FS 1239
Lilyblad

COPY

STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

4601 N. Monroe, Suite 202 • Spokane, Washington 99205-1295 • (509) 456-2926

August 17, 2000

Mr. Thomas Adams
Bullivant Houser Attorneys at Law
2400 Westlake Office Tower
1601 Fifth Avenue
Seattle, WA 98101-1618

RE: First Amendment to MTCA Agreed Order No. DE 95HS-S292

Dear Mr. Adams:

Enclosed is the Department of Ecology's proposed First Amendment to Agreed Order No. DE 95HS-S292, which was issued to Lilyblad Petroleum Inc. (Lilyblad) and Sol-Pro Inc. (Sol-Pro) on October 30, 1995. The proposed Amendment will require Lilyblad and Sol-Pro to conduct interim remedial actions to remediate soil and groundwater contamination at the Lilyblad facility located at 2244 Port of Tacoma Road in Tacoma, Washington, and on some adjacent properties affected by releases of hazardous substances from the Lilyblad property. The Amendment also contains substantive provisions of a National Pollutant Discharge Elimination System (NPDES) wastewater discharge permit issued by Ecology, as well as substantive provisions of a Notice of Construction Order of Approval issued by the Puget Sound Clean Air Agency

Please have representatives of Lilyblad and Sol-Pro sign the Amendment, and then send the Amendment and all attachments back to me. I need to receive the package no later than Wednesday, August 23, 2000, in order to maintain the schedule we have developed for the project. If I do receive the document by that date, Ecology will release a Fact Sheet summarizing the proposed action on Monday, August 28, 2000. That date will also be the opening day of a 30-day public comment period on the proposed action. The comment period will close on Wednesday, September 27, 2000

Ecology will evaluate all comments received during the public comment period. If deemed necessary, Ecology will revise the Amendment and/or the attachments to incorporate the public comments received. We will then send you the revised Amendment to be signed again by Lilyblad and Sol-Pro representatives. If no public comments are received, Ecology will sign the Amendment and establish an effective date for the Amendment.

Ecology appreciates both companies signing the Amendment, and we look forward to completing the interim remedial actions as expeditiously as possible. If you have any questions regarding the content of the Amendment or any of the attachments, please contact me as soon as possible.

Sincerely,

Keith L. Stoffel
Site Manager
Hazardous Waste & Toxics Reduction Program

cc: Andy Fitz, AGO
Linda Pang, SWRO

8/17/00

Fact Sheet to A.O.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

In the Matter of Remedial Action at:

Lilyblad Petroleum, Inc.
2244 Port of Tacoma Road
Tacoma, WA 98401

Agreed Order
No. DE95HS-S292
First Amendment

TO: Lilyblad Petroleum, Inc.
2244 Port of Tacoma Road
P.O. Box 1556
Tacoma, WA 98401-1556

Sol-Pro, Inc
3401 Lincoln Avenue
P.O. Box 1781
Tacoma, WA 98401-1781

Collectively referred to herein as the Potentially Liable Persons ("PLPs"):

I. JURISDICTION

This First Amendment to Agreed Order ("Order") No. DE95HS-S292 is issued pursuant to the authority of RCW 70.105D.050(1).

Section III., Findings of Fact, is amended to include:

13. Between June 1997 and June 1999, the PLPs conducted six phases of fieldwork to gather data required to complete a remedial investigation of soil and groundwater contamination at the Lilyblad property and on adjacent properties.

14. On October 29, 1999, the PLPs submitted to Ecology a *"Remedial Investigation Report, Revision 1"*. This report documents the results of the remedial investigation activities conducted through June 1999, including work on properties adjacent to the Lilyblad property. Data presented confirm that contaminated groundwater has flowed, and is continuing to flow, off the Lilyblad property onto adjacent properties.

Section IV., Ecology Determinations, is amended to include:

9. Based on the results of the remedial investigation activities conducted through June 1999, Ecology has determined that hazardous substances are migrating off the Lilyblad property onto adjacent properties. Ecology has further determined this migration poses a threat to human health and the environment. Therefore, Ecology has determined that interim remedial actions consistent with WAC 173-340-430(1) are necessary to stop the continued release of hazardous substances from the Lilyblad property.

10. Ecology has determined that interim remedial actions at the site should include the following:
    - Interception of contaminated groundwater flowing off the Lilyblad property onto adjacent properties; and

- Remediation of contaminated soils and groundwater on some of the adjacent properties that have been contaminated by releases migrating from the Lilyblad property.

11. Ecology has determined that contaminated groundwater flowing from the Lilyblad property must be intercepted and diverted to a treatment system, where groundwater and associated vapors will be treated before the water is discharged to the City of Tacoma stormwater drainage system. Pursuant to RCW 70.105D.090, a person conducting a remedial action at a facility under a MTCA Agreed Order is exempt from the procedural requirements of chapters 70.94, 70.95, 70.105, 75.20, 90.48, and 90.58 RCW, and the substantive provisions of any laws requiring or authorizing local government permits or approvals, if the substantive provisions of the laws are met. Therefore, Ecology has determined that the groundwater treatment system must meet the substantive provisions of a National Pollutant Discharge Elimination System (NPDES) permit issued by Ecology and the substantive provisions of a Notice of Construction Order of Approval issued by the Puget Sound Clean Air Agency.

12. Ecology has determined that accessible soils and groundwater on some of the adjacent properties that have been contaminated by releases migrating from the Lilyblad property must be remediated concurrently with the interception and treatment of contaminated groundwater flowing off the Lilyblad property. Ecology will determine which areas of contamination must be addressed during the interim remedial actions. Remediation technologies employed will include excavation of the contaminated soils with subsequent treatment and/or disposal at an appropriate facility, or *in situ* treatment of the contaminated soils. Groundwater from portions of some of the adjacent properties will also be collected and pumped to the Lilyblad treatment system for remediation before it is discharged to the stormwater drainage system. If soil vapors are extracted from contaminated soils on adjacent properties, the vapors will also be diverted to the treatment system for destruction. The goal of the interim remedial actions on the adjacent properties is to achieve Method B soil and groundwater cleanup levels established in the Model Toxics Control Act [MTCA] Cleanup Regulation (Chapter 173-340 WAC).

Section V., <u>Work to Be Performed</u>, is amended to include:

12. The PLPs must submit to Ecology interim action workplans for the interception and treatment of contaminated groundwater flowing from the Lilyblad property, and for the remediation of contaminated soils and groundwater on some of the adjacent properties. The workplans must be submitted in accordance with a schedule established by Ecology. Upon approval by the Department, the interim remedial actions must be implemented in accordance with a schedule approved by Ecology and established in the interim action workplans. Soil and groundwater cleanup levels established for the interim remedial actions must be met within a time period to be determined by Ecology, which will be documented in the interim action workplans approved by the Department.

Section VI., <u>Terms and Conditions of Order</u>, is amended as follows:

3. <u>Designated Project Managers</u>, is amended as follows:
The project manager for Ecology is:

Name:	Keith L. Stoffel
Address:	Department of Ecology Eastern Regional Office 4601 North Monroe, Suite 202 Spokane, WA 99205-1295
Telephone:	(509) 456-3176
FAX:	(509) 456-6175
E-Mail:	ksto461@ecy.wa.gov

11. Compliance with Other Applicable Laws, is amended to include:

E. As required by RCW70.105D.090, the interim remedial actions to be conducted at the Lilyblad site must comply with the applicable substantive provisions of chapters 70.94, 70.95, 70.105, 75.20, 90.48, and 90.58 RCW, and the substantive provisions of any laws requiring or authorizing local government permits or approvals. Ecology has determined that the groundwater treatment and soil vapor extraction system must be operated in accordance with the substantive provisions of a National Pollutant Discharge Elimination System (NPDES) permit issued by Ecology and a Notice of Construction Order of Approval issued by the Puget Sound Clean Air Agency. These provisions are included as Attachments 6 and 7, respectively, in this First Amendment.

