

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
 WASTE DISCHARGE PERMIT No. WA-002465-1

State of Washington  
 DEPARTMENT OF ECOLOGY  
 Northwest Regional Office  
 3190 160<sup>th</sup> Avenue SE  
 Bellevue, WA 98008-5452

In compliance with the provisions of  
 The State of Washington Water Pollution Control Law  
 Chapter 90.48 Revised Code of Washington  
 and  
 The Federal Water Pollution Control Act  
 (The Clean Water Act)  
 Title 33 United States Code, Section 1251 et seq.

**PORT OF SEATTLE**  
 SEATAC International Airport  
 P.O. Box 1209  
 Seattle, Washington 98111

<u>Facility Location:</u> SEATAC International Airport Seattle, Washington	<u>Industry Type:</u> Air Transportation - Airport
<u>Water Body I.D. No.:</u> (i) WA-PS-0270 (ii) WA-09-2000 (iii) WA-09-2005	<u>Receiving Water:</u> (i) Puget Sound (Process Wastewater) (ii) Des Moines Creek (Stormwater) (iii) Miller Creek (Stormwater) (iv) City of SeaTac Storm Sewer, tributary to Gillian Creek and the Green River (Stormwater) (v) Walker Creek (Stormwater) (vi) Northwest Ponds (Stormwater)
<u>Part I – Puget Sound – Marine Discharge Location:</u> Latitude: 47° 24' 07" N Longitude: 122° 20' 07" W	
<b>NEW OUTFALL LOCATION</b> <u>East End Diffuser</u> <u>West End Diffuser</u> Latitude: 47° 24' 11" N      47° 24' 11" N Longitude: -122° 20' 13" W      -122° 20' 16" W	
<u>Part II – See page 38 for Other Discharge Locations.</u>	
<u>Part III – See page 66 for Other Discharge Locations.</u>	

is authorized to discharge in accordance with the Special and General Conditions which follow.

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Kevin C. Fitzpatrick  
 Water Quality Section Manager  
 Northwest Regional Office  
 Washington State Department of Ecology

**TABLE OF CONTENTS**

SUMMARY OF PERMIT REPORT SUBMITTALS.....8

**SPECIAL CONDITIONS**

**PART I: INDUSTRIAL WASTEWATER SYSTEM (IWS)**

S1. DISCHARGE LIMITATIONS.....11

- A. ~~Contaminated Stormwater Runoff (Puget Sound)~~  
Interim Effluent Limits - Contaminated Stormwater Runoff (Puget Sound)
- B. Final Effluent Limits - Contaminated Stormwater Runoff (Puget Sound)
- B. C. Municipal Sewer System Discharges
- C. D. Mixing Zone Descriptions for the IWS Effluent

S2. MONITORING REQUIREMENTS.....13 15

- A. Monitoring Schedule, Industrial Wastewater Treatment Plant
- B. Sampling and Analytical Procedures
- C. Flow Measurement
- D. Laboratory Accreditation
- E. Deicing/Anti-icing Fluids Usage
- F. Annual Stormwater Monitoring Summary Report
- G. Annual Sanitary Sewer Discharge Summary Report

S3. ACUTE TOXICITY .....17 19

- A. Effluent Characterization
- B. Effluent Limit for Acute Toxicity
- C. Monitoring for Compliance With an Effluent Limit for Acute Toxicity
- D. Response to Noncompliance With an Effluent Limit for Acute Toxicity
- E. Monitoring When There Is No Permit Limit for Acute Toxicity
- F. Sampling and Reporting Requirements

S4. CHRONIC TOXICITY.....24 27

- A. Effluent Characterization
- B. Effluent Limit for Chronic Toxicity
- C. Monitoring for Compliance With an Effluent Limit for Chronic Toxicity
- D. Response to Noncompliance With an Effluent Limit for Chronic Toxicity
- E. Monitoring When There Is No Permit Limit for Chronic Toxicity
- F. Sampling and Reporting Requirements

S5. REPORTING AND RECORDKEEPING REQUIREMENTS .....25 36

- A. Reporting
- B. Records Retention
- C. Recording of Results
- D. Additional Monitoring by the Permittee
- E. Noncompliance Notification

S6.	OPERATIONS AND MAINTENANCE.....	27	38
A.	Operations and Maintenance Manual		
B.	Bypass Prohibition		
C.	Duty to Mitigate		
S7.	FACILITY LOADING .....	30	40
A.	Design Criteria		
S8.	PROHIBITED DISCHARGES.....	30	41
A.	General Prohibitions		
B.	Specific Prohibitions		
C.	Prohibited Unless Approved		
S9.	SOLID WASTE DISPOSAL.....	31	42
A.	Solid Waste Handling		
B.	Leachate		
S10.	COMPLIANCE SCHEDULE - IWS .....	32	42
S11.	EFFLUENT MIXING STUDY .....	32	42
A.	General Requirements		
B.	Reporting Requirements		
C.	Protocols		
S12.	SEDIMENT MONITORING (MARINE).....	34	45
A.	Sediment Sampling and Analysis Plan		
B.	Sediment Data Report		
C.	Approval of Prior Reports		

**Part II: NONCONSTRUCTION STORMWATER RUNOFF**

S1. FINAL EFFLUENT LIMITATIONS & MONITORING.....37 46

- A. Final Effluent Limits for Nonconstruction Stormwater Runoff Outfalls Discharging Directly into Their Respective Receiving Waters
- ~~B. Nonconstruction Stormwater Runoff Monitoring for Outfalls Discharging into Lake Reba Stormwater Facility Prior to Discharging into Miller Creek~~
- €. B. Discharge Monitoring
- Đ. C. Visual Monitoring
- E. D. Prohibited Discharges
- ƒ. E. Sampling and Analytical Procedures
- Ĝ. F. Laboratory Accreditation
- G. In-stream Turbidity Sampling

S2. REPORTING AND RECORDKEEPING REQUIREMENTS .....41 54

- A. Reporting
- B. Records Retention
- C. Recording of Results
- D. Additional Monitoring by the Permittee
- E. Noncompliance Notification

S3. COMPLIANCE WITH STANDARDS .....43 55

S4. OPERATIONS AND MAINTENANCE.....44 56

- A. Bypass Procedures
- B. Duty to Mitigate

S5. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR INDUSTRIAL FACILITIES .....46 58

- A. General Requirements
- B. SWPPP Contents and Requirements

S6. COMPREHENSIVE RECEIVING WATER & STORMWATER RUNOFF STUDY53 65

S7. ACUTE TOXICITY .....55 68

- A. Effluent Characterization
- B. Effluent Limit for Acute Toxicity
- C. Monitoring for Compliance With an Effluent Limit for Acute Toxicity
- D. Response to Noncompliance With an Effluent Limit for Acute Toxicity
- E. Monitoring When There Is No Permit Limit for Acute Toxicity
- F. Sampling and Reporting Requirements

S8. SUBLETHAL TOXICITY .....60 72  
    A. ~~Effluent Sampling~~ Stream Sampling and Sublethal Toxicity Testing  
    B. Response to Sublethal Toxicity  
    C. Sampling and Reporting Requirements  
  
S9. COMPLIANCE SCHEDULES.....62 77  
  
S10. SOLID AND LIQUID WASTE DISPOSAL .....63 78

**PART III: CONSTRUCTION STORMWATER  
DISCHARGE LIMITATIONS AND MONITORING**

- S1. A. Construction Stormwater Runoff Outfalls and Effluent Limitations.....64 79
- B. Construction Stormwater Runoff Monitoring Plan and Schedule
- C. Sampling and Analytical Procedures
- D. Laboratory Accreditation
  
- S2. REPORTING AND RECORDKEEPING REQUIREMENTS.....68 88
- A. Reporting
- B. Records Retention
- C. Recording of Results
- D. Additional Monitoring by the Permittee
- E. Noncompliance Notification
  
- S3. SOLID WASTE DISPOSAL.....70 90
- A. Solid Waste Handling
- B. Leachate
  
- S4. OPERATIONS AND MAINTENANCE..... 70 90
- A. Bypass Procedures
- B. Duty to Mitigate
  
- S5. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR  
    CONSTRUCTION ACTIVITIES.....73 93
- A. General Requirements
- B. SWPPP Contents and Requirements

**GENERAL CONDITIONS**

G1.	SIGNATORY REQUIREMENTS.....	81	101
G2.	RIGHT OF INSPECTION AND ENTRY .....	82	102
G3.	PERMIT ACTIONS.....	82	102
G4.	REPORTING A CAUSE FOR MODIFICATION .....	83	103
G5.	PLAN REVIEW REQUIRED .....	84	104
G6.	COMPLIANCE WITH OTHER LAWS AND STATUTES.....	84	104
G7.	DUTY TO REAPPLY .....	84	104
G8.	TRANSFER OF THIS PERMIT .....	84	104
G9.	REDUCED PRODUCTION FOR COMPLIANCE .....	85	105
G10.	REMOVED SUBSTANCES .....	85	105
G11.	DUTY TO PROVIDE INFORMATION.....	85	105
G12.	OTHER REQUIREMENTS OF 40 CFR.....	85	105
G13.	ADDITIONAL MONITORING.....	85	105
G14.	PAYMENT OF FEES.....	85	105
G15.	PENALTIES FOR VIOLATING PERMIT CONDITIONS .....	85	105
G16.	UPSET .....	86	106
G17.	PROPERTY RIGHTS.....	86	106
G18.	DUTY TO COMPLY .....	86	106
G19.	TOXIC POLLUTANTS.....	86	106
G20.	PENALTIES FOR TAMPERING .....	87	107
G21.	REPORTING PLANNED CHANGES.....	87	107
G22.	REPORTING ANTICIPATED NONCOMPLIANCE.....	87	107
G23.	REPORTING OTHER INFORMATION.....	87	107
G24.	REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS.....	87	107
G25.	COMPLIANCE SCHEDULES .....	88	108

**SUMMARY OF PERMIT REPORT SUBMITTALS**

Refer to the Special and General Conditions of this permit for additional submittal requirements.

**Part I**

<b>Permit Section</b>	<b>Submittal</b>	<b>Frequency</b>	<b>First Submittal Date</b>
S3.A	Acute Toxicity Tests Characterization Summary Report	1/permit cycle	March 1, <del>2005</del> 2008
<del>S3.E</del>	<del>Acute Toxicity Effluent Characterization</del>	<del>1/permit cycle</del>	<del>April 1, 2008</del>
S4.A	Chronic Toxicity Tests Characterization Summary Report	1/permit cycle	March 1, <del>2005</del> 2008
<del>S4.E</del>	<del>Chronic Toxicity Effluent Characterization</del>	<del>1/permit cycle</del>	<del>April 1, 2008</del>
S5.A	Discharge Monitoring Report	Monthly	December 1, 2003
S5.E	Noncompliance Notification	As necessary	
S6.A	Operations and Maintenance Manual	As necessary	
S6.A	Operations and Maintenance Manual Update or Review Confirmation Letter	Annual	
S6.B	Reporting Bypasses	As necessary	
S11.	Effluent Mixing Report	1/permit cycle	As needed
S12.A	Sediment Baseline Sampling and Analysis Plan	1/permit cycle	January 1, 2005
S12.B	Sediment Data Report	1/permit cycle	January 1, 2006



**SUMMARY OF PERMIT REPORT SUBMITTALS**

Refer to the Special and General Conditions of this permit for additional submittal requirements.

**Part II**

<b>Permit Section</b>	<b>Submittal</b>	<b>Frequency</b>	<b>First Submittal Date</b>
S2.A	Discharge Monitoring Report	Monthly	December 1, 2003
S2.E	Noncompliance Notification	As necessary	
S4.A	Bypass Procedure and Reporting	As necessary	
S6.	Comprehensive Receiving Water and Effluent Study Sampling and Quality Assurance Plan	1/permit cycle	July 1, 2004
S6.	Comprehensive Receiving Water and Effluent Study Final Report	1/permit cycle	April 1, 2008
S7.A	Acute Toxicity Tests Characterization Summary Report	1/permit cycle	May 1, 2005 2006
S7.E	Acute Toxicity Effluent Characterization	1/permit cycle	April 1, 2008
S8.A	Sublethal Toxicity Tests Sampling	1/ 6 months	May 1, 2005 2006
S8.C	Sublethal Toxicity Effluent Characterization	1/permit cycle	April 1, 2008
S9.A,B	Engineering Report Submittal	1/permit cycle	January 31, 2005
S9.B	Start Construction/Installation	1/permit cycle	July 31, 2006
S9.B	Complete Construction or Installation	1/permit cycle	July 31, 2007
S9.B	Start Operation (Compliance Deadline)	1/permit cycle	December 31, 2007
S9.C	Identify BMPs and draft Engineering Report		April 30, 2004
S9.C	Final Engineering Report for the Identified BMPs		January 31, 2005
S9.C	Start Construction of Approved BMPs		July 31, 2006
S9.C	Complete Construction of Approved BMPs		July 31, 2007
S9.D	Complete SSA Report – Progress Report		December 31, 2007
S9.D	Complete the Necessary Retrofit – Progress Report		December 31, 2007

**SUMMARY OF PERMIT REPORT SUBMITTALS**

Refer to the Special and General Conditions of this permit for additional submittal requirements.

**Part III**

<b>Permit Section</b>	<b>Submittal</b>	<b>Frequency</b>	<b>First Submittal Date</b>
S2.A	Discharge Monitoring Report	Monthly	December 1, 2003
S2.E	Noncompliance Notification	As necessary	
G1.	Notice of Change in Authorization	As necessary	
G4.	Permit Application for Substantive Changes to the Discharge	As necessary	
G5.	Engineering Report for Construction or Modification Activities	As necessary	
G7.	Application for Permit Renewal	1/permit cycle	March 4, 2008
G8.	Notice of Permit Transfer	As necessary	
G21.	Notice of Planned Changes	As necessary	
G22.	Reporting Anticipated Noncompliance	As necessary	

## SPECIAL CONDITIONS

### PART I: INDUSTRIAL WASTEWATER SYSTEM (IWS)

#### S1. DISCHARGE LIMITATIONS

~~A. Contaminated Stormwater Runoff (Puget Sound)~~

~~All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.~~

~~Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge treated stormwater contaminated by the industrial activities at the permitted location subject to complying with the following limitations:~~

<b>TABLE 1-A</b>		
<b>EFFLUENT LIMITATIONS: OUTFALL #001 TO PUGET SOUND</b>		
<b>Parameter</b>	<b>Average Monthly a</b>	<b>Maximum Daily b</b>
Flow	Report	3.6 MGD f
Oil and Grease e	8 mg/L	15 mg/L
BOD5 d	Report	250 mg/L
COD	Report	N/A
TSS	21 mg/L	33 mg/L
pH e	Daily minimum is equal to or greater than 6, and the daily maximum is less than 9.	
Toxicity Testing	See Section S3.A	
<p><del>a The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.</del></p>		
<p><del>b The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day.</del></p>		
<p><del>c Oil &amp; grease shall be measured by Ecology Method NWTPH DX.</del></p>		
<p><del>d The BOD5 limits will be applicable one year after successful implementation and completion of the AKART, i.e., July 1, 2007. DMR shall indicate daily maximum limit exceedance occurrence per month.</del></p>		
<p><del>e Indicates the range of permitted values. When pH is continuously monitored, excursions between 5.0 and 6.0, or 9.0 and 10.0 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.0 and above 10.0 are violations. The instantaneous maximum and minimum pH shall be reported monthly.</del></p>		
<p><del>f The daily maximum flow is based on the Port's agreement with the Midway Sewer District. If the flow exceeds the daily maximum limit, it is not a permit violation as long as the combined flow from the IWS and Midway Sewer District does not exceed 90% of the capacity of the outfall, which is 18 MGD.</del></p>		

<b>TABLE 1-B</b>	
<b>BENCHMARK MONITORING: OUTFALL #001 TO PUGET SOUND</b>	
<b>Parameter</b>	<b>Benchmark Maximum Monthly Average Concentration 1</b>
<b>BOD5</b>	30 mg/L
<b>COD</b>	120 mg/L
<del>1 Benchmark Maximum Monthly Average Concentration is the goal that should eventually be met by the Permittee through its Adaptive Management Program. Exceeding Benchmark Maximum Monthly Average Concentration will not be considered violation of this permit as long as Permittee addresses such exceedances adequately in SWPPP and in its annual updates. The updated SWPPP must provide action plan to eliminate any such exceedances in the future.</del>	

**A. Interim Effluent Limits - Contaminated Stormwater Runoff (Puget Sound)**

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through June 2007, the Permittee is authorized to discharge treated stormwater contaminated by the industrial activities at the permitted location subject to complying with the following limitations:

<b>TABLE 1-A</b>		
<b>INTERIM EFFLUENT LIMITATIONS: OUTFALL #001 TO PUGET SOUND</b>		
<b>Parameter</b>	<b>Average Monthly <sup>a</sup></b>	<b>Maximum Daily <sup>b</sup></b>
<b>Flow</b>	Report	Report <sup>d</sup>
<b>Oil and Grease</b>	8 mg/L	15 mg/L
<b>BOD<sub>5</sub></b>	9000 lbs/day N/A	26000 lbs/day, 1000 mg/L
<b>COD</b>	Report mg/L	N/A
<b>TSS</b>	21 mg/L	33 mg/L
<b>Copper</b>	N/A	86 µg/L
<b>Lead</b>	N/A	358 µg/L
<b>Zinc</b>	N/A	263 µg/L
<b>Benzene</b>	N/A	19 µg/L
<b>Toluene</b>	N/A	71 µg/L
<b>Ethyl benzene</b>	N/A	11 µg/L
<b>Total Xylene</b>	N/A	221 µg/L
<b>Naphthalene</b>	N/A	167 µg/L
<b>Total Glycol<sup>a</sup></b>	N/A	2178 µg/L
<b>pH <sup>c</sup></b>	Daily minimum is equal to or greater than 6, and the daily maximum is less than 9.	
<b>Toxicity Testing</b>	See Section S3.A	

<sup>a</sup> The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.
<sup>b</sup> The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day.
<sup>c</sup> Indicates the range of permitted values. When pH is continuously monitored, excursions between 5.0 and 6.0, or 9.0 and 10.0 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.0 and above 10.0 are violations. The instantaneous maximum and minimum pH shall be reported monthly.
<sup>d</sup> The daily flow is based on the Port's agreement with the Midway Sewer District. Based on this agreement the combined flow from the IWS and Midway Sewer District must not exceed 90% of the capacity of the outfall, which is 18 MGD.
* Industrial activity is defined as pollution generating areas

**B. Final Effluent Limits - Contaminated Stormwater Runoff (Puget Sound)**

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning from July 1, 2007 and lasting through the expiration date, the Permittee is authorized to discharge treated contaminated stormwater resulted from industrial activities at the permitted location subject to the following limitations:

<b>TABLE 1-A</b>		
<b>EFFLUENT LIMITATIONS: OUTFALL #001 TO PUGET SOUND</b>		
<b>Parameter</b>	<b>Average Monthly<sup>a</sup></b>	<b>Maximum Daily<sup>b</sup></b>
Flow <sup>c</sup>	Report - MGD	Report - MGD
Oil and Grease	8 mg/L	15 mg/L
BOD <sub>5</sub>	30 mg/L - mg/L	2077 lbs/day
COD	Report - mg/L	N/A
TSS	21 mg/L	33 mg/L
pH <sup>d</sup>	Daily minimum is equal to or greater than 6, and the daily maximum is less than 9.	
Toxicity Testing	See Section S3.A	
<sup>a</sup> The average monthly and weekly effluent limitations are based on the arithmetic mean of the samples taken during a month, or a week.		
<sup>b</sup> The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.		
<sup>c</sup> The daily maximum flow is based on the Port's agreement with the Midway Sewer District. Based on this agreement the combined flow from the IWS and Midway Sewer District must not exceed 90% of the capacity of the outfall, which is 18 MGD.		
<sup>d</sup> Indicates the range of permitted values. When pH is continuously monitored, excursions between 5.0 and 6.0, or 9.0 and 10.0 shall not be considered violations provided no single excursion exceeds 60 minutes in length and total excursions do not exceed 7 hours and 30 minutes per month. Any excursions below 5.0 and above 10.0 are violations. The instantaneous maximum and minimum pH shall be reported monthly.		

<b>TABLE 1-B</b>	
<b>BENCHMARK MONITORING: OUTFALL #001 TO PUGET SOUND</b>	
<b>Parameter</b>	<b>Benchmark Maximum Concentration<sup>1</sup></b>
<b>COD</b>	120 mg/L
<sup>1</sup> Benchmark Maximum Concentration is the goal that should eventually be met by the Permittee through its Adaptive Management Program. Exceeding Benchmark Maximum Concentration will not be considered violation of this permit as long as Permittee addresses such exceedances adequately in SWPPP and in its annual updates. The updated SWPPP must provide action plan to eliminate any such exceedances in the future.	

