54. G4 Reporting A Cause For Modification

Comment: The Permit Writer's Manual entitles this condition "Facility Change." We would, therefore, appreciate it if the heading could be revised to reflect this fact.

Response 54: The agency recently revised the General Conditions and the Permit Writer's Manual has not yet been updated to reflect these revisions.

55. G5 Plan Review Required

Comment: The language as currently drafted exceeds the scope of the general condition language. In this regard, we would appreciate it if the language could be revised as follows: "Prior to constructing or modifying any wastewater control facilities, detailed plans shall be submitted to Ecology for approval in accordance with Chapter 173-240 WAC. Facilities shall be constructed and operated in accordance with the approved plan.

Response 55: The agency recently revised the General Conditions; this language is consistent with all new permits.

56. G6 Compliance With Other Laws And Statutes

Comment: We object to the general condition language because it ignores the fact that compliance with this permit constitutes compliance with the federal CWA and RCW 90.48. In this regard we would appreciate it if the language of this condition could be revised as follows: "Nothing in the permit shall be construed . . . or regulations, except that compliance with this permit constitutes compliance with the Federal Water Pollution Control Act, also known as the Clean Water Act (33 U.S.C. § 1251, et seq.) and Washington State's Water Pollution Control Act (RCW 90.48).

Response 56: General Conditions are based directly on state and federal law and regulations and have been standardized for all individual industrial NPDES permits issued by the Department. This request is denied.

57. G9 Reduced Production For Compliance

Comment: As drafted, this general condition is not applicable to the IWS because this facility cannot control production. The Port has no control over when it rains. Further, the Port cannot reduce production, i.e., decline to deice or anti-ice plans, runways, or ramps. Deicing and anti-icing is mandated by the FAA. This condition is not applicable to the airport and should, therefore, be deleted.

Response 57: This Condition is based on 40 CFR 122.41(c), (d), and (e). These regulations apply to all NPDES permits.

58. G15 Penalties For Violating Permit Conditions

Comment: The Fact Sheet, on page 15, lists 35 violations in 24 months, not including the last two associated with the construction of the North Employee Parking Lot. This points to the fact that fines are not high enough to act as a deterrent and cause for better management practices.

Comment: This condition is not a general condition that is contained in the Permit Writer's Manual. The penalties for violating permit conditions are established in federal

and state statutes and do not need to be restated here. The Port, therefore, requests that this condition be deleted.

Response 58: This condition is based upon RCW 90.48.140, 142, and 144. The agency recently revised the General Conditions and the Permit Writer's Manual has not yet been updated to reflect these revisions.

59. Fact Sheet – Summary/Introduction

Comment: The Port's stormwater is not discharged to Green River, but is discharged to the City of Sea Tac Storm Sewer. The fact sheet should be revised to reflect this fact.

Response 59A: Although the discharge from the Engineering Yard and Taxi Yard are to the City of SeaTac's storm sewer system, the ultimate receiving water body is Gillian Creek and the Green River. The words "tributary to" make this clear. This wording was requested by the public during the modification to the permit in 1996 and remains in the final fact sheet.

Comment: Introduction - It is noted Ecology admits that a permit for discharge to groundwater must be issued before such a discharge can legally occur.

Response 59B: A permit is required for the purposeful discharge of wastewater to ground water.

60. Fact Sheet – Description of the Facility

Comment: We would like language stating that the permit regulates the area within the property boundary and the acquisition boundary.

Response 60A: Language stating that the permit regulates the area within the property boundary and the acquisition boundary has been included in the first paragraph of Special Condition S1 and the first paragraph of the Description of the Facility.

Comment: The definition of industrial wastewater should conform to the definition we have suggested in our comments to Special Condition S1.A of the permit.

Comment: In the last sentence of the first bullet on page 6, it states "Industrial wastewater does not include stormwater runoff that contains minor amounts of deicing/anti-icing agents that shear from aircraft". Application of deicing/anti-icing agents is a primary industrial activity of the airport. Such agents that shear from aircraft are obviously industrial process waste or wastewater as soon as they hit the ground. When such waste comes in contact with waters of the state, it is clearly constitutes an industrial wastewater discharge. It is absurd to assert otherwise. The assertion also clearly constitutes backsliding as it introduces a permit shield permitting or otherwise allowing a discharge that is not permitted or allowed in the in force permit. The previous definition of "Industrial Wastewater" is found in the permit currently in force at page 10,

#17, which states; "Industrial Wastewater" means water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated stormwater and, also, leachate from solid waste facilities." (emphasis added). It is requested that Ecology correct the Draft Permit to use standard Clean Water Act definitions for industrial wastewater and remove the language in the Draft Permit that constitutes backsliding, abuse of authority, substituting a lessor standard for a federal law requirement and arbitrary and capricious decision making.

Comment: The assertion referred to above also concludes that the shear of deicing/anti-icing agents is "minor". How was this determined? In regard to this assertion, please provide all documents and other facts related to the administrative record relied on by Ecology to make these determinations and arrive at the decision stated in the Fact Sheet, footnote a, of the Interim Effluent Limitations: Outfall 001, and footnote a, of the Final Effluent Limitations: Outfall 001. If no administrative record is available, Ecology has failed to meet its duty in making a major modification to the permit. Even if Ecology has met such duty, the decision still constitutes backsliding and substituting a lessor standard for a federal law requirement in clear violation of federal law.

Comment: Please provide the scientific and regulatory basis by which Ecology made the determination that the amount of deicing/anti-icing agents that shear from aircraft is "minor". Has Ecology determined the amount of deicing/anti-icing agents that shear by aircraft size and type?

Has Ecology calculated the annual amount of deicing/anti-icing agents that shear from aircraft and projected how that amount will increase or decrease based on the total number of aircraft flights into and out of the airport?

Response 60B: The definition of industrial wastewater in the fact sheet has been changed to match the definition in Special Condition S1.A of the final permit. The definition no longer refers to "minor amounts."

Comment: Figure 2 Identify the outfalls and any test sites unambiguously on maps. The outfall locations in the references conflict. Plus, at least one outfall was renumbered third quarter of 1997 making it impossible to resolve outfall discrepancies even using the references. Ironically, this is the same outfall that the DIW was given pictures of last June and again in early July regarding a continual flow of oil and grease that had been ongoing for at least three years. The draining then was reduced for over a month (dry at times) but has now resumed to prior levels. I believe it may have been tested while it was "dry".

Response 60C: The outfalls can be located using the latitude and longitude provided on the cover page. The outfall numbering has not changed from the previous permit. Figure 2 provides the approximate location for each outfall.

Comment: In information collected to date, the IWS conveyance system has been identified as a discharge source to subsurface soils and groundwater. Based on the evidence available, including the age of the system, disturbance due to construction, aircraft and vehicle activity and other factors, the IWS conveyance system should be considered a industrial wastewater discharge source to groundwater. While POS may not have specifically designed the IWS conveyance system to discharge to groundwater, the only correction of such discharges that is apparent from the files is when unrelated cleanup activity relative to Model Toxic Control Act sites in the vicinity of the IWS conveyance system happen to address its releases. Otherwise the policy in place has been a "don't ask/don't tell" policy where POS has not looked for a problem and Ecology has not required POS to look. Failure to act in eliminating IWS conveyance system discharges establishes intent as well as a premeditation to cause a discharge.

Comment: Information in Ecology's files indicates that the IWS conveyance system as well as the IWTP, has been identified as a discharge source to subsurface soils and ground water (Ecology files related to Olympic Pipe Line and United Airlines, 1993). Based on the evidence available, including the age of the system, disturbance due to construction, aircraft and vehicle activity and other factors, the operation of the IWS has the potential to degrade ground water within the meaning of the Ground Water Quality Standards. Ecology must modify the Draft Permit to properly address the discharge of waste to ground water from the IWS conveyance system.

Response 60D: The final permit requires the Port to address the IWS collection system in the IWS Operations and Maintenance Manual update.

Comment: Page 6, paragraph two: As mentioned in the comments to the permit, the Port has encountered difficulty obtaining electrical power for the pumps at the snow storage areas. Until power is obtained, these areas will continue to discharge to the SDS. Thus, the reference to November 1, 1997, should be deleted and replaced with the following language: "The Port planned to construct additional pump stations to divert snow melt water from snow storage areas to the IWS by November 1, 1997. However, because of a dispute between the City of SeaTac and Seattle City Light, which affects permitting, the Port has been unable to obtain the necessary electrical permits from the City of SeaTac. Until the City of SeaTac and Seattle City Light resolve their differences, the Port is unable to obtain electrical power for its pumps and thus is unable to divert stormwater runoff from the snow storage areas to the IWS."

Response 60E: The Port notified the Department on January 9, 1998, that the two north end Snowmelt Runoff Facilities were operational. Until the south end facility is completed, the Port will use the area in front of the Delta Hanger to store snow. This area drains to the IWS. Substantial completion of the south end facility is expected in 1998. No discharge of snowmelt runoff to the SDS will be allowed.

Comment: The Fact Sheet states that the efficiency of the IWTP, which is responsible for the actual treatment of waste routed through the IWS, "declines significantly" at

temperatures below 35 degrees Fahrenheit. The regulatory implication of this assertion are not explained. Ecology must modify the Draft Permit to explain what causes this drop in efficiency, what the environmental implications are, and the basis for Ecology's implicit determination that this efficiency reduction does not require specific measures to be implemented under the Draft Permit to safeguard waters of the State.

Comment: The Fact Sheet states that the efficiency of the IWTP drops of significantly when the temperature drops below 35 °F. What is the contingency plan for operation of the IWTP when temperatures are below 35 °F? Does the Operation and Maintenance manual address this issue? If not Ecology should require that the manual be updated to cover the issue to provide adequate protection to waters of the state during cold weather.

Response 60F: The drop in treatment efficiency at temperatures below 35 degrees Fahrenheit is caused by a reduction of the chemical reaction rate in the coagulation process. If the temperatures fall below freezing, exposed piping may freeze. The interim effluent limitations for the IWS apply during low temperature conditions, but the Department may consider environmental conditions when determining the appropriate response to a violation of the effluent limit. The Department will address temperature concerns in the AKART determination process.

Comment: The first paragraph, on page 7, of the Fact Sheet describes the IWS Lagoons and corrective actions taken. In discussing Lagoon 3, it is stated that a schedule for liner installation in Lagoon 3, will be included in the IWS Engineering Report. Why is there a delay in requiring Lagoon 3, to be lined? Lagoon 1, was lined as a result of a Clean Water Act lawsuit brought by Waste Action Project. Lagoon 2, was lined as a result of Ecology action, one year after the lining of Lagoon 1. Lagoon 3, should be lined within one year of the lining of lagoon 2. It is not appropriate to put it off as an inclusion in an engineering report which is itself years overdue, tied to a permit that will be released at an indeterminate date.

Comment: It is noted that Lagoon 3, receives discharges of industrial waste for the airport and is unlined. As an unlined industrial waste storage facility, a Waste Discharge Permit is required. If it is the position of Ecology that a Waste Discharge Permit is not required, please cite the specific authority that allows an unlined industrial waste lagoon to operate without a Waste Discharge Permit, for discharge to groundwater. Does Chapter 173-200 WAC presume that unlined industrial waste lagoons discharge to groundwater?

Comment: On Fact Sheet Table 1 for Interim IWS Improvements, there is no timeline to clean and install a liner within Lagoon 3.

Response 60G: The final use, sizing and configuration of Lagoon 3 will be determined by the final AKART determination. Therefore, the permit does not specify an exact deadline for lining Lagoon 3, but ties it into the Engineering Report approval. The final permit incorporates the requirements of chapter 173-200 WAC for the discharge of industrial wastewater to ground water from Lagoon 3.

Comment: During the last 3-year permit cycle, how many times did the effluent from the IWTP exceed the Midway Sewer District's 2,500 gpm criteria? The Fact Sheet does not indicate this.

Response 60H: The IWTP effluent flow rate never exceeded the discharge rate under the terms of the discharge agreement. When the capacity of the Midway Sewer District outfall was challenged during high flow events, the Midway Sewer District called the IWTP operators to tell them to lower the IWTP discharge rate per the agreement. This situation existed during the large storm event that occurred in the end of December 1996 that caused a bypass to occur from Lagoon 3.

Comment: The third paragraph, on page 8, of the Fact Sheet states that the previous permit required POS to submit an engineering report to determine All Known, Available, and Reasonable Methods of Prevention and Treatment (AKART). The report which was submitted in December dealt with interim IWTP improvements, but did not provide the information necessary to satisfy the AKART requirement. Why did Ecology allow POS to violate the condition of the previous permit to provide an engineering report that satisfied the requirements of AKART?

It appears that POS by avoiding meeting the requirements of AKART in the previous permit as was required, has also avoided meeting the requirements in this permit cycle as well. It should be noted that many of the improvements listed in Table 1, related to the IWTP were the result of settlement of the Clean Water Act lawsuit between Waste Action Project and POS. A copy of the Consent Decree is attached.