Attachments are amended to include:

Attachment Number 6: **Substantive provisions of NPDES water quality permit**

Attachment Number 7: **Substantive provisions of Notice of Construction air quality permit**

Attachment Number 8: **Fact Sheet for Waste Water Discharge (NPDES permit)**

No other condition or requirement of this Order is affected by this First Amendment.

_____ _____

Lilyblad Petroleum, Inc. Date

Susan Penayan, P.E.

_____ _____

Sol-Pro, Inc. Date

John R. Spencer

_____

K. Seiler
Section Supervisor
Hazardous Waste & Toxics Reduction Program
Southwest Regional Office
Washington Department of Ecology

Effective date of this First Amendment: _____

Attachment Number 6

Substantive provisions of National Pollutant Discharge Elimination System (NPDES) permit

Facility Location: Lilyblad Petroleum, Incorporated (LPI) 2244 Port of Tacoma Road Tacoma, Washington 98401 Water Body I.D. No.: WA-10-0020 Industry Type: Chemical and petroleum storage, blending, and distribution facility with groundwater remediation activity	Receiving Water: Blair Waterway of the Inner Commencement Bay Discharge Location: Latitude: 47° 15' 53" N Longitude: 122° 23' 28" W

is authorized to discharge in accordance with the special and general conditions which follow.

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GENERAL CONDITIONS

SUMMARY OF ORDER REPORT SUBMITTALS

Order Section	Submittal	Frequency	First Submittal Date
S3.A	Discharge Monitoring Report	Monthly	
S3.E	Noncompliance Notification	As necessary	
S4.A	Operations and Maintenance Manual Update or Review Confirmation Letter	Annually	
S4.B	Reporting Bypasses	As necessary	
S6.C	Modification to Solid Waste Plan	As necessary	
S8.	Spill Plan	Updates submitted as necessary	
S9.A	Acute Toxicity Characterization Data		Within 60 days after each sampling event
S9.A	Acute Toxicity Tests Characterization Summary Report	1/order cycle	Within 90 days following the last characterization sampling event
S9.C	Acute Toxicity Compliance Monitoring Reports	As necessary	Within 60 days after each subsequent sampling event
S9.D	Acute Toxicity: "Causes and Preventative Measures for Transient Events."	As necessary	
S9.D	Acute Toxicity TI/TRE Plan	As necessary	
S9.E	Acute Toxicity Effluent Characterization with Order Renewal Application	2/order cycle	Within 60 days after each sampling event
S10.A	Chronic Toxicity Characterization Data		Within 60 days after each sampling event
S10.A	Chronic Toxicity Tests Characterization Summary Report	1/order cycle	Within 90 days following the last characterization sampling event
S10.C	Chronic Toxicity Compliance Monitoring Reports		Within 60 days after each subsequent sampling event

Order Section	Submittal	Frequency	First Submittal Date
S10.D	Chronic Toxicity: "Causes and Preventative Measures for Transient Events."	As necessary	
S10.D	Chronic Toxicity TI/TRE Plan	As necessary	
S10.E	Chronic Toxicity Effluent Characterization with Order Renewal Application	2/order cycle	Within 60 days after each sampling event
G1.	Notice of Change in Authorization	As necessary	
G4.	Order Application for Substantive Changes to the Discharge	As necessary	
G5.	Engineering Report for Construction or Modification Activities	As necessary	
G7.	Application for Order Renewal	1/order cycle	At least 180 days before expiration of order
G8	Notice of Order Transfer	As necessary	
G21	Notice of Planned Changes	As necessary	
G22.	Reporting Anticipated Non-compliance	As necessary	

SPECIAL CONDITIONS

S1. DISCHARGE LIMITATIONS

A. Process Wastewater Discharges

All discharges and activities authorized by this order shall be consistent with the terms and conditions of this order.

The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this order shall constitute a violation of the terms and conditions of this order.

The discharge of any pollutant not specifically authorized by this order in concentrations which violate receiving water quality standards established under section 307(a) of the Clean Water Act or Chapter 173-201A WAC, shall also be a violation of this order and the Clean Water Act.

Beginning on the effective date of this order and lasting through the expiration date, LPI is authorized to discharge treated ground water and caustic scrubber blowdown water from the LPI ground water remediation site at the location subject to complying with the following limitations:

	EFFLUENT LIMITATIONS: OUTFALL # 001C	
Parameter	**Average Monthly[a]**	**Maximum Daily[b]**
pH[c]	Daily minimum is equal to or greater than 6 and the daily maximum is less than or equal to 9.	
Temperature	19 C	19 C
1,1 dichloroethene	0.8 ug/l	1 ug/l
1,2 dichloroethane	34 ug/l	43 ug/l
dichloromethane	1010 ug/l	1272 ug/l
tetrachloroethene	8.85 ug/l	19 ug/l
trichloroethene	14 ug/l	17 ug/l
benzene	9 ug/l	12 ug/l
pentachlorophenol	5[1] ug/l	5[1] ug/l

[1] This expected quantitation limit (QL) for pentachlorophenol (i.e., 5 ug/l) will be used for assessment of compliance with these effluent limits. If LPI is unable to attain this QL in its effluent due to matrix effects, LPI shall submit a matrix specific MDL and QL to the Department within nine months of the effective date of this order. The matrix specific method detection limit (MDL) and QL shall be calculated as follows. MDL = 3.14 x (standard deviation of 7 replicate spiked samples). This corresponds to the calculation of the method detection limit, as defined in 40 CFR

zinc	81 ug/l	81 ug/l
[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. If only one sample is taken during the calendar month, the maximum daily effluent limitation applies to that sample. Average values shall be calculated as follows: measurements below the method detection level (MDL) = 0; measurements above the MDL = the measurement.		
[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. 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.		
[c] Indicates the range of authorized 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.		

LPI may have additional effluent limits in S9. Acute Toxicity and S10. Chronic Toxicity.

B. Mixing Zone Descriptions

A mixing zone is not authorized by this order.

Part 136, Appendix B, with the provision that the MDL be calculated for a specific effluent matrix. The QL = 5 x MDL

S2. MONITORING REQUIREMENTS

A. Monitoring Schedule, Influent

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Ground Water Influent	Volatile Organic Constituents[2]	ug/l	Immediately before ground water enters water treatment system.	1/week for first month of operation, and 1/month thereafter for the term of this order	Grab
"	Semivolatile Organic Constituents[3]	"	"	"	"
"	Metals[4]	"	"	1/month for first year of operation	"

[2] Volatile organic analyses shall be by EPA Method 624 and shall include an extensive tentatively identified compound (TIC) search.
[3] Semivolatile organic analyses shall be by EPA Method 625 and shall include an extensive tentatively identified compound (TIC) search.
[4] All metals shall use methods in 40 CFR 136 and shall be expressed as total recoverable metals. Analyses shall include the following metals and achieve the following detection limits:

POLLUTANT PARAMETER	DETECTION LIMIT REQUIRED
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
Silver	0.2 µg/L
Mercury	0.2 µg/L
Arsenic	1.0 µg/L

B. Monitoring Schedule, Mixed Effluent from Ground Water Treatment System and Associated Air Scrubber.

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Wastewater Effluent	Flow	Gallons per minute	Discharge point of the carbon units	continuous	Flow meter
"	"	"	Discharge point of the air scrubber	"	"
"	1,1 dichloroethene[5]	ug/l	Immediately after mixing treated ground water with scrubber blowdown water.	1/week for first month of operation, 2/month for second through sixth month of operation, and 1/month thereafter for the term of this order unless the Department requires continuation of a frequency of 2/month due to unexpected treatment system performance	grab
"	1,2 dichloroethane[5]	"	"	"	"
"	Dichloromethane[5]	"	"	"	"
"	tetrachloroethene[5]	"	"	"	"
"	trichloroethene[5]	"	"	"	"
"	benzene[5]	"	"	"	"
"	pentachlorophenol[6]	"	"	"	"
"	zinc	"	"	"	"
"	temperature	Degrees centigrade	"	continuous	"
"	pH	Standard Units	"	"	"

[5] Volatile organic analyses shall be by EPA Method 624, and in addition to the compound listed shall include the ten highest TICs.

