

BEFORE THE POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON

PORT OF SEATTLE,	)	PCHB Nos. 03-140, 03-141, 03-142
)	
Appellant,	)	CONSOLIDATED
)	
v.)	
)	
STATE OF WASHINGTON,)	
DEPARTMENT OF ECOLOGY,)	
)	
Respondent.	)	APPELLANTS AIRPORT
	)	COMMUNITIES COALITION,
AIRPORT COMMUNITIES COALITION,	)	CITIZENS AGAINST SEATAC
CITIZENS AGAINST SEATAC	)	EXPANSION, AND
EXPANSION, and PUGET SOUNDKEEPER	)	PUGET SOUNDKEEPER ALLIANCE'S
ALLIANCE	)	JOINT MOTION FOR PARTIAL
	)	SUMMARY JUDGMENT
Appellants,)	
	)	Oral Argument Requested
v.)	
)	
STATE OF WASHINGTON,)	
DEPARTMENT OF ECOLOGY and PORT)	
OF SEATTLE,)	
)	
Respondents.)	

Appellants Airport Communities Coalition, Citizens Against Seatac Expansion, and Puget Soundkeeper Alliance jointly move the Board for an Order determining that Seattle-Tacoma International Airport's NPDES Permit is invalid. Appellants respectfully request the Board to direct the Department of Ecology to reissue the permit consistent with all applicable requirements of state and federal law. WAC 371-08-540.

OVERVIEW

NPDES Permit No. WA 002465-1, issued September 4, 2003 (the "2003 Permit") is invalid and must be remanded because it does not require the Port of Seattle to implement AKART -- all known, available, and reasonable methods of preventing, controlling, and treating pollution. The NPDES Permit allows the Port to continue discharging essentially untreated industrial wastewater contaminated with biochemical oxygen demand (BOD)-inducing glycols into Puget Sound. The Permit allows these discharges to continue *even though* the Port identified and recommended an AKART Alternative providing biological treatment for all of its industrial wastewater. The Permit allows these discharges to continue *even though* they contain concentrations of BOD that are many times greater than the levels routinely achieved with biological treatment. In fact, the Permit allows these discharges to continue *even though* the Port is going to build an "AKART pipeline" to the King County sewage treatment plant to provide biological treatment for some of its industrial wastewater.

Two of these points merit repeating: *even though* the Port recommended biological treatment as AKART for its industrial wastewater, and *even though* the Port is going to build an AKART pipeline to a treatment plant which provides biological treatment, the NPDES Permit does not require the Port to provide biological treatment for all of its industrial wastewater.

Ecology reached this result by considering receiving water quality and incorporating available dilution into its AKART determination. In other words, *Ecology used a mixing zone to excuse the Port from fully applying AKART to its industrial wastewater discharges*. This is flatly illegal under three separate and unambiguous provisions of Washington State law.

As discussed further below, despite the factually complex background, there are no material facts in dispute: the facts asserted above are readily confirmed by reference to Ecology and the Port's own documents, and to the deposition testimony of Ecology's designated spokesperson. Moreover, under federal and state law, appellants are entitled to an Order

invalidating NPDES Permit No. WA-002465-1, issued on September 4, 2003. Accordingly, partial summary judgment as to Issue 17(a) is appropriate.¹

I. FACTS

A. The Use of Anti-Icing and Deicing Fluids at Sea-Tac International Airport

Aircraft deicing and anti-icing fluids (ADAFs) are used in significant volumes -- over 100,000 gallons per year -- at Sea-Tac International Airport.² Exh. 2 (Fact Sheet³) at 21. The Port and its tenants use both ethylene glycol-based ADAFs and propylene glycol-based ADAFs. Exh. 2 at 21.⁴

These deicing fluids are highly biodegradable and exert biochemical oxygen demand (BOD) when discharged into surface waters. Exh. 2 at 22. As explained in a previous Fact Sheet for the Airport's NPDES Permit, "The degradation of both types of glycols in water is so rapid and so oxygen-demanding, that dissolved oxygen can be depleted, posing a significant threat to aquatic life." See, Exh. 3 (Early Fact Sheet) at 9. "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." Exh. 2 at 22.

B. Biochemical Oxygen Demand (BOD)

Ecology defines "BOD (Biochemical Oxygen Demand)" as the "quantity of substances present in a water or wastewater that utilizes oxygen to decompose." Exh. 29 (Ecology's Permit

¹ Summary judgment is appropriate when there are no disputed issues of material fact and the moving party is entitled to a judgment as a matter of law. WAC 371-08-300(2); CR 56(c).

² Henceforth, "Sea-Tac".

³ The entire Fact Sheet, as well as the current NPDES Permit for Sea-Tac Airport, may be viewed on-line, at :

http://www.ecy.wa.gov/programs/wq/permits/northwest_permits.html

⁴ Cited page numbers herein refer to the page number in the original document -- not the page number of the exhibit cited. In this citation, for example, page 21 is the third page of the exhibit.

Writer's Manual) at G-2.⁵ Technically, the utilization or consumption of oxygen results from the oxidization of organic matter by microorganisms during the process known as biodegradation. *See generally*, Exh. 24 (Metcalf & Eddy, "Wastewater Engineering: Treatment, Disposal, Reuse" (3d ed., 1991)) at 71.

BOD is one of several "conventional pollutants," which Ecology defines as "[p]ollutants typical of municipal sewage and defined by Federal Regulation (40 CFR 401.16) as BOD, total suspended solids, fecal coliform, pH, and oil/grease." *See*, Exh. 29 at G-4; *see also*, 33 U.S.C. § 1314(a)(4).

C. BOD is Readily Controlled with Biological or "Secondary" Treatment

"The most common, effective, and widely accepted method of treating BOD is biological treatment, which is also commonly known as "secondary treatment." *See*, Declaration of Timothy Fann, P.E. at 6. "Biological or secondary treatment has been the most widely adapted method of reducing BOD for over thirty years, since the passage of the Clean Water Act." Fann. Dec. at 6.