Comment: The discussion on what is lacking in the engineering report is lacking detail. While the issue of deicers and plane wash water discharged to the IWS is highlighted, no indication is given as to whether there are other AKART issues. There should be at least a brief discussion of all issues that need to be covered relative to AKART. There is a brief discussion of a sweeper pilot program to collect glycol. The discussion lacks detail, as it is indicated that the sweeper collected less than 40% of glycol in dry weather conditions but there is no context as to the significance (or lack thereof) of the result. Since it is implied that collection of glycols is ineffective, it is reasonable to anticipate that there would be a discussion of how the treatment train at the IWTP would be modified to treat glycol and other deicing or anti-icing agents. Instead there is a single sentence which states "Several other options are under consideration". What other options are under consideration? Will information on the other options be included in the AKART report due one month after the issuance date of the permit?

Comment: Given that the AKART clock does not start running until the permit is issued, then runs for five years, then requires an Ecology determination, then requires a major permit modification with public comment, there could be a seven to ten year delay in the implementation of AKART for this facility. The AKART time line is too long to be acceptable, especially in light of POS failure to meet previous permit requirements in this regard.

Comment: How does Ecology justify allowing POS to discharge chemical waste without treatment to waters of the state for the past twenty seven years?

Comment: Page 8, last paragraph: We would like to clarify the AKART determination will be made through a major permit modification.

Comment: Since the IWS does not treat glycol, what will the DOE require of the Port to treat this hazardous chemical before it enters the Puget Sound?

Comment: Given that the AKART clock does not start running until the permit is issued, then runs for five years, then requires an Ecology determination, then requires a major permit modification with public comment, there could be a seven to ten year delay in the implementation of AKART for this facility. The AKART time line is too long to be acceptable, especially in light of POS failure to meet previous permit requirements in this regard.

Response 60I: The IWS Engineering Report submitted in December 1995 addressed both interim improvements to the IWTP and options for the AKART determination. Interim improvements to the IWTP were included in the Engineering Report because it was assumed that the IWTP would be part of the final treatment system, as well as Lagoons 1 and 2. Lagoon 3's configuration may change depending on its use in the final treatment system, so Lagoon 3 was not lined in the interim period.

Chapter 4 of the IWS Engineering Report discussed various improvement options. This chapter identified and evaluated all known, available and reasonable treatment technologies using information from other airports and general engineering analysis. The chapter then presented various alternatives for treatment and recommended one of the alternatives. The recommended alternative included the use of vacuum sweeper trucks for the collection of glycols at the gates as AKART for BOD. The pilot program tested this option and showed that it is not effective. The addendum to the Engineering Report required by the final permit will include new alternatives for the treatment of BOD.

The addendum to the Engineering Report will be submitted by May 1, 1998. The Department will review the addendum and comment if necessary. When the report satisfies the requirements of Special Condition S4, we will then approve the report. The information in the report will be used to make the AKART determination. The final permit will then be modified to set final effluent limitations and all other applicable permit conditions. The permit modification will be subject to public notice requirements.

The final permit requires that the Port take all available and reasonable means to implement the AKART determination in the shortest practicable time, but no later than June 30, 2004.

Comment: Lisa Zinner has said that DOE is concerned about levels of BOD at 55,000. Yet an environmental scientist working with a group at another airport has said that 6,000

ppm of glycol would cause BOD of 28,000, which would not only remove all oxygen from the local stream but also create an oxygen demand on atmosphere which would cause people standing near the creek to also suffocate.

Response 60J: BOD in effluent discharges is of concern at much lower levels than 55,000 mg/L. For instance, raw sewage typically has a BOD₅ of 250 mg/L and treated domestic wastewater typically has below 30 mg/L of BOD₅. The Department will not allow an effluent BOD that would cause depletion of the oxygen in the receiving water below the water quality standard outside of the mixing zone. The allowable effluent BOD is established by modeling the uptake of dissolved oxygen in the receiving water.

The oxygen in the receiving water is depleted when organisms in the water use the organic material in the wastewater as food. As they eat the food, they use the available oxygen in the water to digest the food and grow. These microorganisms are not capable of removing oxygen from the air and causing someone standing by the creek to suffocate. If the organisms use up all of the available oxygen in the water, the water becomes anaerobic (without oxygen) and different organisms take over. Anaerobic water is typically found in stagnant water bodies and can appear black and smell bad.

Comment: The permit seems to indicate that glycol used to de-ice and anti-ice aircraft will be routed through the IWS and that storm sewer is all run through the IWS. Previously, glycol entered the storm sewers and was found in high quantities in Des Moines and Miller Creeks. I understand that the IWS discharges through a pipe into the Puget Sound.

Response 60K: Improvements made through the implementation of the Stormwater Pollution Prevention Plan should have eliminated the discharge of glycols to the storm drainage system, except for deicing fluids that may drip or shear from the airplanes as they are taking off. The IWS does discharge to Puget Sound through the Midway Sewer District's outfall.

Comment: The Fact Sheet contains several assertions that various improvements to the Port's waste control systems were to have been completed by dates that are now past or soon will be (Tables 1 and page 12).

Comment: Table 1, page 9: The Lagoon 2 cleaning and lining was complete 9/97. The estimated date to install the two new DAF units, valves and piping is 1/98 instead of 12/97.

Response 60L: Table 1 has been updated in the final fact sheet.

Comment: Specifically I want to comment on the issue of disposal of glycols. No consideration is given to the actual commercial formulations used at the airport. In other words, since they use an anti-freeze mixture which is not pure glycol they do not have to comply with regulations affecting laboratory grade pure glycol. This is ridiculous, a dandy loophole.

Comment: It has been disclosed that there are several proprietary ingredients in ethylene and propylene glycol, one of which is cyanide. What are the others? How do all of these react synergistically? For instance, can you answer the following:

1. How does ethylene and propylene glycol (EG and PG) react when exposed to water? What kind of atmospheric effect is created by mixing either of these with water?
2. How does EG and PG react when mixed with runway de-icers such as urea?
3. How does EG and PG react when mixed with TPH and any of the proprietary ingredients in Jet A fuel? With proprietary ingredients in EG and PG in any above circumstances?
4. Explain how any of these combinations above mix and effect the atmosphere? Or how any of these alone affect the atmosphere? Fate and dissipation upon transport? Atmospheric mixing of nitrogen oxides and ammonia from urea? Is there a potential for the formation of extremely dangerous and carcinogenic atmospheric nitrosamines?
5. Explain how any of these might affect public health if entering the air? Drinking water supply? If the water supply is tested, are all chemicals and their potential hundreds of combinations which could occur tested periodically by the local water departments? How often and at what minimum detection limits? Are these MDL set at levels to protect the public health? Or are they tested only with OSHA or WISHA standard MDL as the Port has done so often with air pollution studies?
6. What are the long-term studies of the potential for the public to be harmed by the chemicals entering the ground, ground water and subsequently, drinking water?

Response 60M: Ethylene and propylene glycol are the primary ingredients of the deicing/anti-icing fluids used by the tenants at Sea-Tac Airport. The remaining ingredients vary with the supplier of the product. The following products are used at Sea-Tac Airport:

1. UCAR PM 6600 Aircraft Deicing Fluid. UCAR PM 6600 is an ethylene glycol-based aircraft deicing concentrate composed of 91.5% ethylene glycol, 7.5% water, and 1.0% proprietary "non-hazardous processing additives".
2. Arcoplus Aircraft Deicing Fluid. Arcoplus is a propylene glycol-based aircraft deicing concentrate composed of 88% propylene glycol, 9% water, and less than 1% each of six proprietary additives.
3. ARCO Killfrost ABC-3 Anti-icing Fluid. Killfrost is a propylene glycol-based Type II aircraft anti-icing fluid composed of 50% propylene glycol, 50% water, and less than 1% each of three proprietary additives.

4. UCAR Ultra +/-Octaflow Aircraft Deicing/Anti-icing Fluid. UCAR Ultra + and Octaflow are ethylene glycol-based aircraft deicing fluids composed of 64% ethylene glycol, 35% water, and 1.0% proprietary "non-hazardous processing additives".
5. ARCO 40 Below Anti-icing Fluid. ARCO 40 Below is a propylene glycol-based Type IV aircraft anti-icing fluid composed of 26% to 65% propylene glycol, 36 to 75% water, and 0.1 to 5% proprietary additives.

These products are very soluble in water and do not react with urea or petroleum hydrocarbons. The effect of deicing/anti-icing fluids on air quality is not an NPDES permit issue. Since industrial wastewater is discharged to Puget Sound and not to ground water, except the discharge from Lagoon 3, the potential for deicing/anti-icing chemicals to affect public health through drinking water is low. The potential for Lagoon 3 to impact ground water will be investigated per the requirement of Special Condition S15 of the final permit.

Comment: The Fact Sheet's discussion of the toxicity of glycols appears to assume that glycols used at the Airport are pure, laboratory grade formulations. We believe that this is highly unlikely, and that in fact the glycol agents used at the Airport almost certainly contain additives and inerts. Ecology must revise the Fact Sheet to ensure that its analysis of deicing/anti-icing agents is based on the actual products used, not just their primary active ingredients. Conditions prescribed in the Draft Permit must be modified accordingly.

Comment: Ecology also has assumed that glycols are far less toxic to aquatic organisms than they actually are. It is requested that Ecology correct the Draft Permit and Fact Sheet based on the data provided in Attachment F.

Comment: Ecology statements on the toxicity of glycol appear to assume that glycols used at the airport are laboratory grade pure glycol formulations. It is highly unlikely that the glycol agents used at the airport meet that criteria as there are almost certainly additives and inerts present in the commercial formulations actually used. The statements made by Ecology in the Fact Sheet should be based on the actual products used and cover the additives and inerts, not just the primary "active" ingredients.

Comment: Statements made that DOE testing has certified ethylene glycol at Sea-Tac Airport is not dangerous as define by the State of Washington. This is not a State permit; it is a Federal permit. I have done a detailed search on glycol's and my conclusions are that glycols are a very toxic substance. Please furnish the data you have obtained on glycols to come to the conclusions that they are not dangerous.

Comment: Ethylene and Propylene glycol are not recommended for consumption, either by fish, animals, or humans. The FDA's statements that glycol is not toxic are in error according to the NRDC. These chemicals are toxic. Additionally, it has been said that propylene glycol is less toxic than ethylene glycol, yet it is 100% lethal to all aquatic life

at just 67 part per million (ppm) and considered by one expert who is not controlled by the Port of Seattle, to be more toxic than ethylene glycol. Last year, both Des Moines and Miller Creeks contained over 3,000 ppm of glycol.

Comment: The draft permit considers glycols as if they were pure laboratory grade substances. No consideration is given to the actual commercial formulations used at the airport including stabilizers, preservatives and inerts. There is an assumption in the draft permit that all glycols discharge to the IWS system (with the exception of exempted aircraft sheeting). This assumption is at odds with the data collected last winter season. The permit should required treatment options to be identified for all deicing/anti-icing agents used at the airport from aircraft or runways. Since Ecology has determined that there is no surface water criteria for glycols, they should determine the technology based limit and impose that limit on the industrial wastewater and stormwater.

Comment: Page 10, paragraph 1: We believe that the statement regarding glycols is slightly inaccurate and propose the following revised language: "Glycols are highly degradable in soil and water. Glycols are degraded very rapidly and may deplete the dissolved oxygen concentration, but diluted in the receiving water do not pose a significant threat to aquatic life via either toxicity or oxygen depletion."

Response 60N: The discussion on the toxicity of glycols has been removed from the final Fact Sheet. The Fact Sheet has been modified to clarify the Dangerous Waste designation issue and the environmental impact of the BOD exerted by the deicing/anti-icing compounds. The aquatic toxicity of the deicing/anti-icing fluids used at the airport is unknown. The final permit allows the discharge of deicing/anti-icing fluids in stormwater due to dripping and shearing from aircraft. The final permit requires stormwater WET testing to determine if dripping and shearing glycols in stormwater are toxic to aquatic life.

Comment: Glycol contamination has been a concern of the DOE and the Port for many years. Years of talk have brought no solutions except an unsuccessful attempt to vacuum and a partial solution to divert more of the glycol runoff to the IWS and away from stormwater. The IWS does not have the capacity to treat glycols, does it? From the IWS, do the glycols travel to the Sound untreated?

Comment: Barbara Hinkle has stated in a letter to Barbara Stuhling that glycol is not treated by the IWS, only diluted. Lisa Zinner in a telephone conversation with me and at the first public meeting on the permit said that glycol is not a major concern of the Department of Ecology. However, it is a major concern for the citizens. In our minds, to protect aquatic life, the water quality of our local stream and the Coastal Zone as well as ground water and recharge systems, the Highline Aquifer and its connection to local wells used by Seattle and Highline Water District for drinking water supply, glycol must be controlled and regulated by DOE in this permit now!