[6] Analysis for pentachlorophenol shall be by EPA Method 625, and in addition to that compound shall include the ten highest TICs.

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Acute Toxicity Testing	See conditions S9				
Chronic Toxicity Testing	See conditions S10				

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Additional Chemical Analysis of Effluent	dioxin[7]	parts per quadrillion	Immediately after mixing treated ground water with scrubber blowdown water.	twice/year for first year and once during fifth year of operation[8]	grab

* Continuous means uninterrupted - except for brief lengths of time for calibration, power failure, or for unanticipated equipment repair or maintenance. Sampling shall be taken hourly when continuous monitoring is not possible.

C. Monitoring Schedule, Ground Water Treatment System Process Control.

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
Ground Water Treatment System Process Control	Flow	Gallons per minute	Discharge point of the carbon units	continuous	Flow meter
"	1,1 dichloro-ethylene[9]	ug/l	Immediately after iron oxide filter and before the carbon columns	1/week for first month of operation, and 1/month	grab

[7] Dioxin analyses shall be by EPA Method 1613B. Because dioxin is not expected to be present above quantitation limits, there is no effluent limit in this order for dioxin at this time. However, because pentachlorophenol is a contaminant at the site and it is a known precursor to dioxin, Ecology has determined that analysis of the effluent for dioxin is necessary. If warranted based on analytical results, an effluent limit for dioxin will be added later.
[8] Sampling shall occur during the fourth and tenth month after full operation has begun and once during the fifth year of operation.

Category	Parameter	Units	Sample Point	Minimum Sampling Frequency	Sample Type
				thereafter for the term of this order	
"	Tetrachloro-ethene[9]	"	"	"	"
"	Penta-chlorophenol[10]	"	After the first carbon column and before the second carbon column in series	See footnote below[11]	"

B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this order 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 order 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 order or approved in writing by the Department.

LPI shall ensure that quantitation limits of methods used for wastewater effluent analyses are at or below the effluent limits in this order for individual constituents. In addition to reporting organic constituents for wastewater effluent listed in the above table, LPI shall report the next ten tentatively identified compounds.

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[9] Analyses shall be by EPA Method 624.

[10] Analyses shall be by EPA Method 625.

[11] Testing shall be conducted once per week until the pentachlorophenol concentration in the effluent from the first carbon column in series first reaches 5 ug/l. At that time, the first carbon column in series shall be replaced by the second carbon column in series, and a new carbon column shall be placed in the position of the second column in the series. For a second period, testing on this system shall be conducted once per week until the effluent from the first carbon column in series first reaches 5 ug/l pentachlorophenol and the column is replaced. The time period which the first carbon column remains in service during the second testing period will establish the "expected column life." Thereafter, for the term of this order, testing shall be conducted at time intervals equivalent to the following portions of the "expected column life:" 50%, 70%, 90%, 110%, and if necessary others increasing by 20%. In all cases, when the first carbon column in series first reaches 5 ug/l pentachlorophenol, it shall be replaced and the graduated monitoring schedule will start over. If Ecology authorizes an increase in flow to the treatment system, or if LPI changes the size of the carbon columns, then LPI shall reestablish the "expected column life" using the above procedures.

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 are 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 calibration per year. Calibration records shall be maintained for at least three 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, and pH are exempt from this requirement. pH shall be accredited if the laboratory must otherwise be registered or accredited.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

LPI 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 order.

A. Reporting

The first monitoring period begins on the effective date of the order. 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 15th day of the month following the completed monitoring period, unless otherwise specified in this order. The reports shall be sent to the Department of Ecology, Southwest Regional Office, Hazardous Waste and Toxics Reduction Program, PO Box 47775, Olympia, Washington 98504-7775, attn Linda Pang, and Department of Ecology, Eastern Regional Office, Hazardous Waste and Toxics Reduction Program, N.4601 Monroe, Ste 202, Spokane, Washington, 99205-1295, attn Keith Stoffel.

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.

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

LPI 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 order, and records of all data used to complete the application for this order. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by LPI or when requested by the Director.

C. Recording of Results

For each measurement or sample taken, LPI 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 LPI

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

E. Noncompliance Notification

In the event LPI is unable to comply with any of the terms and conditions of this order due to any cause, LPI 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 LPI from responsibility to maintain continuous compliance with the terms and conditions of this order or the resulting liability for failure to comply.

S4. OPERATION AND MAINTENANCE

LPI 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 order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up 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 order.

A. Operations and Maintenance Manual

The approved Operations and Maintenance (O&M) Manual shall be kept available at the facility and all operations shall follow the instructions and procedures of the O&M Manual. The O&M Manual shall be reviewed by LPI at least annually and LPI 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.

B. Bypass Procedures

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 for bypass unless one of the following circumstances (1, 2, or 3) is applicable.

1. Bypass for Essential Maintenance without the Potential to Cause Violation of Limits or Conditions in this Order.

   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 order, or adversely impact public health as determined by the Department prior to the bypass. LPI shall submit prior notice, if possible, at least ten (10) days before the date of the bypass.

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

   This bypass is authorized 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 judgement 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 S3E of this order.

3. Bypass which is Anticipated and has the Potential to Result in Noncompliance of this Order.

LPI shall notify the Department at least thirty (30) days before the planned date of bypass. The notice shall contain (1) a description of the bypass and its cause; (2) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (3) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (4) the minimum and maximum duration of bypass under each alternative; (5) a recommendation as to the preferred alternative for conducting the bypass; (6) the projected date of bypass initiation; (7) a statement of compliance with SEPA; (8) 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 (9) 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. 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 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 Department will consider the following prior to issuing an administrative order for this type bypass:

a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this order.

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.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, the Department will approve or deny the request. The public shall 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

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

S5. FACILITY LOADING

A. Design Criteria

Flows or waste loadings of the following design criteria for the LPI treatment facility shall not be exceeded:

System	Instantaneous Peak Flow
Ground water treatment process (i.e., equalization tank, oil/water separator,[12] air sparger, iron oxide filter, activated carbon columns)	10 gpm[13]
Caustic scrubber	10 gpm
Total system (i.e., ground water treatment system plus caustic scrubber)	20 gpm

[12] If there is no floating product, this unit will not be required in the treatment process

[13] After LPI demonstrates the expected adequate performance of the ground water treatment system at a flow of 10 gpm, LPI may request to increase the flow up to 20 gpm in 5 gpm increments. Ecology may approve this increase without additional public notice. For a new higher flow limit to be approved, LPI must demonstrate that there is no reasonable potential to exceed any limit in this order at the increase flow. This demonstration must include a detailed analysis of treatment efficiency at the previously approved lower flow. If a limit is exceeded at the new flow, LPI shall immediately reduce flow to the system to the previously approved lower limit. If Ecology approves an increase flow to the gound water treatment system, that will mean an equivalent increase in approved peak flow from the total system.

S6. SOLID WASTE DISPOSAL

A. Solid Waste Handling

LPI 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

LPI 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. LPI shall apply for a permit or modification of this order as may be required for such discharges to state ground or surface waters.

S7. NON-ROUTINE AND UNANTICIPATED DISCHARGES

A. Beginning on the effective date of this order, LPI may discharge non-routine wastewater on a case-by-case basis if approved by the Department. Prior to any such discharge, LPI shall contact the Department and **at a minimum** provide the following information:

1. The nature of the activity that is generating the discharge.
2. Any alternatives to the discharge, such as reuse, storage, or recycling of the water.
3. The total volume of water expected to be discharged.
4. The results of the chemical analysis of the water. The water shall be analyzed for all constituents limited for LPI's discharge and other organic constituents which based on prior facility characterization are likely to be in the water and whose concentration are either unknown or likely to be higher than the water quality standards. The analysis shall also include any metals that are limited by water quality standards, and any other parameter deemed necessary by the Department. All discharges must comply with the effluent limitations as established in Condition S1. of this order, water quality standards, sediment management standards, and any other limitations imposed by the Department.
5. The date of proposed discharge and the rate at which the water will be discharged, in gallons per minute. The discharge rate shall be limited to that which will not cause erosion of ditches or structural damage to culverts and their entrances or exits.
6. If the proposed discharge is to a municipal storm drain and is approved by the Department, LPI shall notify the municipality of the discharge.