In "primary" treatment, "a portion of the suspended solids and organic matter is removed from the wastewater. This removal is usually accomplished with physical operations such as screening and sedimentation." Exh. 24 (Wastewater Engineering) at 128. "Secondary" treatment involves the further removal of biodegradable organics and suspended solids. *Id.* "Conventional secondary treatment is defined as the combination of processes customarily used for the removal of these constituents and includes biological treatment by activated sludge, fixed-film reactors, or lagoon systems and sedimentation." *Id.*

⁵ As the Permit Writer's Manual further explains, "The test for BOD is to put a sample of water or wastewater in a sealed bottle with sewage bacteria and measure how much oxygen is used in 5 days." Exh. 29 at G-2. Thus, BOD is also commonly called BOD5. Ecology has posted the entire Water Quality Program Permit Writer's Manual on-line, at:

<http://www.ecy.wa.gov/pubs/92109.pdf>

According to the EPA, "many airports rely on biological treatment as a cost-effective and efficient treatment technology." *See*, Exh. 30, (EPA's "Preliminary Data Summary, Airport Deicing Operations") at 7-10.⁶ As EPA explains, biological treatment can be applied on-site, or off-site via discharge to a publicly owned treatment works (POTW). Exh. 30 at 7-10 - 7-11. The principal advantages of biological treatment specific to airport deicing operations include:

- (1) capability to treat both high-strength and dilute wastewaters,
- (2) capability to treat wastewater containing ethylene glycol, propylene glycol, or a mixture of both,
- (3) capability for use with any wastewater collection system, and
- (4) competitive treatment costs as compared to glycol recycling.

Exh. 30 at 7-10 - 7-11. EPA's Table 7-1, "Summary of Wastewater Containment and Treatment at Airports" indicates that virtually every airport listed uses biological treatment and/or discharges all retained ADF-contaminated wastewater to a POTW. Exh. 30 at 7-19.

Even the Port acknowledges that "Discharge to a POTW is a common management practice for many airports." Exh. 8 (IWS Engineering Report) at 4-45.

D. Sea-Tac's "Industrial Wastewater Treatment Plant" (IWTP) Discharges High Levels of BOD into Puget Sound

Sea-Tac's IWTP was originally designed and built in 1963-64 for the purpose of capturing and treating fuel spills. Exh. 2 at 11. More specifically, the IWTP treats "industrial wastewater" from the airport's Industrial Wastewater System" (IWS), which collects stormwater contaminated by "accidental fuel spills, de-icing chemicals, and washwater from cleaning of aircraft and ground support vehicles."⁷

⁶ The entire EPA "Preliminary Data Summary, Airport Deicing Operations" including Chapter 7, "Wastewater Containment and Treatment," is available on-line, at:

<http://www.epa.gov/guide/airport/airport.pdf>

⁷ *See*, Exh. 4 at p. 4-7) (Comprehensive Stormwater Management Plan (CSMP), Master Plan Update Improvements Seattle-Tacoma International Airport, (December 2000, with July 2001 inserts)).

"The IWTP treats collected water by flash-mixing aluminum chloride into the influent water to flocculate particulates and oils, dissolved air flotation (DAF) to carry the floc to the surface, and a skimmer to remove the floated contaminants."⁸ This DAF treatment process removes suspended solids and petroleum hydrocarbons -- but not water soluble compounds such as ethylene and propylene glycol, the primary constituents in aircraft deicing fluids. Exh. 5 (Business Analysis for Proposed AKART Alternative) at 1.

As a result, the industrial wastewater discharged from the IWTP into Puget Sound can have extremely high BOD levels. In December 2003, for example, the maximum sampled BOD5 concentration in industrial wastewater discharged from the IWTP into Puget Sound was 2988 mg/l. *See*, Exh. 6 at 1 (NPDES System Discharge Monitoring Report (DMR) dated January 29, 2004). In January 2004, the IWTP discharged industrial wastewater containing 3970 mg/l BOD5 into Puget Sound. *See*, Exh. 6 at 2 (DMR dated February 24, 2004).

E. The NPDES Permit-Required AKART Engineering Report (1995)

In order to address the IWTP's limitations, Ecology in 1994 required the Port to submit an engineering report consistent with all the requirements of WAC 173-240, "describing plant modifications and/or additional wastewater treatment necessary for the Department to determine AKART" for the airport's industrial wastewater. *See*, Exh. 7 at 25, Cond. S5.A (NPDES Permit No. WA-002465-1, issued June 30, 1994 ("1994 Permit")). In response, the Port submitted its "Industrial Waste System and Treatment Plant Final Report -- December 1995," including an "IWS Engineering Report."

In short, despite recommending a number of incremental improvements to its processes, the Port's 1995 Report rejected using aerated ponds to provide on-site treatment for the IWTP wastes. Exh. 8 (IWS Engineering Report) at 4-17. The Report also considered -- but did not recommend -- discharging IWS flows to a local POTW for further treatment. Exh. 8 at 4-45 - 4-

⁸ *See*, Exhibit 4 at p. 4-19 (CSMP).

46. Ecology was not entirely satisfied, and letters were exchanged. One point of dissatisfaction involved the report's discussion of biological treatment for BOD. Exh. 9 (Letter from L. Zinner to M. Feldman, dated April 3, 1996) at 2. As Ecology's reviewing water quality engineer explained, "if a discharger has a process . . . which produces the pollutant BOD, and if the BOD concentration and degradation rates are similar to domestic wastewater, then biological treatment is known and available and secondary treatment efficiencies are applicable to that discharger." Exh. 9 at 2 (italics in original, underlining added).⁹ After further correspondence and a meeting, Ecology informed the Port "The appropriate prevention/treatment method for glycols is still an issue." Exh. 10 (Letter from L. Zinner to M. Feldman, dated May 15, 1997) at 2.

F. The Effluent Mixing Zone Study

The 1994 Permit also required the Port to conduct an "Effluent Mixing Zone Study."¹⁰ The Port submitted the results in 1996. The Study was revised and submitted in final form in January 1997. Exh. 19 at 3-3. Among other things, the Study determined the amount of dilution available at the IWTP's marine outfall ("Outfall 001"), including acute and chronic dilution factors. 1998 Permit Fact Sheet at 27. The 1998 Permit contained Condition S.1.C ("Mixing

⁹ Ecology's reviewing engineer identified another point of dissatisfaction, involving the 1995 Engineering Report's discussion of proposed numeric effluent limits for the permit. *See*, Exh. 8 at 4-44. The report proposed a daily average effluent limit for BOD₅ of 250 mg/l. Exh. 8 at 4-44. In response, Ecology's reviewing water quality engineer wrote,

A discharge of effluent with this much BOD appears to create two potential problems:

- a. The water quality standard for dissolved oxygen may be violated.
- b. The effluent may fail the whole effluent toxicity requirements contained in Chapter 173-205 WAC It would be a good idea to perform WET testing now, assuming the current system is representative of the preferred alternative, to determine if WET requirements are going to dictate the outcome of the engineering analysis.