Response 60O: Glycols are not currently treated in the IWS, only diluted. The final permit addresses the discharge of deicing/anti-icing fluids (glycols) in both the stormwater and industrial wastewater discharges.

Comment: In 1994, the FAA issued new standards for aircraft deicing facilities. FAA Advisory Circular 150/5300-14 cites these standards as mandatory for design of aircraft deicing facilities at airport receiving Federal Grant Assurances. The NPDES permit should require that Port design deicing facilities which comply with these standards and construct glycol recovery and recycling facilities at Sea-Tac. Other commenters are providing information about deicing facilities at other airports which employ recycle glycol.

Response 60P: The Department cannot require compliance with standards issued by the FAA, the FAA must do this.

Comment: The amount of potassium acetate, calcium magnesium acetate and traction sand is missing in Table 2. Traction sand as well as other chemicals are washed down the SDS during precipitation events. What effect does potassium acetate and calcium magnesium acetate have on the environment?

Response 60Q: The following sentence has been added to the Fact Sheet: "The Port used 61,750 gallons of potassium acetate and 4,400 pounds of calcium magnesium acetate at the airport between April 1, 1996 and March 31, 1997." The quantity of traction sand used at the airport is not reported to the Department.

Comment: Page 10, second paragraph: We would like to acknowledge that the SDN-2 pump station diverts the majority of stormwater runoff from SDN2 to the IWS.

Response 60R: The following has been added to the fact sheet: "Stormwater flows up to the peak flow rate of the 6-month, 24-hour storm event are diverted to the IWS from the majority of SDN-2."

Comment: Page 10, last paragraph: The acreage should be 841 acres, rather than 846 acres. Also, to be absolutely accurate, the correct name is the "Miller Creek Detention Facility." SDN1-SDN4 drain to the Lake Reba Detention Facility, which is contained within the Miller Creek Detention Facility. It would be helpful if the fact sheet could also reiterate Ecology's prior determination that the Lake Reba Detention Facility is not "waters of the State," but instead is an artificially constructed stormwater detention facility.

Comment: Page 11: We would appreciate it if the fact sheet could also mention that Tye Pond detains SDE-4 and SDS-1 stormwater runoff, as well as the fact that stormwater runoff from SDS-2, SDS-3, SDW-3, subbasin SDW3-B, and SDW3-D receive detention in the Northwest Ponds stormwater detention facility. We would also appreciate it if the last sentence could include language acknowledging that SDN-1 also drains several Air Cargo building rooftops.

Response 60S: Most of these comments have been incorporated into the final Fact Sheet. The Miller Creek Regional Detention Facility's name was given as such in the Stormwater Receiving Environment Monitoring Report. The description of Lake Reba is given later on in the Fact Sheet and has not been added here.

Comment: We very much appreciate the revisions Ecology has made to Table 3. We have only the following few minor revisions:

- * SDS-1: Because of recent BMPs, only rooftops of the South Satellite and Alaska Hangars drain to this basin. The ground areas with industrial activity around these buildings have been routed to the IWS. Neither the Delta Hangar, nor any service area around it drains to SDS1. The only area still draining to SDS1 that could be considered even remotely an industrial activity is a small area (approximately 1 acres) of concrete roughly equal distance from the Delta hangar, South Satellite and Alaska Hangars. This is an aircraft taxiway, which is not an aircraft service area.
- * SDS-3: Only the rooftops of Concourse C and the Weyerhaeuser hangar drain to this basin. Because rooftops are non-industrial activity, we request that these areas be deleted from the Table.
- * SDW-3 Subbasin B: "SDW" should be removed from this basin. We note that Ecology has indicated that both the Haz Mat Shed and the Fire Pit drain to the IWS, but has still included these areas in the Table. We believe this is misleading because the rest of the Table concerns only areas that drain to the SDS. We suggest that the Haz Mat Shed and the Fire Pit be deleted from the Table to avoid confusion.
- * SDW-3 Subbasin D: "SDW" should be removed from this basin. The IWS Lagoons would only drain to this basin if there were a bypass. This should be noted. Only rooftops of the IWTP and Snow Removal Equipment Storage Building drain to this basin. Because rooftops are not regulated, the IWTP and the Snow Removal Equipment Storage Building should be deleted.
- * SDN-1: The Lufthansa Food Kitchen loading dock has been rerouted to the sanitary sewer, which should remove any "industrial activity" from this basin.
- * SDN-2: The Port has decided to run the pump station for the North Cargo Service area year round. Thus, stormwater will be diverted to the IWS, except for rainfall that exceeds the peak intensity of the 6-month, 24-hour design storm event.
- * Taxiway: We do not believe it is appropriate to list taxi parking as an activity, because parking lots are not regulated under the stormwater program.

Response 60T: The following responses are for those comments which the Department disagrees with:

- * Although the IWS Lagoons and the IWTP do not drain to the SDS, there are storm drains in close proximity to these activities.
- * Employee parking lots are not regulated under the stormwater program. The taxi yard is not an employee parking lot.

Comment: Table 4: SWPPP BMP Implementation - A wide range of BMPs are given, which include secondary containment of construction sites. An incident recently occurred that resulted in discharge of construction activity related sediments into Des Moines Creek via 188th Street from a IWS manhole surcharging and causing erosion on the south side of lagoon 1. The erosion overwhelmed the BMPs in place on the airport road below the discharge area. POS indicated that this was the result of an extreme rainfall event which was defined as 1.74 inches of rain in 48 hours. It seems to me that .87 inches of rain in 24 hours is far less than the 24 hour storm BMPs are required to be designed for. In fact, such a storm is obviously far less than the six month twenty four hour storm (1.3 inches of rain in 24 hours). Between that release (not detailed in the Fact Sheet) and the multiple releases from the North Employee Parking Lot site into Miller Creek, it is obvious that additional effort on the part of POS is necessary to address BMPs.

Response 60U: Secondary containment refers to the storage of chemicals and/or petroleum products at construction sites in a secondary container designed to capture the product if it is spilled.

Comment: IWS - Have the additional pump stations to divert snow melt water from snow storage areas to the IWS been completed? Is the system complete and operational?

Comment: In discussing the snow storage facilities Ecology presents erroneous information. The snow storage facilities were not ready by November 1, 1997. According to a recent letter from POS to Ecology, the snow storage areas will not be ready until December. It should be noted the letter informing Ecology that the deadline for the operation of the snow melt facilities would not be met was dated almost two weeks after the deadline had expired.

Comment: Page 12, second paragraph : We would appreciate it if the second to the last paragraph could be revised to state that the SDN-2 pump station is operated year-round. The pump station will divert all stormwater to the IWS, except for rainfall that exceeds the peak intensity of the 6-month, 24-hour storm design event. Also, as mentioned previously, the snow storage facilities will be delayed because of the Port's inability to obtain electrical permits.

Response 60V: The Port notified the Department on January 9, 1998 that the two north end Snowmelt Runoff Facilities were operational. Until the south end facility is completed, the Port will use the area in front of the Delta Hanger to store snow. This area drains to the IWS. Substantial completion of the south end facility is expected in 1998.

61. Fact Sheet – Permit Status

Comment: Permit Status - In discussing the permit application, Ecology states, "...and accepted by the Department on May 19, 1997." The date Ecology indicates that Ecology "accepted" the application pre-dates the public comment period on the permit application. Such action on the part of Ecology rendered public comment meaningless as the only determination to make on the application had already been made and could not be aided or influenced by public comment.

Response 61: The purpose of the Public Notice of Application (PNOA) is to notify the public that a discharge has been proposed to waters of the state and to receive comment on the proposed discharge, not the application. Comments received in response to the PNOA are considered during the drafting of the permit.

62. Fact Sheet – Summary of Compliance with the Previous Permit

Comment: In the first bullet, it appears that outfall 010 is misidentified. The location of the August 16, 1995 spill was at outfall 015, as shown on the Comprehensive Storm Drainage System Plan and Design Drainage Basins map, included in the Draft Permit. Outfall 015 is immediately below (south southwest) the IWS lagoons 1 and 2. Outfall 010 is the furthest west of the southern airport outfalls, located near Des Moines Memorial Drive. It should be noted that unlike the inference in the incident report, there were frequent discharges of polluted, foaming water with a petroleum odor and evident sheen.

Comment: In the first bullet, it appears that Outfall 010 is misidentified. We understand that the location of the August 16, 1995 spill was at Outfall 015, as shown on the Comprehensive Storm Drainage System Plans and Design Drainage Basins map included in the Draft Permit. Outfall 015 is immediately below (south/southwest) the IWS lagoons 1 and 2. Outfall 010 is the furthest west of the southern Airport outfalls, located near Des Moines Memorial Drive. We understand that contrary to the implication in the incident report for the above spill, there were frequent discharges of polluted, foaming water with a petroleum odor and evident sheen. Ecology must revise the Fact Sheet to reflect this information.

Response 62A: Outfall 010 has been changed to Outfall 015. The Fact Sheet has not been changed to indicate that "there were frequent discharges of polluted, foaming water with a petroleum odor and evident sheen", as this is an unsubstantiated charge.

Comment: Table 5, page 15: We have reviewed our DMRs and correspondence to Ecology and would like Table 5 to be revised to include an "explanation" column, which contains facts reported to Ecology. In many cases, these explanations document upsets, or excused instances of non-compliance.

Response 62B: The Department denies this request to modify Table 5, but agrees that the DMRs include an explanation on effluent violations as required by the permit.

Comment: Page 16, first bullet: We would like to include the following actions that the Port took in response to this incident: "The Port designed and installed telemetry and mechanical valves to prevent the recurrence of the October 11 and December 3 incidents."

Response 62C: This statement is included in the draft Fact Sheet three paragraphs below this bullet.

Comment: Page 16, second bullet: The flow was diverted to Lagoons 2 and 3. We would also like to add the following language describing the actions the Port took in response to the incident: "Immediately afterward, the Port bolted the manhole shut to prevent this incident from recurring."

Response 62D: Lagoon 3 has been added. The requested language was in the draft Fact Sheet.

Comment: On page 16, where Ecology discusses the notice of violation dated January 3, 1996, it is stated "In response to these events...". In order to be accurate and not create a false impression, the section should include the Clean Water Act lawsuit by Waste Action Project as a major factor as most of the improvement projects noted were the result of the Consent Decree related to that suit.

Response 62E: The Department disagrees that the improvements were made in response to the Clean Water Act lawsuit by the Waste Action Project. The improvements to the IWS were already being planned as a result of the IWS Treatability Study and the preparation of the IWS Engineering Report. The Waste Action Project's lawsuit may have been a factor in the implementation schedule for these improvements.

Comment: Page 16-17: Regarding the warning letters issued to the Port, we would appreciate it if the fact sheet could state that a follow-up inspection report stated as follows: "The Port did a good job of working with the contractor to correct erosion control problems identified during the construction project. This project is a great example of good development and application of a Construction Erosion and Sediment Control Plan. Lessons learned on this project will be applied to future construction projects at the airport. (Ecology Inspection Report dated 11/6/96.)"

Response 62F: The Department denies this request. It would not be appropriate to add this language to the Fact Sheet without adding a detailed discussion on the erosion problems at the North Employee Parking Lot construction site in September, 1997. The Department hopes that the lessons learned at the North Employee Parking Lot construction project will be applied to future construction projects at the airport.

63. Fact Sheet – Industrial Wastewater and Stormwater Characterization

Comment: Stormwater - The Fact Sheet fails to present some pertinent information on the SWS. For example there have been chronic problems with the discharge of glycols and fecal coliform through the SWS to Miller Creek and Des Moines Creek. Des Moines Creek has been listed as water quality limited for fecal coliform since 1996. While POS has claimed that fecal coliform at the airport is a result of birds, testing done to date has shown that fecal coliform in Des Moines Creek results primarily from human sources. Further when sources of fecal coliform have been identified at the airport, it has been determined they resulted from POS or tenant practices.

Response 63A: A paragraph had been added to the Fact Sheet in this section to discuss fecal coliform. Glycols were discussed in a previous section of the Fact Sheet.

Comment: Page 17, last paragraph: The words "90%" should be replaced with the word "majority" to be consistent with the 1997 Annual Stormwater Report. See 1997 Annual Stormwater Report, page 75.

Response 63B: More than 90% is the majority.

Comment: Industrial Wastewater and Stormwater Characterization - It is important to note that due to the selection of data used to develop the Annual Stormwater Monitoring Report for Seattle-Tacoma International Airport report, a false picture is generated in terms of the storm water discharges. For example, while table 7 shows discharges for the parameter glycol to range from none detected to 1.5 milligrams per liter. This gives the impression that even the highest concentrations of glycols found in stormwater from the airport are almost too small to measure. In fact, data from last winter showed concentrations of glycols in both Miller Creek and Des Moines Creek at levels up to and exceeding eight thousand milligrams per liter. This is in fact more than three orders of magnitude greater than what is reported in the table, and eighty times the current Canadian national standard. Both Ecology and POS are well aware of the data showing high concentrations of glycols and the information was available in a timely enough fashion to be used in the Fact Sheet. The false impression the public is left with by the current data used in the Fact Sheet is unacceptable and casts serious doubt about the validity of the rest of the data reported in table 6 and table 7. It also casts serious doubt about the validity of the conclusions reached by Ecology in regard to pollutants reported in the table and this Draft Permit, to the extent that Ecology relied on these tables.