**B. C. Municipal Sewer System Discharges**

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date and lasting through the expiration date of this permit, the Permittee is authorized to discharge wastewater to Midway Sewer District sewer system subject to the following limitations:

<b>EFFLUENT LIMITATIONS</b>		
<b>Parameter</b>	<b>Maximum Average Monthly<sup>a</sup></b>	<b>Maximum Daily<sup>b</sup></b>
<b>Flow - GPD</b>		
Boiler Blowdown	500	2,500
Cooling Tower Blowdown	16,000	250,000
Rental Carwash Blowdown	20,000	25,000
Equipment Wash Rack Blowdown	2,000	2,000
<b>Oil and Grease – mg/L</b>		
Rental Car Wash, and Equipment Wash Rack	N/A	100
<b>pH –</b>	Daily minimum is equal to or greater than 6, and the daily maximum is less than 9 standard units.	
Rental Car Wash, and Equipment Wash Rack		
<sup>a</sup> Daily flows averaged over a month		
<sup>b</sup> The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day.		

**D. Mixing Zone Descriptions for the IWS Effluent**

The maximum boundaries of the mixing zones and attainable dilution within mixing zones are defined as follows:

A zone where chronic criteria may be exceeded extends a maximum distance of 378 feet in any horizontal direction from any individual discharge port. The dilution attained within the chronic mixing zone for the critical conditions is 470:1 in the plume flowing in the direction of the current.

A zone where acute criteria may be exceeded extends a maximum distance of 37.8 feet in any direction from any individual discharge port. The dilution attained within the acute mixing zone for the critical conditions is 60:1 in the plume flowing in the direction of the current.

The Port of Seattle is required to fully apply AKART prior to being authorized a mixing zone. The permit Section S.10 sets a compliance deadline for complete AKART implementation on July 1, 2007. The mixing zone in Section S1.D is granted effective July 1, 2007, which is after successful implementation of AKART. Section S.11, Mixing Zone Study, requires the Permittee to submit to the Department for review and approval a mixing zone study report in case of new, replaced, or reconfigured outfall. The approved mixing zones may be authorized after it is public noticed and after complete implementation of AKART.

**S2. MONITORING REQUIREMENTS**

**A. Monitoring Schedule, Industrial Wastewater Treatment Plant**

- The Permittee shall monitor the treated contaminated stormwater effluent from the Industrial Wastewater Treatment Plant (IWTP) according to the following schedule:

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency <sup>a</sup>	Sample Type
Wastewater Effluent	Flow	MGD	Prior to Discharge	Daily	Continuous
“	BOD <sub>5</sub>	mg/L	Prior to Discharge	1/week Daily	Composite <sup>d</sup>
“	TSS	mg/L	Prior to Discharge	1/week Daily	Composite <sup>d</sup>
“	COD	mg/L	Prior to Discharge	1/week	24-hr Comp. <sup>d</sup>
“	Total Glycols <sup>b</sup>	mg/L	Prior to Discharge	1/week Daily	Composite <sup>d</sup>
“	pH	Standard Units	Prior to Discharge	1/week Daily	Grab
“	Oil & Grease	mg/L	Prior to Discharge	1/week Daily	Grab
“	Arsenic	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>
“	Cadmium	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>
“	Total Chromium	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>
“	Copper	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency <sup>a</sup>	Sample Type
“	Cyanide	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>
“	Lead	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>
“	Mercury	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>
“	Nickel	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>
“	Selenium	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>
“	Silver	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>
“	Zinc	µg/L	Prior to Discharge	1/quarter	Composite <sup>d,e</sup>
“	Priority <sup>c</sup> Pollutants	µg/L	Prior to Discharge	2/year	Composite <sup>d,e</sup>
<sup>a</sup> If no discharge occurs in a given month, sampling is not required and it shall be clearly stated in the DMR. The DMR shall also indicate the total contaminated stormwater processed during the calendar month with the number of processing days.					
<sup>b</sup> Total Glycol is the sum of Ethylene Glycol and Propylene Glycol. Monitoring shall be during deicing and anti-icing months.					
<sup>c</sup> See Fact Sheet Appendix I for the list of priority pollutant chemicals. Samples shall be taken twice per year, once during wet season and once during dry season in year three (3) and the report shall be submitted to the Department one hundred and eighty (180) days prior to permit expiration in conjunction with permit application.					
<sup>d</sup> Manual composite may be used instead of automatic compositor. Manual composite sample shall be a combination of at least four grab samples of fixed volume collected at equal time.					
<sup>e</sup> Monitoring for heavy metal shall be conducted eighteen (18) months prior to expiration date of this permit and shall continue for twelve (12) months.					

2. The Permittee shall monitor the individual discharges of boiler blowdown, cooling tower blowdown, rental carwash blowdown, and equipment wash rack blowdown to the Midway Sanitary Sewer District’s Publicly Owned Treatment Works (POTW) and report individually for each discharge point according to the following schedule:

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency <sup>a</sup>	Sample Type
Effluent	<b>Flow</b> Boiler Blowdown Cooling Tower Blowdown Rental Carwash Blowdown Equipment Wash Rack Blowdown	GPD	Prior to Discharge	Daily	Measurements
“	<b>BOD<sub>5</sub></b> Rental Carwash Blowdown Equipment Wash Rack Blowdown	mg/L	Prior to Discharge	1/month	Composite <sup>d</sup>
“	<b>TSS</b> Rental Carwash Blowdown Equipment Wash Rack Blowdown	mg/L	Prior to Discharge	1/month	Composite <sup>d</sup>
“	<b>Total Glycols<sup>b</sup></b> Rental Carwash Blowdown Equipment Wash Rack Blowdown	mg/L	Prior to Discharge	1/month	Composite <sup>d</sup>



Category	Parameter	Units	Sample Point	Minimum Sampling Frequency <sup>a</sup>	Sample Type
“	<b>pH</b> Rental Carwash Blowdown Equipment Wash Rack Blowdown	Standard Units	Prior to Discharge	1/month	Grab
“	<b>Oil and Grease</b> Rental Carwash Blowdown Equipment Wash Rack Blowdown	mg/L	Prior to Discharge	1/month	Grab
“	<b>Total Priority Pollutants and Heavy Metals<sup>c</sup></b> Rental Carwash Blowdown Equipment Wash Rack Blowdown	µg/L	Prior to Discharge	Annually	Composite <sup>d</sup>
<sup>a</sup> If no discharge occurs in a given month, sampling is not required. It shall be clearly stated in the DMR. The DMR shall also indicate the total flow discharged to Midway POTW during the calendar month.					
<sup>b</sup> Total Glycol is sum of Ethylene Glycol and Propylene Glycol once per month or, as necessary, upon airline’s notification of deicing activities.					
<sup>c</sup> Sampling shall be done during summer each year.					
<sup>d</sup> Manual composite may be used instead of automatic compositor. Manual composite sample shall be a combination of at least four grab samples of fixed volume collected at equal time.					

**B. Sampling and Analytical Procedures**

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department of Ecology (Department).

All analysis for metals must use the methods given in 40 CFR Part 136 and be reported as total recoverable. The detection levels used for the analysis shall be:

<b>POLLUTANT PARAMETER</b>	<b>DETECTION LIMIT REQUIRED</b>
Arsenic	1.0 µg/L
Copper	1.0 µg/L
Lead	1.0 µg/L
Nickel	1.0 µg/L
Chromium	1.0 µg/L
Zinc	2.0 µg/L
Cadmium	0.1 µg/L
Selenium	2.0 µg/L
Silver	0.2 µg/L
Mercury	0.2 µg/L
<b>Benzene</b>	<b>0.2 µg/L</b>
<b>Toluene</b>	<b>0.2 µg/L</b>
<b>Ethyl benzene</b>	<b>0.2 µg/L</b>
<b>Total Xylene</b>	<b>0.2 µg/L</b>
<b>Naphthalene</b>	<b>1.6 µg/L</b>

C. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one (1) calibration per year. Calibration records shall be maintained for at least three (3) years.

D. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. The Department exempts crops, soils, and hazardous waste data from this requirement pending accreditation of laboratories for analysis of these media.

E. Deicing/Anti-icing Fluids Usage

All deicing and anti-icing events of either aircraft or runways shall be reported no later than June 1 of each year, and shall include the volumes of each type of deicing and anti-icing material used each day by each airline and the Permittee. Anti-icing means measures taken to prevent ice accumulation on the surface of the aircraft, airfield, or runway. Deicing means removing ice from the surface of the aircraft, airfield, or runway.

F. Annual Stormwater Monitoring Summary Report

On or before October 1 of each year, the Permittee shall submit a report to the Department summarizing the results of the stormwater monitoring during the preceding twelve (12)-month period from July 1 through June 30.

The report shall present the analytical data, the Port's conclusions as to what is being learned from the data, and any new initiatives to be undertaken and any action plan to ensure eventual compliance with the permit's benchmarks as part of the Stormwater Pollution Prevention Plan for Airport Operations.

G. Annual Sanitary Sewer Discharge Summary Report

On or before January 15<sup>th</sup> of each year, the Permittee shall submit a report to the Department summarizing the following data for the previous calendar year. An update version of this report and all related documents shall also be sent to the local libraries, i.e., Burien and Des Moines libraries.

**S3. ACUTE TOXICITY**

A. Effluent Characterization

~~The Permittee shall conduct acute toxicity testing on the final effluent to determine the presence and amount of acute (lethal) toxicity. The effluent toxicity shall be conducted when the IWTP final effluent BOD concentration is at, or below, 250 mg/L to simulate the post AKART effluent quality. The two acute toxicity tests listed below shall be conducted on each sample taken for effluent characterization.~~

~~Effluent characterization for acute toxicity shall be conducted quarterly for one (1) year. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this section. A dilution series consisting of a minimum of five (5) concentrations and a control shall be used to estimate the concentration lethal to 50% of the organisms (LC<sub>50</sub>). The percent survival in 100% effluent shall also be reported.~~

~~Effluent characterization report shall be submitted to the Department for review and approval in March 2005.~~

The Permittee shall conduct acute toxicity testing on the final effluent to determine the presence and amount of acute (lethal) toxicity. The two acute toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Effluent characterization for acute toxicity shall be conducted four times per year during deicing seasons for one year. The sample shall represent the respective deicing activities. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this section. A dilution series consisting of a minimum of five concentrations and a control shall be used to estimate the concentration lethal to 50% of the organisms (LC<sub>50</sub>). The percent survival in 100% effluent shall also be reported.

Effluent characterization report shall be submitted to the Department for review and approval in March 2008. Acute toxicity tests shall be conducted with the following species and protocols:

1. Fathead minnow, *Pimephales promelas* (96-hour static-renewal test, method: EPA-821-R-02-012).
2. Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48-hour static test, method: EPA-821-R-02-012). The Permittee shall choose one of the three species and use it consistently throughout effluent characterization.

B. Effluent Limit for Acute Toxicity

~~The Permittee has an effluent limit for acute toxicity if, after completing one year of effluent characterization, either:~~

- ~~1. The median survival of any species in 100% effluent is below 80%.~~
- ~~2. Any one test of any species exhibits less than 65% survival in 100% effluent.~~

~~The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).~~

~~If an effluent limit for acute toxicity is required by Subsection B of this condition at the end of one year of effluent characterization, the Permittee shall immediately complete all applicable requirements in Subsections C, D, and F of this condition.~~

~~If no effluent limit is required by Subsection B of this condition at the end of one year of effluent characterization, then the Permittee shall complete all applicable requirements in Subsections E and F of this condition.~~

~~In the event of failure to pass the test described in Subsection C of this condition 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 of this condition are being met to the satisfaction of the Department.~~

~~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. The zone of acute criteria exceedance is authorized in Section S1.C of this permit. The ACEC equals 1.67% effluent.~~

The Permittee has an effluent limit for acute toxicity if, after completing one year of effluent characterization, either:

1. The median survival of any species in 100% effluent is below 80%.
2. Any one test of any species exhibits less than 65% survival in 100% effluent.

If an effluent limit for acute toxicity is required by Subsection B at the end of one year of effluent characterization, the Permittee shall immediately complete all applicable requirements in Subsections C, D, and F.

If no effluent limit is required by Subsection B at the end of one year of effluent characterization, then the Permittee shall complete all applicable requirements in Subsections E and F.

**The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).**

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.

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. The ACEC will be determined as a component of S11. EFFLUENT MIXING STUDY of this permit.

If the Permittee has an effluent limit for acute toxicity and the ACEC is not known, then effluent characterization for acute toxicity shall continue until the time an ACEC is known. Effluent characterization shall be continued until an ACEC has been determined and shall be performed using each one of the tests listed in subsection A on a rotating basis. When an ACEC has been determined, the Permittee shall immediately complete all applicable requirements in Subsections C, D, and F.

If no effluent limit is required by Subsection B at the end of one year of effluent characterization, then the Permittee shall stop effluent characterization and begin to conduct the activities in Subsection E even if the ACEC is unknown.

C. Monitoring for Compliance With an Effluent Limit for Acute Toxicity

~~Monitoring to determine compliance with the effluent limit shall be conducted monthly for the remainder of the permit term using each of the species listed in Subsection A of this condition on a rotating basis and performed using at a minimum 100% effluent, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule. The percent survival in 100% effluent shall be reported for all compliance monitoring.~~

~~Compliance with the effluent limit for acute toxicity means no statistically significant difference in survival between the control and the test concentration representing the ACEC. The Permittee shall immediately implement Subsection D of this condition if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10%, the hypothesis test shall be conducted at the 0.01 level of significance.~~

Monitoring to determine compliance with the effluent limit shall be conducted (monthly) for the remainder of the permit term using each of the species listed in Subsection A on a rotating basis and performed using at a minimum 100% effluent, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule. The percent survival in 100% effluent shall be reported for all compliance monitoring.

Compliance with the effluent limit for acute toxicity means no statistically significant difference in survival between the control and the test concentration representing the ACEC. The Permittee shall immediately implement Subsection D if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10%, the hypothesis test shall be conducted at the 0.01 level of significance.

D. Response to Noncompliance With an Effluent Limit for Acute Toxicity

~~If the Permittee violates the acute toxicity limit in Subsection B of this condition, the Permittee shall begin additional compliance monitoring within one (1) week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four (4) consecutive weeks using the same test and species as the failed compliance test. Testing shall determine the LC<sub>50</sub> and effluent limit compliance. The discharger shall return to the original monitoring frequency in Subsection C of this condition after completion of the additional compliance monitoring.~~

~~If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one (1) additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall be in writing and accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one (1) additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.~~

~~If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.~~

~~If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the fourth additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first three additional compliance monitoring tests failed to meet the acute toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date of the first additional monitoring test to violate the acute toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).~~

If the Permittee violates the acute toxicity limit in Subsection B, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four consecutive weeks during deicing event using the same test and species as the failed compliance test. For intermittent discharges, testing shall be conducted on the next four discharge events using the same test and species as the failed compliance test. Testing shall determine the LC<sub>50</sub> and effluent limit compliance. The discharger shall return to the original monitoring frequency in Subsection C after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the fourth additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first three additional compliance monitoring tests failed to meet the acute toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date for the first additional monitoring test to violate the acute toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).



E. Monitoring When There Is No Permit Limit for Acute Toxicity

~~The Permittee shall test final effluent once on December 1, 2006, and once on July 1, 2007. All species used in the initial acute effluent characterization or substitutes approved by the Department shall be used, and results submitted to the Department as a part of the permit renewal application process on April 1, 2008.~~

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial acute effluent characterization or substitutes approved by the Department shall be used, and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

- ~~1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of the Department of Ecology Publication # WQ R 95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.~~
- ~~2. Testing shall be conducted on 24-hour composite effluent samples or grab samples or manual composite by taking four grab samples during a discharge period. Composite samples taken for toxicity testing shall be cooled to 4° C while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one (1) hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within four (4) hours after collection, it must be below 12° C at receipt. All other grab samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.~~
- ~~3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in the Department of Ecology Publication #WQ R 95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, or most recent version thereof.~~

- ~~4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.~~
  - ~~5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.~~
  - ~~6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.~~
  - ~~7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five (5) effluent concentrations and a control. The series of concentrations must include the ACEC, if known.~~
  - ~~8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.~~
1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.
  2. Testing shall be conducted on 24-hour composite effluent samples or manual composite by taking four grab samples during a discharge period. Composite samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within 4 hours after collection, it must be below 12° C at receipt. All other samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.
4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.
5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.
6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.
8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

#### S4. CHRONIC TOXICITY

##### A. Effluent Characterization

~~The Permittee shall conduct chronic toxicity testing on the final effluent. The effluent toxicity shall be conducted when the IWTP final effluent BOD concentration is at, or below, 250 mg/L to simulate the post AKART effluent quality.~~

~~Effluent testing for chronic toxicity shall be conducted quarterly for one (1) year. The Permittee shall conduct chronic toxicity testing during effluent characterization on a series of at least five (5) concentrations of effluent in order to determine appropriate point estimates. This series of dilutions shall include the ACEC. The Permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.~~

~~Effluent characterization report shall be submitted to Department for review and approval on March 1, 2004.~~

~~Chronic toxicity tests shall be conducted on each sample for effluent characterization with the following two species and the most recent version of the following protocols:~~

<del>Saltwater Chronic Toxicity Test Species</del>		<del>Method</del>
<del>Topsmelt</del>	<del><i>Atherinops affinis</i></del>	<del>EPA/600/R-95/136</del>
<del>Mysid Shrimp</del>	<del><i>Holmesimysis costata</i> or <i>Mysidopsis bahia</i></del>	<del>EPA/600/R-95/136 or EPA/600/4-91/003</del>

~~The Permittee shall use the West Coast mysid (*Holmesimysis costata*) for toxicity testing unless the lab cannot obtain a sufficient quantity of a West Coast species in good condition in which case the East Coast mysid (*Mysidopsis bahia*) may be substituted.~~

~~The Pacific oyster and mussel tests shall be run in accordance with EPA/600/R-95/136 and the bivalve development test conditions in the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, or most recent version thereof. The laboratory shall use whichever one of the two species that will give a valid result in each particular test.~~

The Permittee shall conduct chronic toxicity testing on the final effluent. The two chronic toxicity tests listed below shall be conducted on each sample taken for effluent characterization.

Effluent characterization report shall be submitted to the Department for review and approval in March 2008.

Effluent testing for chronic toxicity shall be conducted four times per year during deicing activity seasons until an acute critical effluent concentration (ACEC) is determined if that determination takes longer than one year. The sampling shall be representative of the deicing activities. The Permittee shall conduct chronic toxicity testing during effluent characterization on a series of at least five concentrations of effluent in order to determine appropriate point estimates. The chronic no observed effects concentration (NOEC) will also be determined for comparison to the ACEC when the ACEC is known. If the ACEC is determined before the one year of characterization is over, the Permittee shall include the ACEC in the concentration series of all subsequent tests and compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001. If the ACEC is unknown at the end of one year of effluent characterization, the Permittee shall continue the effluent characterization until an ACEC has been determined. Toxicity testing conducted during an effluent characterization extended past one year until an ACEC has been determined, shall be performed using each one of the tests listed in Subsection A on a rotating basis.

Chronic toxicity tests shall be conducted with the following two species and the most recent version of the following protocols:

Saltwater Chronic Toxicity Test Species	Method
Topsmelt	<i>Atherinops affinis</i> EPA/600/R-95/136
Mysid shrimp	<i>Holmesimysis costata</i> or <i>Mysidopsis bahia</i> EPA/600/R-95/136 or EPA-821-R-02-014

The Permittee shall use the West Coast mysid (*Holmesimysis costata*) for toxicity testing unless the lab cannot obtain a sufficient quantity of a West Coast species in good condition in which case the East Coast mysid (*Mysidopsis bahia*) may be substituted.

B. Effluent Limit for Chronic Toxicity

~~After completion of effluent characterization, the Permittee has an effluent limit for chronic toxicity 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 (Appendix H, EPA/600/4-89/001) and shall complete all applicable requirements in Subsections C, D, and F of this condition.~~

~~**The effluent limit for chronic toxicity is no toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).**~~

~~The CCEC means the maximum concentration of effluent allowable at the boundary of the mixing zone assigned in Section S1.C pursuant to WAC 173-201A-100. The CCEC equals 0.2% effluent.~~

~~If no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the Permittee has no effluent limit for chronic toxicity and only Subsections E and F of this condition apply.~~

~~In the event of failure to pass the test described in Subsection C of this condition, the Permittee is considered to be in compliance with all permit requirements for chronic whole effluent toxicity only if the requirements in Subsection D of this condition are being met to the satisfaction of the Department.~~

After completion of effluent characterization, the Permittee has an effluent limit for chronic toxicity if any test conducted under Subsection A results in an NOEC less than the ACEC, or if any test shows a significant difference between the control and the ACEC at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001). The Permittee shall complete all applicable requirements in Subsections C, D, and F upon determining that an effluent limit for chronic toxicity applies to the discharge.

