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**BEFORE THE POLLUTION CONTROL HEARINGS BOARD
STATE OF WASHINGTON**

AIRPORT COMMUNITIES
COALITION,

Appellant,

v.

STATE OF WASHINGTON,
DEPARTMENT OF ECOLOGY; and
PORT OF SEATTLE,

Respondents.

PCHB No. 01-133

DECLARATION OF
KEVIN FITZPATRICK

Kevin Fitzpatrick, declares as follows:

1. I am over the age of 18, am competent to testify, and have personal knowledge of the facts stated herein.
2. I am a Section Manager employed by the Department of Ecology (Ecology) in the Northwest Regional Office in the Water Quality Program. I have held that position since February 18, 2001. Prior to becoming Section Manager, I was employed as the Industrial Permit Unit Supervisor at Northwest Regional Office in the Water Quality Program. I have assisted in Ecology's review of the Port of Seattle's (Port) SeaTac International Airport (STIA) Master Plan Update Improvement Projects, including the Third Runway for the past three years. I am familiar with the claims raised and the issues presented in this case.

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1 **Water Quality**

2 3. In its memorandum in support of a stay, the Airport Communities Coalition
3 (ACC) contends that the Port's stormwater discharges from the STIA violate state water
4 quality standards. This assertion is not accurate and is misleading. The Port's stormwater
5 discharges from the STIA have exceeded state water quality criteria for copper, lead, and zinc
6 on an instantaneous basis, but those exceedences do not necessarily mean that the Port
7 violated state water quality criteria. Unlike industrial process water discharges, which are
8 relatively constant in volume and content, the nature of stormwater is dynamic. Stormwater
9 discharges fluctuate rapidly and irregularly in volume and in content. A single instantaneous
10 exceedence of a numeric water quality standard in a stormwater discharge does not mean that
11 that same standard has been violated. A violation exists only if the discharge exceeds the
12 numeric standard for the period of time set forth in the regulations. Data from the Port's self-
13 monitoring reports of its stormwater discharges from its STIA operations, required by the
14 NPDES permit, do not show that the numeric criteria standards were exceeded at a constant
15 level for the required duration of those standards. To the contrary, a closer examination of
16 this data reveals that concentrations of copper, lead and zinc fluctuate widely in the course of
17 any given storm event. At present, there are no established state or federal protocols or
18 methodologies for stormwater sampling and monitoring to determine if pollutant
19 concentrations persist beyond the time periods set in Ecology's regulations.

20 4. The Port's current NPDES permit requires the Port to monitor its STIA
21 stormwater discharges and, if exceedences are identified at a particular outfall, the Port must
22 implement source controls or treatment best management practices (BMPs) to correct the
23 problem. This procedure was successful in identifying metal roofs at the airport's north end
24 as a source of zinc exceedences in the Port's discharges. To address that issue, the Port is
25 currently taking measures to substitute different roofing materials or applying specialty
26 coatings on the existing roofs to control the source of zinc from these pollution generating

1 surfaces. Another source control study undertaken by the Port was a fate and transport study
2 of de-icing agents that may shear off of aircraft during take-off. This study was successful in
3 identifying a number of stormwater drainage systems near the airport's runways and taxi-
4 ways which collect a high concentration of de-icing run-off. These stormwater drainage
5 systems are now being re-routed into the Port's Industrial Wastewater System for treatment.
6 Also, the Port's Stormwater Management Plan (SMP) for the Master Plan Update Projects
7 calls for a retrofit of the Port's existing stormwater management system at STIA. This retrofit
8 is expected to improve water quality in the Port's stormwater discharges.

9 5. The Clean Water Act § 401 Certification (401 Certification) issued for the
10 STIA Master Plan Update Projects requires that the Port complete a site specific study, such
11 as a Water Effects Ratio Study (WERS), before it may discharge stormwater from new
12 pollution-generating impervious surfaces at STIA. The purpose of this study is to identify
13 specific effluent limitations for copper and other metals that will be protective of beneficial
14 uses in the receiving waters. The effluent limitations established by the study will be
15 incorporated into the Port's NPDES permit when it is renewed next year and the Port will be
16 required to meet those limits as set forth in the 401 Certification. Ecology included this
17 condition in response to comments raised by ACC and others regarding the levels of copper
18 and other metals in the Port's discharges.

