

Kenny, Ann

From: Fitzpatrick, Kevin
Sent: Monday, July 30, 2001 3:35 PM
To: Kenny, Ann
Cc: Drabek, John
Subject: Deliberative Document - Do Not Disclose; Acceptable Fill Criteria Language for the Draft 401 Certification

DELIBERATIVE DOCUMENT - DO NOT DISCLOSE

Here's Chung Yee's draft language on acceptable fill criteria with a new section added on Prohibited Fill Material.



Clean Fill Criteria
for 401 Ce...

Kevin

Draft (July 30, 2001)

E6. Borrow Sites

The use of imported fill for the proposed Third Runway embankment and associated construction projects of the Port of Seattle Master Plan Improvements may result in impacts to wetlands or other waters of the state. To ensure compliance with measures designed to minimize potential impacts, the Port of Seattle shall submit borrow site clean fill certification documentation described in the following sections to the Department of Ecology for review and approval prior to fill placement.

E7. Fill Source/Documentation/Fill Criteria

The Port of Seattle shall adhere to the following conditions to ensure that the fill placed for the proposed Third Runway embankment and associated construction projects of the Port of Seattle Master Plan Improvements does not contain toxic materials in toxic amounts, thereby preventing the introduction of toxic materials in toxic amounts into waters of the state which includes wetlands.

E7a. Fill Sources

Fill materials for the proposed Third Runway embankment and associated construction projects of the Port of Seattle Master Plan Improvements shall be limited to the following three sources:

- State-certified borrow pits
- Contractor-certified construction sites
- Port of Seattle-owned properties.

E7b. Prohibited Fill Sources

The following fill sources are prohibited for use on the proposed Third Runway embankment and associated construction projects of the Port of Seattle Master Plan improvements:

- Fill which consists in whole or in part of soils or materials that are determined to be contaminated following a Phase I or Phase II site assessment.
- Fill which consists in whole or in part of soils or materials that were previously determined to be contaminated by a Phase I or Phase II site assessment and have been treated in some manner so to be considered re-mediated soils or fill material.

E7c. Documentation

No later than five (5) business days prior to accepting any fill materials for use on the proposed Third Runway embankment and associated construction projects of the Port of Seattle Master Plan Improvements, the Port of Seattle shall submit to the Department of Ecology's Northwest Regional Office, Water Quality Program, certification documentation for the proposed fill source. The documentation shall contain an environmental assessment of the fill source and shall verify excavated soil from the proposed fill source complies with the fill criteria. Findings of the environmental assessment are subject to the review and approval of the Department of Ecology. The environmental assessment shall be conducted by an environmental professional in general conformance with the American Society for Testing and Materials Standard (ASTM) E 1527-00 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, and E 1903-97 Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process. At minimum, the document shall contain the followings:

1. **Fill Source Description:** Provide a description/location of the fill source, general characteristics of the fill source and vicinity, current use, and a site plan identifying the extent of the excavation, project schedule and the estimated quantity of fill to be transported to the proposed Third Runway embankment.
2. **Records Review:** Obtain and review environmental records of the proposed fill source site and adjoining properties. In addition to the standard federal and local environmental record sources, the following Department of Ecology environmental databases shall be reviewed:
 - Confirmed & Suspected Contaminated Site Report
 - No Further Action Site List
 - Underground Storage Tank List
 - Leaking Underground Storage Tank List
 - Site Register.

Records review shall also contain historical use information of the fill source and the surrounding area to help identify the likelihood of environmental contamination.

3. **Site Reconnaissance:** Conduct a site visit to identify current site use and site conditions to help identify the likelihood of environmental contamination and/or the potential migration of hazardous substances onto the site from adjoining properties.
4. **Fill Source Sampling:** Collect and analyze fill materials for the potential contaminant(s) identified in the Phase I Environmental Site Assessment. At a minimum, fill materials from each fill source shall be analyzed for the following hazardous substances.
 - Total Antimony
 - Total Arsenic

- Total Beryllium
- Total Cadmium
- Total Chromium¹
- Total Copper
- Total Lead
- Total Mercury
- Total Nickel
- Total Selenium
- Total Silver
- Total Thallium
- Total Zinc
- NWTPH-HCID

¹ Chromium (VI) shall be analyzed if the results of the Phase I Environmental Site Assessment show a likelihood of Chromium (VI) contamination.