If no test resulted in a NOEC less than the ACEC or if no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, the Permittee has no effluent limit for chronic toxicity and only Subsections E and F apply.

**The effluent limit for chronic toxicity is no toxicity detected in a test concentration representing the chronic critical effluent concentration (CCEC).**

The CCEC means the maximum concentration of effluent allowable at the boundary of a mixing zone assigned pursuant to WAC 173-201A-100. The CCEC will be determined as a component of **S11. EFFLUENT MIXING STUDY** of this permit.

If the ACEC is not known at the end of effluent characterization, then effluent characterization for chronic toxicity shall continue until the time an ACEC is known. Effluent characterization shall be continued until an ACEC and a CCEC have been determined and shall be performed using each one of the tests listed in subsection A on a rotating basis. When an ACEC and a CCEC have been determined, the Permittee shall immediately complete all applicable requirements in Subsections C, D, and F.

C. Monitoring for Compliance With an Effluent Limit for Chronic Toxicity

~~Monitoring to determine compliance with the effluent limit shall be conducted monthly for the remainder of the permit term using each of the species listed in Subsection A of this condition on a rotating basis and performed using at a minimum the CCEC, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule.~~

~~Compliance with the effluent limit for chronic toxicity means no statistically significant difference in response between the control and the test concentration representing the CCEC. The Permittee shall immediately implement Subsection D of this condition if any chronic toxicity test conducted for compliance monitoring determines a statistically significant difference in response between the control and the CCEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in response between the control and the CCEC is less than 20%, the hypothesis test shall be conducted at the 0.01 level of significance.~~

~~In order to establish whether the chronic toxicity limit is eligible for removal from future permits, the Permittee shall also conduct this same hypothesis test (Appendix H, EPA/600/4-89/001) to determine if a statistically significant difference in response exists between the ACEC and the control.~~

Monitoring to determine compliance with the effluent limit shall be conducted monthly for the remainder of the permit term using each of the species listed in Subsection A above on a rotating basis and performed using at a minimum the CCEC, the ACEC, and a control. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule.

Compliance with the effluent limit for chronic toxicity means no statistically significant difference in response between the control and the test concentration representing the CCEC. The Permittee shall immediately implement Subsection D if any chronic toxicity test conducted for compliance monitoring determines a statistically significant difference in response between the control and the CCEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in response between the control and the CCEC is less than 20%, the hypothesis test shall be conducted at the 0.01 level of significance.

In order to establish whether the chronic toxicity limit is eligible for removal from future permits, the Permittee shall also conduct this same hypothesis test (Appendix H, EPA/600/4-89/001) to determine if a statistically significant difference in response exists between the ACEC and the control.

D. Response to Noncompliance With an Effluent Limit for Chronic Toxicity

~~If a toxicity test conducted for compliance monitoring under Subsection C of this condition determines a statistically significant difference in response between the CCEC and the control, the Permittee shall begin additional compliance monitoring within one (1) week from the time of receiving the test results. This additional monitoring shall be conducted monthly for three (3) consecutive months using the same test and species as the failed compliance test. Testing shall be conducted using a series of at least five (5) effluent concentrations and a control in order to be able to determine appropriate point estimates. One (1) of these effluent concentrations shall equal the CCEC and be compared statistically to the nontoxic control in order to determine compliance with the effluent limit for chronic toxicity as described in Subsection C of this condition. The discharger shall return to the original monitoring frequency in Subsection C of this condition after completion of the additional compliance monitoring.~~

~~If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one (1) additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall be in writing and accompany the report of the compliance test result and identify the reason for considering the compliance test result~~

~~to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one (1) additional sample fails to comply with the effluent limit for chronic toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one (1) additional test result shall replace the original compliance test result upon determination by the Department that the compliance test result was anomalous.~~

~~If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event that triggered the additional compliance monitoring.~~

~~If toxicity occurs in violation of the chronic toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the third additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first two (2) additional compliance monitoring tests failed to meet the chronic toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date for the first additional monitoring test to violate the chronic toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).~~

If a toxicity test conducted for compliance monitoring under Subsection C determines a statistically significant difference in response between the CCEC and the control, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted monthly for three consecutive months using the same test and species as the failed compliance test. For intermittent discharges, testing shall be conducted on the next three discharge events using the same test and species as the failed compliance test. Testing shall be conducted using a series of at least five effluent concentrations and a control in order to be able to determine appropriate point estimates. One of these effluent concentrations shall equal the CCEC and be compared statistically to the nontoxic control in order to determine compliance with the effluent limit for chronic toxicity as described in Subsection C. The discharger shall return to the original monitoring frequency in Subsection C after completion of the additional compliance monitoring.



If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for chronic toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the chronic toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the third additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first two additional compliance monitoring tests failed to meet the chronic toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date for the first additional monitoring test to violate the chronic toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Chronic Toxicity

~~The Permittee shall test final effluent once on December 1, 2006, and once on July 1, 2007. All species used in the initial chronic effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process on April 1, 2008.~~

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All species used in the initial chronic effluent characterization or substitutes approved by the Department shall be used and results submitted to the Department as a part of the permit renewal application process.

F. Sampling and Reporting Requirements

- ~~1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.~~
- ~~2. Testing shall be conducted on 24-hour composite effluent samples or grab samples. Composite samples taken for toxicity testing shall be cooled to 4° C while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one (1) hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within four (4) hours after collection, it must be below 12° C at receipt. All other grab samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.~~
- ~~3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, or most recent version thereof.~~
- ~~4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A of this condition and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.~~
- ~~5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.~~

- ~~6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.~~
- ~~7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In that case, the series must have a minimum of five (5) effluent concentrations and a control. The series of concentrations must include the ACEC and the CCEC.~~
- ~~8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing, and do not comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020, must be repeated on a fresh sample with an increased number of replicates to increase the power.~~

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results. Testing shall be conducted on 24-hour composite effluent samples or on manual composite grab samples by taking four grab samples during a discharge period. Composite samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within 4 hours after collection, it must be below 12° C at receipt. All other samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.

3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.

4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A or pristine natural water of sufficient quality for good control performance.
6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC and the CCEC.
8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing, and do not comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020, must be repeated on a fresh sample with an increased number of replicates to increase the power.

## **S5. REPORTING AND RECORDKEEPING REQUIREMENTS**

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

### **A. Reporting**

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly. Monitoring data obtained during each monitoring period shall be summarized, reported, and submitted on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by the Department. DMR forms shall be received no later than the 30<sup>th</sup> day of the month following the completed monitoring period, unless otherwise specified in this permit. Priority pollutant analysis data shall be submitted no later than forty-five (45) days following the monitoring period. Unless otherwise specified, all toxicity test data shall be submitted within sixty (60) days after the sample date.

The report(s) shall be sent to:

Washington State Department of Ecology  
Northwest Regional Office  
3190 - 160<sup>th</sup> Avenue SE  
Bellevue, Washington 98008-5452

Discharge Monitoring Report forms must be submitted monthly whether or not the facility was discharging. If there was no discharge during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling or measurement; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) the individual who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S2 of this permit, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Noncompliance Notification

In the event the Permittee is unable to comply with any of the terms and conditions of this permit due to any cause, the Permittee shall:

1. Immediately take action to stop, contain, and clean up unauthorized discharges or otherwise stop the noncompliance, correct the problem and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to the Department within thirty (30) days after becoming aware of the violation.
2. Immediately notify the Department of the failure to comply.
3. Submit a detailed, written report to the Department within thirty (30) days (five [5] days for upsets and bypasses), unless requested earlier by the Department. The report shall contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

## S6. OPERATIONS AND MAINTENANCE

The Permittee shall, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

### A. Operations and Maintenance Manual

An Operations and Maintenance (O&M) Manual, approved by the state of Washington Department of Ecology in accordance with WAC 173-240-150, shall be kept available at the permitted facility and all operators shall follow the instructions and procedures of this manual. If the manual, or any of its amendments, has not been approved by the Department, it is the Permittee's primary responsibility to seek and obtain the Department approval. The O&M Manual shall be reviewed by the Permittee at least annually and the Permittee shall confirm this review by letter to the Department. Substantial changes or updates to the O&M Manual shall be submitted to the Department whenever they are incorporated into the manual.

The O&M Manual shall include:

1. Emergency procedures for plant shutdown and cleanup in event of wastewater system upset or failure.
2. Plant maintenance procedures.
3. The treatment plant process control monitoring schedule.

The approved Operations and Maintenance Manual shall be kept available at the permitted facility, and all operators are responsible for being familiar with, and using, this manual.

### B. Bypass Prohibition

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited, and the Department may take enforcement action against a Permittee for bypass unless one of the following applies:

#### 1. **Bypass for Essential Maintenance without the Potential to Cause Violation of Permit Limits or Conditions**

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health as determined by the Department prior to the bypass. The Permittee shall submit prior notice at least ten (10) days before the date of the bypass.

2. **Bypass Which is Unavoidable, Unanticipated, and Results in Noncompliance of this Permit**

Bypass under these circumstances is permitted only if all of the following are present:

Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "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.

There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.

The Department is properly notified of the bypass as required in Condition S5E of Part I of this permit.

3. **Bypass Which is Anticipated and has the Potential to Result in Noncompliance of this Permit**

The Permittee shall notify the Department at least one hundred and eighty (180) days before the planned date of bypass. The notice shall contain:

(a) a description of the bypass and its cause; (b) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (c) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (d) the minimum and maximum duration of bypass under each alternative; (e) a recommendation as to the preferred alternative for conducting the bypass; (f) the projected date of bypass initiation; (g) a statement of compliance with SEPA; (h) a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated; and (i) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical.

The Department will consider the following prior to issuing an administrative order for this type of bypass:

- a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.
- d. If bypass is to a body of water different from the original point of discharge and its impact to the new environment.

After review of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department may approve or deny the request. The public may be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

C. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

**S7. FACILITY LOADING**

A. Design Criteria

Flows or waste loadings of the following design criteria for the permitted treatment facility shall be in accordance with the approved design criteria and the latest version of the approved engineering report. The following design criteria shall not be exceeded:

Daily Peak Flow @ Maximum Overflow Rate of 4.1 GPM/SF of Dissolved Air Flotation Surface Area	7.7 MGD
IWTP Hydraulic Capacity	8.3 MGD

The daily peak flow is limited by the capacity of existing outfall shared with Midway Sewer District.



## S8. PROHIBITED DISCHARGES

### A. General Prohibitions

The Permittee shall not introduce into the POTW pollutant(s) which cause pass-through or interference.

### B. Specific Prohibitions

In addition, the following shall not be introduced into the POTW:

1. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, waste streams with a closed cup flashpoint of less than 60° C (140° F) using the test methods specified in 40 CFR 261.21;
2. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;
3. Any pollutant, including oxygen demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW;
4. Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40° C (104° F) unless the approval authority, upon request of the POTW, approves alternative temperature limits;
5. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass-through;
6. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
7. Any trucked or hauled pollutants, except at discharge points designated by the POTW;
8. Pollutants which will cause corrosive structural damage to the POTW.

### C. Prohibited Unless Approved

1. Any of the following discharges are prohibited unless approved by the Department under extraordinary circumstances (such as a lack of direct discharge alternatives due to combined sewer service or a need to augment sewage flows due to septic conditions):
  - a. Noncontact cooling water in significant volumes.
  - b. Storm water and other direct inflow sources.
  - c. Wastewaters significantly affecting system hydraulic loading, which do not require treatment or would not be afforded a significant degree of treatment by the system.

2. Unless specifically authorized in this permit, the discharge of dangerous wastes as defined in Chapter 173-303 WAC, is prohibited.

## S9. SOLID WASTE DISPOSAL

### A. Solid Waste Handling

The Permittee shall handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

### B. Leachate

The Permittee shall not allow leachate from its solid waste material to enter state waters without providing all known, available and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee shall apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

## S10. COMPLIANCE SCHEDULE - IWS

The Permittee shall comply with the following schedule and milestones to implement its final AKART determination. The design completion and construction beginning dates are milestone dates and may be changed with the approval of the Department. The construction completion date, start up date, and compliance deadline are nonnegotiable. The Permittee shall build the associated infrastructure to transport treated **contaminated** stormwater from industrial activities that contains more than 250 mg/L of BOD concentration to the King County South Treatment Plant for further processing and discharge to Puget Sound.

- |                  |                                |   |
|------------------|--------------------------------|---|
| A.               | Design Completion              | <del>August 15, 2003</del> July 1, 2005 |
| <del>B.</del>    | <del>Construction Begins</del> | <del>February 1, 2004</del>             |
| <del>B. C.</del> | Construction Complete          | December 31, 2006                       |
| <del>C. D.</del> | Start Up Testing               | January 1, 2007 to June 30, 2007        |
| <del>D. E.</del> | Compliance Deadline            | July 1, 2007                            |

## S11. EFFLUENT MIXING STUDY

### A. General Requirements

The Permittee shall comply with this section only if during the term of this permit the effluent outfalls have been altered/redesigned, relocated, and/or the effluent flow conditions have changed from the date of the last Mixing Zone Study conducted in January 1997 that has resulted in reduced mixing and dilution factors.

The Permittee shall determine the degree of effluent and receiving water mixing which occurs within the mixing zone (as defined in permit Condition S1.C). The degree of mixing shall be determined during critical conditions, as defined in WAC 173-201A-020 Definitions-“Critical Condition,” or as close to critical conditions as reasonably possible.

The critical condition scenarios shall be established in accordance with *Guidance for Conducting Mixing Zone Analyses* (Ecology, 1996). The dilution ratio shall be measured in the field with dye using study protocols specified in *Guidance for Conducting Mixing Zone Analyses*, Section 5.0 “Conducting a Dye Study,” as well as other protocols listed in Subsection C of this condition. The use of mixing models is an acceptable alternative or adjunct to a dye study if the critical ambient conditions necessary for model input are known or will be established with field studies and if the diffuser is visually inspected for integrity or has been recently tested for performance by the use of tracers. *Guidance for Conducting Mixing Zone Analyses* shall be consulted when choosing the appropriate model. The use of models is also required if critical condition scenarios that need to be examined are quite different from the set of conditions present during the dye study.

Validation (and possibly calibration) of a model may be necessary and shall be done in accordance with *Guidance for Conducting Mixing Zone Analyses*, in particular, Subsection 5.2 “Quantify Dilution.” The resultant dilution ratios for acute and chronic boundaries shall be applied in accordance with directions found in Ecology’s *Permit Writer’s Manual* (Ecology Publication 92-109, most current version), in particular, Chapter VI.

A Plan of Study shall be submitted to the Department for review thirty (30) days prior to initiation of the effluent mixing study.

**B. Reporting Requirements**

If the Permittee has information on the background physical conditions or background concentration of chemical substances (for which there are criteria in Chapter 173-201A WAC) in the receiving water, this information shall be submitted to the Department as part of the Effluent Mixing Report.

The results of the effluent mixing study shall be included in the Effluent Mixing Report, which shall be submitted to the Department for approval no later than one hundred and eighty (180) days prior to permit expiration in conjunction with an application for permit renewal.

If the results of the mixing study, toxicity tests, and chemical analysis indicate that the concentration of any pollutant(s) exceeds or has a reasonable potential to exceed the State Water Quality Standards, Chapter 173-201A WAC, the Department may issue a regulatory order to require a reduction of pollutants or modify this permit to impose effluent limitations to meet the water quality standards.

The Permittee shall use some method of fixing and reporting the location of the outfall and mixing zone boundaries [i.e., triangulation off the shore, microwave navigation system, or using Loran or Global Positioning System (GPS) coordinates]. The method of fixing station location and the actual station locations shall be identified in the report.

If Permittee elects to cease direct discharges to the Puget Sound, this requirement need not be complied with.

C. Protocols

The Permittee shall determine the dilution ratio using protocols outlined in the following references, approved modifications thereof, or by another method approved by the Department:

- Akar, P.J. and G.H. Jirka, *Cormix2: An Expert System for Hydrodynamic Mixing Zone Analysis of Conventional and Toxic Multiport Diffuser Discharges*, USEPA Environmental Research Laboratory, Athens, GA, Draft, July 1990.
- Baumgartner, D.J., W.E. Frick, P.J.W. Roberts, and C.A. Bodeen, *Dilution Models for Effluent Discharges*, USEPA, Pacific Ecosystems Branch, Newport, OR, 1993.
- Doneker, R.L. and G.H. Jirka, *Cormix1: An Expert System for Hydrodynamic Mixing Zone Analysis of Conventional and Toxic Submerged Single Port Discharges*, USEPA, Environmental Research Laboratory, Athens, GA. EPA/600-3-90/012, 1990.
- Ecology, *Permit Writer's Manual*, Water Quality Program, Department of Ecology, Olympia, WA 98504, July 1994, including most current addenda.
- Ecology, *Guidance for Conducting Mixing Zone Analyses*, Permit Writer's Manual, (Appendix 6.1), Water Quality Program, Department of Ecology, Olympia, WA 98504, October 1996.
- Kilpatrick, F.A., and E.D. Cobb, Measurement of Discharge Using Tracers, Chapter A16, *Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics*, USGS, U.S. Department of the Interior, Reston, VA, 1985.
- Wilson, J.F., E.D. Cobb, and F.A. Kilpatrick, Fluorometric Procedures for Dye Tracing, Chapter A12, *Techniques of Water-Resources Investigations of the USGS, Book 3, Application of Hydraulics*, USGS, U.S. Department of the Interior. Reston, VA, 1986.

**S12. SEDIMENT MONITORING (MARINE)**

A. Sediment Sampling and Analysis Plan

The Permittee shall submit for review and approval a Sediment Sampling and Analysis Plan (SAP) for sediment monitoring on January 1, 2005. The purpose of the plan is to characterize or recharacterize sediment quality in the vicinity of the Permittee's discharge locations. The Permittee shall follow the guidance provided in the Sediment Source Control Standards User Manual, Appendix B: Sediment Sampling and Analysis Plan (Ecology, 1995).

The report shall be submitted to the Sediment Management Unit (SMU) of the Department of Ecology, 300 Desmond Drive, PO Box 47600, Olympia, WA 98504-7600 with a copy to the Ecology Northwest Regional Office, 3190 – 160<sup>th</sup> Avenue SE, Bellevue, WA 98008-5452. The purpose of the plan is to re-characterize sediment quality in the vicinity of the Permittee's discharge locations. The Permittee shall coordinate with the Department's SMU, the review and approval process, and/or any additional information required by the SMU to comply with this section of the permit.

B. Sediment Data Report

Following Department approval of the Sediment Sampling and Analysis Plan, sediments will be collected and analyzed. The Permittee shall submit to the Department's SMU, with a copy to the Ecology Northwest Regional Office, a Sediment Data Report containing the results of the sediment sampling and analysis on January 1, 2006. The Sediment Data Report shall conform with the approved Sampling and Analysis Plan.

C. Approval of Prior Reports

To demonstrate compliance with this provision, the Permittee may resubmit the most recent Sediment Sampling and Analysis Plan and the Sediment Data Report that were previously submitted to the Department of Ecology, NWRO, for review and approval of the SMU but did not receive such approval.

## PART II: NONCONSTRUCTION STORMWATER RUNOFF

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of that identified and authorized by this permit, or at locations not identified by this permit shall constitute a violation of the terms and conditions of this permit. The Permittee must conduct regular monitoring of authorized outfalls as described under Tables 1 ~~and 2~~ for direct discharges of stormwater to surface water, ~~and for indirect discharge of stormwater to Lake Reba Stormwater Treatment Facility.~~ Samples shall be collected immediately after applicable BMP(s), ~~but prior to mixing with any other flow.~~ Monitoring shall consist of visual monitoring and stormwater sampling as prescribed.

### S1. FINAL EFFLUENT LIMITATIONS & MONITORING

#### A. Final Effluent Limits for Nonconstruction Stormwater Runoff Outfalls Discharging Directly into Their Respective Receiving Waters

Beginning on ~~the~~ effective date ~~of issuance~~ of this permit and lasting through the expiration date, ~~the Permittee shall monitor all discharges at the permitted outfall locations as authorized by this permit~~ the Permittee is authorized to discharge stormwater associated with industrial activities to waters of the state, and it shall ~~monitor all discharges at the permitted outfall locations as authorized by this permit.~~ The Permittee shall install all necessary treatment and source control best management practices (BMP) according to the Compliance Schedule Section (Part II:S9.B.).