Comment: Thank you for including median values. The single high glycol value should be footnoted with the explanation that this data point was not characteristic as it was from a time-series sampling on 12/26/96 and was part of a huge snow storm, which was a worst-case event. The diversion of snow melt water to the IWS makes it extremely unlikely that this will recur in the future.

Response 63C: Table 7 has not been changed in response to either of these comments. The concentration range for total glycols in stormwater (none detected - 3,635 mg/L) is what was reported to the Department. Concentration ranges are not supposed to be characteristic, the median value presented in the table serves that purpose.

64. Fact Sheet – Proposed Permit Limitations

Comment: In the first paragraph, the Fact Sheet appears to state water quality based limitations in NPDES permits are based on compliance with a number of laws or regulations, including Ground Water Standards (Chapter 173-200). How do ground water standards compliance apply to a NPDES permit?

Response 64A: WAC 173-200-100(3) states: This chapter shall be enforced through all legal, equitable, and other methods available to the department including, but not limited to: Issuance of state waste discharge permits, other departmental permits, regulatory orders, court actions, review and approval of plans and specifications, evaluation of compliance with all known, available, and reasonable methods of prevention, control, and treatment of a waste prior to discharge, and pursuit of memoranda of understanding between the department and other regulatory agencies.

Comment: In the second paragraph, the Fact Sheet lists reasons to not develop an effluent limit for a pollutant known to be in a discharge. One of the reasons included is "...are not controllable at the source". Please clarify what is meant by this phrase and what authority provides the basis for the exclusion.

Comment: In the second paragraph, the Fact Sheet lists the reasons that Ecology may rely on in determining to not develop an effluent limit for a pollutant known to be in a discharge. One of the reasons included is if pollutants "are not controllable at the source." This assertion is unacceptably vague. Ecology must revise the Fact Sheet to clarify the meaning of this phrase and the basis for Ecology's determination that this exclusion is environmentally appropriate and consistent with Ecology's duties under state and federal law.

Response 64B: This statement has been removed from the Fact Sheet.

65. Fact Sheet – Technology-based Effluent Limitations

Comment: Oil and Grease - It is stated that if there is a statistical difference between the two methods, that will be tested side by side, that a new interim effluent limit for Oil and Grease will be determined by Ecology. Is this a minor or major modification of the permit?

Comment: Oil and Grease - The Port is concerned that the comparable determination and statistical difference could be subject to different interpretations. Therefore, we request that any change in testing methodology be made through a major permit modification.

Comment: The Fact Sheet discusses an existing and a proposed substituted analytic methodology for oil and grease, which are to be evaluated concurrently. The Fact Sheet states that if a statistical difference appears, Ecology will establish new interim effluent

limitations based on the new methodology. Ecology must revise the Fact Sheet to state whether these new limitations will be established through a major or minor permit modification.

Response 65A: This change would be a major modification with opportunity for public comment.

Comment: The first paragraph of this section states that total ammonia, PAHs, BTEX, total recoverable phenolics and priority pollutant metals have been removed from the list of final effluent limit parameters because monitoring data has shown that these parameters are not present at levels of concern in the IWTP effluent. This statement is provided with no explanation whatsoever. The substances in this list typically are associated with discharges from airport facilities throughout the nation. The removal of these parameters from the list of final effluent parameters constitutes backsliding, which is prohibited under the Clean Water Act. Ecology must revise the Fact Sheet to explain the specific bases for the proposed deletion of these parameters from the list of final effluent parameters, with reference to (1) the particular monitoring data relied upon by Ecology, and (2) the anti-backsliding provisions of the CWA and WPCL.

Response 65B: The IWS monitoring data gathered during the previous permit term showed that the concentrations of these parameters were low in the IWS effluent. Effluent limits for parameters that are not present in significant concentrations are not justified. Removing a limit that was never established does not constitute backsliding.

Comment: Flow: The first sentence should be deleted and replaced with the following language: "The flow limitation is set at 4800 gallons per minute (gpm). This limit is based on the design peak loading rate for the DAF units in the IWTP. The discharge flow rate shall also not exceed the discharge rate specified in the Midway Sewer District discharge agreement (flow shall not exceed 2,500 gpm whenever the combined flow from the IWS and Midway Sewer district exceeds 90% of the outfall's present capacity of 12,500 gpm)." The Port objects to the last sentence, which authorizes a more stringent technology based limit and requests that the sentence be deleted. These revisions are consistent with the interim flow limitations.

Response 65C: A technology-based final effluent limit for flow, such as the 4,800 gpm interim effluent limit, cannot be set until AKART has been determined. The final flow limit will be the more stringent of the AKART technology-based flow limit and the Midway Sewer District agreement flow limit. The Department does not understand why the Port would object to this statement.

Comment: Final Limitations, Other - The Fact Sheet states "Intentional discharge of industrial wastewater to ground water is prohibited." This, by implication would mean that unintentional discharge to groundwater is approved. Please provide an explanation of Ecology's authority, under the appropriate statute, to allow unintentional discharge to groundwater without a Waste Discharge Permit. Please indicate where in the relevant

statute and regulation the term “intentional discharge” is defined and distinguished from any other kind of discharge.

Response 65D: This statement has been changed to: All known, available, and reasonable methods to prevent the unintentional release of industrial wastewater to ground water shall be applied.

Comment: The Fact Sheet states “Discharge of stormwater to ground water is permitted”. Is this discharge permitted if the stormwater is contaminated with industrial process wastewater? If it is, under what authority?

Response 65E: The permit does not allow the discharge of industrial wastewater to stormwater.

66. Fact Sheet – Surface Water Quality-based Effluent Limitations

Comment: Surface Water Quality-Based Effluent limitations, page 20, discusses protection of existing water quality and preservation of the beneficial uses of surface waters, but it fails to consider adequately critical conditions related to Airport discharges to such waters. As noted elsewhere in these comments, Ecology has listed Des Moines Creek, pursuant to Section 303(d) of the Clean Water Act, as water quality limited for fecal coliform. We understand, further, that the King County Water and Land Resource Division has also determined that fecal coliform in Des Moines Creek is a critical condition. Ecology's failure to address fecal coliform discharge into surface water from the Airport in this Draft Permit is unacceptable. Ecology must modify the Fact Sheet and the Draft Permit to establish water quality-based effluent limits to encourage and enforce the elimination of fecal coliform (and related pathogenic) discharges to surface water from the Airport.

Comment: Surface Water Quality-Based Effluent Limitations, Critical Conditions - Ecology has determined that Des Moines Creek is water quality limited for fecal coliform. Ecology has failed in this Draft Permit to give adequate consideration to critical conditions related to airport discharges to waters of the state. The King County Water and Land Resource Division has also determined that fecal coliform in Des Moines Creek is a critical condition. Ecology's failure to address fecal coliform discharges into surface water from the airport in this permit is unacceptable. Water quality limit based effluent limits must be set to encourage and enforce the elimination of fecal coliform (and related pathogenic) discharges to surface waters from the airport. An analysis of data from the Discharge monitoring reports from the last permit cycle clearly demonstrate that BMPs are not effective in eliminating, or even reducing to acceptable levels, discharges of fecal coliform. Unlike relatively low levels of dissolved metals which are very difficult to treat, fecal coliform treatment is well understood, and achievable with existing technology.

Comment: Require that the source of the high levels of fecal coliform in Des Moines Creek be discovered and eliminated. Higher than normal levels of fecal coliform in Des

Moines Creek has been a documented problem since at least 1994 and probably longer, yet no agency has taken the initiative to discover the source or fix the problem. The Port has been allowed for years to claim that birds were the source and this has been an unproved hypotheses that Ecology never challenged or endeavored to understand.

Response 66A: "Critical conditions" is a term used in NPDES permitting to describe the assumptions made about the wastewater discharge flow rate and the receiving water flow rate when making permitting decisions. Critical conditions are when the wastewater flow rate is high and the receiving water flow rate is low, providing the highest potential for adverse impact to the receiving water.

Fecal coliform are harmless bacteria that reside in the intestinal tracts of warm-blooded animals, including human beings. Fecal coliform are used to indicate the presence of pathogenic organisms from human waste. Pathogenic organisms may be discharged in human wastewater by human beings who are infected with disease or who are carriers of disease. Fecal coliform are used to indicate the presence of human pathogenic organisms because the identification of pathogenic organisms in water is both extremely time-consuming and difficult. If high fecal coliform counts are traced to wildlife population, then the fecal coliform are not indicating the presence of human pathogens, and therefore may not indicate a risk to human health.

The updated SWPPP required in Special Condition S12 is required to address fecal coliform in the stormwater discharges. The Port should perform additional testing to determine the source of fecal coliform for the updated SWPPP.

Comment: The Fact sheet fails to specify for which body of water Ecology has been unable to make this determination, therefore we assume this is the case for all the water bodies that receive discharge from the Airport. Moreover, the indifference to enforcement of the State's anti-degradation policy implicit in Ecology's casual observation that it is "unable to determine if ambient water quality is either higher or lower than the designated classification criteria" and therefore will not concern itself with determining the facts, is extremely troubling. Further, the bland assurance that the "discharges authorized by this proposed permit should not cause a loss of beneficial uses" is wholly conclusory. Ecology must revise the Draft Permit to require the collection of data necessary to determine the natural conditions of the receiving waters and to provide for the imposition of effluent limitations as necessary to comply with the State's anti-degradation policy.

Response 66B: Natural conditions for Puget Sound, Miller Creek and Des Moines Creek no longer exist and therefore cannot be determined. Ambient monitoring data exists for Miller Creek and Des Moines Creek. The discussion on anti-degradation has been modified in the final fact sheet to include this information.

Section 502(11) of the Clean Water Act (CWA) defines "effluent limitation" to mean any restriction on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources, including schedules of

compliance. The CWA does not say that effluent limitations need to be numeric. The SWPPP requirement for stormwater discharges from the airport operations constitutes an effluent limitation under this definition.

Comment: Mixing Zones - It is noted that mixing zones are not applicable to airport discharges as AKART has not been applied.

Response 66C: Comment noted.

Comment: Puget Sound - Given the monitoring requirements in the Draft Permit related to outfall monitoring and sediment monitoring there should be at least some minimal discussion of what existing data there is on water and sediment quality in the vicinity of the outfall into Puget Sound and where the public could get additional detailed information if they want it.

Response 66D: A discussion on sediment quality is contained in another section of the Fact Sheet. There are no monitoring stations in Puget Sound in the vicinity of the Midway Sewer District outfall. If ambient water quality data is needed to determine the final effluent limits for the IWS discharge, then ambient sampling will be required either through an administrative order or in the modified permit.

Comment: Since the Puget Sound area is rated in the top 13 estuaries to be protected due to the variety and quantity of unusual and unique plant and wildlife populations, how will this new permit help to enhance and protect this important designation? How will this permit help to destroy this designation?

Response 66E: This permit includes a compliance schedule for the implementation of AKART for the IWS discharge to Puget Sound. The final effluent limits will be protective of the water quality standards in Puget Sound.

Comment: From airport site inspections I have been involved in it appears that Walker Creeks origin, in part, comes from springs discharging out of the western portion of airport property. The text makes it appear that the origin is west of the airport altogether.

Comment: Figure 4 Walker Creek is a tributary of historic Miller Creek. Walker Creek flows into Miller Creek a short distance from it mouth on Puget Sound. The main headwaters for Walker Creek are in a large marsh on the west side of Sea-Tac Airport at 12th and 176th South to Des Moines Memorial Drive. Preservation of these headwaters are important to the survival of this salmon bearing stream. I only saw a reference to Walker Creek once in the Draft - "as a tributary of Miller Creek." Your map of the Miller Creek watershed should show the South end of the watershed draining into Walker Creek and show it as a separate watershed before the stream joins Miller Creek a few hundred feet from Puget Sound. It should also be tested for pollution at the upper reaches of the creek.

Comment: Figure 4 Walker Creek is a tributary of historic Miller Creek. Walker Creek flows into Miller Creek a short distance from its mouth on Puget Sound. The main headwaters for Walker Creek are in a large marsh on the west side of Sea-Tac Airport at 12th and 176th South to Des Moines Memorial Drive. Preservation of these headwaters are important to the survival of this salmon bearing stream. I only saw a reference to Walker Creek once in the Draft - "as a tributary of Miller Creek." Your map of the Miller Creek watershed should show the South end of the watershed draining into Walker Creek and show it as a separate watershed before the stream joins Miller Creek a few hundred feet from Puget Sound. It should also be tested for pollution at the upper reaches of the creek.