Exh. 9 at 3.

¹⁰ *See, e.g.*, Exh. 19 (Addendum #2) at 3-3.

Zone Description - Outfall 001"), indicating Ecology would grant a mixing zone following "the AKART determination required by Special Condition S4." *See*, Exhibit 11 (1998 Permit) at 10.

G. The Port's Addendum to the IWS Engineering Report (1998)

Ecology then required the Port to submit an Addendum to the AKART Engineering Report. Exh. 11 at 21. The Port reconsidered biological treatment in the "Addendum to IWS Engineering Report" in April 1998. The Addendum recommended sending all IWTP wastes to the King County DNR Eastside Plant in Renton for biological treatment.¹¹ The Addendum described the recommended alternative as follows:

Alternative A1 involves enlarging Lagoon #3 to 47 MM gallon capacity and rerouting all the IWTP-treated effluent to KCDNR. It offers the following advantages:

- Satisfies the requirements of AKART
- Involves capital construction costs that are among the lowest of the cases evaluated (\$20 million)
- Eliminates the IWS outfall from the Port's NPDES permit
- Is consistent with current airport practices around the country
- The Port will use only 4 percent of the total KCDNR capacity.

Exh. 12 (1998 Addendum) at 4-3 (emphasis added). The Port also identified two "disadvantages" to this alternative -- high annual operating costs, and the obligation to obtain and comply with a new pretreatment permit from King County. Exh. 12 at 4-3.¹²

¹¹ Exh. 12 at 3-1, 4-3, "Addendum to IWS Engineering Report" (April 1998).

¹² The Addendum's Appendix C described the recommended AKART Alternative in greater detail:

ALTERNATIVE A1 - LAGOON #3 AT 47 MG AND DISPOSAL OF 4 MGD OF WASTEWATER TO THE KING COUNTY DEPARTMENT OF NATURAL RESOURCES EAST DIVISION RECLAMATION PLANT (RENTON)

This alternative consists of pumping up to 4 MGD from the IWTP for treatment at the King County Department of Natural Resources (KCDNR; formerly Metro) East Division Reclamation Plant."

Exh. 12 at C-1.

H. Ecology and the Port Concur in the "IWS AKART Determination"

Ecology supported the Port's recommendation.¹³ Ecology's reviewing Water Quality Engineer informed the Port:

The recommended alternative presented in the IWS Engineering Report Addendum consists of enlarging Lagoon #3 to 47 MM gallons and rerouting the IWTP-treated effluent to the King County Department of Natural Resources Eastside Treatment Plant in Renton. The Department supports this option contingent upon the approval of King County. If King County will accept the IWS discharge, a permit will be required from the King County Industrial Waste Division (KCIWD).

Exh. 13 at 1 (Letter from L. Zinner to M. Feldman, dated June 9, 1998) (emphasis added).

One and a half years later, the Port responded to Ecology's letter. *See*, Exh. 14 (Letter from M. Feldman to K. Fitzpatrick, dated November 10, 1999). The Port informed Ecology, "The Port will not retain Outfall 001 as an IWS outfall for discharge of effluent during deicing events." Exh. 14 at 1. Among other points, the also Port stated, "The recommended AKART solution was developed to manage glycol-containing IWTP effluent via pretreatment and discharge to the EDRPR for secondary biotreatment."¹⁴ Exh. 14 at 2.

In late 2001, in the updated Comprehensive Stormwater Management Plan the Port submitted to this Board to support Ecology's § 401 Certification of the proposed Third Runway, the Port described the "IWS AKART Determination" as follows:

As required by its NPDES Permit, the Port has performed an analysis and determination of all known available and reasonable methods of treatment (AKART) for handling of IWS flows (Kennedy/Jenks 1998). The Port has determined that the recommended AKART alternative is to discharge treated effluent from the IWTP to the King County DNR East Division Reclamation Plant at Renton (EDRPR). This alternative will eliminate or reduce IWS discharge to Puget Sound. IWS flows will continue to be treated by the IWTP to

¹³ Exh. 13 at 1 (Letter from L. Zinner to M. Feldman, dated June 9, 1998)

¹⁴ As explained in the letter, "EDRPR" refers to King County's East Division Treatment Plant at Renton. Exh. 14 at 1. The EDRPR later became known as the King County South Treatment Plant.

remove oil and grease as well as TSS before flowing to the EDRPR. The Port is negotiating with DNR to determine pretreatment standards, flow limits and timing, conveyance from the IWTP to the EDRPR, permitting, monitoring, and fees (Feldman 1999). The Port's NPDES Permit requires that the AKART recommendation must be fully implemented by June 2004. It has been submitted to Ecology for concurrence.

See, Exh. 4 at p. 7-15.

I. Addendum No. 2: The Port Attempts to Renegotiate the IWS AKART Determination

Despite Ecology's written support for rerouting all of the IWTP effluent to King County for biological treatment, the Port did not submit -- and to this day *still* has not submitted -- an application to King County for a waste discharge permit. Exh. 15 (KC Dep. Tr) at 9, Ins. 1-6.

In December 2001, the Port submitted an AKART Implementation "Status Report."¹⁵ The Port proposed to issue a second Addendum to the AKART Engineering Report, including a "re-examination of the proposed AKART alternative[.]" Exh. 18 (AKART Status Report) at 3. The Port asserted that limited available capacity in downstream lines,¹⁶ "combined with a desire to minimize capacity charges," will affect operation of the IWS, including the AKART pump station and the IWTP. Exh. 18 at 13. Among other things, the Port suggested that IWTP "effluent flows may be partitioned, [and] released either to KC or to the Puget Sound, depending on effluent BOD concentrations." Exh. 18 at 13.