The following final effluent limitations in Table 1 for nonconstruction stormwater discharges become effective on December 31, 2007, and remain in effect until the expiration of this permit for the outfall locations identified.

**Table 1.**

OUTFALL #	OUTFALL LOCATIONS	SAMPLING POINT	RECEIVING WATER
<del>SDS1</del>	<del>Latitude: 47° 26' 00" N Longitude: 122° 18' 01" W</del>	<del>At the Point of Discharge</del>	<del>Des Moines Creek</del>
<del>SDS2</del>	<del>Latitude: 47° 25' 50" N Longitude: 122° 18' 42" W</del>	<del>At the Point of Discharge</del>	<del>Northwest Pond</del>
<del>SDS3</del>	<del>Latitude: 47° 25' 58" N Longitude: 122° 18' 30" W</del>	<del>At the Point of Discharge</del>	<del>Northwest Pond</del>
<del>SDS4</del>	<del>Latitude: 47° 25' 33" N Longitude: 122° 18' 15" W</del>	<del>At the Point of Discharge</del>	<del>Des Moines Creek</del>
<del>SDS5</del>	<del>Latitude: 47° 26' 06" N Longitude: 122° 18' 46" W</del>	<del>At the Point of Discharge</del>	<del>Northwest Pond</del>
<del>SDS6</del>	<del>Latitude: 47° 26' 07" N Longitude: 122° 18' 48" W</del>	<del>At the Point of Discharge</del>	<del>Northwest Pond</del>
<del>SDS7</del>	<del>Latitude: 47° 26' 09" N Longitude: 122° 18' 53" W</del>	<del>At the Point of Discharge</del>	<del>Northwest Pond</del>
<del>SDE 4</del>	<del>Latitude: 47° 26' 30" N Longitude: 122° 17' 45" W</del>	<del>At the Point of Discharge</del>	<del>Des Moines Creek</del>

<del>012-EY</del>	<del>Latitude: 47° 27' 34" N Longitude: 122° 17' 50" W</del>	<del>At the Point of Discharge</del>	<del>Gilliam Creek</del>	
<del>SDW1-A*</del>	<del>Latitude: 47° 27' 30" N Longitude: 122° 19' 15" W</del>	<del>At the Point of Discharge</del>	<del>Miller Creek</del>	
<del>SDW1-B*</del>	<del>Latitude: 47° 27' 15" N Longitude: 122° 19' 15" W</del>	<del>At the Point of Discharge</del>	<del>Miller Creek</del>	
<del>SDW2*</del>	<del>Latitude: 47° 27' 00" N Longitude: 122° 19' 15" W</del>	<del>At the Point of Discharge</del>	<del>Walker Creek</del>	
<del>SDN3-A*</del>	<del>Latitude: 47° 27' 45" N Longitude: 122° 19' 15" W</del>	<del>At the Point of Discharge</del>	<del>Miller Creek</del>	
<b>CATEGORY</b>	<b>PARAMETERS</b>	<b>DAILY MAXIMUM LIMITS</b>	<b>SAMPLING FREQUENCY<sup>1</sup></b>	<b>SAMPLING TYPE</b>
Runoff	Flow—MG <sup>2</sup> /Event	Report	Once/Month	Continuous/ Estimate
Runoff	Turbidity—NTU	25	Once/Month	Grab
Runoff	pH—S.U.	Between 6.5-8.5 S.U.	Once/Month	Grab
Runoff	Oil and Grease mg/L <sup>3</sup>	15 mg/L—No visible sheen	Once/Month	Grab
Runoff	BOD <sub>5</sub> —mg/L	Monitor and Report	Once/Month	Flow Weighted Composite <sup>4</sup>
Runoff	Total Glycol—mg/L <sup>5</sup>	Report—mg/L	Once/Month	Flow Weighted Composite <sup>4</sup>
Runoff <sup>6</sup>	Ammonia—mg/L	19 mg/L	Once/Month	Flow Weighted Composite <sup>4</sup>
Runoff <sup>6</sup>	Nitrate/ Nitrite as N—mg/L	0.68 mg/L	Once/Month	Flow Weighted Composite <sup>4</sup>
Runoff	Total Copper—mg/L	63.6 µg/L	Once/Month	Flow Weighted Composite <sup>4</sup>
Runoff	Total Lead—mg/L	81.6 µg/L	Once/Month	Flow Weighted Composite <sup>4</sup>
Runoff	Total Zinc—mg/L	117 µg/L	Once/Month	Flow Weighted Composite <sup>4</sup>
Runoff	Priority Pollutants <sup>7</sup>	Report	2/year	Flow Weighted Composite <sup>4</sup>
<sup>1</sup> The sampling frequency shall continue throughout the term of this permit. If the Permittee demonstrates total compliance at the point of discharge with the final effluent limits parameters, as prescribed under Table 1, for one full year, the monitoring frequency for that particular outfall may be reduced to once per quarter upon a written request from the Permittee. The Permittee shall return to original monitoring should an outfall fail to maintain total compliance in two consecutive quarters.				
<sup>2</sup> The Permittee shall estimate the flow if continuous flow measurement is not feasible.				
<sup>3</sup> Oil & grease shall be measured by Ecology Method NWTPH-DX.				

<sup>4</sup> <del>Sampling shall be performed in accordance with the latest approved monitoring plan.</del>
<sup>5</sup> <del>Total Glyeol is the sum of Ethylene and Propylene Glycol. Monitoring shall be during deicing and anti-icing months.</del>
<sup>6</sup> <del>Required only if urea is applied. If Urea is not applied, Permittee must certify it.</del>
<sup>7</sup> <del>See Fact Sheet Appendix I for the list of priority pollutant chemicals. Samples shall be taken twice per year, once during wet season and once during dry season in year three (3) and the report shall be submitted to the Department one hundred and eighty (180) days prior to permit expiration in conjunction with permit application.</del>
* <del>NOTE: These outfalls are future outfalls. The Permittee shall notify the Department two (2) weeks prior to the discharge of stormwater runoff from these outfalls. In case of future (or new) outfalls, Compliance Schedules will not apply and effluent limits are to be met immediately per WAC 173-201-160(4)(a).</del>

**Table 1.**

<b>OUTFALL #</b>	<b>OUTFALL LOCATIONS</b>	<b>SAMPLING POINT</b>	<b>RECEIVING WATER</b>
<b>SDN1</b>	Latitude: 47° 27' 56" N Longitude: 122° 18' 09" W	At the Point of Discharge	Lake Reba
<b>SDN2</b>	Latitude: 47° 28' 00" N Longitude: 122° 18' 28" W	At the Point of Discharge	Lake Reba
<b>SDN3</b>	Latitude: 47° 27' 59" N Longitude: 122° 18' 45" W	At the Point of Discharge	Lake Reba
<b>SDN4</b>	Latitude: 47° 28' 00" N Longitude: 122° 18' 38" W	At the Point of Discharge	Lake Reba
<b>SDS2</b>	Latitude: 47° 25' 50" N Longitude: 122° 18' 42" W	At the Point of Discharge	Northwest Pond
<b>SDS3</b>	Latitude: 47° 25' 58" N Longitude: 122° 18' 30" W	At the Point of Discharge	Northwest Pond
<b>SDS5</b>	Latitude: 47° 26' 06" N Longitude: 122° 18' 46" W	At the Point of Discharge	Northwest Pond
<b>SDS6</b>	Latitude: 47° 26' 07" N Longitude: 122° 18' 48" W	At the Point of Discharge	Northwest Pond
<b>SDS7</b> (See the Note)	Latitude: 47° 26' 09" N Longitude: 122° 18' 53" W	At the Point of Discharge	Northwest Pond
<b>SDS1</b>	Latitude: 47° 26' 00" N Longitude: 122° 18' 01" W	At the Point of Discharge	Des Moines Creek
<b>SDS4</b>	Latitude: 47° 25' 33" N Longitude: 122° 18' 15" W	At the Point of Discharge	Des Moines Creek
<b>SDE 4</b>	Latitude: 47° 26' 30" N Longitude: 122° 17' 45" W	At the Point of Discharge	Des Moines Creek
<b>012 -EY</b>	Latitude: 47° 27' 34" N Longitude: 122° 17' 50" W	At the Point of Discharge	Gilliam Creek
<b>SDW1-A *</b> (Future Outfall)	Latitude: 47° 27' 30" N Longitude: 122° 19' 15" W	At the Point of Discharge	Miller Creek
<b>SDW1-B *</b> (Future Outfall)	Latitude: 47° 27' 15" N Longitude: 122° 19' 15" W	At the Point of Discharge	Miller Creek
<b>SDN3-A *</b> (Future Outfall)	Latitude: 47° 27' 45" N Longitude: 122° 19' 15" W	At the Point of Discharge	Miller Creek



<b>SDW2 *</b> <b>(Future Outfall)</b>	Latitude: 47° 27' 00" N Longitude: 122° 19' 15" W	At the Point of Discharge	Walker Creek	
<b>CATEGORY</b>	<b>PARAMETERS</b>	<b>DAILY MAXIMUM LIMITS</b>	<b>SAMPLING FREQUENCY<sup>1</sup></b>	<b>SAMPLING TYPE</b>
<b>Runoff</b>	Flow – MG <sup>2</sup> /Event	Report	Once/Month	Continuous/ Estimate
<b>Runoff</b>	TSS – mg/L	100	Once/Month	Flow Weighted Composite <sup>3</sup>
<b>Runoff</b>	Turbidity - NTU	Report <sup>4</sup>	Once/Month	Grab
<b>Runoff</b>	pH – S.U.	Between 6.5-8.5 S.U.	Once/Month	Grab
<b>Runoff</b>	Oil and Grease <sup>5</sup> mg/L	15 mg/L – No visible sheen	Once/Month	Grab
<b>Runoff</b>	BOD <sub>5</sub> – mg/L	Monitor and Report	Once/Month	Flow Weighted Composite <sup>3</sup>
<b>Runoff</b>	Total Glycol – mg/L <sup>6</sup>	Report – mg/L	Once/Month	Flow Weighted Composite <sup>3</sup>
<b>Runoff</b>	Ammonia – mg/L	19 mg/L	Once/Month	Flow Weighted Composite <sup>3</sup>
<b>Runoff<sup>7</sup></b>	Nitrate/ Nitrite as N – mg/L	0.68 mg/L	Once/Month	Flow Weighted Composite <sup>3</sup>
<b>Runoff</b>	Total Copper – mg/L	63.6 µg/L	Once/Month	Flow Weighted Composite <sup>3</sup>
<b>Runoff</b>	Total Lead – mg/L	81.6 µg/L	Once/Month	Flow Weighted Composite <sup>3</sup>
<b>Runoff</b>	Total Zinc – mg/L	117 µg/L	Once/Month	Flow Weighted Composite <sup>3</sup>
<b>Runoff</b>	Total Hardness – Reported as CaCO <sub>3</sub>	Report	Once/Month	Flow Weighted Composite <sup>3</sup>
<b>Runoff</b>	Priority Pollutants <sup>8</sup>	Report	2/year	Flow Weighted Composite <sup>3</sup>
<sup>1</sup> The sampling frequency shall continue throughout the term of this permit. If the Permittee demonstrates total compliance at the point of discharge with the final effluent limits parameters, as prescribed under Table 1, for one full year, the monitoring frequency for that particular outfall may be reduced to once per quarter upon a written request from the Permittee. The Permittee shall return to original monitoring should an outfall fail to maintain total compliance in two consecutive quarters.				
<sup>2</sup> The Permittee shall estimate the flow if continuous flow measurement is not feasible.				

<sup>3</sup> Sampling shall be performed in accordance with the latest approved monitoring plan.
<sup>4</sup> See Section S1.G. Part II for sampling locations and monitoring.
<sup>5</sup> Oil and Grease shall be measured by ecology Method NWTPH-DX.
<sup>6</sup> Total Glycol is the sum of Ethylene and Propylene Glycol. Monitoring shall be during de-icing and anti-icing months.
<sup>7</sup> Required only if urea is applied. If Urea is not applied, Permittee must certify it.
<sup>8</sup> See Fact Sheet Appendix I for the list of priority pollutant chemicals. Samples shall be taken twice per year, once during wet season and once during dry season in year three (3) and the report shall be submitted to the Department 180 days prior to permit expiration in conjunction with permit application.
* <b>NOTE:</b> These outfalls are future outfalls. The Permittee shall notify the Department two (2) weeks prior to the discharge of stormwater runoff from these outfalls. The SDS 7 is scheduled for elimination in summer 2005. This outfall will be decommissioned immediately after the Port <del>inform</del> notifies the Department in writing of its elimination.

~~B. Nonconstruction Stormwater Runoff Monitoring for Outfalls Discharging into Lake Reba Stormwater Facility Prior to Discharging into Miller Creek~~

~~Beginning effective date of issuance of this permit and lasting through the expiration date, the Permittee shall conduct regular monitoring of authorized outfalls as described below for discharge of stormwater to the receiving water. The Permittee shall install all necessary treatment and source control best management practices (BMP) according to the Compliance Schedule Section (Part II:S9.C.).~~

**Table 2.**

<b>OUTFALL #</b>	<b>OUTFALL LOCATIONS</b>	<b>SAMPLING POINT</b>	<b>RECEIVING WATER</b>	
006—SDN1	Latitude: 47° 27' 56" N Longitude: 122° 18' 09" W	At the Point of Discharge	Lake Reba Detention Facility Prior to, Miller Creek	
007—SDN2	Latitude: 47° 28' 00" N Longitude: 122° 18' 28" W	At the Point of Discharge	Lake Reba Detention Facility Prior to, Miller Creek	
008—SDN3	Latitude: 47° 27' 59" N Longitude: 122° 18' 45" W	At the Point of Discharge	Lake Reba Detention Facility Prior to, Miller Creek	
011—SDN4	Latitude: 47° 28' 00" N Longitude: 122° 18' 38" W	At the Point of Discharge	Lake Reba Detention Facility Prior to, Miller Creek	
<b>CATEGORY</b>	<b>PARAMETERS</b>	<b>DAILY MAXIMUM</b>	<b>SAMPLING FREQUENCY<sup>1</sup></b>	<b>SAMPLING TYPE</b>
Runoff	Flow—MG <sup>2</sup> /Event	Report	Once/Month	Continuous/ Estimate
Runoff	Turbidity—NTU	Report	Once/Month	Grab
Runoff	pH—S.U.	Report	Once/Month	Grab
Runoff	Oil and Grease mg/L	Report	Once/Month	Grab
Runoff	BOD <sub>5</sub> —mg/L	Report	Once/Month	Flow Weighted Composite <sup>3</sup>
Runoff	Total Glyeol—mg/L <sup>4</sup>	Report	Once/Month	Flow Weighted Composite <sup>3</sup>

Runoff	Ammonia—mg/L	Report	Once/Month	Flow Weighted Composite <sup>3</sup>
Runoff <sup>5</sup>	Nitrate/ Nitrite as N—mg/L	Report	Once/Month	Flow Weighted Composite <sup>3</sup>
Runoff	Total Copper—mg/L	Report	Once/Month	Flow Weighted Composite <sup>3</sup>
Runoff	Total Lead—mg/L	Report	Once/Month	Flow Weighted Composite <sup>3</sup>
Runoff	Total Zinc—mg/L	Report	Once/Month	Flow Weighted Composite <sup>3</sup>
Runoff	Total Hardness— Reported as CaCO <sub>3</sub>	Report	Once/Month	Flow Weighted Composite <sup>3</sup>
<sup>1</sup> <del>The sampling frequency shall continue throughout the term of this permit. If the Permittee demonstrates total compliance at the point of discharge with the final effluent limits parameters, as prescribed under Table 2, for one full year, the monitoring frequency for that particular outfall may be reduced to once per quarter upon a written request from the Permittee. The Permittee shall return to original monitoring should an outfall fail to maintain total compliance in two consecutive quarters.</del>				
<sup>2</sup> <del>The Permittee shall estimate the flow if continuous flow measurement is not feasible.</del>				
<sup>3</sup> <del>Sampling shall be performed in accordance with the latest approved monitoring plan.</del>				
<sup>4</sup> <del>Total Glycol is the sum of Ethylene and Propylene Glycol. Monitoring shall be during deicing and anti-icing months.</del>				
<sup>4</sup> <del>Required only if urea is applied. If Urea is not applied, Permittee must certify it.</del>				

**C. B. Discharge Monitoring**

The Permittee shall report its monitoring results for each month. The results of sampling and analysis shall be submitted to the Department. If there are no qualifying storms during the reporting period per section S<sub>1</sub>, C<sub>3</sub>, and C<sub>4</sub> of Part II, the Permittee shall submit a report indicating such on the DMR form.

Stormwater must be sampled according to the instructions below. If the Permittee is unable to sample according to any of these criteria, the Permittee shall submit an explanation with the monitoring report that includes the variance and the reason why. Sampling of stormwater shall be conducted as follows:

1. Sample type shall be as specified in Tables 1 and 2, and taken in accordance with the Ecology-approved procedure manual for stormwater monitoring.
2. All samples shall be taken at the sampling point specified in the permit, or as close to the point of discharge as reasonably practical.

3. The storm event sampled must be at least 0.1 inches of rain in a 24-hour period.
4. The storm event sampled must be preceded by at least 24 hours of no discharge with less than 0.1 inches of precipitation.
5. Samples must be representative of discharge.

**D. C.** Visual Monitoring

Beginning on the effective date of issuance of this permit and lasting through the expiration date, the Permittee must conduct regular visual monitoring of authorized outfalls as shown under Tables 1 and 2 and as described below. Visual monitoring shall be done as frequently as practicable but no less frequent than the sampling frequency. Visual monitoring shall assess the SWPPP BMPs required by this permit.

1. The visual inspection shall be conducted by personnel named in the SWPPP to verify that the description of potential pollutant sources required under this permit is accurate; the site map as required in the SWPPP has been updated or otherwise modified to reflect current conditions; and the controls to reduce pollutants in stormwater discharges associated with industrial activity identified in the SWPPP are implemented and adequate. All outfalls shall receive visual inspection.
2. Inspection shall include observations for the presence of floating materials, suspended solids, oil and grease, visible sheen, discoloration, turbidity, odor, etc., in the stormwater discharge(s).
3. The Permittee shall conduct at least one dry season (July, August, September) inspection per month by personnel named in the SWPPP and after at least seven (7) consecutive days of no precipitation. The dry season inspection shall determine the presence of non-stormwater discharges such as domestic wastewater, noncontact cooling water, or process wastewater (including leachate) to the stormwater drainage system that are not authorized under this permit.
4. If a prohibited non-stormwater discharge is discovered, the Permittee shall notify Ecology. The Permittee shall eliminate the illicit discharge within thirty (30) days unless additional time is authorized by Ecology.

~~E.~~ **D.** Prohibited Discharges

Process wastewater, domestic wastewater, and noncontact cooling water discharges to surface water are prohibited. Prohibited process wastewater discharges include, but are not limited to, truck wash water, tire bath wastewater, wheel wash water, equipment wash water, petroleum products, and chemical wastes. This permit does not authorize illicit discharges, including spills of oil or hazardous substances, nor does it relieve entities from obligations under state and federal laws and regulations pertaining to those discharges.

~~F.~~ **E.** Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters. Samples shall be collected according to procedures and criteria set forth in the Ecology-approved procedure manual for stormwater monitoring.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department.

~~G.~~ **F.** Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, conductivity, pH, turbidity, and internal process control parameters are exempt from this requirement. Conductivity, pH, and turbidity shall be accredited if the laboratory must be registered or accredited for any other parameter. The Department exempts crops, soils, and hazardous waste data from this requirement pending accreditation of laboratories for analysis of these media.

**G.** In-stream Turbidity Sampling

The Port shall monitor for turbidity in-stream at point upstream and downstream of each outfall listed under special condition S1. The frequency of turbidity monitoring shall be once/month. The location of each upstream and downstream sampling point shall be determined in a sampling monitoring plan to be developed by the Port and submitted to Ecology for review and approval.