Comment: The attached map's lettering is too light to be readable. Miller and Walker Creeks are not shown on the map. Since wetlands are an integral part of creeks, all wetlands should be included on the map. For better reading, color coding should not cover symbols, words or other features.

Response 66F: Figure 4 has been improved in the final Fact Sheet. The new Figure 4 clearly shows Walker Creek and its headwaters. A separate Figure 5 has been added for Des Moines Creek.

Comment: The Fact Sheet does not mention the need to dredge material out of Lake Reba in order to maintain enough capacity to mitigate damage detailed from peak flows. It is requested Ecology correct the Fact Sheet to indicate the need and related requirement for dredging of Lake Reba.

Comment: The Fact Sheet fails to mention or determine whether the Miller Creek Regional Detention Facility is sufficient to mitigate peak flows to Miller Creek to the extent necessary to prevent damage from airport discharges that would interfere with characteristic uses of Miller Creek. The Draft Permit fails to set a schedule for dredging Lake Reba to maintain capacity and decrease the potential for water quality violations related to settleable solids, suspended solids and turbidity and other pollutants. It is requested that Ecology correct these deficiencies in the Draft Permit and Fact Sheet.

Comment: The attached 'Fact Sheet' to the draft NPDES permit is really not a statement of facts, but more a statement of assumptions and in many cases a distortion and or omission of facts. Whether intentional or not, it is a disservice to the public and should be closely reviewed and corrected. A most glaring omission is the need to dredge the 'Lake' Reba retention facility and provide an operation and maintenance plan for that and other retention facilities 'on' Miller Creek. The capacity of 'Lake' Reba must be restored, especially in light of the huge volumes of sediment that currently nearly fill the 'lake'.

Comment: The recent spills from the North Employee Parking Lot site have resulted in heavy siltation of Lake Reba, resulting in seriously decreased capacity for stormwater detention. The permit should require an operation and maintenance plan for all the Miller Creek detention facilities and a compliance schedule for removal of sediment in Lake Reba to restore storage capacity.

Comment: We believe that Lake Reba requires dredging to restore adequate capacity to mitigate damage from peak flows. Ecology must revise the Fact Sheet to discuss the capacity of Lake Reba and the advisability of dredging under specific conditions, and must revise the Draft Permit to prescribe a dredging schedule and associated requirements.

Comment: Like the discussion of Miller Creek, the Fact Sheet's discussion of Des Moines Creek gives no indication as to the adequacy of detention facilities to protect the receiving water's beneficial uses. Similarly, the Draft Permit imposes no requirements related to the maintenance of existing detention capacity or the need for a schedule for developing additional capacity. Ecology must modify the Fact Sheet and the Draft Permit to correct these deficiencies.

Comment: Des Moines Creek - Like the Miller Creek section of the Fact Sheet, the Des Moines Creek section refers to detention facilities, the Northwest Ponds and the Tyeec Pond. In similar fashion to the Miller Creek section, no indication is given as to the adequacy of the detention facilities to protect the receiving waters characteristic uses and the permit has no requirements relative to the maintenance of the existing detention capacity or the need and schedule for additional capacity. While I am aware that the airport is only a portion of the watersheds for the three identified creeks, the airport is also on or near the headwaters of all three creeks. As such they occupy a critical portion of the watershed and adequate detention is a particularly critical issue.

Response 66G: Special Condition S14 of the final permit has been modified as follows:

All construction actions taken by the Permittee shall provide sufficient detention and/or shall use existing available detention capacity, in accordance with the Stormwater Management Manual for the Puget Sound Basin or its approved equivalent, to prevent an increase in the peak flow rate or flooding frequency of Miller Creek and Des Moines Creek. All detention facilities owned and/or operated by the Permittee shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function.

The Permittee shall submit to the Department within three (3) months of the effective date of this permit an Operations and Maintenance Plan for the Lake Reba Detention Facility.

Comment: We would appreciate it if the references to "Lake Reba" could reiterate Ecology's prior conclusion that Lake Reba is not a lake and is not waters of the State, but is instead an artificially created stormwater detention facility. Also, the Port considers "Lake Reba" to be a subset of the Miller Creek Detention Facility. We suggest the following revisions:

Page 23, second sentence: "Sea-Tac Airport contributes drainage to the creek through the Miller Creek Detention Facility, which includes Lake Reba. Lake Reba

is an artificially constructed stormwater detention facility, and is not "waters of the State."

Page 24, third paragraph, last two sentences: "The Lake Reba stormwater detention facility was constructed by the Port in 1973. The Miller Creek Detention Facility (which includes the Lake Reba stormwater detention facility) . . . "

Response 66H: The Fact Sheet clearly states that Lake Reba was constructed by the Port.

Comment: Ecology must modify this section to discuss the State's listing of Des Moines Creek under CWA section 303(d), and the regulatory implications of that listing.

Comment: The Draft Permit and the Fact Sheet should be revised to address the CWA 303(d) listing and TMDL development and implementation processes as applicable to discharges from the Airport.

Comment: There is no mention of Des Moines Creek being water quality limited for fecal coliform, which is a relevant fact for the public to know and the agency to consider in drafting and finalizing the NPDES permit. The Fact Sheet and Draft Permit do not indicate the steps Ecology is taking to address the 303(d) listing for Des Moines Creek. Ecology has a duty to inform the public of this listing and take steps to address it in the Fact Sheet and Draft Permit. Please correct these deficiencies in the Draft Permit and Fact Sheet.

Comment: The permit fails to indicate that Des Moines Creek is on the state "303(d)" list as water quality limited for fecal coliform. When this issue was brought up in the NPDES permit public information meeting a DOE representative told the public the creek was not listed as such. Subsequently this information was checked and it has been verified that Des Moines Creek was listed as water quality limited in 1996. The permit should require POS to have an operation and maintenance plan for detention facilities on Des Moines Creek.

Response 66I: A discussion on the 303(d) list and TMDLs has been added to the Fact Sheet section on Des Moines Creek.

Comment: Stormwater Receiving Environment Monitoring Report - As mentioned previously in these comments, there is a concern that the cited report fails to present an accurate picture of discharges to surface waters. For example the high end or the range of glycol concentration in discharge reported was in excess of three orders of magnitude (103) lower than actual data reported. This calls into question the credibility of POS reports. The reference to additional documentation available on the creeks is appreciated.

Response 66J: Comment noted.

Comment: Surface Water Quality Criteria - There is a concern that discharges from the airport grossly violate the Surface Water Quality Criteria. In the case of Des Moines Creek, this includes a pollutant that the receiving water is water quality limited for. There is no information in the Fact Sheet related to these pollutants or how permit requirements will result in compliance with the relevant Surface Water Quality Criteria. Please correct the Fact Sheet and Draft Permit to address these concerns.

Comment: This Surface Water Quality Criteria section sets forth state surface water criteria for aquatic biota, but it fails to assess the Port's compliance with these criteria. Ecology must revise the Fact Sheet to assess the Port's compliance with these criteria, in particular fecal coliform, and to explain how the Draft Permit assures such compliance. Ecology must revise the Draft Permit accordingly to assure such compliance.

Response 66K: The Surface Water Quality Criteria section discusses the criteria, the next section discusses consideration of the criteria. A discussion on fecal coliform has been added to this section, called Consideration of Surface Water Quality-Based Limitations for Numeric Criteria.

Comment: This section discusses a mixing zone study performed by the Port. It addresses specifically the impact of dissolved oxygen deficiency and pH, and notes that "no other water quality criteria pollutants are present in the IWTP discharge at levels of concern." Ecology must revise the Fact Sheet to explain the basis for its determination that dissolved oxygen deficiency and pH are the only water quality criteria pollutants that should be addressed in connection with the Port's industrial wastewater discharge.

Response 66L: The basis for this determination was an examination of the monitoring data collected during the term of the previous permit.

Comment: Consideration of Surface Water Quality-Based Limits for Numeric Criteria, Industrial Wastewater - It is unclear what the significance is of the dilution factors given for the maximum allowable mixing zone for outfall 001. What significance do these numbers have when no determination has been reached regarding AKART? Is Ecology proposing to establish a mixing zone for POS, based on its discharge alone? Has Ecology already made an AKART determination for the Midway Sewer District? If a mixing zone is established, will Ecology make its determination on the mixed discharge from Midway Sewer District and POS? If Ecology does make a determination based on a mixed discharge, what steps will Ecology take to assure that POS does not receive a benefit from dilution of its discharge with Midway Sewer Districts discharge? Is dilution of industrial wastewater to achieve compliance illegal?

Response 66M: The dilution factors given in the draft Fact Sheet are provided for informational purposes. AKART for the Midway Sewer District, and all municipal wastewater treatment plants, is secondary treatment. When the AKART determination for the IWS is made, the need for a mixing zone and its appropriate size and dilution factors will be reevaluated.

Comment: The Port incorporates all of its comments to stormwater set forth in its comments to the permit above. To summarize, the Port believes that it is inappropriate to make a reasonable potential analysis for stormwater without allowing for dilution. WET testing is inappropriate because the data does not show a reasonable potential to violate water quality standards. As the fact sheet *correctly notes*, all data was analyzed without dilution in the receiving water body. The fact sheet's reasonable potential analysis is inherently flawed because Ecology assumes that no dilution will occur and that, through a non site-specific translator factor, dissolved fractions can be equated to total recoverable fractions (which would be expected to have a wide range of potential toxicities under varying effluent and receiving water conditions). The actual exposure of organisms to bioavailable concentrations is greatly overestimated using this type of approach.

Response 66N: A mixing zone for stormwater has not been granted in this permit. The Port must satisfy the requirements of WAC 173-201A-100(4) prior to being granted a mixing zone.

Comment: The fact sheet should state that concentrations of lead and zinc in stormwater found in airport runoff were typically lower than urban stormwater. Moreover, the data shown in Table 8 at page 25, shows that upstream data for both Miller Creek and Des Moines Creek "violated" the acute criteria for copper and zinc. This data shows that significant pollution is generated from non-Port sources upstream of the Sea-Tac Airport. In most cases, downstream data showed a *net reduction* in metals, which indicates that Sea-Tac Airport runoff actually improved the water quality in the creeks by diluting the upstream metal pollution generated by non-Port sources.

Comment: The fact sheet inaccurately states that airport copper results appear to be higher than typical urban stormwater. This statement appears to be based on Ecology's inaccurate conclusion that the airport's median copper exceeded the most conservative urban comparator reported in the Bellevue, 1996 study. This conclusion is inaccurate because the copper results from the Bellevue study (10.4 ug/l) represent *instream* samples, while all of the airport's including copper results represent *undiluted samples collected at the outfall*. It is, therefore, inappropriate to compare copper results from the Bellevue study to the airport's copper results. We understand that you have based the statement in the 1996 Annual Stormwater Report (7/95 – 6/96). The report, however, did not make the distinction between diluted and undiluted samples. Both lead and zinc results at the airport are lower than the instream results of the Bellevue study. In addition, the majority of lead and zinc in outfall discharges are an order of magnitude lower than the highway runoff study cited. Finally, the majority of lead and zinc in outfall discharges are below even the most conservative estimate of criterion for acute toxicity.

Comment: The fact sheet should acknowledge that copper, lead and zinc are commonly found in stormwater discharged by municipalities and other urban land use activities. Moreover, copper, lead, and zinc in the airport's runoff are seldom above comparative urban metals data, and only so in some of the airport's stormwater discharges. Non-Port

vehicle activity on public roads contributes metals to the Port's samples. These are important points.

Comment: Table 10, page 28: The Port requests a footnote regarding the comparator values which states as follows: "All median comparator values exceeded copper, lead, and zinc criteria."

Response 66O: The Fact Sheet discussion on metals has not been changed in response to these comments, except that the data from Bellevue in Table 10 has been replaced with Oregon NPDES stormwater monitoring data for mixed land use.

Comment: Table 9: The Table does not properly indicate that metals results are skewed, and that, therefore, the 95th percentile for all outfalls is non-representative for specific outfalls. The 95th percentile for lead and zinc in airfield outfalls is less than one-third of the overall 95th percentile reported in Table 9. The Port believes the skew is caused by unfavorable bias from non-Port, public road runoff in the land side subbasins. The last Annual Stormwater Report showed that airfield outfalls had significantly less metals (and all other pollutants in general) than the land side and terminal outfalls. Therefore, the "reasonable potential" determination is flawed because it judges all outfalls as if they were the same and does not take into account the demonstrated bias from various sources.

Response 66P: Comment noted. The Fact Sheet has not been modified in response to this comment.

Comment: Page 29: The Port objects to the ambiguous statement "The updated SWPPP will need to address copper, lead, and zinc in stormwater discharges from Sea-Tac Airport." The Port has previously implemented numerous BMPs which have reduced pollutant loading and will continue to do so. This statement in the fact sheet is unnecessary.