B. The discharge cannot proceed until the Department has reviewed the information provided and has authorized the discharge. Authorization from the Department will be by letter to LPI or by an Administrative Order.

S8. SPILL PLAN

LPI shall review the existing Spill Prevention Control and Countermeasure Plan at least annually and update it as needed. Changes to the plan shall be sent to the Department within 30 days of the modification. The plan and any supplements shall be followed throughout the term of the order.

S9. ACUTE TOXICITY

A. Effluent Characterization

LPI 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 once during the wet season and once during the dry season immediately following the first quarter of full operation. 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_{50}). The percent survival in 100% effluent shall also be reported.

A written report shall be submitted to the Department within 60 days after the sample date. A final effluent characterization summary report shall be submitted to the Department within 90 days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability which is developed during the period of testing.

Acute toxicity tests[14] shall be conducted with the following species and protocols:

1. Topsmelt, *Atherinops affinis* (96 hour static-renewal test, method: EPA/600/R-95/136).

2. Mysid, *Holmesimysis costata* (48 hour static test, method: EPA/600/R-95/136).

LPI shall use the West Coast fish (topsmelt, *Atherinops affinis*) and mysid (*Holmesimysis costata*) for toxicity testing unless the lab cannot obtain a sufficient

[14] Acute test results may be provided from the 7-day chronic test by using the daily survival from the 7-day chronic test at 48 hours for mysids and at 96 hours for topsmelt. Data analysis and reporting shall follow procedures for acute testing.

quantity of a West Coast species in good condition in which case the East Coast fish (silverside minnow, *Menidia beryllina*) or mysid (*Mysidopsis bahia*) may be substituted.

B. Effluent Limit for Acute Toxicity

LPI 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, LPI 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 LPI shall complete all applicable requirements in subsections E and F.

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, LPI is considered to be in compliance with all order requirements for acute whole effluent toxicity as long as the requirements in subsection D. are being met to the satisfaction of the Department.

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 order term using each of the species listed in subsection A on a rotating basis and performed using at a minimum 100% effluent and a control. LPI shall schedule the toxicity tests in the order listed above unless the Department notifies LPI 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 100% effluent. LPI 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 100% effluent 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 100% effluent 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 LPI violates the acute toxicity limit in subsection B, LPI 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 using the same test and species as the failed compliance test. Testing shall determine the LC_{50} and effluent limit compliance. The discharger shall return to the original monitoring frequency in subsection C after completion of the additional compliance monitoring.

If LPI believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, LPI may notify the Department that the compliance test result might be anomalous and that LPI 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. LPI 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 LPI 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 order limit, LPI 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, LPI shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department within 60 days after test results are final. 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 Order Limit for Acute Toxicity

LPI shall test final effluent at least once during January/February and once during August/September in the fifth year after the effective date of this order. 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 order 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 LPI shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on grab samples. 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. The lab shall begin the toxicity testing as soon as possible, but no later than 36 hours after sampling was ended.

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. LPI 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 100% effluent.

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.

S10. CHRONIC TOXICITY

A. Effluent Characterization

LPI 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 for chronic toxicity shall be conducted once during the wet season and once during the dry season immediately following the first quarter of full operation. A written report shall be submitted to the Department within 60 days after the sample date. A final effluent characterization summary report shall be submitted to the Department within 90 days after the last monitoring test results are final. This summary report shall include a tabulated summary of the individual test results and any information on sources of toxicity, toxicity source control, correlation with effluent data, and toxicity treatability which is developed during the period of testing.

LPI 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. This series of dilutions shall include 100% effluent. LPI shall compare 100% effluent to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

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

1. Topsmelt, *Atherinops affinis* - Method - EPA/600/R-95/136.

2. Mysid, Holmesimysis *costata* - Method - EPA/600/R-95/136.

LPI shall use the West Coast fish (topsmelt, *Atherinops affinis*) and 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 fish (silverside minnow, *Menidia beryllina*) or mysid (*Mysidopsis bahia*) may be substituted.

B. Effluent Limit for Chronic Toxicity

After completion of effluent characterization, LPI has an effluent limit for chronic toxicity if any test conducted for effluent characterization shows a significant difference between the control and 100% effluent 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.

If no significant difference is shown between 100% effluent and the control in any of the chronic toxicity tests, LPI has no effluent limit for chronic toxicity and only subsections E and F apply.

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

After completion of effluent characterization, LPI has an effluent limit for chronic toxicity if any test conducted under subsection A results in an NOEC less than the 100% effluent, or if any test shows a significant difference between the control and 100% effluent at the 0.05 level of significance using hypothesis testing (Appendix H, EPA/600/4-89/001). LPI 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 100% effluent or if no significant difference is shown between the ACEC and the control in any of the chronic toxicity tests, LPI has no effluent limit for chronic toxicity and only subsections E and F apply.

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

Monitoring to determine compliance with the effluent limit shall be conducted quarterly for the remainder of the order term using each of the species listed in subsection A above on a rotating basis and performed using at a minimum 100% effluent and a control. LPI shall schedule the toxicity tests in the order listed above unless the Department notifies LPI 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 100% effluent. LPI 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 100% effluent 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 orders, LPI 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 100% effluent 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 determines a statistically significant difference in response between 100% effluent and the control, LPI 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. 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 100% effluent 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 LPI believes that a test indicating noncompliance will be identified by the Department as an anomalous test result, LPI may notify the Department that the compliance test result might be anomalous and that LPI 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. LPI 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 LPI 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 order limit, LPI 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, LPI shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to the Department within 60 days after test results are final. 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 Order Limit for Chronic Toxicity

LPI shall test final effluent at least once during January/February and once during August/September in the fifth year after the effective date of this order. 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 order 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 LPI shall send the disk to the Department along with the test report, bench sheets, and reference toxicant results.

2. Testing shall be conducted on grab samples. 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. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

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. LPI 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 100% effluent.

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.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

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

A. All applications for authorization to discharge treated waste water 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 order 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

LPI 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 order.

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 order.

C. To inspect - at reasonable times - any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this order.

D. To sample or monitor - at reasonable times - any substances or parameters at any location for purposes of assuring order compliance or as otherwise authorized by the Clean Water Act.

G3. ORDER ACTIONS

This order may be modified, revoked and reissued, or terminated either at the request of any interested person (including LPI) or upon the Department's initiative.

A. The following are causes for terminating this order during its term, or for denying a renewal application to discharge treated waste water:

1. Violation of any order term or condition.

2. Obtaining the authority to discharge treated waste water through this order 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 activity authorized by this order endangers human health or the environment or contributes to water quality standards violations and can only be regulated to acceptable levels by modification or termination of this order[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 order [40 CFR part 122.64(4)].

6. Nonpayment of fees assessed pursuant to RCW 90.48.465.

7. Failure or refusal of LPI to allow entry as required in RCW 90.48.090.

B. The following are causes for modification but not revocation and reissuance except when LPI 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 order issuance that would have justified the application of different order conditions.

3. Material and substantial alterations or additions to the LPI facility or activities which occurred after this order issuance.

4. Promulgation of new or amended standards or regulations having a direct bearing upon order conditions, or requiring order revision.

5. LPI 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 order. A order 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

LPI 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 order. This application shall be submitted at least sixty (60) days prior to any proposed changes. The filing of a request by LPI for a order modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve LPI of the duty to comply with the existing order 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 eighty (180) days prior to the planned start of construction unless a shorter time is approved by The Department. Facilities shall be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

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

G7. DUTY TO REAPPLY

LPI shall apply for renewal of this order at least 180 days prior to the specified expiration date of this order.