## S2. REPORTING AND RECORDKEEPING REQUIREMENTS

Unless referring to a specific permit requirement (e.g., reporting sampling results), the following conditions apply to all records and reports required by this permit. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

### A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly. Monitoring data obtained during each monitoring period shall be summarized, reported, and submitted on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by the Department. DMR forms shall be received no later than the 28<sup>th</sup> day of the month following the completed monitoring period, unless otherwise specified in this permit. Priority pollutant analysis data shall be submitted no later than forty-five (45) days following the monitoring period. The report(s) shall be sent to:

Washington State Department of Ecology  
Northwest Regional Office  
3190 - 160<sup>th</sup> Avenue SE  
Bellevue, Washington 98008-5452

Discharge Monitoring Report forms must be submitted monthly whether or not the facility was discharging. If there was no discharge during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

### B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Department.

### C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact location, method, and time of sampling or measurement; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) the individual who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Condition S1, Part II of this permit, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Noncompliance Notification

In the event the Permittee is unable to comply with any of the terms and conditions of this permit due to any cause, the Permittee shall:

1. Immediately take action to stop, contain, and clean up unauthorized discharges or otherwise stop the noncompliance and correct the problem.
2. Immediately notify the appropriate Department regional office of the failure to comply.
3. Submit a detailed, written report to the Department within five (5) days unless additional time is authorized by the Department. The report shall contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Compliance with these requirements does not relieve the Permittee from its responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

**S3. COMPLIANCE WITH STANDARDS**

Permittees must comply with Washington State Surface Water Quality Standards (Chapter 173-201A WAC), Sediment Management Standards (Chapter 173-204 WAC), Ground Water Quality Standards (Chapter 173-200 WAC), and Human Health-based Criteria in the national Toxics Rule (Federal Register, Vol. 57, No. 246, December 22, 1992, pages 60848-60923). Compliance with standards applies to all discharges.

Compliance with surface water quality standards means that stormwater discharges from this facility will not cause or contribute to a violation of water quality standards in the receiving water.

Stormwater treatment systems must be fully functional for all storm situations that do not exceed the water quality design storm or the water quality design flow rate, whichever is applicable. A stormwater treatment system that fails to function during a storm that exceeds the water quality design storm will not be a permit violation provided the failure is not as a result of and due to improper and lack of maintenance and is solely due to severe storm.

#### S4. OPERATIONS AND MAINTENANCE

The Permittee shall, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation of such is necessary to achieve compliance with the conditions of this permit.

##### A. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited for stormwater below the approved design criteria for stormwater management. The Department will take enforcement action against a Permittee for bypass unless one of the following applies:

##### 1. **Bypass for Essential Maintenance Without the Potential to Cause Violation of Permit Limits or Conditions**

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health as determined by the Department prior to the bypass. The Permittee shall submit prior notice, at least ten (10) days before the date of the bypass. The Permittee shall sample the bypass for all constituents under Table 1, Part II, and submit the result together with the following month DMR.

##### 2. **Bypass Which is Unavoidable, Unanticipated, and Results in Noncompliance of this Permit**

Bypass under these circumstances is permitted only if:

- a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "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.
- b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.



- c. The Department is properly notified of the bypass as required in Condition S2.E, Part II, of this permit.
- d. In either case, the Permittee shall sample the bypass for all constituents under Table 1, Part II, and submit the result together with the following month DMR.

**3. Bypass Which is Anticipated and Has the Potential to Result in Noncompliance of this Permit**

The Permittee shall notify the Department at least one hundred and eighty (180) days before the planned date of bypass. The notice shall contain: (a) a description of the bypass, and its cause; (b) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (c) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (d) the minimum and maximum duration of bypass under each alternative; (e) a recommendation as to the preferred alternative for conducting the bypass; (f) the projected date of bypass initiation; (g) a statement of compliance with SEPA; (h) a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated; and (i) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical.

In either case, the Permittee shall be prepared to sample the bypass for all constituents under Table 1, Part II, and submit the result together with the following month DMR.

The Department will consider the following prior to issuing an administrative order for this type of bypass:

- a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.

- c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.
- d. If the bypass is to the original point of discharge.

After review of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department may approve or deny the request. The public may be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

B. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

**S5. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR INDUSTRIAL FACILITIES**

The facility covered under this permit must have a Stormwater Pollution Prevention Plan (SWPPP) specifically developed for the facility. The SWPPP must be consistent with permit requirements, fully implemented as directed by permit conditions, and updated as necessary to maintain compliance with permit conditions. The Permittee must update the SWPPP as required by permit conditions. An updated version of the SWPPP, and all related documents, shall be sent to the local libraries, i.e., Burien and Des Moines libraries.

A. General Requirements

The Permittee shall retain the SWPPP on site or within reasonable access to the site and make it immediately available, upon request, to the Department. If discharge is to a municipal storm sewer system, the municipal operator of the storm sewer system shall also have access to the SWPPP. The responsible party as identified in General Condition G20, Signatory Requirements, shall sign the SWPPP and all of its modifications.

1. **Illicit Discharges**

The SWPPP shall include measures to identify and eliminate the discharge of process wastewater, domestic wastewater, noncontact cooling water, and other illicit discharges, to stormwater drainage systems, or to surface waters of the state of Washington.

2. **Department Request**

The Department may request a written copy or update of a previously submitted SWPPP. The Permittee must submit its SWPPP to Ecology within two (2) weeks of receiving the request or at a later date if approved by the Department.

3. **Public Access**

The Department will maintain a copy of the SWPPP for each industrial facility at the appropriate Department regional office. The public may view a copy of a Permittee's SWPPP at the Department regional office.

4. **Enhanced/Additional Best Management Practices (BMPs)**

The Permittee shall provide a schedule in the SWPPP for implementation of any additional or enhanced BMPs that are necessary because of a notice from Ecology, facility changes, or self-inspection. Unless otherwise authorized by Ecology in writing, a schedule for implementation (plan) must be completed and entered into the SWPPP within thirty (30) days of a notice/determination of necessary improvements, or in accordance with an approved compliance schedule. BMPs identified in the plan must be implemented with due diligence. Unless otherwise authorized by Ecology in writing, noncapital BMPs shall be completed within two (2) weeks after completing the plan and capital BMPs within six (6) months. Enhanced/additional BMPs shall comply with the Special Condition S5.A.5. below.

Complying with this provision does not limit the potential liability for enforcement action where the Permittee has failed to implement required BMPs or where stormwater discharges violate water quality standards. Ecology may issue a notice to the Permittee when the SWPPP does not meet one or more of the minimum requirements of Special Condition S5 or when it is not adequate to assure compliance with standards. The Permittee shall modify the SWPPP and the BMPs to correct the deficiencies identified in the notice.

Ecology may require additional BMPs based on the current SWMM where the Permittee exceeds benchmark values for required sampling of certain outfalls.

The Permittee shall modify the SWPPP whenever there is a change in design, construction, operation, or maintenance of any BMP which cause(s) the SWPPP to be less effective in controlling the pollutants.

This permit requires the Permittee to conduct visual monitoring, and this monitoring may identify BMPs that are inadequate or pollutant sources that are not identified or poorly described in the SWPPP. When visual monitoring identifies inadequacies in the SWPPP, due to the actual discharge of or potential to discharge a significant amount of any pollutant, the SWPPP must be modified and BMPs adjusted to correct the deficiency.

**5. Applicability of the Current Editions of the Stormwater Management Manual (SWMM)**

The *Stormwater Management Manual for Western Washington* dated August 2001 is the applicable SWMM for all facilities not included in the Permittee's Ecology-approved Comprehensive Stormwater Management Plan (CSMP). New facilities, not included in CSMP, shall apply the minimum technical requirements and BMPs appropriate for their facility as found in the August 2001 the SWMM or other Ecology-equivalent manuals that are available when selecting BMPs for their facility. For Permittee's existing facilities, the Permittee is not required to redo its SWPPP and BMPs to incorporate changes to BMPs that were designed and implemented according to an earlier version of the SWMM. However, for existing facilities not included in the CSMP, the Permittee shall apply the applicable technical standards and BMPs as found in the most recent published edition of the SWMM, or other equivalent Ecology-approved manuals, that are available when updating their SWPPP to accommodate changes at their facility or when additional BMPs are required to maintain compliance with permit conditions. Facilities not included in the CSMP undergoing new development or redevelopment will apply the applicable minimum requirements of the appropriate, most current SWMM available when beginning final design of the project to the development site.

**6. Other Pollution Control Plans**

The Permittee may incorporate by reference applicable portions of plans prepared for other purposes at its facility. Plans or portions of plans incorporated into a SWPPP become enforceable requirements of this permit and must meet the availability requirements set forth in Special Condition S5A of Part II of this permit. A Pollution Prevention Plan prepared under the Hazardous Waste Reduction Act, Chapter 70.95C RCW, is an example of such a plan.

**B. SWPPP Contents and Requirements**

The SWPPP shall contain a detailed assessment of the facility and a detailed description of the BMPs being implemented.

1. **Facility Assessment**

The facility assessment must include a description of the facility, a detailed site map, an inventory of facility activities and equipment that contribute to or have the potential to contribute pollutants to stormwater, and an inventory of materials that contribute to or have the potential to contribute pollutants to stormwater. The assessment must be as complete as possible and must be updated to reflect changes at the facility. The SWPPP must address each potential source of pollutants with best management practices that will eliminate or reduce the potential to contaminate stormwater.

- a. **Facility Description:** The facility description will describe the industrial activities conducted at the site, the general layout of the facility including buildings and storage of raw materials, and the flow of goods and materials through the facility. It should include seasonal variations, including peaks in production and any changes in work based on season or weather (e.g., moving work outdoors on dry days).
- b. **Site Map:** The site map must be drawn to an identified scale or include relative distances between significant structures and drainage systems. It must provide identifiers (names) of significant features and be of sufficient size and detail to identify the following: The site map will show the stormwater drainage and discharge structures, an outline of the stormwater drainage areas for each stormwater discharge point (including discharges to ground water), paved areas and buildings, areas of pollutant contact (actual or potential), surface water locations (including wetlands and drainage ditches), areas of existing and potential soil erosion and vehicle service areas; lands and waters adjacent to the site shall also be depicted where helpful in identifying discharge points or drainage routes.
- c. **Industrial Activities:** The inventory of industrial activities will identify all areas associated with industrial activities which have been or may potentially be sources of significant amounts of pollutants, including the following:
  - i) Loading and unloading of dry bulk materials or liquids.
  - ii) Outdoor storage of materials or products.
  - iii) Outdoor manufacturing and processing.
  - iv) Dust or particulate generating processes.
  - v) Roofs or other surfaces exposed to air emissions from a manufacturing building or a process area.
  - (vi) On site waste treatment, storage, or disposal.
  - (vii) Vehicle and equipment fueling, maintenance, and/or cleaning (includes washing).

- d. **Material List:** The inventory of materials will list all the types of materials handled at the site that potentially may be exposed to precipitation or runoff. The inventory will include a short narrative for each material describing the potential of the pollutant to be present in stormwater discharges. The Permittee will update this narrative when data become available to verify the presence or absence of these pollutants. The inventory will include a narrative description of any potential sources of pollutants from past activities; significant materials that were previously handled, treated, stored, or disposed of in a manner to allow ongoing exposure to stormwater; the method and location of on-site storage or disposal; and a list of significant spills and significant leaks of toxic or hazardous pollutants.
2. **Monitoring Plan:** The SWPPP will include a monitoring plan. The plan must identify all the points of discharge to surface water or to a storm drain system. If there is more than one point of discharge, then the plan must include a discussion of representative sampling and how the Permittee has determined which points of discharge will be monitored. The discussion must include an estimate of the volume of discharge from each discharge point, differences in exposure to pollutants, pollutants likely to be in each discharge, and a relative comparison of probable pollutant concentrations. The plan must identify who is responsible for monitoring and how monitoring will be conducted to comply with permit conditions. The monitoring plan will address stormwater sampling requirements and visual inspections. The plan must include the following:
    - a. Identification of points of discharge
    - b. A check list for visual monitoring
    - c. Who conducts stormwater sampling
    - d. Where samples will be taken
    - e. Parameters for analysis
    - f. Procedures for sample collection and handling
    - g. Procedures for sending samples to the lab
    - h. Procedures for submitting results to the Department
  3. **BMPs:** The SWPPP will include a description of the BMPs that are necessary for the facility to eliminate or reduce the potential to contaminate stormwater. BMPs must also be considered to regulate peak flow and volume of stormwater discharge. BMPs shall be included to comply with the following requirements:
    - a. **Operational Source Control BMPs:** Operational BMPs are common to all facilities. The categories listed below are a minimum set of BMPs that must be included in the SWPPP.

- i) Pollution Prevention Team: The SWPPP will include a BMP that identifies specific individuals by name or by title within the facility who are responsible for developing the SWPPP and assisting the facility manager in its implementation, maintenance, and modification. The activities and responsibilities of the team should address all aspects of the facility's SWPPP.
- ii) Good Housekeeping: The SWPPP will include a BMP(s) that defines ongoing maintenance and cleanup, as appropriate, of areas which may contribute pollutants to stormwater discharges. The SWPPP will include the schedule/frequency for completing each housekeeping task.
- iii) Preventive Maintenance: The SWPPP will include a BMP(s) to inspect and maintain the stormwater drainage and treatment systems (if any), and plant equipment and systems that could fail and result in contamination of stormwater. The SWPPP will include the schedule/frequency for completing each maintenance task.
- iv) Spill Prevention and Emergency Cleanup Plan: The SWPPP will include a BMP(s) to identify areas where potential spills can contribute pollutants to stormwater discharges. The BMP(s) must specify material handling procedures, storage requirements, cleanup equipment, and procedures as appropriate. It must be at least equivalent to BMP S1.80 in the Department's *Stormwater Management Manual for Western Washington* (SWMM Volume IV, Spill Emergencies). The SWPPP may include excerpts of plans prepared for other purposes (e.g., Spill Prevention Control and Countermeasure [SPCC] plans under Section 311 of the CWA), where those excerpts meet the intent of this requirement.
- v) Employee Training: The SWPPP will include a BMP(s) to provide SWPPP training for employees who have duties in areas of industrial activity subject to this permit. At a minimum, training shall include an overview of what is in the SWPPP and how employees make a difference in complying with the SWPPP and preventing contamination of stormwater. The training must address spill response procedures, good housekeeping, and material management practices. The BMP(s) must provide the content of the training, how training will be conducted, and the frequency/schedule for assuring employees will receive training. Annual training is the minimum acceptable frequency. A log of the dates on which specific employees receive training shall be kept and included in the SWPPP.

~~vi) Inspections and Recordkeeping: The SWPPP will include a BMP(s) to identify plant personnel who will inspect designated equipment and plant areas as required in Condition S2 of Part II of this permit. The Permittee shall also provide a tracking or follow-up procedure to ensure that appropriate action has been taken in response to visual monitoring. There shall be documentation of visual monitoring reporting and recordkeeping procedures and schedules as required in Special Condition S5 of Part II of this permit.~~

vi) Inspections and Recordkeeping: The SWPPP will identify personnel responsible for inspection of BMPs (i.e., structural and non-structural) and other equipments and plant areas of Part II of this permit. The Permittee shall also provide a tracking or follow-up procedure to ensure that appropriate action has been taken in response to monitoring. There shall be documentation of visual, and other monitoring reporting and recordkeeping procedures and schedules as required by the permit.

- b. **Structural Source Control BMPs:** Structural source control BMPs must be provided to eliminate or minimize the exposure of stormwater to pollutants. Volume IV of the Department’s *Stormwater Management Manual for Western Washington* provides useful information for source control BMPs for different industrial activities. Those BMPs listed as “applicable” are considered the minimum set of required BMPs for an industrial activity. Equivalent BMPs may be selected which result in equal or better quality of stormwater discharge.
- c. **Treatment BMPs:** Treatment BMPs are required when operational and source control BMPs are not adequate to reduce pollutants below a significant amount and maintain compliance with water quality standards. At a minimum, the SWPPP must include a narrative that describes how the Permittee determined if treatment BMPs are or are not required. When treatment BMPs are required, refer to the Department’s *Stormwater Management Manual for Western Washington*, Volume V, or equivalent manual, for guidance on selecting treatment BMPs.
- d. **Stormwater Peak Runoff Rate and Volume Control BMPs:** Flow control BMPs are required for new development or redevelopment as defined in the Department’s *Stormwater Management Manual for Western Washington*, Volume I. At a minimum, the SWPPP must include a narrative that describes how the Permittee determined if flow control BMPs are/are not required. Where required, the SWPPP shall



include appropriate BMPs from Volumes I and III of the Department's *Stormwater Management Manual for Western Washington* or equivalent manuals.

4. **Erosion and Sediment Control BMPs:** All facilities must evaluate the risk of soil erosion on their site. At a minimum, the SWPPP must include a narrative that describes if there is reasonable potential for soil erosion at the site. Where reasonable potential exists, the Permittee must include BMPs to prevent or minimize the potential for soil erosion on site. When required, BMPs shall be selected from BMPs in Volumes II and III of the Department's *Stormwater Management Manual for Western Washington* or equivalent manual.
5. **Other BMPs:** Nothing in Special Condition S5 of Part II of this permit is intended to preclude the application of innovative treatment, source control, reduction or recycle, or operational BMPs beyond those identified in the Department's *Stormwater Management Manual for Western Washington*. Additional BMPs beyond those identified in the Department's *Stormwater Management Manual for Western Washington* may be necessary to achieve compliance with standards. However, treatment BMPs that include the addition of chemicals to provide treatment must be approved by the Department before implementation.

## S6. COMPREHENSIVE RECEIVING WATER AND STORMWATER RUNOFF STUDY

The Permittee shall design and conduct a comprehensive study of the receiving water and the stormwater runoff to assess the impact of stormwater discharges from the Permittee's properties to Miller Creek, Des Moines Creek, Gilliam Creek, ~~and Walker Creek, and Northwest Ponds~~ by analyzing the upstream and downstream receiving water. The sampling events must occur during storm with at least ~~0.5~~ 0.1 inches of rain in a 24-hour period. The sampling events shall be spread adequately to ensure seasonal variations. There must be an adequate number of samples collected to ensure statistical significance.

As part of this report, the Port shall study quality of the discharge from SDS3 outfall into the Northwest Ponds. This study shall show if this discharge has any effect on its receiving water, Northwest Ponds and Des Moines Creek, its ultimate discharge point. This study shall also incorporate the one-hour average testing protocols consistent with WAC 173-201A-040, as needed and if possible. To the maximum extent practicable, the Port shall also take grab samples during the first thirty (30) minutes of a storm event. The report must extensively study the possibility of establishing a relationship between the BOD and COD content of the discharge.

The Port may decide to study impact of the individual outfalls to the receiving water, or study the overall impact of the Port's activities to the local receiving water. To assess the overall impact of the Port's activities on the receiving fresh water, the Port may choose one upstream

and one downstream sampling location at the edge of the boundaries of the Port property as the receiving water of the interest enters and leaves the Port’s property. In case of assessment of impact of the individual outfalls to the receiving water, samples shall be collected sufficiently upstream and downstream of the individual outfalls outside of the influence of the respective outfall.

The report shall also include an assessment of the Benthic Index of Biological Integrity (BIBI) for Miller Creek, Des Moines Creek, Walker Creek, and Gilliam at upstream and downstream locations identified below. In cases where sampling may not be feasible due to outfalls physical locations without undermining the scientific integrity of the study, the Permittee shall provide adequate technical and scientific justification ~~and provide alternative~~ in the report.

Following ~~outfalls~~ **locations** shall be sampled:

<b>SAMPLING LOCATION</b>		
<b>Receiving Water</b>	<b>Upstream of:</b>	<b>Downstream of:</b>
Miller Creek	Lake Reba Outfall	Lake Reba Outfall
Des Moines Creek	SDS1, SDS4, and SDE4 Outfalls discharging to Des Moines Creek	SDS1, SDS4, and SDE4 Outfalls discharging to Des Moines Creek
Walker Creek	All outfall(s) discharging to the Walker Creek	All outfall(s) discharging to the Walker Creek
Gilliam Creek	All outfall(s) discharging to the Gilliam Creek	All outfall(s) discharging to the Gilliam Creek

<b>SAMPLING LOCATION</b>		
<b>Receiving Water</b>	<b>Upstream of:</b>	<b>Downstream of:</b>
Northwest Ponds	All outfalls discharging into Northwest Ponds, including SDS3.	All outfalls discharging into Northwest Ponds, including SDS3.
Lake Reba	All outfalls discharging into Lake Reba.	All outfalls discharging into Lake Reba.
Miller Creek	Lake Reba Outfall and all other outfalls discharging into Miller Creek.	Lake Reba Outfall and all other outfalls discharging into Miller Creek.
Des Moines Creek	All outfalls discharging into Des Moines Creek, including SDS1, SDS4, and SDE4 Outfalls.	All outfalls discharging into Des Moines Creek, including SDS1, SDS4, and SDE4 Outfalls.
Walker Creek	All outfall(s) discharging into Walker Creek	All outfall(s) discharging into Walker Creek
Gilliam Creek	All outfall(s) discharging into Gilliam Creek	All outfall(s) discharging into Gilliam Creek

The receiving water and the stormwater runoff, upstream and downstream, shall be sampled at a minimum for the following parameters:

- 1) 10) Total Suspended Solids
- 2) 11) Hardness
- 3) 12) Temperature
- 4) 13) pH
- 5) 14) Total and dissolved heavy metals (zinc, copper, lead)
- 6) 15) Total Glycol
- 7) 16) Oil and Grease
- 17) BOD
- 18) COD, and
- 19) DO

The report shall also analyze Lake Reba ~~stormwater facility~~, and the Northwest Ponds for their biological, limnological, physical, and chemical characteristics. The Permittee shall work with other entities contributing to Lake Reba stormwater facility, and to the Northwest Ponds to develop an action plan to attain compliance with the water quality standards in their ~~respective~~ receiving water. ~~The report shall evaluate impact of various discharges to the Northwest Ponds.~~ The action plan shall also identify and assess entities' contributions and shall provide recommendations that would ensure water quality improvement and water quality attainment.