Response 66Q: The Fact Sheet has not been modified in response to this comment. The updated SWPPP should specifically investigate BMPs for the removal of copper, lead, and zinc from stormwater.

Comment: The Fact Sheet states that stormwater discharges from the Airport show "reasonable potential to violate the water quality criteria for copper, lead, and zinc." The Draft Permit does not, however, prescribe any measures designed to protect the waters of the State from such discharges. Ecology must revise the Draft Permit to include specific effluent limitations applicable to the presence of copper, lead, and zinc in discharges from the Airport, including stormwater discharges.

Comment: Stormwater - The section fails to address a number of issues, including that the stormwater discharge from the airport includes industrial discharges that the last four years of BMPs have failed to adequately address or correct. These discharges include fecal coliform and glycols among other pollutants. Further due to lack of control and no

plans for any control of the sheeting of glycol from aircraft, industrial waste discharge to stormwater will continue for the foreseeable future. What the permit does, in effect, is allow illegal discharges to be covered under a permit shield in perpetuity. The present configuration of the permit also allows fecal coliform surface water quality standards to be violated in perpetuity, including in a surface water that is 303(d) listed. This is not appropriate or acceptable. Please change the Fact Sheet and the Draft Permit to correct these deficiencies.

Response 66R: The final permit requires the SWPPP to be updated no later than November 30, 1998. The updated SWPPP will need to address the fecal coliform, copper, lead, and zinc in the stormwater discharges. The final permit also includes an ongoing requirement for outfall monitoring and annual data analysis to determine the effectiveness of the SWPPP. Acute whole effluent toxicity testing is required to help determine whether the discharge of metals in the stormwater has the potential to cause aquatic toxicity in the receiving water.

Section 502(11) of the Clean Water Act (CWA) defines "effluent limitation" to mean any restriction on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources, including schedules of compliance. The CWA does not say that effluent limitations need to be numeric. The SWPPP requirement for stormwater discharges from the airport operations constitutes an effluent limitation under this definition.

Comment: While the whole effluent toxicity (WET) testing would help address concerns related to protection of waters of the state, there is no start date requirement for the sampling and the completion date is four years off. Data collection should start as soon as possible and be designed in such a manner as to require sampling of the first flush of the stormwater discharge. As mentioned previously, a problem has also been noted in regard to POS using data that excludes the highest values from consideration. Steps need to be taken to assure this kind of bias is prevented or the data developed will provide no real level of protection to waters of the state. It is confusing to have the WET testing for the IWTP discussed under the section related to stormwater.

Comment: The timing and nature of WET testing is not adequately addressed in the Draft Permit. We believe that data collection should start as soon as possible, and be designed to require sampling of the early part of each episode of stormwater discharge. In addition, controls must be instituted to prevent the Port from using data that excludes the highest values from consideration. Ecology must modify the Fact Sheet and the Draft Permit to correct these deficiencies. In addition, to avoid confusion, Ecology must revise the Fact Sheet to at least cross-reference the discussion of whole effluent toxicity testing in the section on industrial wastewater, since such testing applies to industrial wastewater as well as stormwater.

Comment: The Port incorporates by reference its comments to Special Condition S9-10 of the permit and all of its comments to stormwater above.

Response 66S: The final permit requires the Port to perform the stormwater WET testing during the first year of the permit term. A stormwater WET characterization summary report will be submitted within 90 days after the last monitoring test results are final. Testing is required on composite stormwater samples taken during the first one inch of rainfall, or the entire storm event if it is less than one inch.

Comment: The discussion on Human Health identifies numeric health-based criteria that must be considered in NPDES permits, then makes the unexplained assertion that the Port's discharges "do not contain chemicals of concern based on existing data." This unexplained assertion is unacceptable. Ecology must revise the Fact Sheet to identify the data on which it relied in making this determination and explain fully the basis for this determination.

Comment: Human Health - On page 25 of the Fact Sheet, Ecology lists a number of parameters, with the implication being that fecal coliform is among the EPA, human health criteria. If this is true, then the statement that the applicants discharges do not contain chemicals of concern based on existing data is not true. According to Seattle/King County Public Health Department, excess fecal coliform is an indicator of potential human health concern, related to exposure to surface waters through drinking or recreational uses. The explanation of human health in the Fact Sheet and the provisions for human health in the Draft Permit are inadequate. It is requested that Ecology correct these deficiencies in the Draft Permit and Fact Sheet.

Response 66T: All of the monitoring data collected during the previous permit term was used to make this determination. A comparison of the monitoring data with the Human Health Criteria shows that there are no chemicals of human health toxicity concern in the discharges from Sea-Tac Airport. Fecal coliform is not a health-based criteria from the National Toxics Rule, it is a water quality criteria from chapter 173-201A WAC.

Comment: The Port objects to re-characterizing the sediment. As the fact sheet correctly acknowledges, the sediment testing showed no substance exceeded its respective sediment quality standard or lowest apparent effects threshold. Under these circumstances, the Port should not be required to re-characterize the sediments.

Response 66U: The Department denies this request. Although the sediment monitoring study showed that there is probably no great concern for adverse biological effects in the sediments from the combined discharge at Outfall 001, it was impossible to draw a final conclusion because the detection levels for a number of compounds were too high. The reported detection limits for phthalates, total PCB's, and several other compounds exceeded both the total organic carbon (TOC) normalized sediment quality criteria and the alternate dry weight normalized lowest Apparent Effects Threshold (LAET) values. Therefore, the final permit requires resubmittal of the report with additional chemical analyses at lower detection levels. Because phthalates and PCB's have been detected in the IWS discharge, and because phthalate and PCB levels seem to be accumulating in the sediments, further sediment monitoring will be required for all 47 compounds in the

standard scan, with a focus on phthalates and total PCB's at stations 105-109 (the stations around the diffuser).

67. Fact Sheet – Ground Water Quality Limitations

Comment: Please admit that Chapter 173-200 WAC does not require a discharge to groundwater to be “intentional” before coverage by Waste Discharge permit is required. It is requested that Ecology remove the requirement that discharges to groundwater must be “intentional”, in order to be covered by the permit.

Comment: This section acknowledges Ecology's obligations under the Ground Water Quality Standards, but fails to explain adequately how these obligations are met. As discussed in comments to the Draft Permit, Ecology must correct its apparent determination that only intentional discharges of waste to ground water are regulated under the Ground Water Quality Standards.

Response 67A: The intention of Special Condition S1.F in the draft permit was to prohibit the disposal of industrial wastewater to ground water. Since industrial wastewater is not discharged to ground water, but is discharged to surface water, this limitation is not necessary. The Special Condition S1.F in the final permit has been modified to include the following condition: “The Permittee shall apply all known, available, and reasonable methods to prevent the unintentional release of industrial wastewater to ground water.”

Comment: The Fact Sheet states that the boundary of impacts from spills of fuel including gasoline are defined and are all being addressed. This is not true for the IWS collection and transmission system, which has been confirmed as discharging at the site of other product spill investigations. Since the purpose of the investigation was to define the nature and extent of contamination related to the fuel spills and the costs of the study were being primarily paid for by the related tenant, the nature and extent of discharge related to the IWS transmission system was never followed up on or defined. The approach of the Draft Permit allows discharges related to the IWS collection and transmission system to the groundwater to continue unabated and without monitoring. That is not an acceptable or legal outcome.

Response 67B: Special Condition S15 requires the Port to perform a hydrogeologic study to evaluate the potential for the Industrial Wastewater Facility to impact ground water. Industrial Wastewater Facility means all structures, equipment, or processes required to collect, carry away, treat, reclaim or dispose of industrial wastewater.

Comment: The Fact Sheet discusses the impact of fuel spills and states that all sites that have been affected by such spills have been or are being remediated under the Model Toxics Control Act. These generalized assertions are inadequate. In particular, the Fact Sheet refers to activities called for under an agreed order between the Port and Ecology. It is our understanding that this agreed order is still under review and has not been signed. Accordingly, any assertions based on its provisions are inappropriate. Ecology must

revise the Fact Sheet (i) to identify specifically each site that has been affected by a fuel spill or spills; (ii) to explain how after-the-fact remediation under the Model Toxics Control Act is related to Ecology's and the Port's obligations under state law to prevent the ongoing discharge of pollutants to ground water; and (iii) to fully address compliance with the Ground Water Quality Standards.

Comment: Page 32, third paragraph, third sentence: The Port would like to clarify that Jet A fuel predominates over the proportion of gasoline contamination at the airport. In this regard, we suggest the following revision: "The releases to ground water have been predominantly Jet A fuel, and to a much lesser extent, gasoline."

Comment: Page 32, third paragraph, sixth sentence: To ensure accuracy, the Port requests the following clarification: "The boundary of the impacts are known and typically there is only localized contaminant migration in ground water from the original source areas."

Response 67C: The Department believes that the discussion in the Fact Sheet on contaminated sites, the proposed Agreed Order, and the requirements of the Ground Water Standards is sufficient and it has not been modified.

Comment: It is logical and consistent with preliminary findings of contamination that the AO be completed prior to the issuance of a new NPDES Permit, do you not agree? Since the extent of contamination on airport property is yet still unknown, and the fate of future transport of contaminants into aquifers, ground water and other natural environment is not yet studied, this permit issuance is premature because it gives no guarantees that all the past practice under permit has not afforded adequate environmental protection of valuable local water resources.

Comment: Issues in the proposed NPDES permit are implicated by concurrent actions which are presently undergoing review. Citizen comments related to the proposed Agreed Order between the Port and DOE should be incorporated and harmonized during the current NPDES permit public comment process. Shortly after the May 21 public hearing concerning the proposed Agreed Order DOE reported that its Responsiveness Summary to public comments would be forthcoming in August. It is now November and the Summary has not been issued. Many public comments in the proceeding concerned the interrelationship between the "Agreed Order" between the Department of Ecology and POS and this NPDES permit. This situation creates an "out of sequence" process which now complicates the task of provided community input concerning ground water issues during the current NPDES permit process. (The deadline for public comment on the proposed NPDES permit is December 10. It is obviously impossible to review DOE's responsiveness summary for the proposed Agreed Order prior to its release.)

Response 67D: The proposed Agreed Order and the NPDES permit address different issues at Sea-Tac Airport and therefore the order in which they are issued (or signed) is irrelevant.

Comment: The Agreed Order (AO) indicates that contaminants such as glycol have entered the soil and ground water at Sea-Tac. Highline Water District recommends a list of actions to prevent future and further contamination in their comment letter on the AO date June 16, 1997. They also state that "there is known water table contamination in the AOMA" and recommend establishing whether continuity exists between the QVA and Intermediate aquifers, which is till largely unknown. What is your opinion of these comments?

Response 67E: The Department will respond to comments on the proposed Agreed Order in a separate Responsiveness Summary.

Comment: Ground Water Quality Limitations - It is noted that the Fact Sheet states that conditions in the Draft Permit related to groundwater are imposed pursuant to state law only and not part of the NPDES permit program. That is not at all clear from the language in the permit itself. When the Permit Writers Handbook was drafted to address Waste Discharge Permits for groundwater discharges, the committee working on drafting the handbook was told there was supposed to be a separate cover page added to the permit to indicate that it is a Waste Discharge Permit, under authority of state law as well as a federal NPDES permit. This Draft Permit tries to eliminate the distinction through a claim that a lack of an "intentional" industrial discharge means a Waste Discharge Permit is unnecessary, but then adds Chapter 173-200 WAC requirements to the draft NPDES permit for which there is no basis under the Clean Water Act. This balancing act on a line of infinite thinness does not meet the requirements or intent of the Clean Water Act or Chapter 173-200 WAC. At a minimum, Chapter 173-200 WAC would require a hydrological assessment of all three lagoons (lined and unlined), and the transmission system, based on evidence of releases from the transmission system to sub-surface soils and/or groundwater. The current Ecology position is equivalent to saying that Infiltration and Inflow or raw sewage leaks from the transmission system of a sewage treatment plant do not need to be fixed unless they can be proven to be intentionally caused. This clearly leads to an absurd result that is insupportable. Please correct the Fact Sheet and the Draft Permit to be consistent and meet the requirements of the law, without adding definitions not otherwise present.

Response 67F: Both the Ground Water Quality Standards and the Implementation Guidance for the Ground Water Quality Standards state that discharges to ground water should be incorporated into NPDES permits when a facility has a surface water discharge and a ground water discharge.

Comment: Page 32, first paragraph: The Port incorporates its objections to Special Condition S15. If this condition is not deleted from the permit, the Port requests that the following sentence be added after the existing first sentence: "This study will supplement existing data that generally demonstrate that the IWTP and IWS Lagoons 1 and 2 have not impacted groundwater."

Response 67G: The Port is welcome to use existing data to supplement the requirement of Special Condition S15.