G8. TRANSFER OF THIS ORDER

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

A. Transfers by Modification

Except as provided in paragraph B below, this order may be transferred by LPI to a new owner or operator only if this order 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 order may be automatically transferred to a new Permittee if:

1. LPI notifies the Department at least 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 order 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 order. 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

LPI, in order to maintain compliance with its order, 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

LPI 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 order or to determine compliance with this order. LPI shall also submit to the Department upon request, copies of records required to be kept by this order [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 order by reference.

G13. ADDITIONAL MONITORING

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

G14. PAYMENT OF FEES

LPI shall submit payment of fees associated with this order as assessed by the Department.

G15. PENALTIES FOR VIOLATING ORDER CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this order 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 order 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 order effluent limitations because of factors beyond the reasonable control of LPI. 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 order 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 LPI can identify the cause(s) of the upset; 2) the facility was being properly operated at the time of the upset; 3) LPI submitted notice of the upset as required in condition S3.E; and 4) LPI complied with any remedial measures required under S5 of this order.

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

G17. PROPERTY RIGHTS

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

G18. DUTY TO COMPLY

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

G19. TOXIC POLLUTANTS

LPI 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 order 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

order shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two 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

LPI shall, as soon as possible, give notice to the Department of planned physical alterations or additions to the facility, production increases, or process modification which will result in: 1) the 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 LPI's sludge use or disposal practices. Following such notice, this order 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 order limits or not specifically authorized by this order constitutes a violation.

G22. REPORTING ANTICIPATED NON-COMPLIANCE

LPI 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 facility or activity which may result in noncompliance with order limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during non-critical water quality periods and carried out in a manner approved by the Department.

G23. REPORTING OTHER INFORMATION

Where LPI becomes aware that it failed to submit any relevant facts in an application for authorization to discharge waste water under this order, or submitted incorrect information in an application or in any report to the Department, it shall promptly submit such facts or information.

G24. COMPLIANCE SCHEDULES

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

Puget Sound Clean Air Agency

Notice of Construction No. 8186

Registration No. 21339

Date

HEREBY ISSUES AN ORDER OF APPROVAL TO CONSTRUCT, INSTALL, OR ESTABLISH

In-Situ Soil Vapor Extraction Wells and Air Sparging Tank with emissions controlled by a Thermal Oxidizer, a Quench Chamber, and a Caustic Soda Scrubber.

APPLICANT
Scott Adamek
Camp Dresser & McKee
PO Box 3885
Bellevue, WA 98009

OWNER
Dennis Montgomery
Lilyblad Petroleum, Inc
PO Box 1556
Tacoma, WA 98401-1556

INSTALLATION ADDRESS

Lilyblad Petroleum, Inc, 2244 Port of Tacoma Rd, Tacoma, WA, 98421

THIS ORDER IS ISSUED SUBJECT TO THE FOLLOWING RESTRICTIONS AND CONDITIONS

1. Approval is hereby granted as provided in Article 6 of Regulation I of the Puget Sound Clean Air Agency to the applicant to install or establish the equipment, device or process described hereon at the INSTALLATION ADDRESS in accordance with the plans and specifications on file in the Engineering Division of the Puget Sound Clean Air Agency.

2. This approval does not relieve the applicant or owner of any requirement of any other governmental agency.

3. Lilyblad Petroleum shall vent all air effluent from the extraction wells and air sparging tank through the oxidizer, pre-scrubber heat exchanger/quench chamber, and scrubber.

4. Lilyblad Petroleum shall not operate the vapor extraction system unless the temperature in the thermal oxidizer combustion bed is maintained at or above 1500 degrees F. Lilyblad Petroleum shall continuously measure and record the temperature of the thermal oxidizer to an accuracy of +/- 50 degrees F. Lilyblad Petroleum shall maintain the temperature monitor according to manufacturer's specifications and keep a record of the temperature on site for Puget Sound Clean Air Agency inspection.

5. Within 60 days of startup, Lilyblad Petroleum shall determine the Destruction and Removal Efficiency (DRE) of the oxidizer using EPA Method TO-14 and EPA Method 2. After the initial test and except to test the oxidizer DRE, Lilyblad Petroleum shall not operate the vapor extraction system unless the most recent DRE across the oxidizer is greater than 99.9% for each of the following: vinyl chloride, methylene chloride, trichloroethene (TCE), and tetrachloroethene (PCE). Lilyblad Petroleum shall determine DRE for each pollutant using the following equation:

DRE = ((Mass flow rate in - Mass flow rate out) / (Mass flow rate in)) * 100

6. Lilyblad Petroleum shall perform monthly monitoring as follows:

(a) Measure the air flow rate entering and leaving the oxidizer with EPA Method 2;

(b) Collect air samples at the inlet and outlet of the oxidizer;

(c) Perform laboratory analysis of the samples to determine concentrations of vinyl chloride, methylene chloride,

Order of Approval for NC No. 8186

ichloroethene (TCE), and tetrachloroethene (PCE);

(d) Determine the DRE of the individual pollutants listed above using the equation described in Condition No. 5;

(e) Determine the emission rates of the individual pollutants listed above using the air flow rate from the most recent EPA Method 2, multiplied by hours of operation for the month multiplied by the outlet concentration as determined above; and

(f) Lilyblad Petroleum shall keep monthly monitoring results on site and notify the Puget Sound Clean Air Agency within 15 days of receiving the information if the monthly emission rates as estimated with the average quantities in the last monitoring exceed the limits listed below or DRE falls below 99.9% for any of the 4 listed pollutants:

Vinyl Chloride: 0.4 lb/month

Methylene Chloride: 3.0 lb/month

Trichloroethene: 3.0 lb/month

Tetrachloroethene: 10.0 lb/month.

7. The concentration of HCl in the effluent shall not exceed 5 ppmv as measured by EPA Method 26 or 26A. Within 60 days after startup, Lilyblad Petroleum shall determine the concentration of HCl in the stream leaving the stack. Lilyblad Petroleum shall measure the following operating parameters during the source test:

(a) Liquid flow rate (gallons/minute) through the scrubber;

(b) pH of the liquid leaving the scrubber; and

(c) LP shall keep a monthly record of the:

(1) Average water flow rate (gallons/minute) as determined by a rotalizer and hours of operation, and

(2) Average pH of the liquid leaving the scrubber as determined by the built-in pH monitor.

The water flow rate and the pH should be in the ranges established during the source test.

8. The concentration of dioxins and furans in the effluent shall not exceed 7.5 ng/dscm corrected to 7% O2 TEQ (Puget Sound Clean Air Agency Regulation III, Section 2.07(b)(3)(B)) as measured by EPA Method 23. Within 60 days of start-up, Lilyblad Petroleum shall determine the concentrations of dioxins and furans and every 3 years thereafter unless the initial test shows that the dioxin concentration is below 1 ng/dscm.

9. Lilyblad Petroleum shall make all records required by this approval available to Puget Sound Clean Air Agency personnel upon request.

10. Lilyblad Petroleum shall submit quarterly reports to the Puget Sound Clean Air Agency Attn: Compliance Certification. The reports shall at least contain the following:

(a) Lowest temperature of the oxidizer bed as determined by the monitoring system required by Condition No. 4 during operation of the vapor extraction;

(b) The lowest DRE of the thermal oxidizer as determined according to Condition No. 6;

Order of Approval for NC No. 8186

c) Monthly emission rates of vinyl chloride, methylene chloride, TCE, and PCE as determined according to Condition No. 6; and

(d) Total number of hours operated for each month.

11. Operation of the soil vapor extraction system shall not be allowed for a period longer than 6 years.

APPEAL RIGHTS

Pursuant to Puget Sound Clean Air Agency's Regulation I, Section 3.17 and RCW 43.21B.310, this Order may be appealed to the Pollution Control Hearings Board (PCHB). To appeal to the PCHB, a written notice of appeal must be filed with the PCHB and a copy served upon Puget Sound Clean Air Agency within 30 days of the date the applicant receives this Order.