All sampling and analysis shall be conducted in accordance with the guidelines given in *Guidelines and Specifications for Preparing Quality Assurance Project Plans*, Ecology Publication 91-16. The Permittee shall follow clean sampling techniques (*Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels*, EPA Publication No. 821-R-95-034, April 1995). The sampling station accuracy requirements are  $\pm 20$  meters.

Prior to start of sampling, the Permittee shall submit a plan for studying the chemical and biological properties of upstream and downstream with a sampling and quality assurance plan to the Department for review and approval on **July 1, 2004 2005**. The report shall identify specific procedure for each task and identify any obstacles and difficulties to perform each and provide recommendations or alternatives. The final report shall discuss and identify the potential of any chemical and biological degradation attributed to the Port of Seattle stormwater runoff, and shall include an action plan to prevent further degradation and to improve the chemical and biological integrity of the receiving water. In addition, the final report shall identify sources of the pollution, whether generated from within the Port's properties or discharged into the Port's properties by outside sources. The report shall also include any action plan, if necessary, to isolate and separate Port's and non-Port's runoff. All chemical analysis shall be conducted according to methods given in 40 CFR 136 as prescribed in Section S2.B of the Part II of this permit. The Permittee shall submit the final report to the Department following approval of the plan of study summarizing the data and the final conclusion in conjunction with the permit application on ~~April 1~~ **January 31**, 2008.

## S7. ACUTE TOXICITY

### A. Effluent Characterization

The Permittee shall conduct acute toxicity testing on the stormwater discharges to Miller Creek, Des Moines Creek, Gilliam Creek, Walker Creek, **Lake Reba**, and to Northwest Ponds to determine the presence and amount of acute (lethal) toxicity. The two acute toxicity tests listed below shall be conducted on each stormwater sample taken for discharge characterization. The effluent characterization report shall be submitted to the Department for review and approval ~~on~~ no later than **May 1, 2006** **2005**.

Stormwater discharge characterization for acute toxicity shall be conducted quarterly for one year and must be in accordance with the Permittee's approved sampling and monitoring procedure. At least one sample shall be collected during deicing and anti-icing operations. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this section. A dilution series consisting of a minimum of five concentrations and a control shall be used to estimate the concentration lethal to 50% of the organisms (LC<sub>50</sub>). The percent survival in 100% effluent shall also be reported.

Acute toxicity tests shall be conducted with the following species and protocols:

1. Fathead minnow, *Pimephales promelas* (96-hour static-renewal test, method: EPA/600/4-90/027F).
2. Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48-hour static test, method: EPA/600/4-90/027F). The Permittee shall choose one of the three species and use it consistently throughout effluent characterization.

### B. Effluent Limit for Acute Toxicity

The Permittee has an effluent limit for acute toxicity if, after completing one year of effluent characterization, either:

1. The median survival of any species in 100% effluent is below 80%.
2. Any one test of any species exhibits less than 65% survival in 100% effluent.

**The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).**

If an effluent limit for acute toxicity is required by Subsection B of this condition at the end of one year of effluent characterization, the Permittee shall immediately complete all applicable requirements in Subsections C, D, and F of this condition.

If no effluent limit is required by Subsection B of this condition at the end of one year of effluent characterization, then the Permittee shall complete all applicable requirements in Subsections E and F of this condition.

In the event of failure to pass the test described in Subsection C of this condition 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 of this condition are being met to the satisfaction of the Department.

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.

If the Permittee has an effluent limit for acute toxicity and the ACEC is not known, then effluent characterization for acute toxicity shall continue until the time an ACEC is known. Effluent characterization shall be continued until an ACEC has been determined and shall be performed using each one of the tests listed in Subsection A of this condition on a rotating basis. When an ACEC has been determined, the Permittee shall immediately complete all applicable requirements in Subsections C, D, and F of this condition.

If no effluent limit is required by Subsection B of this condition at the end of one year of effluent characterization, then the Permittee shall stop effluent characterization and begin to conduct the activities in Subsection E even if the ACEC is unknown.

C. Monitoring for Compliance With an Effluent Limit for Acute Toxicity

Monitoring to determine compliance with the effluent limit shall be conducted quarterly for the remainder of the permit term using each of the species listed in Subsection A of this condition on a rotating basis and performed using at a minimum 100% effluent, the ACEC, and a control. Each sampling event shall be three (3) months apart and must be in accordance with the Permittee's approved Sampling and Monitoring Report and as prescribed in the permit Special Condition S2, Part II, above. The Permittee shall schedule the toxicity tests in the order listed in the permit unless the Department notifies the Permittee in writing of another species rotation schedule. The percent survival in 100% effluent shall be reported for all compliance monitoring.

Compliance with the effluent limit for acute toxicity means no statistically significant difference in survival between the control and the test concentration representing the ACEC. The Permittee shall immediately implement Subsection D of this condition if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10%, the hypothesis test shall be conducted at the 0.01 level of significance.

D. Response to Noncompliance With an Effluent Limit for Acute Toxicity

If the Permittee violates the acute toxicity limit in Subsection B of this condition, the Permittee shall begin additional compliance monitoring within one (1) week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four (4) consecutive weeks using the same test and species as the failed compliance test. Testing shall determine the LC<sub>50</sub> and effluent limit compliance. The discharger shall return to the original monitoring frequency in Subsection C of this condition after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, the Permittee may notify the Department that the compliance test result might be anomalous and that the Permittee intends to take only one (1) additional sample for toxicity testing and wait for notification from the Department before completing the additional monitoring required in this subsection. The notification to the Department shall be in writing and accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by the Department that the compliance test result was not anomalous. If the one (1) additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by the Department that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to the Department on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the fourth additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first three additional compliance monitoring tests failed to meet the acute toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date for the first additional monitoring test to violate the acute toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

E. Monitoring When There Is No Permit Limit for Acute Toxicity

The Permittee shall test final effluent once in December 2006 and once in July 2007. All species used in the initial acute effluent characterization or substitutes approved by the Department shall be used, and results submitted to the Department as a part of the permit renewal application process April 1, 2008.

F. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results. The final report shall be sent to the Department on January 31, 2008.
2. Testing shall be conducted on flow weighted composite effluent samples or grab samples, or in accordance with the Permittee's approved Sampling and Monitoring Report and as prescribed in the permit Section S1 above. Composite samples taken for toxicity testing shall be cooled to 4° C while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one (1) hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within four (4) hours after collection, it must be below 12° C at receipt. All other grab samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.
3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, or most recent version thereof.
4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A of this condition and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A of this condition or pristine natural water of sufficient quality for good control performance.
6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.
8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

## S8. SUBLETHAL TOXICITY

### ~~A. Effluent Sampling~~

~~The Permittee shall conduct sublethal toxicity testing on stormwater discharges reflected as in-stream samples collected from the stormwater discharging to Miller Creek, Des Moines Creek, Gilliam Creek, Walker Creek, and from all outfalls discharging to the Northwest Ponds. The Permittee shall also monitor the Lake Reba stormwater treatment facility outfall discharges to Miller Creek. At least one sample shall be collected during deicing and anti-icing operations.~~

~~The sublethal toxicity tests listed below shall be conducted on each sample taken.~~

~~Stormwater testing for sublethal toxicity shall be conducted biannually. The first sample shall be taken on May 1, 2004. Each sampling event shall be six (6) months apart and must be in accordance with the Permittee's approved sampling and monitoring procedure. The Permittee shall conduct sublethal toxicity testing on a series of at least five (5) concentrations of the sample in order to determine appropriate end point estimates.~~

<del>Freshwater Sublethal Toxicity Test Species</del>	<del>Method</del>
<del>Toxicity Tests Using Early Life Stages of Salmonid Fish</del>	<del>Environment Canada, Pacific Environmental Science Center, Environmental Toxicology Section, EPS 1/RM/28 Second Edition, 1998.</del>



~~B. Response to Sublethal Toxicity~~

~~If sublethal toxicity occurs during the monitoring, i.e. when the EC50 is 100% stream sample or lower, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department. The TI/RE plan submittal shall be within sixty (60) days after the sample date for the third additional compliance monitoring test. If the Permittee decides to forgo the rest of the additional compliance monitoring tests required in this subsection because one of the first two (2) additional compliance monitoring tests failed to meet the sublethal toxicity limit, then the Permittee shall submit the TI/RE plan within sixty (60) days after the sample date for the first additional monitoring test to violate the sublethal toxicity limit. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).~~

~~C. Sampling and Reporting Requirements~~

- ~~1. All reports for stormwater characterization or compliance monitoring shall be submitted in accordance with the most recent version of Department of Ecology Publication #WQ R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results. The final report shall be submitted to the Department on April 1, 2008.~~
- ~~2. Testing shall be conducted on flow-weighted composite effluent samples or grab samples. Each sampling event must be in accordance with the Permittee's approved Sampling and Monitoring Report and as prescribed in the permit Special Condition S2 of Part II of this permit. Composite samples taken for toxicity testing shall be cooled to 4° C while being collected and shall be sent to the lab immediately upon completion. Grab samples must be shipped on ice to the lab immediately upon collection. If a grab sample is received at the testing lab within one (1) hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within four (4) hours after collection, it must be below 12° C at receipt. All other grab samples must be below 8° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.~~
- ~~3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Department of Ecology Publication #WQ R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*, or most recent version thereof.~~

- ~~4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in Subsection A of this condition and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected samples at the next possible opportunity that present representative conditions.~~
- ~~5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in Subsection A of this condition or pristine natural water of sufficient quality for good control performance.~~
- ~~6. The sublethal toxicity tests shall be run on unmodified samples.~~
- ~~7. The Permittee shall choose to conduct a full dilution series test in order to determine dose response. In this case, the series must have a minimum of five (5) effluent concentrations and a control.~~

A. Stream Sampling and Sublethal Toxicity Testing

The Permittee shall conduct in-stream sublethal toxicity testing on ambient samples from Miller Creek, Des Moines Creek, Gilliam Creek, Walker Creek, Northwest Ponds, and Lake Reba taken at convenient sampling stations that are nearby and downstream of the Permittee's stormwater outfalls. These sampling locations shall be specified in the sampling and monitoring plan required in Special Condition **S6** of Part II of this permit. At least one sample shall be taken during deicing and anti-icing operations.

Sublethal toxicity testing on ambient water samples from each station shall be conducted biannually in the fall and spring during times of stormwater or snow melt runoff. In addition, another test shall be conducted if possible each year on ambient water samples collected from each station receiving runoff from areas where deicing and anti-icing operations are occurring. The first sample shall be taken no later than **May 1, 2006**. Each sampling event must be in accordance with the Permittee's approved sampling and monitoring plan and as prescribed in Special Condition **S6** of Part II of this permit. The sampling and monitoring plan submitted to the Department for review on July 1, 2004, may propose substituting acute toxicity testing for rainbow trout embryo testing of ambient samples after June 2006 if no adverse effects have been found in the rainbow trout embryo testing conducted to that time. The acute testing using rainbow trout and a daphnid would trigger resumption of rainbow trout embryo testing at any station having less than 65% survival in 100% sample.

The rainbow trout embryo test (E test) from the Environment Canada manual listed below shall be conducted on each sample taken:

Freshwater Sublethal Toxicity Test Species	Reference for Method
Rainbow trout ( <i>Oncorhynchus mykiss</i> )	Environment Canada, Pacific Environmental Science Center, Environmental Toxicology Section, EPS 1/RM/28 Second Edition, 1998.

**B. Response to Sublethal Toxicity**

If the EC<sub>25</sub> from any valid test is 100% stream sample or less, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department within sixty (60) days after the sample date. If a valid EC<sub>25</sub> cannot be calculated for any test, then the EC<sub>50</sub> shall be calculated and used instead of the EC<sub>25</sub> to determine if a TI/RE plan is required in accordance with this paragraph. The TI/RE plan shall be based on WAC 173-205-100(2)(b) and (c). WAC 173-205-100(2)(b) shall be interpreted to allow the TI/RE plan to include upstream and downstream comparisons to determine if steam water quality in general or a source upstream of the Permittee's discharges is responsible for the impairment seen in the trout embryo toxicity test. The TI/RE plan shall be implemented in accordance with WAC 173-205-100(3) immediately upon receipt of any test result showing the EC<sub>25</sub> or EC<sub>50</sub> to be 100% stream sample or less.

**C. Sampling and Reporting Requirements**

1. All reports for testing results shall be submitted in accordance with the most recent version of Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into the Department's database, then the Permittee shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results. The final report shall be submitted to the Department by June 30, 2006.

2. Three (3) separate samples shall be collected around two (2) days apart for test solution renewal in each rainbow trout embryo test. The first sample shall be taken at a time of stormwater or snow melt runoff and the goal shall be to have all three samples taken at times of runoff, but the test is still valid even if only the first sample occurs during runoff. Each sampling event must be in accordance with the Permittee's approved sampling and monitoring plan and as prescribed in Special Condition S6 of Part II of this permit. Testing shall be conducted on 24-hour time weighted composite samples or on composites of four (4) grab samples taken six (6) hours apart over 24 hours. Grab samples may be composited onsite or at the lab but must be stored at 4° C in the dark during the process. The sample must be held at 4° C in the dark during collection if 24-hour time weighted compositing is used. Composite samples must be at or below 6° C at receipt by the lab. If a grab sample is received at the testing lab within one (1) hour after collection, it must have a temperature below 20° C at receipt. If a grab sample is received at the testing lab within four (4) hours after collection, it must be below 12° C at receipt. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after the end of 24-hour compositing or the collection of the last of the four grab samples. The lab shall store all samples at 4° C in the dark from receipt until completion of the test.
3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.
4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the Environment Canada manuals listed in Subsection A of this condition and the Department of Ecology Publication #WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by the Department, testing shall be repeated with freshly collected effluent.
5. Testing procedures should follow: Environment Canada, Pacific Environmental Science Center, Environmental Toxicology Section, SOP ID: RBTELS11.SOP, 1999. The test procedure may take advantage of the smaller volume modification described in: Canaria, E.C., Elphick, J.R. and Bailey, H.C. 1999. *A simplified procedure for conducting small scale short-term embryo toxicity tests with salmonids*. Environ. Toxicol. 14:301-307.
6. Control water and dilution water shall be a moderately hard reconstituted laboratory water or pristine natural water of sufficient quality for good control performance.

7. The toxicity tests shall be run on unmodified samples unless specific modifications have been approved by the Department.
8. The EC<sub>25</sub> shall be calculated using probit analysis. If probit analysis is not appropriate for the data, then the EC<sub>50</sub> shall be calculated by the trimmed Spearman-Kärber procedure. Abbott's correction may be applied to the data before deriving these point estimations. A minimum of five (5) concentrations and a control shall be used in the testing.

## S9. COMPLIANCE SCHEDULES

A. No later than **January 31, 2005**, based on monitoring conducted under Section S.1.A and S.1.B (Part II), the Permittee shall identify outfalls with potentially contaminated runoff to the Northwest Pond, Miller Creek, Des Moines Creek, Walker Creek, **and Gilliam Creek, and Lake Reba** and submit two (2) copies of an AKART analysis Engineering Report in accordance with the Chapter 173-240 WAC, to the Department for review, approval, and final determination. The report shall contain an action plan and a compliance schedule for implementation of the AKART. The report shall incorporate the compliance schedule in Subsection B below.

B. The Permittee shall comply with the following schedule to implement and to install appropriate BMPs, where necessary, to meet the applicable effluent limits specified under Part II, Table 1.A.

Final Engineering Report	<b>January 31, 2006</b>
Start Construction of Approved BMPs	<b>July 31, 2006</b>
Complete Construction of Approved BMPs	<b>July 31, 2007</b>
Compliance Deadline for Meeting Effluent Limits	<b>December 31, 2007</b>

C. For outfalls identified under Part II, Table 2, the Permittee shall comply with the following schedule. The parameters under Table 2 shall be used as **BENCHMARKS** for the design and sizing calculations of appropriate BMPs.

Final Engineering Report	<b>January 31, 2006</b>
Start Construction	<b>July 31, 2006</b>
Complete Installation of the Approved BMPs	<b>July 31, 2007</b>

D. The Permittee shall submit a site specific study to comply with Condition J.2. (Discharge of Operational Stormwater to the State Receiving Waters) of the § 401 Certification issued to the Permittee on September 21, 2001. The certification requires the Permittee to:

1. Conduct a site specific study, e.g., Water Effect Ratio, which is a criteria adjustment factor accounting for the effect of site specific water characteristics on pollutants bioavailability and toxicity to aquatic life, and

2. To complete the necessary retrofit (i.e., 100%) of the Permittee's existing stormwater management system prior to 50% completion of the new proposed impervious areas.

By **December 31, 2007**, the Permittee shall submit to the Department for review and approval a report documenting the results of the site specific study. By December 31, 2007, the Permittee shall submit to the Department a report detailing its progress in retrofitting the stormwater management system.

#### **S10. SOLID AND LIQUID WASTE DISPOSAL**

Disposal of waste materials from maintenance activities, including liquids and solids from cleaning catch basins and other stormwater facilities, shall be conducted in accordance with the Minimum Functional Standards for Solid Waste Handling, Chapter 173-304 WAC, and where appropriate, the Dangerous Waste Regulations, Chapter 173-303 WAC.