19 6. Contrary to the contentions of ACC, the 401 Certification does not authorize a
20 "mixing zone" in violation of water quality standards. For instream and shoreline work only,
21 the certification allows temporary exceedences of water quality standards for turbidity
22 pursuant to WAC 173-201A-110(3). Section 401 Certification, Condition A (1), p. 2. The
23 certification further states that any mixing zone established pursuant to that regulation must be
24 minimized pursuant to WAC 173-201A-100. Condition A (2)(d), p. 3. These conditions do
25 not authorize mixing zones for any work other than instream and shoreline work and for no
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1 other criteria than turbidity. The 401 Certification does not authorize mixing zones for
2 stormwater discharges from the Port's STIA industrial operations.

3 **Acceptable Fill Criteria**

4 7. Ecology was presented with a considerable challenge in determining the
5 appropriate conditions to include in a 401 Certification to screen fill materials to be used in the
6 construction of the proposed Third Runway and related projects. Conditions for acceptable fill
7 material have never been developed for projects receiving a 401 Certification from Ecology.
8 However, given the fact that this project requires the importation of an enormous volume of fill
9 material to the site (estimated at anywhere from 17 to 22 million cubic yards), it was
10 incumbent on Ecology to develop necessary conditions on the use of fill materials to ensure
11 that water quality standards will not be violated. In light of this water quality concern, I
12 participated in the development of the acceptable fill criteria and in drafting the terms of
13 Condition E of the 401 Certification which establishes the protocols governing the Port's use
14 of fill material for its proposed project.

15 8. Because there is no national or state guidance on acceptable fill standards or
16 criteria, Ecology elected to craft conditions for inclusion in the 401 Certification that place
17 requirements on the Port to investigate its fill sources to ensure that fill material came from
18 uncontaminated sources. The fill criteria also requires the Port to test and monitor its fill
19 materials to ensure that over the life of the project the fill materials will not have "the potential
20 either singularly or cumulatively to adversely affect characteristic water uses," of Washington
21 State waters. WAC 173-201A-040(1).

22 9. The fill screening protocols, set forth in Condition E of the 401 Certification,
23 are designed to fulfill two separate but related objectives of the Army Corps of Engineers
24 (Corps) and Ecology. Those requirements are the Corps' § 404 permitting standard of "free
25 from toxic pollutants in toxic amounts" (U.S Army Corps of Engineers Nationwide Permitting
26 Standards No. 18. "Suitable Material") and Ecology's requirement that fill materials used for

1 the project not be sources of any contaminants that would exceed state surface water standards
2 (WAC 173-201A) and state groundwater standards (WAC 173-200) at any time over the life of
3 the project. When developing the fill criteria, Ecology was specifically guided by the
4 requirements of WAC 173-201A-040(1) (“[t]oxic substances shall not be introduced above
5 natural background levels in waters of the state which have the potential either singularly or
6 cumulatively to adversely affect characteristic water uses”) and the antidegradation standard in
7 WAC 173-201A-070(4)(a) (“[e]xisting instream uses and the level of water quality necessary
8 to provide full support to those uses must be maintained and protected”).

9 10. Under Condition E, the first step in meeting these objectives is the requirement
10 that fill materials for the project must originate from uncontaminated sources. Under that
11 condition, the Port is restricted to using only naturally occurring uncontaminated soils as fill
12 material. This requirement is found in Condition E (1)(d) Prohibited Fill Sources which
13 prohibits the use on the proposed Third Runway embankment of “[f]ill which consists in whole
14 or in part of soils or materials that are determined to be contaminated following a Phase I or
15 Phase II site assessment.” Phase I and Phase II site assessments refer to established protocols
16 from the American Society for Testing and Material Standards (ASTM) for investigating
17 historical uses of a site and necessary record reviews that may disclose actual or potential
18 instances of site contamination. Condition E (1)(d) also prohibits the Port from using “soils or
19 materials that were previously determined to be contaminated by a Phase I or Phase II site
20 assessment and have been treated in some manner so to be considered re-mediated soils or fill
21 material.”