Kwame Agyei, PE
Reviewing Engineer
mej

Jay M. Willenberg, PE
Reviewing Engineer

Dennis J. McLerran
Air Pollution Control Officer

Attachment Number 8

Fact Sheet for Wastewater Discharge

FACT SHEET FOR WASTEWATER DISCHARGE
LILYBLAD PETROLEUM, INC.

SUMMARY

The Department of Ecology (Ecology) has made a tentative decision to issue a wastewater discharge authorization to Lilyblad Petroleum Inc. (LPI) for discharge of treated groundwater to surface water of the State. The groundwater will be extracted and treated during remedial actions taken to clean up soil and groundwater contamination at the Site. The remedial actions will be conducted to satisfy the conditions of an Agreed Order issued by Ecology under the authority of the Model Toxics Control Act (MTCA).

Pursuant to RCW 70.105D.090, a National Pollutant Discharge Elimination System (NPDES) permit is not required for remedial actions conducted under a MTCA Agreed Order, if all substantive provisions of the NPDES permit are met. **Therefore, Ecology is proposing to issue the LPI wastewater discharge authorization through MTCA Agreed Order No. DE95HS-S292, which will include the substantive provisions of an NPDES permit as an enforceable attachment.** The Order will require LPI to meet requirements in the Federal Clean Water Act and laws and regulations of the State of Washington that govern wastewater discharges to surface waters of the state.

The wastewater discharge authorization will be effective for five (5) years from the effective date of the First Amendment to MTCA Agreed Order No. DE95HS-S292.

In October 1995, LPI, Sol-Pro, Inc. (SPI), and Ecology signed MTCA Agreed Order No. DE95HS-S292, which requires LPI and SPI to investigate and cleanup soil and groundwater contamination at the Lilyblad facility and on surrounding properties that are affected by releases of hazardous substances from the Lilyblad facility. Extraction, treatment, and discharge of contaminated groundwater will be an essential part of the facility cleanup.

LPI is located at 2244 Port of Tacoma Road, in an industrial area of the Port of Tacoma on the Tacoma tidal flats. LPI proposes to discharge treated groundwater to the City of Tacoma storm drain located along the Port of Tacoma Road in front of the facility. The discharge will ultimately flow into marine water in the Blair Waterway of Inner Commencement Bay.

The tentative decision to authorize the wastewater discharge is based on a determination that two necessary conditions are fulfilled: (1) that the minimum treatment/control criteria established by state and federal regulations are achievable with the technologies and management practices proposed by LPI, and (2) that the discharge under these technology-based controls will not have a reasonable potential to cause or contribute to violations of any receiving water quality standards or diminish the beneficial uses of the receiving water.

Interested persons are invited to comment on Ecology's tentative decision by submitting comments on the proposed First Amendment to MTCA Agreed Order No. DE95HS-S292. Please submit comments to Ecology at the address given in Appendix A. **A 30-day public comment period on the Order begins on August 28, 2000 and ends on September 27, 2000.** Upon request, the Department will provide copies of the LPI wastewater discharge application,

the MTCA Agreed Order (which contains the NPDES substantive provisions as an enforceable attachment), and a MTCA Fact Sheet describing the proposed action. All written comments submitted will be considered by Ecology before the Department makes a final decision on the proposed wastewater discharge authorization. Persons who submit comments will be notified of the final decision.

The applicant or anyone affected by or interested in the proposed decision may request a public hearing. The request must be filed within the 30-day comment period, and must indicate the interest of the party filing the request and the reason why a hearing is warranted. Ecology will hold a public hearing if it determines there is sufficient public interest.

INTRODUCTION

The Federal Clean Water Act (FCWA, 1972, and later modifications, 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One of the mechanisms for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System of permits (NPDES permits), which is administered by the Environmental Protection Agency (EPA). The EPA has delegated responsibility to administer the NPDES permit program to the State of Washington on the basis of Chapter 90.48 RCW, which defines the Department of Ecology's authority and obligations in administering the wastewater discharge permit program.

The regulations adopted by the State include procedures for issuing permits (Chapter 173-220 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of wastewater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements (WAC 173-220-060) for issuing a permit under the NPDES permit program is the preparation of a draft permit and an accompanying fact sheet. Public notice of the availability of the draft permit is required at least thirty days before the permit is issued (WAC 173-220-050).

The Department of Ecology proposes to issue an Agreed Order, under the authority of the Model Toxics Control Act (RCW 70.105D), in lieu of a NPDES permit for this proposed wastewater discharge. The Order includes substantive provisions of an NPDES permit as an enforceable attachment to the Order.

This Fact Sheet describes the proposed wastewater discharge and the NPDES substantive provisions that must be met. A separate Fact Sheet is available from Ecology, which describes the MTCA Agreed Order and proposed remedial actions.

Ecology will accept public comments on the proposed MTCA Agreed Order and all enforceable attachments from August 28, 2000 through September 27, 2000. After the public comment period has closed, Ecology will prepare a Responsiveness Summary, which summarizes the Department's substantive comments received and responses to each of the comments. The response to comments will become part of the file on the Order. All parties who submit comments will receive a copy of the Responsiveness Summary.

GENERAL INFORMATION	
Applicant	Lilyblad Petroleum, Incorporated P.O. Box 1556 Tacoma, Washington 98401
Facility Name and Address	Lilyblad Petroleum, Incorporated 2244 Port of Tacoma Road Tacoma, Washington 98401
Type of Facility:	Chemical and petroleum storage, blending, and distribution facility with ground water remediation activity
SIC Code	5172 – Petroleum Products, Nec; 5171 – Petroleum Bulk stations/Terminals; 2992-Lubricating Oils and Greases
Discharge Location	Waterbody name: Blair Waterway Latitude: 47° 15' 53" N Longitude: 122° 23' 28" W.
Water Body ID Number	WA-10-0020

BACKGROUND INFORMATION

DESCRIPTION OF THE FACILITY

Lilyblad Petroleum, Inc. (LPI) operates a 1.98-acre chemical petroleum storage, blending, and distribution facility located at 2244 Port of Tacoma Road in Tacoma, Washington. As shown in Figure 1, the facility consists of two tank farms, two loading areas, and two covered areas for product blending, and a diesel cardlock island, product warehouses and offices. Process-related wastewater and storm water from the site is discharged to the City of Tacoma stormwater drainage system, through an existing NPDES permit (Permit No. WA0038679).

HISTORY

Lilyblad Petroleum, Inc. (LPI) has been the owner and principal operator of the facility at 2244 Port of Tacoma Road since 1972. LPI is currently the owner and sole operator of the facility. Sol-Pro Inc. (SPI) was also an operator at the facility in the past, first in a joint venture with Lilyblad, and later as the sole operator of a leased portion of the facility.

In 1972, Lilyblad began operating as a distributor of gasoline, diesel, solvents, chemicals, and packaged petroleum products. Lilyblad also engaged in waste fuel blending. Through the years, Lilyblad also periodically recycled spent solvents and other dangerous wastes. In 1983, Lilyblad entered into a joint venture with Sol-Pro to recycle and reclaim parts washer solvents and other chlorinated and non-chlorinated solvents. Sol-Pro was the principal operator of the joint venture until 1988, when the joint venture was dissolved and the recycling unit was removed from the Site and taken to another Sol-Pro facility.

SPILLS AND DISCHARGES

Releases and potential releases of hazardous substances have been documented at the Lilyblad facility. Known releases have included volatile and semi-volatile organic compounds, total petroleum hydrocarbons, and metals. Spills and discharges of chemicals managed at the LPI facility have contaminated soils and groundwater at the Site.