### PART III: CONSTRUCTION STORMWATER DISCHARGE LIMITATIONS AND MONITORING

**S1. A. Construction Stormwater Runoff Outfalls and Effluent Limitations**

1. The following outfalls are the authorized construction stormwater runoff outfalls.

**Table 1.**

<b>EXISTING OUTFALL LOCATION<sup>1</sup></b>	<b>RECEIVING WATER</b>	<b>SAMPLING POINT</b>
Latitude: 47° 25' 45" N Longitude: 122° 18' 45" W	Des Moines Creek #5	At the Point of Discharge
Latitude: 47° 25' 30" N Longitude: 122° 18' 30" W	Des Moines Creek #7	At the Point of Discharge
Latitude: 47° 26' 15" N Longitude: 122° 17' 45" W	Des Moines Creek #8	At the Point of Discharge
Latitude: 47° 26' 00" N Longitude: 122° 18' 00" W	Des Moines Creek #10	At the Point of Discharge
Latitude: 47° 28' 15" N Longitude: 122° 19' 00" W	Miller Creek #14 <sup>2</sup>	At the Point of Discharge
Latitude: 47° 28' 00" N Longitude: 122° 19' 00" W	Miller Creek #15	At the Point of Discharge
Latitude: 47° 27' 45" N Longitude: 122° 19' 15" W	Miller Creek #17	At the Point of Discharge
Latitude: 47° 27' 30" N Longitude: 122° 19' 30" W	Miller Creek #18	At the Point of Discharge
Latitude: 47° 27' 30" N Longitude: 122° 19' 15" W	Miller Creek #19	At the Point of Discharge
Latitude: 47° 27' 15" N Longitude: 122° 19' 30" W	Miller Creek #20	At the Point of Discharge
Latitude: 47° 27' 15" N Longitude: 122° 19' 15" W	Miller Creek #21	At the Point of Discharge
Latitude: 47° 27' 00" N Longitude: 122° 19' 30" W	Walker Creek #22	At the Point of Discharge
Latitude: 47° 26' 45" N Longitude: 122° 19' 30" W	Walker Creek #23	At the Point of Discharge
Latitude: 47° 26' 45" N Longitude: 122° 19' 15" W	Walker Creek #24	At the Point of Discharge
<b>FUTURE OUTFALL LOCATION 1</b>	<b>RECEIVING WATER</b>	<b>SAMPLING POINT</b>
Latitude: 47° 28' 00" N Longitude: 122° 17' 45" N	Gilliam Creek #1	At the Point of Discharge
Latitude: 47° 27' 45" N Longitude: 122° 17' 45" W	Gilliam Creek #2	At the Point of Discharge
Latitude: 47° 27' 30" N Longitude: 122° 17' 30" W	Gilliam Creek #3	At the Point of Discharge
Latitude: 47° 25' 45" N Longitude: 122° 19' 00" W	Des Moines Creek #4 F	At the Point of Discharge
Latitude: 47° 25' 45" N Longitude: 122° 18' 45" W	Des Moines Creek #5 F	At the Point of Discharge

Latitude: <del>47° 25' 30" N</del> Longitude: <del>122° 18' 45" W</del>	<del>Des Moines Creek #6</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 25' 30" N</del> Longitude: <del>122° 18' 30" W</del>	<del>Des Moines Creek #7-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 26' 15" N</del> Longitude: <del>122° 17' 45" W</del>	<del>Des Moines Creek #8-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 26' 00" N</del> Longitude: <del>122° 17' 45" W</del>	<del>Des Moines Creek #9</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 26' 00" N</del> Longitude: <del>122° 18' 00" W</del>	<del>Des Moines Creek #10-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 26' 00" N</del> Longitude: <del>122° 18' 15" W</del>	<del>Des Moines Creek #11</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 25' 45" N</del> Longitude: <del>122° 18' 15" W</del>	<del>Des Moines Creek #12</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 25' 30" N</del> Longitude: <del>122° 18' 15" W</del>	<del>Des Moines Creek #13</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 28' 00" N</del> Longitude: <del>122° 19' 00" W</del>	<del>Miller Creek #15-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 28' 00" N</del> Longitude: <del>122° 19' 15" W</del>	<del>Miller Creek #16</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 27' 45" N</del> Longitude: <del>122° 19' 15" W</del>	<del>Miller Creek #17-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 27' 30" N</del> Longitude: <del>122° 19' 30" W</del>	<del>Miller Creek #18-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 27' 30" N</del> Longitude: <del>122° 19' 15" W</del>	<del>Miller Creek #19-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 27' 15" N</del> Longitude: <del>122° 19' 30" W</del>	<del>Miller Creek #20-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 27' 15" N</del> Longitude: <del>122° 19' 15" W</del>	<del>Miller Creek #21-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 27' 00" N</del> Longitude: <del>122° 19' 30" W</del>	<del>Walker Creek #22-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 26' 45" N</del> Longitude: <del>122° 19' 30" W</del>	<del>Walker Creek #23-F</del>	<del>At the Point of Discharge</del>
Latitude: <del>47° 26' 45" N</del> Longitude: <del>122° 19' 15" W</del>	<del>Walker Creek #24-F</del>	<del>At the Point of Discharge</del>
<sup>1</sup> The geographic coordinates included in Table 1 are based on the NAD 83 datum.		
<sup>2</sup> This existing outfall may also be used for future construction outfall.		

**Table 1.**

<b>EXISTING OUTFALL LOCATION 1</b>	<b>RECEIVING WATER</b>	<b>SAMPLING POINT</b>
Latitude: 47° 28' 15" N Longitude: 122° 19' 00" W	Miller Creek #14	At the Point of Discharge
Latitude: 47° 28' 00" N Longitude: 122° 19' 00" W	Miller Creek #15	At the Point of Discharge
Latitude: 47° 28' 15" N Longitude: 122° 19' 00" W	Miller Creek #14-A	At the Point of Discharge



Latitude: 47° 28' 00" N Longitude: 122° 19' 00" W	Miller Creek #15-A	At the Point of Discharge
Latitude: 47° 28' 00" N Longitude: 122° 19' 15" W	Miller Creek #16-A	At the Point of Discharge
Latitude: 47° 27' 45" N Longitude: 122° 19' 15" W	Miller Creek #17	At the Point of Discharge
Latitude: 47° 27' 30" N Longitude: 122° 19' 30" W	Miller Creek #18	At the Point of Discharge
Latitude: 47° 27' 30" N Longitude: 122° 19' 15" W	Miller Creek #19	At the Point of Discharge
Latitude: 47° 27' 15" N Longitude: 122° 19' 30" W	Miller Creek #20	At the Point of Discharge
Latitude: 47° 27' 15" N Longitude: 122° 19' 15" W	Miller Creek #21	At the Point of Discharge
Latitude: 47° 28' 15" N Longitude: 122° 18' 45" W	Miller Creek # 28	At the Point of Discharge
Latitude: 47° 28' 15" N Longitude: 122° 18' 45" W	Miller Creek # 28 -A	At the Point of Discharge
Latitude: 47° 28' 15" N Longitude: 122° 18' 45" W	Miller Creek # 28 - B	At the Point of Discharge
Latitude: 47° 28' 00" N Longitude: 122° 18' 45" W	Miller Creek # 29	At the Point of Discharge
Latitude: 47° 28' 00" N Longitude: 122° 18' 45" W	Miller Creek # 29-A	At the Point of Discharge
Latitude: 47° 28' 00" N Longitude: 122° 18' 45" W	Miller Creek # 30	At the Point of Discharge
Latitude: 47° 28' 00" N Longitude: 122° 18' 45" W	Miller Creek # 30-A	At the Point of Discharge
Latitude: 47° 28' 00" N Longitude: 122° 18' 45" W	Miller Creek # 30-B	At the Point of Discharge
Latitude: 47° 28' 15" N Longitude: 122° 18' 45" W	Miller Creek # 30-C	At the Point of Discharge
Latitude: 47° 28' 15" N Longitude: 122° 18' 45" W	Miller Creek # 30-D	At the Point of Discharge
Latitude: 47° 28' 15" N Longitude: 122° 18' 45" W	Miller Creek # 30-E	At the Point of Discharge
Latitude: 47° 25' 45" N Longitude: 122° 19' 00" W	Des Moines Creek #4-A	At the Point of Discharge
Latitude: 47° 25' 45" N Longitude: 122° 18' 45" W	Des Moines Creek #5	At the Point of Discharge
Latitude: 47° 25' 45" N Longitude: 122° 18' 45" W	Des Moines Creek #5-A	At the Point of Discharge
Latitude: 47° 25' 30" N Longitude: 122° 18' 30" W	Des Moines Creek #7	At the Point of Discharge

Latitude: 47° 26' 15" N Longitude: 122° 17' 45" W	Des Moines Creek #8	At the Point of Discharge
Latitude: 47° 26' 00" N Longitude: 122° 18' 00" W	Des Moines Creek #10	At the Point of Discharge
Latitude: 47° 26' 00" N Longitude: 122° 18' 15" W	Des Moines Creek #11-A	At the Point of Discharge
Latitude: 47° 25' 45" N Longitude: 122° 18' 15" W	Des Moines Creek #12-A	At the Point of Discharge
Latitude: 47° 25' 45" N Longitude: 122° 18' 15" W	Des Moines Creek #12-B	At the Point of Discharge
Latitude: 47° 25' 30" N Longitude: 122° 18' 15" W	Des Moines Creek #13-A	At the Point of Discharge
Latitude: 47° 25' 30" N Longitude: 122° 18' 15" W	Des Moines Creek #13-B	At the Point of Discharge
Latitude: 47° 25' 15" N Longitude: 122° 18' 15" W	Des Moines Creek #25	At the Point of Discharge
Latitude: 47° 27' 45" N Longitude: 122° 17' 15" W	Gilliam Creek #26	At the Point of Discharge
Latitude: 47° 27' 45" N Longitude: 122° 17' 00" W	Gilliam Creek #27	At the Point of Discharge
Latitude: 47° 27' 30" N Longitude: 122° 17' 00" W	Gilliam Creek #27-A	At the Point of Discharge
Latitude: 47° 27' 00" N Longitude: 122° 19' 30" W	Walker Creek #22	At the Point of Discharge
Latitude: 47° 26' 45" N Longitude: 122° 19' 30" W	Walker Creek #23	At the Point of Discharge
Latitude: 47° 26' 45" N Longitude: 122° 19' 15" W	Walker Creek #24	At the Point of Discharge
<b>FUTURE OUTFALL LOCATION 1</b>	<b>RECEIVING WATER</b>	<b>SAMPLING POINT</b>
Latitude: 47° 28' 00" N Longitude: 122° 19' 00" W	Miller Creek #15-F	At the Point of Discharge
Latitude: 47° 28' 00" N Longitude: 122° 19' 15" W	Miller Creek #16	At the Point of Discharge
Latitude: 47° 27' 45" N Longitude: 122° 19' 15" W	Miller Creek #17-F	At the Point of Discharge
Latitude: 47° 27' 30" N Longitude: 122° 19' 30" W	Miller Creek #18-F	At the Point of Discharge
Latitude: 47° 27' 30" N Longitude: 122° 19' 15" W	Miller Creek #19-F	At the Point of Discharge
Latitude: 47° 27' 15" N Longitude: 122° 19' 30" W	Miller Creek #20-F	At the Point of Discharge
Latitude: 47° 27' 15" N Longitude: 122° 19' 15" W	Miller Creek #21-F	At the Point of Discharge
Latitude: 47° 25' 45" N Longitude: 122° 19' 00" W	Des Moines Creek #4-F	At the Point of Discharge

Latitude: 47° 25' 45" N Longitude: 122° 18' 45" W	Des Moines Creek #5-F	At the Point of Discharge
Latitude: 47° 25' 30" N Longitude: 122° 18' 45" W	Des Moines Creek #6	At the Point of Discharge
Latitude: 47° 25' 30" N Longitude: 122° 18' 30" W	Des Moines Creek #7-F	At the Point of Discharge
Latitude: 47° 26' 15" N Longitude: 122° 17' 45" W	Des Moines Creek #8-F	At the Point of Discharge
Latitude: 47° 26' 00" N Longitude: 122° 17' 45" W	Des Moines Creek #9	At the Point of Discharge
Latitude: 47° 26' 00" N Longitude: 122° 18' 00" W	Des Moines Creek #10-F	At the Point of Discharge
Latitude: 47° 26' 00" N Longitude: 122° 18' 15" W	Des Moines Creek #11	At the Point of Discharge
Latitude: 47° 25' 45" N Longitude: 122° 18' 15" W	Des Moines Creek #12	At the Point of Discharge
Latitude: 47° 25' 30" N Longitude: 122° 18' 15" W	Des Moines Creek #13	At the Point of Discharge
Latitude: 47° 28' 00" N Longitude: 122° 17' 45" N	Gilliam Creek #1	At the Point of Discharge
Latitude: 47° 27' 45" N Longitude: 122° 17' 45" W	Gilliam Creek #2	At the Point of Discharge
Latitude: 47° 27' 30" N Longitude: 122° 17' 30" W	Gilliam Creek #3	At the Point of Discharge
Latitude: 47° 27' 00" N Longitude: 122° 19' 30" W	Walker Creek #22-F	At the Point of Discharge
Latitude: 47° 26' 45" N Longitude: 122° 19' 30" W	Walker Creek #23-F	At the Point of Discharge
Latitude: 47° 26' 45" N Longitude: 122° 19' 15" W	Walker Creek #24-F	At the Point of Discharge
Note: The geographic coordinates included in Table 1 are based on the NAD 83 datum. This existing outfall may also be used for future construction outfall.		

Footnotes:

Miller Creek outfall boundaries extend from SR 518 to SR 509. Walker Creek outfall boundaries extend from wetland headwaters **feast** of Des Moines Memorial Drive) to Des Moines Memorial Drive. Des Moines Creek outfall boundaries extend from the Northwest Ponds (West Branch) and Bow Lake Outfall (East Branch) to South 200<sup>th</sup> Street. Gilliam Outfalls #1 and #2 encompass surface flows just north and south of SR 518 near the Approach Drives interchange. **The** Gilliam Outfall #3 encompasses the outfall of SDE1 to the city of SeaTac drainage system.

2. **Effluent Limitations**

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a concentration in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee is authorized to discharge construction stormwater and construction dewatering water at Des Moines Creek, Miller Creek, Walker Creek, and Gilliam Creek, subject to the following limitations:

**Table 2.**

<b>EFFLUENT LIMITATIONS</b>	
<b>Parameter</b>	<b>Maximum Daily<sup>a</sup></b>
Turbidity	Turbidity in the <b>receiving water</b> shall not exceed 5 nephelometric turbidity units (NTU) over background turbidity when the background turbidity is 50 NTU or less, or have more than a 10 percent increase in turbidity when the background turbidity is more than 50 NTU. <sup>b</sup>
Turbidity <sup>c</sup> (Chemical Treatment and Batch Treatment)	The maximum daily average shall not exceed 5 NTU.
Total Petroleum Hydrocarbons	5 mg/L - No visible sheen at any time <sup>d</sup>
Arsenic <sup>e</sup>	360 µg/L
pH <sup>f</sup>	In the range of 6.5 to 8.5 – In case of in-stream sampling, such as for nonchemical treatment, with the human-caused variation within the above range of less than 0.2 units.
<sup>a</sup> The maximum daily effluent limitation is defined as the highest allowable daily discharge.	
<sup>b</sup> <del>Sampling location is in the receiving water.</del> In the <b>receiving water</b> here means at the point of complete mix to be determined by the Permittee.	
<sup>c</sup> <del>The average daily effluent limitation is based on the arithmetic mean of the sample taken for each batch in one day.</del> The chemical treatment here is referred to as treatment with aids of either polymer for batch treatment (as specified by the DOE SWMM) or by the aids of chitosan for continuous treatment. The average daily effluent limitation is based on the arithmetic mean of number of samples taken per day from the continuous discharge, or in case of batch treatment based on the number of batches per day.	
<sup>d</sup> <del>Oil &amp; grease shall be measured by Ecology Method NWT-TPH-DX.</del> TPH numerical limit shall be applied and a sample shall be taken only when visible sheen is observed.	
<sup>e</sup> The arsenic limit is based on acute water quality criteria, WAC 173-201A. Arsenic monitoring is only required for construction stormwater generated from historically undisturbed locations. The Permittee shall start sampling and reporting the results for cadmium and lead <del>should if</del> the arsenic water quality-based limit is exceeded.	
<sup>f</sup> Indicates the range of permitted values. <del>Sampling location for nonchemically treated stormwater runoff shall be in the receiving water.</del> In the receiving water here means at the point of complete mix to be determined by the Permittee.	

**Footnotes:**

(1) The method detection level (MDL) for turbidity is 1 NTU using a turbidimeter and Method Number 180.1 from 40 CFR Part 136 or Standard Methods for the Examination of Water and Wastewater, 18th Edition, 2130.

(2) The MDL for total petroleum hydrocarbons in 0.1 mg/L using Gas Chromatography and Flame Ionization Detector (FID) and method number Northwest Diesel (WTPH-D) from Washington State Department of Ecology Method WTPH-D. The quantitation level (QL) for TPH-D is 0.5 mg/L (5 x MDL).

**B. Construction Stormwater Runoff Monitoring Plan and Schedule**

The Permittee shall monitor all outfalls that receive construction runoff. Each outfall shall be monitored, sampled, and reported individually according to the following schedule:

**Table 3.**

Category	Parameters	Units	Sample Point		Sampling Frequency <sup>a</sup>	Sample Type
Construction Stormwater Runoff	pH— Chemical Treatment	S.U.	Immediately prior to discharge	N/A	One/batch	Grab
	pH— Nonchemical Treatment	S.U.	Downstream at the point of complete mix	Upstream, outside the influence of respective outfalls, or other outfalls	See footnote <sup>a</sup>	Grab
Construction Stormwater Runoff	Turbidity— Chemical Treatment	NTU	Immediately prior to discharge	N/A	One/batch	Grab
	Turbidity— Nonchemical Treatment	NTU	Downstream at the point of complete mix.	Upstream, outside the influence of respective outfalls, or other outfalls	See footnote <sup>a</sup>	Grab
Construction Stormwater Runoff	Total Petroleum Hydrocarbons <sup>b</sup> (Oil & grease)	mg/L	Immediately prior to discharge when sheen is visible		One/batch for chemical treatment. See footnote <sup>d</sup> for the rest.	Grab
Construction Stormwater Runoff	Arsenic <sup>e</sup>	µg/L	Immediately prior to discharge		One/batch for chemical treatment. See footnote for the rest.	Grab
Construction Stormwater Runoff	Flow	Precipitation and Flow Record shall be collected and submitted to the Department with the Discharge Monitoring Report (DMR).				

Category	Parameters	Units	Sample Point	Sampling Frequency <sup>a</sup>	Sample Type
<sup>a</sup> Sampling frequencies stated above are for construction stormwater with chemical treatment. For nonchemically treated stormwater, the monitoring frequency shall be: a) all samples shall be grab samples taken within the first hour of discharge; b) all samples shall be taken at the sampling point specified in the permit or, in case of in-stream sampling, at the point of complete mix determined by the Permittee; c) the storm event sampled must be at least 0.5 inches of rain in a 24-hour period; d) the storm event sampled must be preceded by at least 24 hours of no discharge; e) samples must be representative of discharge.					
<sup>b</sup> Oil & grease shall be measured by Ecology Method NWTPI-DX.					
<sup>c</sup> Arsenic monitoring is only required for construction stormwater generated from historically undisturbed locations. Monitoring (of arsenic for a particular project) may be discontinued if Permittee consistently meets the effluent limits during the first three (3) months of sampling.					

Table 3.

Category	Parameters	Units	Sample Point		Sampling Frequency <sup>a</sup>	Sample Type
Construction Stormwater Runoff	Turbidity - Chemical Treatment - Batch Treatment	NTU	Immediately prior to discharge	N/A	One/ batch	Grab
	Turbidity - Chemical Treatment - Continuous Treatment	NTU	Immediately prior to discharge	N/A	At least 4 samples per discharge period	Continuous recording
	Turbidity - Non-chemical Treatment	NTU	Downstream at the point of complete mix.	Upstream, outside the influence of respective outfalls, or other outfalls	See footnote <sup>a</sup>	Grab
Construction Stormwater Runoff	pH - Chemical Treatment - Batch Treatment	S.U.	Immediately prior to discharge	N/A	One/ batch	Grab
	pH - Chemical Treatment - Continuous Treatment	NTU	Immediately prior to discharge	N/A	At least 4 samples per discharge period	Continuous recording

Category	Parameters	Units	Sample Point		Sampling Frequency <sup>a</sup>	Sample Type
	pH – Non-chemical Treatment	S.U.	Downstream at the point of complete mix	Upstream, outside the influence of respective outfalls, or other outfalls	See footnote	Grab
Construction Stormwater Runoff	Total Petroleum Hydrocarbons	mg/L	Downstream at the point of complete mix	Upstream, outside the influence of respective outfalls, or other outfalls	One/ batch for chemical batch treatment. At least 4 samples per discharge period for continuous chemical treatment. See footnote <sup>a</sup> for the rest.	Grab
Construction Stormwater Runoff	Arsenic <sup>b</sup>	µg/L	Immediately prior to discharge	N/A	One/ batch for chemical batch treatment. At least 4 samples per discharge period for continuous chemical treatment. See footnote <sup>a</sup> for the rest.	Grab
Construction Stormwater Runoff	Flow	Precipitation and Flow Record shall be collected and submitted to the Department with the Discharge Monitoring Report (DMR).				
<sup>a</sup> Sampling frequencies stated above are for construction stormwater with chemical treatment. For nonchemically treated stormwater, the following requirements apply: a) all samples shall be taken at the sampling point specified in the permit or, in case of in-stream sampling, at the point of complete mix as determined by the Permittee; b) the storm event sampled must be at least <b>0.5 inches of rain in a 24-hour period</b> ; c) samples must be representative of discharge.						
<sup>b</sup> Arsenic monitoring is only required for construction stormwater generated from historically undisturbed locations. Monitoring (of Arsenic for a particular project) may be discontinued if Permittee consistently meet the effluent limits during the first 5 months of sampling.						

C. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 CFR Part 136 or to the latest revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by the Department.

D. Laboratory Accreditation

All monitoring data required by the Department shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 WAC. Flow, temperature, settleable solids, turbidity, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. The Department exempts crops, soils, and hazardous waste data from this requirement pending accreditation of laboratories for analysis of these media.

**S2. REPORTING AND RECORDKEEPING REQUIREMENTS**

The Permittee shall monitor and report in accordance with the following conditions. The falsification of information submitted to the Department shall constitute a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. Monitoring results shall be submitted monthly. Monitoring data obtained during each monitoring period shall be summarized, reported, and submitted on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by the Department. DMR forms shall be received no later than the 30<sup>th</sup> day of the month following the completed monitoring period, unless otherwise specified in this permit. Priority pollutant analysis data shall be submitted no later than forty-five (45) days following the monitoring period. Unless otherwise specified, all toxicity test data shall be submitted within sixty (60) days after the sample date. The report(s) shall be sent to the Department of Ecology, Northwest Regional Office, 3190 – 160<sup>th</sup> Avenue SE, Bellevue, WA 98008-5452.