The Port submitted Addendum #2 to IWS Engineering Report in April, 2002. The Port now proposed using "online (real-time) monitoring of biochemical oxygen demand (BOD) and segregation of the wastewater based on BOD concentrations" to enable more "efficient management" of the wastewater. Exh. 19 at 1, 1-1. As a result, the Port asserted, "Treated

¹⁵ The Port initially listed -- but did not subsequently include -- the December 2001 Status Report in the Administrative Record of the 401 Appeal. Exh. 17 at 2 (Exh. 1306).

¹⁶ Unlike the 1995 AKART Engineering Report, the 1998 Addendum, the March 2000 Engineering Report for Lagoon #3 Expansion, and the 2001 Addendum #2, the "Status Report" bears no Engineer's Stamp. Compare, Exh. 8 at 1, Exh. 12 at 2, Exh. 19 at 2, and Exh. 28 at 1 with Exh. 18.

wastewater with high BOD concentrations can be routed to KC STP, while treated wastewater with low BOD concentrations can be discharged to the Puget Sound." Exh. 19 at 1-1.¹⁷

The Port elaborated on the "refined" AKART alternative in somewhat greater detail:

Flows exceeding the established BOD effluent limit for discharge to the Puget Sound will be routed to a new wet well and pump station for transfer to KC STP. Low-BOD concentration effluent will gravity flow to Puget Sound via the existing outfall. Regardless of BOD concentration, all industrial wastewater will be treated in the IWTP prior to discharge.

Exh. 19 at 2-1.

Despite its assertions about conveyance and capacity issues, the Port conspicuously failed to provide any *engineering* analysis of the actual conveyance system capacity in Addendum #2. *See*, Exh. 19 at i (Table of Contents).¹⁸ In fact, in every one of the engineer-stamped, AKART-related Engineering Reports that listed and discussed the specific requirements of WAC 173-240-130, the Port's engineers indicated that WAC subsection 173-240-130(o)'s requirement to evaluate the sewerage system's capacity was "not applicable." *See*, Exh. 8 (1995 AKART Report) at 1-1 and Table 1-1 at 5 of 7; Exh. 19 (Addendum #2) at 1-1 and Appendix A, Table 1-1 at 5 of 7; and Exh. 28 (Engineering Report for Lagoon #3 Expansion (March 2000)) at 2-9.¹⁹ Ecology's CR 30(b)(6) spokesperson, Mr. Hamid ("Ed") Abbasi, confirmed that he has not seen an engineering evaluation of the capacity available at King County. Exh. 1 (Ecology Dep. Tr.) at 292, Ins. 14-21.

¹⁷ Ironically, Addendum #2 included a discussion of four other airports (O'Hare, Salt Lake City, Pittsburgh, and Calgary) -- *all of which*, as described in the Addendum, either use biological treatment or discharge to a POTW, and *none of which* discharge untreated waste to surface waters. *See*, Exh. 19 at 3-1 - 3-2; *see also*, Ecology Dep. Tr. at 271, ln. 20 - 274 ln. 14.

¹⁸ However, Addendum #2 did include an extensive discussion of a proposed effluent limit for BOD. *See*, Exh. 19 at i (Table of Contents)

¹⁹ The Port's 1998 Addendum did not address sewage system capacity. *See*, Exh. 12 at i (Table of Contents).

Mr. Abbasi testified he performed Ecology's engineering review of Addendum #2, and subsequently recommended that Ecology approve the Port's IWS engineering reports.²⁰ Exh. 1 at 233 ln. 3 - 234 ln. 23. Mr. Abbasi's superior in Ecology approved the AKART engineering reports on the same day. Exh. 1 at 309 ln. 18 - 310 ln. 18.

J. The NPDES Permit Effluent Limit for BOD

Until the issuance of the 2003 Permit, there was no "established BOD effluent limit" for the IWTP's discharges to the Puget Sound. As of the date the Port proposed revising the IWS AKART Determination, the Port's NPDES Permit contained neither an interim effluent limit nor a final effluent limit for discharges of BOD5 to Puget Sound. *See*, Exh. 11 at 8-10 (1998 NPDES Permit, as modified in 2001). In the 1994 Permit, the final, daily average and daily maximum effluent limits for BOD were identified as "TBD" (to be determined). Exh. 7 at 13. A footnote explained the limits would be determined by Ecology upon completion of the AKART Engineering Report and the Effluent Mixing Study.²¹

K. King County's Evaluation of the Port's Available Flow Data

²⁰ In addition to being Ecology's reviewing engineer, Mr. Abbasi also wrote the 2003 NPDES Permit for Sea-Tac Airport. Exh. 1 at 11, ln. 20.

²¹ The 1994 Permit further specified that:

The effluent limitations shall be set at the most stringent of the following three values:

1. Limitations based on the determination of All Known, Available, and Reasonable Methods of Treatment (AKART).
2. Limitations based on compliance with the Water Quality Standards (Chapter 173-201A WAC).
3. Limitations based on compliance with the Sediment Quality Standards established in the Sediment Management Standards (Chapter 173-204 WAC).

Exh. 7 at 14 note b (emphasis added). The modified 1998 Permit likewise included a "TBD," but notably did not include the assurances about selecting a final limit based on the "most stringent" standard. *See*, Exh. 11 at 9-10, note e.

In the third party deposition conducted by appellants, the King County Wastewater Treatment Division testified its representatives told the Port, in a November 2001 meeting to discuss the AKART proposal, that the County could accept the volume of flows the Port had originally proposed -- 4 MGD.²² Exh. 15 (KC Dep. Tr.) at 18, lns. 7-21. In April 2002, King County informed the Port in writing that, "We are confident that all technical and engineering issues can be resolved to manage any change of wastewater flow into the County's system." Exh. 26 (Letter from B. Peterson to T. Hubbard, dated April 2, 2002) at 1. King County's representative stated he continues to share that confidence today. Exh. 15 at 34, lns. 19-25. He further stated that King County has ways to address any problems that are identified as the result of a discharge application, including permit conditions such as flow restrictions. Exh. 15 at 40, lns. 1-18.

Asked, "did King County ever inform the Port that it couldn't accept any volume of IWTP waste from the airport?" Mr. Sifford answered, "No." Exh. 15 at 44, lns. 15-18. King County's representative also stated that the BOD level of the Port's effluent was not a matter of any significance to King County. Exh. 15 at 20, lns. 9-14.