68. Fact Sheet – Other Permit Conditions

Comment: Operation and Maintenance - As mentioned under sections discussing stormwater, there should be specific requirements spelled out in an O&M manual for the stormwater detention facilities as well. The need for this was made especially clear by the heavy silting in Lake Reba due to POS site spills and the failure of the Lake Reba outlet control structure to control the spills due to structural failure. Storm water detention facility O&M manuals should be required as a permit condition and adopted as an enforceable portion of the NPDES permit. It is requested that Ecology make these changes to the Draft Permit and Fact Sheet.

Comment: The Port's required Operations and Maintenance Manual must include specific requirements related to stormwater detention facilities. Ecology must modify the Draft Permit to include such a requirement, and must revise the Fact Sheet accordingly.

Response 68A: Special Condition S14 of the final permit has been modified to include this requirement.

Comment: As discussed in our comments to Special Condition S12, the Port would like to update the SWPPP only once during the permit cycle. Also, the Port incorporates by reference all of its comments to Special Condition S12 above.

Response 68B: The Department incorporates by reference all of its responses to the comments to Special Condition S12 above.

Comment: As discussed in the comments to Special Condition S13, the SWPPP should not be required unless construction disturbs more than 5 acres and there is a point source discharge to surface water. Also, exemptions exist for certain activities, which should be acknowledged. In this regard, the Port incorporates by reference all of its comments to Special Condition S13 above.

Response 68C: The Department incorporates by reference all of its responses to the comments to Special Condition S13 above.

Comment: The Port requests that this portion of the fact sheet be deleted for the reasons mentioned in our comments to Special Condition S14.

Response 68D: The Department incorporates by reference all of its responses to the comments to Special Condition S14 above. This request is denied.

Comment: The Port incorporates by reference all of its comments to the General Conditions, discussed in our comments to the Permit.

Response 68E: The Department incorporates by reference all of its responses to the comments to the General Conditions above.

69. Fact Sheet - Permit Issuance Procedures

Comment: Recommendation for Permit Issuance - There is a conflict between the defined permit cycle of four and a half years and the requirement for the engineering report to be implemented within five years. The permittee should be required to implement the engineering report selected alternative within a single permit cycle (4.5 years) with a provision for notification of Ecology as soon as the permittee is aware of any condition that would interfere with that time line. If it is Ecology's Best Professional Judgement, that it will take more than five years to implement the engineering report, then milestones should be established to assure the permittee is kept on schedule. This would include dates for requests for bids and selection of contractor.

Response 69: WAC 173-201A-160(4) allows the Department to establish compliance schedules for existing discharges to include a schedule for achieving compliance with the water quality criteria. Schedules of compliance are allowed for construction of necessary treatment capability and are developed to ensure final compliance with all water quality-based effluent limits in the shortest practicable time. Schedules of compliance may in no case exceed ten years, and shall generally not exceed the term of any permit. Decision on schedules of compliance are made on a case-by-case basis by the Department.

The compliance schedule for the IWS discharge was established in the previous permit, which was issued on June 30, 1994. Therefore, the compliance schedule may not go beyond June 30, 2004. The complexity of the AKART determination and the capital improvements that will be necessary to implement the AKART determination make it necessary to go beyond the term of one permit. The final permit requires the Port to implement the AKART determination in the shortest practicable time, but no later than June 30, 2004.

The final permit requires the submittal of an addendum to the AKART Engineering Report within two months of the permit issuance date, which will include a schedule for project design, construction, and startup. After approval of the AKART report, the Port will submit a preliminary design report, plans and specifications.

70. Fact Sheet – References for Text and Appendices

Comment: The 1997 Annual Stormwater Monitoring Report, September 29, 1997, should be listed as a reference.

Response 70: This reference has been added.

71. Fact sheet – Appendix B

Comment: The Port requests the following revised definitions:

- * Industrial Wastewater: As mentioned above, the definition of industrial wastewater should be revised to ensure clarity, consistent with our comments to Special Condition S.1A.
- * Industrial Wastewater Facility: The industrial wastewater facility is the Industrial Waste Treatment Plant and the IWS Lagoons.
- * Spill: "Unanticipated, sudden, and accidental discharges of a reportable quantity of oil or hazardous substances into waters of the state. "Spills" do not include any discharge authorized by a permit or discharges that are reported in the NPDES permit application. An overflow of untreated industrial wastewater from the IWS collection system or IWS lagoons due to stormwater flows in excess of design criteria is an authorized bypass, not a spill."
- * Total Suspended Solids: We suggest that the definition in the Permit Writer's Manual replace the definition in the fact sheet, which inaccurately states that any amount of TSS is toxic and extremely harmful. The Permit Writer's Manual defines TSS as follows: "Particulates in water or wastewater retained by a glass fiber filter. TSS is measured as given in 40 CFR Part 136 and referenced as Residue - nonfilterable (TSS) or as given in Standard methods (17th ed.) method 2540D."

Response 71: The definition of industrial wastewater has been changed to match the definition contained in the permit. The other three definitions have not been changed.

72. General Comments - Application

Comment: I am very concerned that the current application does not provide all the facts and data required to make an appropriate renewal assessment. I am particularly concerned that volume is barely addressed at all and according to EPA guidelines excessive hydrological flow is a hazardous discharge. Primarily, the application is missing information, maps, needed diagrams required by the Clean Water Act. Please be sure the Port supplements the application as required. The application map does not even show the legal boundaries of the airport facilities. A cannot even find all of the surface waters or springs. The operations that contribute to the wastewater are not shown or described.

Comment: I am writing to request and urge that you make the Port of Seattle respond fully to all the requirements stated in the permit application. I have lived in this community for over 44 years, starting long before the P.O.S. grew with Sea-Tac to become the obnoxious gorilla it has been in recent years. The residents of the community need all the protection the laws require from the bullying tactics they resort to. The POS has repeatedly shown a mocking disdain for responsible civic behavior, particularly with respect to environmental guidelines/laws. I cal upon you folks to do your job to the full extent of the law and your authority, and protect our environment form the irresponsible behavior. Please, do your job and make them do theirs correctly and right.

Comment: The Clean Water Act contains clear requirements for public participation and availability of public information in conjunction with the NPDES permit process. The Act provides that, in the event clear information is not provided, the agency shall find the proposed application to be incomplete. I strongly encourage DOE to take all necessary steps to assure that the proposed permit adheres to the strict requirements of the Clean Water Act when reviewing and administering the Port's current permit application as well as when responding to public comments on the draft permit.

Response 72: The application was declared complete by the Department. The Department uses all of the information gathered during the previous permit term in combination with the application form to prepare the draft permit. The purpose of the Public Notice of Application (PNOA) is to notify the public that a discharge has been proposed to waters of the state and to receive comment on the proposed discharge, not the application. Comments received in response to the PNOA were considered during the drafting of the permit.

73. General Comments – Protection of the aquifer

Comment: Ensure adequate protection of the aquifer and water mains that supply drinking water.

Comment: Water is a vital necessity of life and we are all asked to protect it. The aquifer under the airport and its recharge area are an important source of water (hopefully clean). What assurance do you have that it will stay clean with such things as the #3 runoff retention pond being unlined as well as other sources of airport pollution penetrating the area? Hanford water supply was considered safe from the Hanford storage vaults because they were all in solid rock. Have you researched our situation thoroughly enough or are we going to have a similar problem? Can the weight of the fill dirt have an effect on the structure of the aquifer? What assurance do we have that the conformity will not be changed and possibly dislocate and destroy the whole water source? Is serious consideration and specific action being directed and taken to protect the vital health of the recharge area? This is critical! Does the fact that we are in an earthquake zone and scientists are expecting the "Big-One" raise any question in your mind of the stability of this development? How useful would the airport remain in the case of a disaster? Large buildings are required to be earthquake proofed as much as possible as well as being constructed on solid ground. Are the requirements different for an airport?

Response 73: This permit endeavors to protect ground water through many of its conditions. It requires the Port to implement AKART for the industrial wastewater discharge, which will include lining Lagoon 3. It requires a Hydrogeologic Study to be performed to assess the potential for the Industrial Wastewater Facility to impact the ground water. It also requires the implementation of a construction Stormwater Pollution Prevention Plan to prevent the contamination of stormwater that may be infiltrated to ground water.

74. General Comments – Inadequate Permit

Comment: We encourage the Department of Ecology to reissue the permit incorporating conditions that produce measurable results.

Comment: If current regulation are inadequate to provide the necessary protection, it is the DOE's responsibility to impose meaningful mitigation and monitoring while identifying the shortcomings and developing a strategy to work the issues.

Comment: The worldwide significance of this discharge permit needs to be recognized. The pollution it allows impacts an area that has been identified as critical by various organizations.

Comment: Ensure adequate protection of wetlands, creeks, and Puget Sound that provide a habitat for salmon, otters, blue heron, bald eagles and various other endangered and threatened species.

Response 74A: The final permit incorporates many conditions that will provide improved protection for the environment.

Comment: I feel that there are too many loopholes in the proposed permit allowing P.O.S. to continue to discharge hazmats into the Sea-Tac water system. The hazardous materials used in the deicing of commercial airlines run off the runway directly into the storm sewers. This is wrong and must be stopped!

Response 74B: The final permit disallows the discharge of industrial wastewater to the storm drain system.

Comment: The permit is in violation of the EPA NPDES delegation agreement. The permit must be enforced.

Response 74C: The final permit is not in violation of the EPA NPDES delegation agreement and it will be enforced.

Comment: The permit should consider the volumes of local data on the environment and industry data on airport pollution.

Comment: The permit should be compliant with other existing agreements and court orders. The application and permit appeared to be written in a vacuum. The technical risks to the aquifer voiced by the Seattle Water Department in the SEIS are pertinent in reviewing the interaction between ground pollution and its impact on the aquifer. The mitigation required by the Seattle Water Department needs to be included in airport related permits. This political mitigation should not diffuse the importance of the technical concerns in the SEIS. Also, the court order regarding miller Creek that was result of the second runway also has ramification to this permit.

Comment: The permit should be based on analysis that more accurately reflect actual and probable conditions for flooding, types of pollutants, air and ground traffic, etc.: a) flood impacts are underestimated; b) ground traffic pollution is underestimated in reports referenced by the draft permit; c) pollution impacts are underestimated, d) sediment characterization data in reports is obsolete according to the airport's recent Final EIS; e) peat farms and soft soil just downhill and west of the present airport increase all risks of contamination; and f) the pollution buffer for the airport area is being destroyed rapidly creating a new precarious ecosystem.

Comment: My wife and I are particularly concerned that water volume is barely addressed at all and according to EPA guidelines excessive hydrological flow is a hazardous discharge. The amount of impervious surface continues to grow at Sea-Tac - 40 acres just recently with the employee parking lot.

Comment: The draft permit WA-002465-1, "National Pollutant Discharge Elimination System Waste Discharge" Permit date 13 October 1997 needs to be revised extensively to: 1. Comply with environmental regulations, 2. Ensure protection of our environment including the aquifer and water mains that supply drinking water, and 3. Be based on analysis that more accurately reflect actual and probable conditions for flooding, types of pollutants, air and ground traffic, etc. Examples (a) "100" year floods occur every one to two years, (b) vehicular and aircraft traffic conditions, (c) Hazards like deicers, oil and grease are contaminating current water. The Master Plan Update Final Environmental Impact Statement erroneously reported glycols are being treated before release with the Port retracted in writing. The draft permit references, Storm Water Receiving Environmental Monitoring Report for NPDES Permit No. WA-002465-1, dated June 1997 refers to 1996 traffic data and focuses on metallic pollutants, not poisonous glycol deicers. The Public hearing notification process in Ecology Report WQ-R-93-019, which specifies advertising 30 days in advance, should be followed to obtain public comments on the Revised draft. This hearing process was not followed for the November 10, 1997 hearing at the Burien Library. My business's profit margin will be adversely impacted if the supply of inexpensive safer drinking water is reduced. The Clean Water Act and other environmental regulations need to be enforced through the permit process.

Comment: The draft permit WA-002465-1, "National Pollutant Discharge Elimination System Waste Discharge" Permit date 13 October 1997 needs to be revised extensively to: 1. Comply with environmental regulations such as the Federal Clean Water Act (Example: application is missing key information, maps, and diagrams). 2. Ensure adequate protection of our environment including (a) the aquifer and water mains that supply drinking water, (b) wetlands, lakes, creeks and Puget Sound that provide habitat for salmon, otters, blue heron, bald eagles and various other endangered and threatened species, and 3. Be based on analysis that more accurately reflect actual and probable conditions for flooding, types of pollutants, air and ground traffic, etc. (Examples (a) flood impacts underestimated - "100" year floods occur frequently, (b) ground traffic pollution underestimated in reports referenced by the draft permit - Reports ignore the incredible number of Sea-Tac Airport construction double haul trucks that are already

bringing traffic to a dead stop for over 3/4 mile almost every day for 5 months a year, (c) Pollution impacts underestimated - Hazards like deicers, oil and grease are contaminating current water. The Master Plan Update Final Environmental Impact Statement (FEIS) erroneously reported glycols are being treated before release. The Port has admitted in writing that glycols are being treated before release. The draft permit fails to set fecal coliform in Des Moines Creek even though testing has shown that the problems are from human sources rather than avian sources. The Public hearing notification process in Ecology Report WQ-R-93-019, which specifies advertising 30 days in advance, should be followed to obtain public comments on the Revised draft and revised application.