22 11. The Port’s compliance with the restriction that only naturally occurring
23 uncontaminated soils be used is reinforced by the requirement that the Port investigate the
24 proposed fill source to determine whether the site has any history of contamination. This
25 requirement is set forth in Condition E (1)(a) Documentation. This condition defines the
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1 detailed nature of the site investigation and the information that must be submitted to Ecology
2 documenting that investigation. Specifically, Condition E (1)(a) requires that:

3 The environmental assessment shall be conducted by an environmental
4 professional in general conformance with the American Society for Testing and
5 Materials Standard (ASTM) E 1527-00 Standard Practice for Environmental
6 Site Assessments: Phase I Environmental Site Assessment Process, and E 1903-
7 97 Standard Guide for Environmental Site Assessments: Phase II
8 Environmental Site Assessment Process.

9 12. The next requirement guaranteeing that the fill used meets the Corps' and
10 Ecology's objectives is the verification of the findings of the site investigation. The
11 verification provisions, contained in Conditions E (1)(a)(iv) Fill Source Sampling and E (1)(b)
12 Criteria, require the Port to sample fill materials for the potential contaminants identified and
13 sets forth criteria for concentrations of naturally occurring contaminants in soil. The purpose
14 of the verification is two-fold: (1) to establish that the source of fill is indeed uncontaminated;
15 and (2) to ensure that even naturally occurring contaminants in soil do not exceed the specified
16 concentrations. The latter requirement is needed because of the potential for naturally
17 occurring contaminants present in the soil at concentrations in excess of the stated criteria to
18 exceed state groundwater and surface water standards if mobilized. For example, naturally
19 occurring contaminants such as arsenic and copper could be at concentrations in a fill source
20 where, if mobilized, they present a risk of violating state groundwater and surface water
21 standards at some time over the life of the project.

22 13. The criteria established for concentrations of the naturally occurring
23 contaminants listed in Condition E (1)(b) was developed to render highly unlikely the
24 possibility that these contaminants could be mobilized in the soil and reach surface water or
25 groundwater. Another measure in Condition E (1)(b) designed to further reduce the risk of
26 mobilizing naturally occurring contaminants from soils into surface water or groundwater is
the establishment of even lower concentration requirements for certain naturally occurring
contaminants (chromium, lead and nickel). These lower concentrations apply to fill materials
depending on the location of the fill in the final fill profile. Under that provision, the Port must

1 employ the stricter criteria when screening fill for placement in the fill profile in those
2 locations where the risk of mobilizing those contaminants into surface water or groundwater is
3 increased.

4 14. Conditions E (2) As-Built Documentation and E (3) Post Construction
5 Monitoring provide additional assurance that the fill materials used meet the objective that the
6 placement of fill not jeopardize either state surface or groundwater standards. To that end,
7 Condition E (2) establishes a tracking system for fill materials imported onto the construction
8 site so that Ecology and the Port know with some certainty the exact location and elevation of
9 the materials used. In addition, under Condition E (3) the Port is required to monitor both
10 surface water and groundwater conditions throughout the project development. The
11 monitoring requirement serves as an "early-warning" system concerning surface water and
12 groundwater conditions in the unlikely event that unsuitable fill material was deposited onto
13 the site.

14 15. In my opinion, the fill criteria and protocols established in Condition E provide
15 for the protection of the water quality of state groundwater and surface water in the Port's
16 construction of its proposed project. In particular, the criteria developed for soil concentrations
17 of naturally occurring contaminants are appropriately conservative. As a result, it is highly
18 unlikely that those contaminants will mobilize and move into groundwater and surface waters
19 at concentrations exceeding acute or chronic criteria established in the state's surface and
20 groundwater standards. I believe that the unprecedented requirements placed on the Port in its
21 selection and use of fill material provide Ecology with reasonable assurance that Washington
22 State's surface water and groundwater quality standards will be met throughout the life of this
23 project.

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1 I declare under penalty of perjury under the laws of the state of Washington that the
2 foregoing is true and correct.

3 DATED this 28th day of September, 2001.

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6 KEVIN FITZPATRICK

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DECLARATION OF KEVIN FITZPATRICK

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