According to its NPDES Permit Renewal Application, King County's South Treatment Plant is the second largest treatment plant in Washington State. *See*, Exh. 27 (unnumbered second page). The South Plant is "readily able to handle the entire volume of STIA's current and projected future IWTP discharges." *See*, Fann Dec. at 8. The Port's projected future daily flow rate of 2.8 MGD represents just 2.4 percent of the South Plant's daily flow capacity. Fann Dec. at 8-9.

²² The testimony of the King County Department of Natural Resources and Parks, Waste Treatment Division was taken pursuant to a CR 30(b)(6) Deposition Notice and Subpoena on April 16, 2004. *See*, Exh. 16. King County designated James W. Sifford, a compliance investigator with the Department of Natural Resources and Parks' Wastewater Treatment Division, as its representative. Exh. 15 at 7.

The documentary record of the Port's correspondence also confirms that the Val Vue Sewer District has adequate capacity to convey the IWTP discharges to King County.²³

L. Ecology's Discovery Responses Confirm that Ecology Considered Water Quality in Determining AKART for the IWTP

Mr. Abbasi, Ecology's CR 30(b)(6) spokesperson, testified as follows:

Q. How was reasonableness determined in the AKART decision for the IWTP?

A. It made lots of sense. **When your discharge is not causing any water quality violation, there is no need to treat it.** And if you showed to me that it's at or below 250 [mg/l BOD], [and] it's not causing any water quality degradation, so be it. That is reasonableness for me.

Exh. 1 at 151, Ins. 9-15 (emphasis added).

Appellants ACC and CASE submitted interrogatories to Ecology in this administrative appeal. Interrogatory No. 18 requested Ecology to:

Identify all facts and evidence supporting Ecology's determination that requiring secondary treatment of all IWTP effluent is not known, available, and reasonable.

See, Exh. 25 (Ecology's Interrogatory Responses) at 12 (emphasis added). Ecology answered the interrogatory in two sentences:

Ecology made a determination that AKART in this particular case is a combination of biological system (i.e., high concentration flow transfer to Renton) and water quality based criteria for dissolved oxygen. The idea of

²³ In August 1995, the Port's engineers informed Val Vue of the projected wastestream flow volumes. See, Exh. 20 (Letter from R. Thomas to T. Matelich, dated August 16, 1995) at 1, 3. In response Val Vue wrote, "The District has analyzed our existing system and have determined that based on your projections there is adequate capacity to accommodate the proposed flows." See, Exh. 21, (Letter from T. Matelich to R. Thomas, dated November 28, 1995) at 1. Over six years later, Val Vue confirmed in writing to the Port that, "consultants for the Port of Seattle are working with Val Vue Sewer District to provide capacity for flow from the AKART industrial sewer line. * * * The necessary construction to accommodate flow from the Port of Seattle is scheduled for completion by 2003, when final connection through Val Vue's system will be made." See, Exh. 22 (Letter from D. Dick to K Harris, dated May 22, 2001).

having a stand alone on-site secondary treatment for the entire flow/or entire flow transfer to Renton did not appear to be reasonable due to the extremely high organic and hydraulic variability.

Exh. 25 at 12-13 (emphasis added).

M. Biological Treatment of the IWTP Effluent Would Result in Additional Pollutant Removal -- *i.e.*, Significantly Decreased Discharges of Pollutants into Puget Sound

The 2003 Permit's 250 mg/l daily maximum effluent limit for BOD5 allows the Port to continue discharging industrial wastewater from the IWTP into Puget Sound.²⁴ See, Exh. 33 (2003 Permit) at 1, 11. The 2003 Permit includes no mass limitation for BOD5. Exh. 33 at 11. According to Ecology, reducing the Port's maximum daily effluent limitation for BOD from 250 mg/l to 45 mg/l would reduce the annual discharge of BOD into Puget Sound by 620,000 lbs. See, Exh. 25 at 8-9 (Ecology's Response to Interrogatory Nos. 9b-c). Likewise, if the Port's BOD effluent limit were reduced from the daily maximum of 250 mg/l to an average monthly limit of 30 mg/l, the load of BOD5 discharged to Puget Sound would be reduced by more than 700,000 lbs. per year (assuming an annual flow volume of 390 MG). Fann Dec. at 7, ¶ 5.c.

II. ISSUE PRESENTED

Does the permit satisfy legal requirements to apply all known, available, and reasonable methods of prevention, control, and treatment (AKART) to Industrial Wastewater Treatment Plant (IWTP) discharges?

III. ARGUMENT:

The 2003 Permit is Invalid Because it Does Not Require AKART for the IWTP's Discharges to Puget Sound

AKART, the fundamental, technology-based standard of Washington State water pollution and water resource laws, requires that all known, available, and reasonable methods be

²⁴ The permit effluent limit for BOD5 is not effective until "one year after successful implementation and completion of the AKART, *i.e.*, July 1, 2007." Exh. 33 at 11 n.d. Until that date, the Port's authority to discharge BOD5 into Puget Sound is effectively unlimited -- as it has been for the life of the facility.

utilized to prevent, control, and treat pollutants before they are discharged into surface waters. The Port's 2003 NPDES Permit is invalid because it does not require the Port to fully apply AKART to prevent, control, and treat the BOD in its IWTP effluent. More specifically, the Permit is invalid because it only requires the Port to provide biological treatment for some -- but not all -- of its IWTP discharges.

As discussed further below, Ecology subverted the AKART analysis by considering water quality in determining what level of treatment is required. Ecology's representative explained: "When your discharge is not causing any water quality violation, there is no need to treat it." Exh. 1 at 151. This interpretation of AKART is diametrically opposed to the purposes and intents of the Clean Water Act and Washington state law.

Ecology's legal obligation to require AKART **without regard to the quality of the receiving waters** is stated unequivocally and repeatedly in state law. The Pollution Disclosure Act of 1971 (RCW 90.52) provides:

Except as provided in RCW 90.54.020(3)(b), in the administration of the provisions of chapter 90.48 RCW, the director of the department of ecology shall, **regardless of the quality of the water of the state to which wastes are discharged** or proposed for discharge, **and regardless of the minimum water quality standards established by the director for said waters**, require wastes to be provided with all known, available, and reasonable methods of treatment prior to their discharge or entry into waters of the state.