All laboratory reports providing data for organic and metal parameters shall include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/number, method detection limit (MDL), laboratory practical quantitation limit (PQL), reporting units, and concentration detected.

DMR forms must be submitted monthly whether or not the facility was discharging. If there was no discharge during a given monitoring period, submit the form as required with the words "no discharge" entered in place of the monitoring results.

B. Records Retention

The Permittee shall retain records of all monitoring information for a minimum of three (3) years. Such information shall include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by the Director.

C. Recording of Results

For each measurement or sample taken, the Permittee shall record the following information: (1) the date, exact place, method, and time of sampling or measurement; (2) the individual who performed the sampling or measurement; (3) the dates the analyses were performed; (4) the individual who performed the analyses; (5) the analytical techniques or methods used; and (6) the results of all analyses.

For batch sampling results, the DMR forms should report the maximum concentration for the month and the number of exceedances for the month, if any.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit using test procedures specified by Special Condition S1 of Part III of this permit, then the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Noncompliance Notification

In the event the Permittee is unable to comply with any of the terms and conditions of this permit due to any cause, the Permittee shall:

1. Immediately take action to stop, contain, and clean up unauthorized discharges or otherwise stop the noncompliance, correct the problem and, if applicable, repeat sampling and analysis of any noncompliance immediately and submit the results to the Department within five (5) days after becoming aware of the violation.
2. Immediately notify the Department of the failure to comply.
3. Submit a detailed, written report to the Department within five (5) days. The report shall contain a description of the noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

### **S3. SOLID WASTE DISPOSAL**

#### **A. Solid Waste Handling**

The Permittee shall handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water.

#### **B. Leachate**

The Permittee shall not allow leachate from its solid waste material to enter state waters without providing all known, available and reasonable methods of treatment, nor allow such leachate to cause violations of the State Surface Water Quality Standards, Chapter 173-201A WAC, or the State Ground Water Quality Standards, Chapter 173-200 WAC. The Permittee shall apply for a permit or permit modification as may be required for such discharges to state ground or surface waters.

### **S4. OPERATIONS AND MAINTENANCE**

The Permittee shall, at all times, properly operate and maintain all facilities or systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation of such is necessary to achieve compliance with the conditions of this permit.

A. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited for stormwater below the approved design criteria for stormwater management. The Department will take enforcement action against a Permittee for bypass unless one of the following applies:

1. **Bypass for Essential Maintenance Without the Potential to Cause Violation of Permit Limits or Conditions**

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health as determined by the Department prior to the bypass. The Permittee shall submit prior notice, at least ten (10) days before the date of the bypass. The Permittee shall sample the bypass for all constituents under Table 2, Part III, and submit the result together with the following month DMR.

2. **Bypass Which is Unavoidable, Unanticipated, and Results in Noncompliance of this Permit**

Bypass under these circumstances is permitted, only if:

- a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. “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.
- b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.
- c. The Department is properly notified of the bypass as required in Condition S2.E, Part III, of this permit.
- d. In either case, the Permittee shall sample the bypass for all constituents under Table 2, Part III, and submit the result together with the following month DMR.

**3. Bypass Which is Anticipated and Has the Potential to Result in Noncompliance of this Permit**

The Permittee shall notify the Department at least one hundred and eighty (180) days before the planned date of bypass. The notice shall contain: (a) a description of the bypass, and its cause; (b) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (c) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (d) the minimum and maximum duration of bypass under each alternative; (e) a recommendation as to the preferred alternative for conducting the bypass; (f) the projected date of bypass initiation; (g) a statement of compliance with SEPA; (h) a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is anticipated; and (i) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical.

In either case, the Permittee shall be prepared to sample the bypass for all constituents under Table 2, Part III, and submit the result together with the following month DMR.

The Department will consider the following prior to issuing an administrative order for this type of bypass:

- a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.
- d. If the bypass is to the original point of discharge.

After review of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department may approve or deny the request. The public may be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by the Department under RCW 90.48.120.

B. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

**S5. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR CONSTRUCTION ACTIVITIES**

A programmatic SWPPP describing all components of the Port of Seattle construction management program at the STIA shall be submitted to the Department within ninety (90) days of the effective date of this permit. In addition, a project specific SWPPP for construction activity shall be implemented for any construction activity which disturbs one or more acres of the total land area. The SWPPP for each division or subdivision of the construction project shall be prepared and retained on site prior to the start of construction of that division or subdivision. A project-specific SWPPP monitoring plan shall be submitted to the Department for review at least thirty (30) days prior to the start of the construction of that division or subdivision of the construction project. All supplemental monitoring plans shall also be submitted to the Department for review. Construction activities included in this requirement include clearing, grading, filling, and excavation activities. For construction projects that discharge solely to groundwater, the SWPPP for construction activities shall be protective of the groundwater quality. With Department approval, a SWPPP shall not be required for construction projects that discharge to the IWS.

An update version of the SWPPP, and all related documents, shall be sent to the local libraries, i.e., Burien and Des Moines libraries.

A. General Requirements

1. The SWPPP and all of its modifications shall be signed in accordance with General Condition G.1.B. In addition, the SWPPP shall be stamped by a Professional Engineer licensed by the State of Washington.
2. The SWPPP shall be retained on site or within reasonable access to the site and be made available upon request.

3. The Permittee shall be responsible for the implementation of the SWPPP. The Erosion and Sediment Control Plan shall be attached to bid packages when seeking contractors to allow the contractor sufficient time to plan implementation. At construction sites for which a lease, easement, or other use agreement has been obtained from the Permittee, the Permittee shall be responsible for the implementation of a SWPPP.
4. The Permittee shall implement procedures for reviewing the SWPPP with contractors and subcontractors prior to initiating construction activities. The Permittee shall implement procedures for addressing changes in plans and construction activities and resolving disagreements on the interpretation of the SWPPP.
5. The Permittee shall designate a contact person who will be available 24 hours a day to respond to emergencies, and to inquiries or directives from the Department. The contact person shall have authority over the SWPPP implementation. The Permittee shall establish and fund an independent qualified construction pollution control officer to advise on and determine compliance with the SWPPP and the applicable water quality standards. These names shall be listed in the SWPPP. While the Permittee is ultimately responsible for the implementation of the SWPPP, both the Permittee and the contractor/subcontractor may be held liable for violations of the permit conditions and/or the water quality standards.
6. The Permittee shall retain the SWPPP and copies of inspection reports and all other reports required by this permit for at least three (3) years after the date of final stabilization of the construction site. The Permittee shall make these documents available upon request.
7. Reports on incidents, such as discharge of spills and other noncompliance notification, shall be included in the records.
8. Modifications:
  - a. The Department may notify the Permittee when the SWPPP does not meet one or more of the requirements of this special condition. Upon notification by the Department, the Permittee shall take appropriate action(s) to come into compliance with this special condition. All SWPPP modifications shall be submitted to the Department for review.
  - b. The Permittee shall implement SWPPP and BMP modifications as directed by the Department if compliance with the State of Washington Surface Water Quality Standards (Chapter 173-201A WAC), Sediment

Management Standards (Chapter 173-204 WAC), Ground Water Quality Standards (Chapter 173-200 WAC), and human health-based criteria in the National Toxics Rule (Federal Register, Vol. 57, No. 246, Dec. 22, 1992, pages 60848-60923) is not being achieved.

- c. The Permittee shall modify the SWPPP whenever there is a change in design, construction, operation, or maintenance of any BMP which cause(s) the SWPPP to be less effective in controlling the pollutants.
  - d. Whenever a self-inspection reveals that the description of pollutant sources or the BMPs identified in the SWPPP are inadequate, due to the actual discharge of or potential to discharge a significant amount of any pollutant, the SWPPP shall be modified, as appropriate. The Permittee shall provide for implementation of any modifications to the SWPPP in a timely manner.
9. BMPs shall be selected from the current edition of the Department's *Stormwater Management Manual for Western Washington* that has been available for at least one hundred and twenty (120) days prior to BMP selection or other equivalent manuals available at the time of BMP selection.
10. The Permittee may request in writing that the Department approve the use of an experimental BMP, such as chemical treatment. The request shall be submitted to the Department at least thirty (30) days prior to the proposed use of the experimental BMP. The request shall include, but not be limited to, a description of:
- a. The experimental BMP;
  - b. Why the experimental BMP is being requested;
  - c. Why the BMPs in the *Stormwater Management Manual for Western Washington* are not adequate;
  - d. Applicable construction techniques;
  - e. The characteristics of the site or sites at which use of the experimental BMP is proposed;
  - f. Design criteria for the experimental BMP and the expected results;
  - g. Maintenance procedures;
  - h. Cost estimates;
  - i. Monitoring procedures and duration; and
  - j. If appropriate, an approved BMP that could be used if the experimental BMP fails.

B. SWPPP Contents and Requirements

The SWPPP shall consist of and make provision for the following:

1. **An Erosion and Sediment Control Plan**

The Erosion and Sediment Control Plan shall describe stabilization and structural practices, both of which shall be implemented to minimize erosion and the transport of sediments.

a. **Stabilization Practices**

The Erosion and Sediment Control Plan shall include a description of stabilization BMPs, including site-specific scheduling of the implementation of the practices. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees, preservation of mature vegetation, commercially available soil stabilization products, and other appropriate measures. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated shall be included in the plan. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased.

The plan shall ensure that the following requirements are satisfied:

- i) All exposed and unworked soils shall be stabilized by suitable and timely application of BMPs.
- ii) Existing vegetation should be preserved whenever possible. Areas which are not to be disturbed, including setbacks, sensitive/critical areas and their buffers, trees and drainage courses, shall be fenced or flagged on site before construction activities are initiated. These areas should not be harmed when measures under the SWPPP and/or construction activities are undertaken.
- iii) Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes shall be stabilized in accordance with the requirements of this subsection.



- iv) Stabilization adequate to prevent erosion of outlets and adjacent stream banks shall be provided at the outlets of all conveyance systems.
- v) All storm drain inlets made operable during construction shall be protected and maintained.
- vi) Wherever construction vehicle access routes intersect paved roads, provisions must be made to minimize the transport of sediment (mud) onto the paved road. If sediment is transported onto a road surface, the roads adjacent to the construction site shall be cleaned on a regular basis. Street washing shall be allowed only after other methods to prevent the transport or removal of the sediments are unsuccessful. Street wash water may not be discharged to the stormwater system.

b. Structural Practices

In addition to stabilization practices, the Erosion and Sediment Control Plan shall include a description of structural BMPs to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions, and sediment basins. Structural practices should be placed on upland soils to the degree attainable. The installation of these devices may be subject to Section 404 of the Federal Clean Water Act. The plan shall ensure that the following requirements are satisfied:

- i) Prior to leaving the site, stormwater runoff shall pass through a sediment pond or sediment trap, or other appropriate BMPs.
- ii) Properties adjacent to the project site shall be protected from sediment deposition.
- iii) Sediment ponds and traps, perimeter dikes, sediment barriers, and other BMPs intended to trap sediment on site shall be constructed as a first step in grading. These BMPs shall be functional before other land disturbing activities take place. Earthen structures used for sediment control such as dams, dikes, and diversions shall be stabilized as soon as possible.
- iv) Properties and waterways downstream from the construction site shall be protected from erosion due to increases in volume,

velocity, and peak flow of stormwater runoff from the project site. ~~The stormwater discharge rate shall not exceed 50% of the predevelopment peak flow rate for the 2-year, 24-hour storm, and shall maintain the existing condition peak runoff rate for the 10-year, 24-hour and the 100-year, 24-hour design storms.~~ The peak flow of stormwater runoff shall be controlled as specified by the Stormwater Management Manual for Western Washington. If local requirements are more stringent, then the Permittee shall comply with the local requirements.

- v) All temporary erosion and sediment control BMPs shall be removed within thirty (30) days after final site stabilization is achieved or after the temporary BMPs are no longer needed. Trapped sediment shall be removed or stabilized on site. Disturbed soil areas resulting from removal shall be permanently stabilized.

c. Inspection and Maintenance

All BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function. All on site erosion and sediment control measures shall be inspected at least once every seven (7) days and within 24 hours after any storm event of greater than 0.5 inches of rain per 24-hour period.

d. Recordkeeping

Reports summarizing the scope of inspections, the personnel conducting the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP, and actions taken as a result of these inspections shall be prepared and retained as part of the SWPPP.

e. Format

The Erosion and Sediment Control Plan shall consist of two parts: a narrative and a set of site plans. The Permittee may refer to Chapter II-4 of the Department's *Stormwater Management Manual for Western Washington* for guidance on the content and format.

2. **Construction Stormwater/Dewatering Monitoring Plan**

The SWPPP shall contain a detailed monitoring plan, including monitoring of discharges and the receiving water. The monitoring plan shall include sampling upstream and downstream of discharge points sufficient to evaluate compliance with all relevant water quality standards. The plan shall specify all sampling locations, parameters, and frequencies.

In the event the Permittee wants to modify the monitoring plan, proposed revisions shall be submitted to the Department at least thirty (30) days before implementing the revision.

3. **Control of Pollutants Other Than Sediment on Construction Sites**

All pollutants that occur on site during construction shall be handled and disposed of in a manner that does not cause contamination of stormwater.

The Port of Seattle, conducting construction activities within the boundaries of their property as relevant to this permit, shall monitor the construction runoff for arsenic. The construction runoff shall comply with the arsenic water quality criteria as indicated by the WAC 173-201A. The runoff shall be monitored according to the monitoring plan as described under Section S1.B, Table 3, Part III, of this permit.

A Spill Prevention and Emergency Cleanup Plan shall be included as a section in the SWPPP. BMP S1.80 in Volume IV of the Department's *Stormwater Management Manual for Western Washington* shall be used for guidance in developing this plan.

Solid chemicals, chemical solutions, paints, petroleum products, solvents, acids, caustic solutions and waste materials, including used batteries, shall be stored in a manner which will prevent the inadvertent entry of these materials into waters of the state, including ground water. Storage shall be in a manner that will prevent spills due to overfilling, tipping, or rupture. In addition, the following practices shall be used:

- a. All liquid products **and wastes** shall be stored on durable impervious surfaces and within bermed containment capable of containing 110% of the largest single container in the storage area.
- b. ~~Waste liquids shall be stored under cover, such as tarpaulins or roofed structures.~~ All waste storage areas, whether for waste oil or hazardous waste, shall be clearly designated as such and kept segregated from new product storage.

4. **Coordination with Local Requirements**

This permit does not relieve the Permittee of compliance with any more stringent requirements of local government.

Also, as required by the Puget Sound Water Quality Management Plan, local governments within the Puget Sound Basin are to adopt requirements for construction, which are at least equivalent to the requirements listed in Chapter I-2 of the Department's *Stormwater Management Manual for Western Washington*. Where the Department has determined that the requirements adopted by a local government are equivalent to those of the *Stormwater Management Manual for Western Washington*, compliance with the local requirements is deemed compliant with the Department's manual. If local requirements are more stringent than the *Stormwater Management Manual for Western Washington* requirements, the Permittee shall comply with the local requirements.

## GENERAL CONDITIONS

### G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the Department shall be signed and certified.

- A. All permit applications shall be signed by either a responsible corporate officer of at least the level of vice president of a corporation, a general partner of a partnership, or the proprietor of a sole proprietorship.
- B. All reports required by this permit and other information requested by the Department shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative, only if:
  - 1. The authorization is made in writing by a person described above and submitted to the Department.
  - 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
- C. Changes to authorization. If an authorization under paragraph B.2, above, is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2, above, must be submitted to the Department prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this section shall make the following certification:

*“I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”*

## **G2. RIGHT OF INSPECTION AND ENTRY**

The Permittee shall allow an authorized representative of the Department, upon the presentation of credentials and such other documents as may be required by law:

- A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.
- B. To have access to and copy - at reasonable times and at reasonable cost - any records required to be kept under the terms and conditions of this permit.
- C. To inspect - at reasonable times - any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
- D. To sample or monitor - at reasonable times - any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

## **G3. PERMIT ACTIONS**

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the Permittee) or upon the Department's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

- A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
  - 1. Violation of any permit term or condition.
  - 2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
  - 3. A material change in quantity or type of waste disposal.
  - 4. A determination that the permitted activity endangers human health or the environment or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination [40 CFR Part 122.64(3)].
  - 5. A change in any condition that requires either a temporary or permanent reduction or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR Part 122.64(4)].
  - 6. Nonpayment of fees assessed pursuant to RCW 90.48.465.
  - 7. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.

- B. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:
1. A material change in the condition of the waters of the state.
  2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.
  3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.
  4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.
  5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.
  6. The Department has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.
  7. Incorporation of an approved local pretreatment program into a municipality's permit.
- C. The following are causes for modification or alternatively revocation and reissuance:
1. Cause exists for termination for reasons listed in A1 through A7, of this section, and the Department determines that modification or revocation and reissuance is appropriate.
  2. The Department has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G8) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new Permittee.

#### **G4. REPORTING A CAUSE FOR MODIFICATION**

The Permittee shall submit a new application, or a supplement to the previous application, along with required engineering plans and reports whenever a material change to the facility or in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application shall be submitted at least sixty (60) days prior to any proposed changes. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

**G5. PLAN REVIEW REQUIRED**

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to the Department for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications shall be submitted at least one hundred and eighty (180) days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities shall be constructed and operated in accordance with the approved plans.

**G6. COMPLIANCE WITH OTHER LAWS AND STATUTES**

Nothing in this permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

**G7. DUTY TO REAPPLY**

The Permittee shall apply for permit renewal at least one hundred and eighty (180) days prior to the specified expiration date of this permit.

**G8. TRANSFER OF THIS PERMIT**

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department.

A. Transfers by Modification

Except as provided in paragraph B below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

1. The Permittee notifies the Department at least thirty (30) days in advance of the proposed transfer date.
2. The notice includes a written agreement between the existing and new Permittee's containing a specific date transfer of permit responsibility, coverage, and liability between them.
3. The Department does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under the subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.



**G9. REDUCED PRODUCTION FOR COMPLIANCE**

The Permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

**G10. REMOVED SUBSTANCES**

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

**G11. DUTY TO PROVIDE INFORMATION**

The Permittee shall submit to the Department, within a reasonable time, all information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also submit to the Department upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

**G12. OTHER REQUIREMENTS OF 40 CFR**

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

**G13. ADDITIONAL MONITORING**

The Department may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

**G14. PAYMENT OF FEES**

The Permittee shall submit payment of fees associated with this permit as assessed by the Department.

**G15. PENALTIES FOR VIOLATING PERMIT CONDITIONS**

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to ten thousand dollars (\$10,000) and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to ten thousand dollars (\$10,000) for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

#### **G16. UPSET**

Definition – “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that:

- 1) an upset occurred and that the Permittee can identify the cause(s) of the upset;
- 2) the permitted facility was being properly operated at the time of the upset;
- 3) the Permittee submitted notice of the upset as required in Condition S3.E; and
- 4) the Permittee complied with any remedial measures required under S5 of this permit.

In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

#### **G17. PROPERTY RIGHTS**

This permit does not convey any property rights of any sort, or any exclusive privilege.

#### **G18. DUTY TO COMPLY**

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

#### **G19. TOXIC POLLUTANTS**

The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

**G20. PENALTIES FOR TAMPERING**

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two (2) years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this Condition, punishment shall be a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or by both.

**G21. REPORTING PLANNED CHANGES**

The Permittee shall, as soon as possible, give notice to the Department of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in: 1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b); 2) a significant change in the nature or an increase in quantity of pollutants discharged; or 3) a significant change in the Permittee's sludge use or disposal practices. Following such notice, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation.

**G22. REPORTING ANTICIPATED NONCOMPLIANCE**

The Permittee shall give advance notice to the Department by submission of a new application or supplement thereto at least one hundred and eighty (180) days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during noncritical water quality periods and carried out in a manner approved by the Department.

**G23. REPORTING OTHER INFORMATION**

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

**G24. REPORTING REQUIREMENTS APPLICABLE TO EXISTING MANUFACTURING, COMMERCIAL, MINING, AND SILVICULTURAL DISCHARGERS**

The Permittee belonging to the categories of existing manufacturing, commercial, mining, or silviculture must notify the Department as soon as they know or have reason to believe:

- A. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following “notification levels”:
1. One hundred micrograms per liter (100 µg/l).
  2. Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony.
  3. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
  4. The level established by the Director in accordance with 40 CFR 122.44(f).
- B. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following “notification levels”:
1. Five hundred micrograms per liter (500 µg/L).
  2. One milligram per liter (1 mg/L) for antimony.
  3. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
  4. The level established by the Director in accordance with 40 CFR 122.44(f).

## **G25. COMPLIANCE SCHEDULES**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.