For fill source characterization, the following table presents the minimum sampling schedule for fill sources with no likelihood of environmental contamination.

Cubic Yards of Soil	Minimum Number of Samples
<1,000	2
1,000 – 10,000	3
10,000 – 50,000	4
50,000 – 100,000	5
>100,000	6

Samples shall be collected at locations that are representative of the fill destined for the proposed Third Roadway embankment.

For fill sources with suspected contamination identified by the Phase I Environmental Site Assessment or with complex site conditions, please consult with the Department of Ecology Northwest Regional Office, Water Quality Program, for the appropriate sampling requirements.

E7d. Fill Criteria

The results of the Phase II Environmental Site Assessment sampling and testing shall be compared to the fill criteria to determine the suitability of the fill source for the proposed Third Runway embankment. Presented in the following table is the fill criteria established for hazardous substances specified in Section E7c.4.

Hazardous Substances	Fill Criteria mg/kg ²
Antimony	16
Arsenic	20
Beryllium	0.6
Cadmium	2
Chromium ³	42/2000
Copper	36
Lead ⁴	220/250
Mercury	2
Nickel ⁵	100/110
Selenium	5
Silver	5
Thallium	2
Zinc	85
Gasoline	30
Diesel ⁶	460/2000
Heavy Oils	2000

² mg/kg = milligrams per kilogram

³ Fill with total chromium concentrations greater than 42 mg/kg and less than 2000 mg/kg may be placed to within six feet of the ground surface. No fill with total chromium concentrations greater than 42 mg/kg may be placed within the first six feet of the embankment. No fill with chromium (VI) concentrations greater than 19 mg/kg may be placed within the embankment.

⁴ Fill with total lead concentrations greater than 220 mg/kg and less than 250 mg/kg may be placed to within six feet of the ground surface. No fill with total lead concentrations greater than 220 mg/kg may be placed within the first six feet of the embankment.

⁵ Fill with total nickel concentrations greater than 100 mg/kg and less than 110 mg/kg may be placed to within six feet of the ground surface. No fill with total nickel concentrations greater than 100 mg/kg may be placed within the first six feet of the embankment.

- ⁶ Fill with diesel range organics concentrations greater than 460 mg/kg and less than 2000 mg/kg may be placed to within six feet of the ground surface. No fill with diesel range organics concentrations greater than 460 mg kg may be placed within the first six feet of the embankment.

For hazardous substances other than those identified in the above fill criteria table that have been identified in the Phase II Environmental Site Assessment, please consult with the Department of Ecology Northwest Regional Office, Water Quality Program, for the applicable fill criteria.

E8. As-Built Documentation

The Port of Seattle shall provide to the Department of Ecology for review quarterly summaries of:

- Names and locations of fill sources placed for the previous quarter
- Quantities of fill materials from these fill sources
- Locations and elevations of fill source materials placed within the embankment.

The Department of Ecology may require additional compliance conditions and/or corrective actions upon Ecology's review of the as-built documents.

E9. Post Construction Monitoring

In order to minimize the potential for migration of hazardous substances, the Department of Ecology expects the Port of Seattle to take appropriate measures to minimize precipitation and subsequent runoff coming into contact with the fill materials. Furthermore, the Department of Ecology expects that runoff and seepage from the fill area shall be monitored for compliance with applicable Washington State surface water criteria. Ground water down-gradient from the fill area shall be monitored for compliance with applicable ground water criteria.

Within 180 days after the issuance of the 401 Water Quality Certification for the Master Plan Update Improvements for the Seattle-Tacoma International Airport, the Port of Seattle shall submit to the Department of Ecology for review and approval a surface water and ground water monitoring plan. The monitoring plan shall be designed to detect impacts of the fill embankment to the receiving water and to the ground water during fill placement and post fill placement. In the event monitoring detected adverse impacts to the receiving water/ground water, the Department of Ecology may revise the fill criteria and/or institute corrective actions to address these impacts.