RCW 90.52.040 (emphasis added). The cited provision, RCW 90.54.020(3)(b), is part of the Water Resources Act of 1971. The cited provision requires that:

Waters of the state shall be of high quality. **Regardless of the quality of the waters of the state**, all wastes and other materials and substances proposed for entry into said waters shall be provided with all known, available, and reasonable methods of treatment prior to entry. **Notwithstanding that standards of quality established for the waters of the state would not be violated**, wastes and other materials and substances shall not be allowed to enter such waters which will reduce the existing quality thereof, except in those situations where it is clear that overriding considerations of the public interest will be served.

RCW 90.54.020(3)(b) (emphasis added). As Ecology's Permit Writer's Manual explains, "This law explicitly states that AKART is required *even if it results in more stringent treatment than required to meet water quality standards.*" Exh. 29 (Permit Writer's Manual) at IV.30 (emphasis added).²⁵ The Port's 1994 Permit appropriately incorporated this requirement, stating that final effluent limitations would be set at the "most stringent" value. *See*, Exh. 7 at 14 (note b).

Under these unambiguous laws, Ecology's "no harm, no foul" rationale for allowing the Port to continue discharging industrial wastewater and contaminated stormwater from the IWTP directly into Puget Sound when the BOD concentration is below 250 mg/l is invalid and illegal.²⁶ Ecology's interpretation of AKART is certainly entitled to no deference, as it flatly contradicts unambiguous law.²⁷ The relative water quality of Puget Sound in general -- and whether the discharges would violate water quality standards in the receiving waters in specific -- is irrelevant as a matter of law under Washington's technology-based standard. Ecology simply has no authority to waive the AKART requirement whenever it believes the receiving waters can handle more pollution.

This principle was confirmed by this Board nearly 20 years ago, in two cases soundly rejecting the position now advanced by Ecology. In *City of Bellingham*, the Board rejected the municipality's assertion that water quality may be considered in determining what the State's

²⁵ The fundamental AKART requirement also appears in the state law addressing Water Pollution Control -- RCW Chapter 48. *See*, RCW 90.48.520 (requiring Ecology, in issuing and renewing state and federal waste discharge permits to incorporate permit conditions requiring AKART). This law was enacted nearly sixty years ago, in 1945. *See*, Chapter 216, Laws of 1945, codified in RCW 90.48. Again, the legislature explicitly required that permit-incorporated, AKART requiring conditions "shall be required *regardless of the quality of receiving water and regardless of the minimum water quality standards.*" RCW 90.48.520 (emphasis added).

²⁶ The 250 mg/l daily maximum effluent limit for BOD is also invalid because it does not "ensure that dilution will not be used a substitute for treatment." *See*, 40 CFR 122.45(f)(iii).

²⁷ *See, e.g., Waste Management v. Utilities & Transp. Comm'n*, 123 Wn.2d 621, 628, 869 P.2d 1034, (1994), *citing*, *Pasco v. Public Empl. Relations Comm'n*, 119 Wn.2d 504, 509, 833 P.2d 381 (1992), *and Cowiche Canyon Conservancy v. Bosley*, 118 Wn.2d 801, 815, 828 P.2d 549 (1992)).

technology-based standard requires. *City of Bellingham v. Ecology*, PCHB No. 84-211, 1985 WA ENV LEXIS 109 at *23-32 (1985). The Board stated, "Water quality standards were never the basis for effluent limitations less stringent than required by the generally applicable technology standard." *City of Bellingham*, 1985 WA ENV LEXIS at *6.

Likewise, in *City of Port Angeles*, the Board concluded that the plain language of state laws cited above, RCW 90.52.040 and RCW 90.54.020(3)(b), confirm that the Washington State Legislature's purpose was to "establish unambiguously a technology-based system in this state." *City of Port Angeles v. Ecology*, PCHB No. 84-178, 1985 WA ENV LEXIS 106 at *15-16 (1985). Accordingly, the Board concluded that Washington State law "calls for the imposition of methods of treatment based on technology and that, in the instant case, water quality considerations are irrelevant to the selection of the technology to be imposed." *City of Port Angeles*, 1985 WA ENV LEXIS at *21.

These cases, rejecting municipalities' attempts to avoid implementing secondary treatment under the technology-based AKART standard, are directly relevant here. Moreover, along with the laws they construe, these cases are controlling because the Port of Seattle's IWTP is a publicly-owned treatment works (POTW) under the Clean Water Act.

A. Secondary Treatment is Mandatory because the IWTP is a POTW

In this case, secondary treatment isn't just AKART -- it's the law.²⁸ The Clean Water Act requires all "publicly owned treatment works" (POTWs) to achieve "effluent limitations based

²⁸ The minimum level of effluent quality attainable by secondary treatment is defined in 40 CFR 133.102. For BOD₅, secondary treatment achieves the following effluent concentrations and removal efficiencies:

- (1) The 30-day average shall not exceed 30 mg/l.
- (2) The 7-day average shall not exceed 45 mg/l.
- (3) The 30-day average percent removal shall not be less than 85%.

40 CFR 133.102(a).

upon secondary treatment" 33 U.S.C. § 1311(b)(1)(B), and the Port's industrial wastewater treatment plant is a POTW.

As the EPA explained in *In re: City of Port St. Joe and Florida Coast Paper Co.*,

Under the [Clean Water Act], whether a facility is subject to secondary treatment (and its users to pretreatment) requirements * * * depends *solely* upon whether the plant is publicly or privately owned, and *not* on the nature of the wastes being treated. Any publicly owned (by a State or municipality) device or system used in the treatment of municipal sewage or industrial wastes of a liquid nature is a POTW.

In re: City of Port St. Joe and Florida Coast Paper Co., 1997 EPA App. LEXIS 12, *28-29, 7 E.A.D. 275 (1997) (emphasis in original).²⁹

Under the CWA's implementing regulations, "Publicly owned treatment works or POTW means a treatment works, as defined in section 212(2) of the Act, which is owned by a State, municipality, or intermunicipal or interstate agency." 40 CFR 125.58(u)

1. The IWTP is a "treatment works"

CWA sec. 212(2) defines treatment works as:

any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature to implement section 1281 of this title, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, outfall sewers, sewage collection systems, pumping, power, and other equipment, and their appurtenances

33 U.S.C. § 1292(2) (emphasis added). This definition explicitly includes liquid industrial wastes -- not just sewage. And the Port not only stores and treats liquid industrial wastes, it also recycles and reclaims them. As explained in the Fact Sheet for the Port's 1998 NPDES Permit, "Oil and other petroleum products skimmed off the surface of the lagoons are stored in a tank and removed by an authorized recycler for reclamation."³⁰

²⁹ A copy of this decision is attached as Exhibit 31 to this brief.