In 1995, Ecology determined the releases of hazardous substances at the Site posed a threat to human health and the environment. On January 18, 1995, Ecology notified Lilyblad and Sol-Pro of their status as "potentially liable persons" (PLPs) for releases of hazardous substances at the Site. In October 1995, LPI, SPI, and Ecology signed an Agreed Order, which requires the two companies to investigate and cleanup contaminated soils and groundwater on Lilyblad property and on surrounding properties that are affected by releases from the LPI facility. Regulatory actions affecting site cleanup are currently being directed through Ecology under that Order. To date, the site has not generated contaminated ground water that requires treatment prior to discharge. However, extraction and treatment of contaminated groundwater are necessary to achieve site cleanup, and authorization for those activities is the purpose of this Fact Sheet and associated Order.

PERMIT STATUS

LPI received its first NPDES permit on November 25, 1992, for discharges of process related wastewater and stormwater. That permit was revised and reissued on June 4, 1999. The permit authorizes the discharge of process wastewater and stormwater to the City of Tacoma stormwater

drainage system located in front of the LPI facility along Port of Tacoma Road. The City's storm drain empties into the Lincoln Avenue Ditch, which flows into the Blair Waterway. Water from the Lincoln Avenue Ditch enters a closed culvert, and remains in that culvert until it is discharged through a tide gate to the Blair Waterway. The Blair Waterway is a part of Puget Sound's Commencement Bay.

PROPOSED DISCHARGE OUTFALL

LPI now proposes to also discharge treated ground water to the City of Tacoma storm drain. This will be will be a new activity at the LPI facility.

Ecology received LPI's application for authorization to discharge treated ground water on March 3, 2000. Ecology has evaluated LPI's proposed discharge, and has determined to base discharge limits on marine receiving water. By meeting the marine water quality criteria, Ecology believes the Blair Waterway and existing uses in the affected section of the Lincoln Avenue ditch will be protected. This section of the Lincoln Avenue Ditch is not expected to be a potential drinking water source because it is tidally influenced and the natural chloride concentration at the point of discharge is expected to be in the range of 550 to 800 mg/l. Therefore, effluent limits were not developed to protect this section of the Ditch as a potential drinking water source. Also, the natural chloride level in this section of the ditch precludes it as a habitat for some freshwater species. Therefore, Ecology determined that marine water quality criteria and use of salt-water species for whole effluent toxicity (WET) testing are appropriate for protection of uses by wildlife.

WASTEWATER CHARACTERIZATION

The contaminated ground water contains several constituents that exceed water quality criteria. These constituents are listed in Table 1. In addition to these constituents, the ground water contains numerous other chlorinated and nonchlorinated organic contaminants at concentrations below the water quality criteria, or that have no water quality criteria (see Appendix C). These additional contaminants have chemical characteristics similar to the constituents that are above the water quality criteria. Therefore, their concentrations will also be significantly reduced by the treatment process. By comprehensively addressing the treatment of the constituents listed in Table 1, LPI will assure that:

- No constituent will be discharged above its water quality criteria
- Organic contaminants in the ground water which are below the water quality criteria or that do not have water quality criteria will be reduced by the treatment process prior to discharge

Concentrations listed in Table 1 are based on characterization of untreated ground water during the years of 1998 and 1999. The concentrations are based on selected ground water wells at the LPI site in the vicinity of proposed ground water extraction. The concentrations are upper 90th percentile confidence limit of the distribution of data collected. Thus, the concentrations given below are higher than the expected average concentrations of the constituents in the untreated ground water.

Table 1: Wastewater Characterization

Constituents Above Water Quality Criteria	Concentration (upper 90th percentile confidence limit)
1,1 dichloroethene	300 ug/l
1,2 dichloroethane	320 ug/l
dichloromethane (methylene chloride)	9,600 ug/l
Tetrachloroethene	540 ug/l
Trichloroethene	470 ug/l
Benzene	320 ug/l
Pentachlorophenol	960 ug/l
Zinc	120 ug/l

PROPOSED ORDER LIMITATIONS

Federal and State regulations require that effluent limitations set forth in a NPDES permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-220 WAC). Water quality-based limitations are based upon compliance with the Surface Water Quality Standards (Chapter 173-201A WAC), Ground Water Standards (Chapter 173-200 WAC), Sediment Quality Standards (Chapter 173-204 WAC) or the National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992). The more stringent of these two limits must be chosen for each of the parameters of concern. Each of these types of limits is described in more detail below.

Although Ecology proposes to authorize LPI's wastewater discharge in a MTCA Agreed Order instead of an NPDES permit, Ecology will require all of the substantive provisions of an NPDES permit and water quality rules and regulations in the MTCA Order.

The limits in this Order are based in part on information received in the application. The effluent constituents in the application were evaluated on a technology and water quality basis. The limits necessary to meet the rules and regulations of the State of Washington were determined and included in this Order. Ecology did not develop effluent limits for all pollutants reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and/or do not have a reasonable potential to cause a water quality violation. Effluent limits have not been established for pollutants that may be in the discharge but are not reported as present in the application. However, the Order does not authorize discharge of the non-reported pollutants. Effluent discharge conditions may change from the conditions reported in the Order application. If significant changes occur in any constituent, as described in 40 CFR 122.42(a), LPI is required to

notify the Department of Ecology. LPI could be in violation of the Order unless it is modified to reflect additional discharge of pollutants.

DESIGN CRITERIA

In accordance with WAC 173-220-150 (1)(g), flows or waste loadings shall not exceed approved design criteria.

The design criteria for this treatment facility are taken from Lilyblad Petroleum, Inc. industrial wastewater engineering report prepared by Camp Dresser & McKee Inc. and are as follows:

Table 2: Design Standards for LPI.

Parameter	Design Quantity
Instantaneous peak flow from ground water treatment process (i.e., equalization tank, oil/water separator,[1] air sparger, iron oxide filter, activated carbon columns)	10 gallons per minute (gpm)[2]
Instantaneous peak flow from caustic scrubber	10 (gpm)
Instantaneous peak flow for total system (ground water treatment process plus caustic scrubber)	20 (gpm)

After LPI demonstrates adequate performance of the ground water treatment system at a flow of 10 gpm, LPI may request to increase the flow up to 20 gpm in 5 gpm increments. Ecology may approve this increase without additional public notice. For a new higher flow limit to be approved, LPI must demonstrate that there is no reasonable potential to exceed any limit in this Order at the increased flow rate. This demonstration must include a detailed analysis of treatment efficiency at the previously approved lower flow. If a limit is exceeded at the new flow, LPI must immediately reduce flow to the system to the previously approved lower limit. If Ecology approves an increased flow to the ground water treatment system, that will result in an equivalent increase in approved peak flow from the total system.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

Organic Constituents:

LPI proposes to install a ground water treatment system based on air stripping of volatile organic contaminants and carbon adsorption of semivolatile organic contaminants. Under the proposed

[1] If there is no floating product, this unit will not be required in the treatment process.
[2] The design flow for this system is actually 15–20 gpm, and a 15 gpm flow is the basis for determining technology-based effluent limitations. However, the ground water to be treated is complex with numerous organic constituents and a relatively high total dissolved solids content. LPI has not conducted comprehensive treatibility studies on the ground water. Therefore, Ecology wishes to evaluate the performance of the treatment system at 10 gpm before authorizing Lilyblad to operate at its design flow rate.

operating conditions, expected removal efficiencies range from 96% to 99.9% for organic contaminants that have a reasonable potential to exceed water quality criteria. At these expected treatment efficiencies, all organic contaminants except for tetrachloroethene will be reduced to concentrations below the water quality criteria. Expected treatment efficiencies and technology based effluent limitations are based on a flow of 15 gallons per minute to the treatment system.

Since the technology based effluent limitations for these constituents are generally more stringent than the water quality criteria, technology based effluent limitations are established as discharge limits in the draft Order. The exception is for tetrachloroethene; for that constituent, the water quality criteria is lower than a technology based effluent limitations. Therefore, although the technology based limit is used for the daily maximum effluent limit for tetrachloroethene, the water quality criteria is the discharge limit for the monthly average effluent limit. See Table 3 for a summary of effluent limits.