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Response 74D: The Department took volumes of recent data into consideration in preparing the draft and final permit and fact sheet, including court orders and agreements. Special Condition S14 requires the Port to provide stormwater detention in compliance with the Stormwater Management Manual for the Puget Sound Basin.

Comment: If airports rank 3rd of 25 of the worst offending polluters in the proposed TRI list, there must be far more toxic releases than what are now being covered under the present permit. What are they and why is the public not being made aware of them?

Response 74E: The final permit addresses all of the wastewater discharges from the airport.

Comment: It appears that, at the outset of negotiations, DOE made the decision that this permit issuance was going to be approved no matter what. The negotiations have been

framed by DOE employees to obtain as many compliances as possible with Federal and State regulations. Compromises would be made as necessary as the negotiations went forward. This attitude is bound to result in many shortcuts and compromises that would result in very serious damage to the ecology of a large area southwest of the Seattle that is heavily populated, if this project were to go forward.

Comment: The main thrust of this NPDES draft permit seems to be to accommodate Sea-Tac Airport, and allow airport activities to continue as planned even at the expense of the environment. Instead of this approach of allowing more relaxed standards, the impacted cities and residents would ask the DOE to increase its vigilance. Would DOE make this its goal: 1. Ensure clean drinking water. 2. Ensure healthy salmon runs. 3. Prevent flooding in the lowlands.

Comment: The permit needs to be more strict than the preceding one because the real current pollution situation and ongoing construction problems and risks are much higher.

Response 74F: The first NPDES permit was issued to Sea-Tac Airport in 1975. This permit has been renewed approximately every five years since then. The Department is required to renew the permit as long as there is a discharge of wastewater to waters of the state. The Department strives to issue reasonable permits that fully implement all of the requirements of federal and state law and regulation. What may appear to be compromises to those less involved with the daily compliance issues at the airport are actually improvements made to the permit to provide clarification of the intent of the conditions in the permit. The Department believes that the conditions in the final permit are an improvement over the previous permit in providing protection for the environment.

Comment: If you have no criteria, we recommend nothing toxic to fish ever be allowed to leave airport property, stormwater discharge should not exceed 1% of any stream's flow and nothing should be discharged onto the ground which might eventually affect the Highline Aquifer. We have information that jet fuel has been detected in 2 wells at the south end of the airport.

Response 74G: The Surface Water Quality Standards contain a criteria that forbids the discharge of toxics in toxic amounts. The WET testing conditions in the final permit are protective of this criteria. The quantity of stormwater discharge with respect to the flow rate of the receiving water is very site specific in terms of the surface area contributing to the discharge. It would not be possible to have one criteria for stormwater flow rate. The Ground Water Quality Criteria state that discharges may not prevent the beneficial uses of the ground water.

There are three ground water monitoring wells downgradient of Lagoons 1 and 2 on the southwest end of the airport. One of these wells, MWE-1 has shown low levels of TPH. The Hydrogeologic Study will assess this monitoring data and the potential impact from the Industrial Wastewater Facility to ground water.

Comment: The League of Women Voters recommends that the re-issuance of the permit include the responsibility for monitoring the quality and quantity of wastewater discharge at the source with requirements for immediate corrective action if either quality or quantity exceed your Department's established criteria of acceptability.

Our major areas of concern are: 1. Stormwater discharges into Des Moines and Miller Creeks. 2. Uncontrolled industrial wastewater discharges. 3. Uncontrolled surface water run-off resulting in silting of creeks and erosion. 4. Quantity and kinds of industrial wastewater allowed to be discharged into Puget Sound. 5. Protection of the Highline Aquifer. The Department of Ecology needs to take a strong regulatory stance at the front end of the water quality permit process to address the above listed concerns. The current regulatory procedure appears to allow exceptions to the regulations followed by miniscule fines and a "we're sorry" statement from the agency involved.

Comment: With the pending expansion of the Sea-Tac Airport, this permit must reflect the future of what will be required with double the number of aircraft operations of today. If DOE does not set a standard today, we never will be able to!

Response 74H: The Department shares your concerns and has addressed them in the final permit.

Comment: The recent State funded Sea-Tac Airport Impact Mitigation Study provides specific recommendations concerning the effect of proposed Port construction activities on ground water. The study recommends measures intended to mitigate the impacts on ground water, to prevent contamination and disruption of the underlying aquifer. Table 7.09 in the study identifies 10 Des Moines neighborhoods, 12 Burien neighborhoods, and 9 Normandy Park neighborhoods potentially affected by reduction of the Highline Aquifer recharge zone. The HOK study also recommends that additional studies be undertaken to assure that the total recharge zone for the aquifers is protected and maintained, and that any areas affected be replaced. Table 7.10 provides recommended parameters for monitoring for surface and ground water quality. The study also recommends developing a system of ground water sampling wells to test water quality in areas potentially affected by the Port's construction activities. The proposed permit completely failed to respond to these recommendations and should be modified to include them.

Response 74I: The Department believes that the conditions in the permit will protect ground water from impacts due to stormwater runoff from construction sites. Ground water quantity with respect to water use is not regulated under the water quality rules that this permit implements.

Comment: The Sea-Tac wastewater treatment is already grossly inadequate. The only treatment now provided is the removal of oils in settling ponds, and then dumping the water into a retention pond on into the river. The Port admits that glycols are being released untreated. And this new permit does nothing to remedy the situation.

Response 74J: Industrial wastewater is treated with a dissolved air flotation treatment process to remove oil and grease and solids prior to discharge to Puget Sound. The permit includes a compliance schedule to implement treatment for the organic matter (deicing/anti-icing fluids and wash water) in the wastewater.

Comment: The documentation should incorporate the information from references rather than relying heavily on them since they are not readily available and sometimes contradict each other.

Response 74K: The Fact Sheet has to summarize the information available due to the large amount of relevant information. It is not possible to include details from every reference. The references are listed for those who are interested in more detail.

Comment: No permit can be issued for enlarging the airport or allowing an increase in operations which would automatically result in increases of fuel storage, handling, spills, etc. Aircraft deicing fluids are a major uncontrolled and unmonitored permit problem now and will only become worse with increased operations!

Response 74L: The NPDES permit is issued for the discharge of wastewater to waters of the state. The Department of Ecology is not issuing a permit for enlarging the airport or allowing an increase in operations. The NPDES permit incorporates conditions to protect the environment from the construction of the airport expansion.

75. General Comments – Inadequate Staff

Comment: The staff should be experienced so as to not mislead the public by indicating glycols are safe when only 65 ppm of glycol can rot the stomach of a fish.

Comment: The permit should be delayed until technically competent people can fully review the entire situation. The current staffing level and DOE workload make it impossible for the DOE to give this permit attention it requires. If the DOE is unable to increase their staff for this project, then the DOE should return the responsibility of water back to the United States EPA who delegated it to the DOE.

Comment: If DOE is understaffed and under funded and cannot perform their duties to the best of their ability as has been indicated at the public meetings, should they then delay issuance of a permit until there are guarantees that the public, streams, water, resources, aquatic life and ecosystem near Sea-Tac can be adequately protected? Nobody will suffer harm if this process is delayed. Thousands might be injured if this permit is not issued with the kind of careful design that is necessary to protect public health and the environment.

Comment: Our citizens group has taken note of DOE's statements at the public meetings regarding the lack of knowledge on the part of Ecology staff of the preliminary design of many of the Port's present projects. Planning and engineering must be a part of any proposal for a permit application which might be made by any of us for any project

we might contemplate. Yet the Port is allowed to mow down a wellfield protection area without implementing any meaningful BMP under an unconditional general permit based upon a nonexistent EIS without Corps oversight of wetland impacts. The Port was allowed to work in some BMPs after the fact... after filling Miller Creek with sediment. Isn't this a violation of the Clean Water Act?

Comment: The staff should be informed it is their responsibility to impose regulations and issue violations even if the Port of Seattle doesn't like them. At the 3 December 1997 Burien meeting, when asked when the glycol TO Be Determined (TBD) limit was to be identified, the DOE answer was not until they "know what they can meet". The recent NRDC airport pollution report should be required reading for staff working on airport permits. Airports are unique.

Response 75: The Department's staff has worked with airport issues for many years and is aware of all of the technical issues involved with the issuance of this permit. The Department apologizes that statements made in the Public Meeting were misunderstood. The Department believes that the final permit and fact sheet are comprehensive and will serve well to protect the environment.

76. General Comments – Public Participation

Comment: Ecology needs to make provisions for better public participation. For example, currently, there is a citizen monitoring program in place where community representatives have the right to accompany POS staff when stormwater samples are collected. This includes the right to take split samples to submit to an independent laboratory. The permit language should be modified to include this element of public participation. All data related to the permit should be available at a location in the community so the public can readily access the data, rather than having to file Public Disclosure Requests with POS or Ecology.

Response 76A: The Department cannot mandate that the Port allow citizen access to the airport, the Port must do this voluntarily. The final permit requires that all reports, plans, and manuals be made available to the public for review.

Comment: The public hearing notification process, which requires 30 days in advance, should be followed to obtain comments on the revised draft permit. The November 10th meeting did not appear to comply. An effort should be made to not schedule for the same night that the Port is holding a "Third Runway Buy-out" meeting and the city council is reviewing the highly controversial comprehensive plan that also relates to the Third Runway.

Response 76B: The November 10th public hearing complied with the 30 day public notice requirement. The Department apologizes for the scheduling conflict with other meetings. The meeting and hearing dates were scheduled when the room in the Burien Public Library was available.

Comment: A revised draft and revised application need to be issued. Excessive uncontrolled airport pollutant discharges of hazardous materials such as deicers could ultimately destroy our drinking water supply and salmon bearing creeks.

Comment: In conclusion, for the reasons set forth above we respectfully assert the terms of the CWA, the WPCL, State of Washington laws governing discharges to ground water and Puget Sound, the regulations and applicable policy documents promulgated or issued respectively thereunder, the administrative record compiled in this matter to date (all of the foregoing is hereby incorporated by reference as if fully set forth herein), and the exercise of sound judgement to protect human health and the environment, mandate that Ecology revise and reissue the Draft Permit and Fact Sheet for public comment.

Response 76C: The Department has chosen to issue the final Permit and Fact Sheet and will not repeat the public notice process.

Comment: Appoint an independent panel to review present and future practices of the Port and its tenants to assure the nearby communities of an adequate degree of environmental protection has been implemented, assured of success and enforced.

Response 76D: The Department suggests that the existing Watershed Forum groups address water quality issues in Miller Creek and Des Moines Creek from the airport and the surrounding communities.

77. General Comments – Penalties/Costs

Comment: Require that the Port of Seattle pay all the costs associated with independent oversight and monitoring of compliance and provide assurance that the Port has no influence over studies or results.

Comment: Make the fines and penalties consistent with the cost of remediation/clean-up and damages to individuals, communities and the environment.

Comment: Money from fines should go to the local communities. The permit should include a stipulation that penalties assessed by the Department of Ecology for violations of water quality standards resulting from activities at the airport be provided to local jurisdiction for mitigation of the impacts and prevention of future impacts.

Response 77: Chapter 90.48 RCW mandates that penalties collected under the chapter be paid to the Coastal Protection Fund. All penalties are calculated per the Department's Enforcement Policy and may not exceed \$10,000 per day per violation.

78. General Comments – Agreed Order/Cleanup Activities

Comment: Require that the Port and its parties to all past, present and future contamination, immediately clean up all known sites and begin to control all releases to

the environment rather than allow them to implement studies or other delay tactics to avoid the cost while the problem is allowed to leachate further into our environment.

Comment: Much or most of this present contamination problem is directly due to DOE's lack of enforcement of ground water laws and Clean Water Act regulations, either through natural discovery or the necessary and needed more stringent permit requirement violations. Why does DOE give the airport so much room to procrastinate on clean up? Would any private citizen or other business be granted decades to clean up waste sitting on an aquifer? How about buried oil tanks? Buried fuel tanks? Leaking fuel lines?

Comment: Has the agreed order been postponed to delay discovery of further problems which might effect this NPDES permit?

Comment: This permit should not be issued until the results of the Agreed Order are completed.

Response 78: The Responsiveness Summary for the proposed Agreed Order is being prepared by the Department's Toxic Cleanup Program. The proposed Agreed Order and the NPDES permit address different issues at Sea-Tac Airport and therefore the order in which they are issued (or signed) is irrelevant. Cleanup issues at the airport are regulated by the Model Toxics Control Act, not state or federal water quality laws and regulations. The NPDES permit endeavors to protect state waters from impacts due to the ongoing operations at Sea-Tac Airport.