³⁰ See, Exh. 32 (Fact Sheet for NPDES Permit WA-002465-1, Seattle-Tacoma International Airport," issued February 20, 1998) at 7.

"Section 1281 of this title" is CWA section 201 (33 U.S.C. § 1281), which is the "Congressional declaration of purpose" for the Act's Subchapter II, Grants for Construction of Treatment Works. Subsection 201(a) states "It is the purpose of this subchapter to require and to assist the development and implementation of waste treatment management plans and practices which will achieve the goals of this chapter." 33 U.S.C. § 1281(a).³¹ The "goals of this chapter" are stated in 33 U.S.C. § 1251, the Congressional declaration of goals and policy. These include restoring and maintaining the chemical, physical, and biological integrity of the Nations waters, as well as recognizing, preserving, and protecting the primary responsibilities of the States to prevent, reduce, and eliminate pollution. *See*, 33 U.S.C. § 1251(a), (b). The Port's storage, treatment, recycling, and reclamation of liquid industrial wastes pursuant to a Washington State-issued NPDES Permit implements all of these goals.

2. The Port of Seattle is a "municipality"

The term "municipality" is defined both in the Act and the regulations, to mean:

a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes

CWA sec. 502(4), 33 U.S.C. § 1362(4)); 40 CFR 122.2.

The Port of Seattle is a district created by State law -- specifically, a "port district" under Chapter 53 RCW. Moreover, the Port has jurisdiction over the disposal of sewage, industrial wastes, and other wastes. Under Washington law, a port district may:

. . . acquire, construct, install, improve, and operate sewer and water utilities to serve its own property and other property owners under terms conditions, and rates to be fixed and approved by the port commission. A district may also acquire, by purchase, construction, lease, or in any other manner, and may maintain and operate other facilities for the control or

³¹ Subsection 201(b) requires that waste management plans and practices "shall provide for the application of the best practicable waste treatment technology before any discharge into receiving waters." 33 U.S.C. § 1281(b).

elimination of air, water, or other pollution, including, but not limited to, facilities for the treatment and/or disposal of industrial wastes, and may make such facilities available to others under such terms and conditions and rates to be fixed and approved by the port commission."

RCW 53.08.040.

Under these provisions, the Port's IWTP is properly classified as a POTW "because it is a 'system used in the treatment * * * of municipal sewage or industrial wastes of a liquid nature which is owned by * * * a "municipality.'"" *In re: City of Port St. Joe and Florida Coast Paper Co.*, 1997 EPA App. LEXIS 12 at *28; 7 E.A.D. 275 (1997), quoting 40 C.F.R. § 122.2. As held by the EPA's Environmental Appeals Board in *City of Port St. Joe*, the regulatory definition is free from any particular ambiguity, and the permitting agency -- here, Ecology -- has no "discretion to ignore the regulatory definition and classify the IWTP as a non-POTW rather than as a POTW." *Id.*, 1997 EPA App. LEXIS 12 at *29-30.

B. Under the Facts of this Case, Biological Treatment is AKART

With respect to the conventional pollutant BOD, AKART is biological treatment. In other words, biological treatment is a known, available, and reasonable method of treating all of the Port's IWTP effluent before it is discharged into Puget Sound.

In *City of Bellingham*, this Board considered whether a municipality should have to utilize a "high purity secondary sludge system" to treat a waste stream including "corn waste which creates an extraordinary demand for oxygen." *City of Bellingham v. Ecology*, PCHB No. 84-211, 1985 WA ENV LEXIS 109 at *18 (1985). In resolving this issue nearly two decades ago, the Board found:

Secondary treatment is both known and available. There is no argument to the contrary. The technology has been in existence for many years. It is in common use by industries and municipalities across the nation.

City of Bellingham, 1985 WA ENV LEXIS at *18-19.

There is no argument to the contrary in this case, either. Ecology's CR 30(b)(6) representative, Mr. Abbasi, readily agreed that discharging "all treated IWTP effluent [to] King

County Sewage Treatment Plant is the most effective means of handling BOD." *See*, Exh. 1 at 274, Ins. 15-23. Moreover, the Port has submitted a stamped engineering report acknowledging that sending "all IWTP-treated effluent" to the King County South Treatment Plant "[s]atisfies the requirements of AKART." Exh. 12 at 4-3.

The only thing lacking is the Port's willingness to pay for treatment, and Ecology's willingness to make the Port comply with the plain requirements of federal and state law.

1. Biological Treatment is Known

The Washington Supreme Court explained that technology "must be 'known' in the sense that it has been tested and found to control emissions effectively and efficiently." *Weyerhaeuser Co. v. Southwest Air Pollution Control Authority*, 91 Wn.2d 77, 82 (1978).³² As discussed above, that is certainly the case with biological treatment. *City of Bellingham*, 1985 WA ENV LEXIS at *18-19. Ecology's CR 30(b)(6) representative agreed that biological treatment is "known." Exh. 1 (Ecology Dep. Tr.) at 302, Ins. 7-10.

2. Biological Treatment is Available

Dischargers must incorporate the use of "control systems previously developed and presently available." *Weyerhaeuser*, 91 Wn.2d at 82. Biological treatment is both previously developed and presently available. *City of Bellingham*, 1985 WA ENV LEXIS at *18-19. It is available to the Port at the KC/South Plant, and it could also be provided on site at Sea-Tac. *See*, Fann Dec. at 5, 8-9.

a. Biological treatment is "available" at the King County/South POTW

³² Although *Weyerhaeuser* was decided under the Clean Air Act, the Court's AKART analysis has been applied to the same terms in the water pollution laws. *See, e.g., Puget Soundkeeper Alliance v. State*, 102 Wn.App. 783, 792 (2000).

The only challenge involved in treating all the Port's industrial wastes at the KC/South plant is getting them there -- in a word, "conveyance." But that's been taken care of: Ecology is already requiring the Port to build an "AKART pipeline" to the King County POTW.

In terms of physical capacity, the conveyance system is fully adequate to handle all of Sea-Tac Airport's industrial wastewater. *See*, Exh. 22; Exh. 26; Fann Dec. at 8 ¶ 5.e. The expansion of Lagoon 3, as well as the Port's sophisticated lagoon management capabilities, mean the Port has adequate detention to meter out its stormwater at acceptable volumes and rates. Ecology's CR 30(b)(6) representative, Permit Writer Abbasi, agreed that the Port can meter out its discharges to King County to minimize hydraulic loading. *See*, Exh. 1, at 287, lns. 18-21; Fann Dec. at 5, ¶ 4.g.

While Mr. Abbasi agreed that biological treatment is "available" (Exh. 1 at 302, lns. 8-12), he also qualified this agreement, suggesting treatment is only available to the extent it doesn't cause problems for the sewage treatment plant. Exh. 1 at 302, lns. 13-24. However, Mr. Abbasi could not answer a question about the King County treatment plant's capacity (Exh. 1 at 290 ln. 24 - 291, ln. 24), and he did not know how much of the IWTP flow is above 250 mg/l BOD. Exh. 1 at 303, lns. 14-16. In fact, the record confirms the Permit Writer's concerns about the KC/South Plant's capacity are plainly mistaken.³³

b. Biological Treatment is also "available" in Lagoon 3

The Port's enormous Lagoon 3 is readily available for use as an aerated lagoon. The Port's consultants rejected this obvious approach back in 1995, when Lagoon 3's capacity was

³³ The reviewing engineer's information about the capacity of the KC/South Plant is outdated, and off by a full twenty-five percent (25%). Ecology's engineer testified he remembered the KC South Plant had a capacity of 92 MGD "seven, eight years ago[.]" *See*, Exh. 1 (Ecology Dep. Tr.) at 366. But King County's application for a renewal NPDES Permit states, "An expansion of the plant in the latter half of the 1990's increased the rated wet weather capacity to 115 million gallons per day (MGD). Exh. 27 (King County NPDES Permit Renewal Application) at unnumbered second page (Section B-3). This is 25% more capacity than that assumed by the reviewing engineer. The current data also show that King County has further increased its available capacity by significantly reducing infiltration and inflow (I/I). Exh. 27 at page "3 of 23" (section A.6).

just 26 MG. But since then, Lagoon 3 has nearly tripled in size, to 76 MG. It is entirely suitable for mechanical aeration. *See*, Fann Dec. at 9-10, ¶¶ 5.h - i.

3. Biological Treatment is "Reasonable"

As the Washington Supreme Court explained, the requirement of reasonableness addresses both economic and technological feasibility. *Weyerhaeuser*, 91 Wn.2d at 82. The requirement of reasonableness bars pollution control systems which would "impose an unreasonable financial burden on the applicant because of excessive initial outlay or annual operating costs. *Weyerhaeuser*, 91 Wn.2d at 82.

AKART requires both an engineering and an economic evaluation. There is no question whether secondary treatment is technologically feasible here. Secondary treatment standards are also "reasonable" because the Port's engineer told Ecology a monthly average BOD concentration of 30 mg/l is "doable." Exh. 1 (Ecology Dep. Tr.) at 336 ln. 23 - 337 ln. 22.

With respect to economic reasonableness, Ecology's Permit Writer's Manual strongly suggests that secondary treatment is reasonable per se.³⁴

But in this case, Ecology skipped the economic analysis, not even bothering to evaluate the added costs of treating the full volume of the IWTP wastes. Exh. 1 (Ecology Dep. Tr.) at 305, lns. 9-16. In fact, Ecology's representative went so far as to say "it doesn't matter" how

³⁴ With respect to AKART's economic reasonableness component, the Manual explains that:

Ecology has adopted EPA's BCT and BAT economic tests for AKART analysis.

The BCT economic reasonableness tests imply that the minimum treatment for conventional pollutants on a BPJ basis is secondary treatment with 85% removal of BOD and solids. A candidate treatment technology would be advanced secondary treatment.

Exh. 29 (Ecology, Water Quality Program Permit Writer's Manual) at IV-29. BCT means "best conventional pollutant control technology." BPT means "best practicable control technology currently available." BPJ means "best professional judgment." *See, e.g.*, Exh. 29 at IV-3.

much it would cost the Port to send all of its industrial wastewater to King County, rather than just some of it. Exh. 1 at 305 ln. 23 - 306 ln. 23.³⁵

But given the AKART pipeline -- which the Port is building in any event -- the additional costs of treating all of STIA's industrial wastewater (instead of just some of it) is literally reasonable as a matter of law. This is because the KC/South Plant's charges for treatment are set by ordinance. *See*, Exh. 23 (King County Waste Treatment Division 2004 Fee Schedule). The costs that the Port would incur are the same exact costs that all other users incur to treat their BOD instead of dumping it into the Sound. As a matter of law, King County's charges cannot be considered unreasonable.³⁶

IV. CONCLUSION

Under the foregoing points and authorities, the Board should grant partial summary judgment to appellants Airport Communities Coalition, Citizens Against Seatac Expansion, and Puget Soundkeeper Alliance on appeal issue 17(a). Under authority of WAC 371-08-540, appellants respectfully request the Board to declare NPDES Permit WA-002465-1 invalid, and direct the Department of Ecology to reissue the permit consistent with all applicable requirements of state and federal law.

³⁵ Unfortunately, space limitations prohibit fully excerpting this remarkable colloquy here. Nevertheless, appellants urge the Board to review page 306 of the deposition transcript (Exh. 1).

³⁶ The Port might argue that the annual costs of treating its industrial wastewater are unreasonable in light of the large volumes of contaminated stormwater it must handle. But if so, it is not the cost of treatment that is unreasonable -- it is the volume of stormwater the Port allows to become contaminated with ADAFs that is unreasonable. The Clean Water Act requires reducing the volume of stormwater that becomes contaminated. Dumping the stormwater, once contaminated, untreated into Puget Sound is an illegal and an unacceptable response to the problem.

DATED this 26th day of April, 2004.

SMITH & LOWNEY, P.L.L.C.

By: _____
Richard A. Poulin, Of Counsel
WSBA # 27782
Attorneys for Appellants
Airport Communities Coalition
Citizens Against Seatac Expansion

GENDLER & MANN, LLP

By: _____
David S. Mann
WSBA No. 21068
Attorneys for Puget Soundkeeper Alliance