Table 3: Effluent limitations and other information on organic constituents that have a reasonable potential to exceed water quality criteria.

Parameter	Design Influent Conc. (ug/l)	Expected Treatment Efficiency (%)	Expected Average Effluent Conc. (ug/l)	Average Monthly Effluent Limit (ug/l)	Maximum Daily Effluent Limit (ug/l)	Water quality criteria (ug/l)
1,1 dichloroethene	300	99.9	0.3	**0.8**	**1**	3.2
1,2 dichloroethane	320	96.0	12	**34**	**43**	99
Dichloromethane	9,600	96.0	382	**1010**	**1272**	1600
Tetrachloroethene	540	98.9	6	**8.85**	**19**	8.85
Trichloroethene	470	98.9	5	**14**	**17**	81
Benzene	320	98.9	4	**9**	**12**	71
Pentachlorophenol	960	>99.5	<5	**5**	**5**	7.9

The proposed treatment system for LPI is new, so actual performance data for the treatment system and the Site's ground water does not exist. The technology based limits for 1,1 dichloroethene, 1,2 dichloroethane, dichloromethane, trichloroethene, and benzene are based on engineering information developed by the manufacturers of components of the proposed treatment systems. The "average monthly effluent limit" is the upper 95% percentile of the "expected average effluent concentration." When calculating this limit," Ecology assumed a normal distribution of effluent concentrations with a coefficient of variation of "1." Similarly, the "maximum daily effluent limit" is based the upper 99% percentile of the "expected average effluent concentration." Again, Ecology assumed a normal distribution of effluent concentrations with a coefficient of variation of "1."

The actual distribution and value of the coefficient of variation of effluent concentrations will not be known until LPI operates the treatment system and generates monitoring data. At this time,

Ecology believes the assumptions made for these statistical parameters are reasonable for establishing technology based limits. Ecology will review monitoring data as it become available to evaluate the assumptions. If the assumptions prove to result in unsupportable effluent limitations, Ecology will consider modifying the limits based on facility specific treatment data.

The Order is structured to require more frequent monitoring during the start-up and early stages of system operations than during later operations. This will provide early information to evaluate the technology-based effluent limits. Additionally, it will allow Ecology and LPI to better understand the performance of the treatment system, and to make early adjustments to its operations and design if the system does not perform as expected.

The effluent limit for tetrachloroethene is the water quality criteria. This is because the 95th and 99th upper percentile of the expected effluent concentration exceed the criteria. Thus, the effluent limit for tetrachloroethene can not be a technology-based limit, as that would exceed the water quality criteria.

The effluent limit for pentachlorophenol is based on a quantification limit of 5 ug/l using EPA Method 624. The value is below the water quality criteria, and it is a limit that LPI should consistently meet based on an engineering evaluation of their treatment system.

Metals:

Zinc is the only metal for which LPI has a reasonable potential to exceed water quality criteria. The expected upper 90th percentile influent concentration of zinc is 120 ug/l, whereas the water quality criteria is 81 ug/l. The proposed treatment system includes an iron oxide filter which will incidentally remove a significant portion of zinc from the ground water. However, the iron oxide filter is not specifically designed for zinc removal, and the expected concentration of zinc in the influent does not warrant such a system. Therefore, Ecology will rely on the water quality criteria as the effluent limitation for zinc. Ecology expects the effluent concentration of zinc to be well below the water quality criteria.

SURFACE WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's surface waters, WAC 173-201A-060 states that waste discharge permits shall be conditioned such that the discharge will meet established Surface Water Quality Standards. The Washington State Surface Water Quality Standards (Chapter 173-201A WAC) is a state regulation designed to protect the beneficial uses of the surface waters of the state. Limits in this Order for organic contaminants and zinc require LPI to meet or exceed surface water quality standards in their effluent. (See the section of this fact sheet entitled *"TECHNOLOGY-BASED EFFLUENT LIMITATIONS."*)

NUMERICAL CRITERIA FOR THE PROTECTION OF AQUATIC LIFE

"Numerical" water quality criteria are values set forth in the State of Washington's Water Quality Standards for Surface Waters (Chapter 173-201A WAC). They specify the levels of pollutants

allowed in a receiving water while remaining protective of aquatic life. Numerical criteria set forth in the Water Quality Standards are used along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limitations, they must be used in a permit. The effluent limit for zinc under this Order is the criteria for the protection of aquatic life. (See the section of this fact sheet entitled "*TECHNOLOGY-BASED EFFLUENT LIMITATIONS*" for a more complete explanation.)

NUMERICAL CRITERIA FOR THE PROTECTION OF HUMAN HEALTH

The U.S. EPA has promulgated 91 numeric water quality criteria for the protection of human health that are applicable to Washington State (EPA 1992). These criteria are designed to protect humans from cancer and other disease and are primarily applicable to fish and shellfish consumption and drinking water from surface waters. The effluent limit for tetrachloroethene under this Order is the criteria for the protection of human health. (See the section of this fact sheet entitled "*TECHNOLOGY-BASED EFFLUENT LIMITATIONS*" for a more complete explanation.)

NARRATIVE CRITERIA

In addition to numerical criteria, "narrative" water quality criteria (WAC 173-201A-030) limit toxic, radioactive, or deleterious material concentrations below those which have the potential to adversely affect characteristic water uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health. Narrative criteria protect the specific beneficial uses of all fresh (WAC 173-201A-130) and marine (WAC 173-201A-140) waters in the State of Washington.

ANTIDEGRADATION

The State of Washington's Antidegradation Policy requires that discharges into a receiving water shall not further degrade the existing water quality of the water body. In cases where the natural conditions of a receiving water are of lower quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. Similarly, when the natural conditions of a receiving water are of higher quality than the criteria assigned, the natural conditions shall constitute the water quality criteria. More information on the State Antidegradation Policy can be obtained by referring to WAC 173-201A-070.

The Department has reviewed existing records and is unable to determine if ambient water quality is either higher or lower than the designated classification criteria given in Chapter 173-201A WAC; therefore, the Department will use the designated classification criteria for this water body in the proposed Order. The discharges authorized by this proposed Order should not cause a loss of beneficial uses.

CRITICAL CONDITIONS

Surface water quality-based limits are derived for the waterbody's critical condition, which represents the receiving water and waste discharge condition with the highest potential for

adverse impact on the aquatic biota, human health, and existing or characteristic water body uses.

MIXING ZONES

The Water Quality Standards allow the Department of Ecology to authorize mixing zones around a point of discharge in establishing surface water quality-based effluent limits. Both "acute" and "chronic" mixing zones may be authorized for pollutants that can have a toxic effect on the aquatic environment near the point of discharge. The concentration of pollutants at the boundary of these mixing zones may not exceed the numerical criteria for that type of zone. Mixing zones can only be authorized for discharges that are receiving all known, available, and reasonable methods of prevention, control and treatment (AKART) and in accordance with other mixing zone requirements of WAC 173-201A-100.

The National Toxics Rule (EPA, 1992) allows the chronic mixing zone to be used to meet human health criteria.

Ecology has not authorized a mixing zone in this draft Order.

DESCRIPTION OF THE RECEIVING WATER

The facility discharges to Blair Waterway of Inner Commencement Bay, which is designated as a Class B receiving water body in the vicinity of the outfall. Other nearby point source outfalls include US Oil and Cascade Pole. Significant nearby non-point sources of pollutants includes industrial area runoff and the fill material of which the Site and surrounding land area is composed. Characteristic uses include water supply (industrial, agricultural); stock watering; fish migration; fish and shellfish rearing, spawning and harvesting; wildlife habitat; secondary contact recreation; sport fishing; boating and aesthetic enjoyment; commerce and navigation. Water quality of this class shall meet or exceed the requirements for most uses.

SURFACE WATER QUALITY CRITERIA

Applicable criteria are defined in Chapter 173-201A WAC for aquatic biota. In addition, U.S. EPA has promulgated human health criteria for toxic pollutants (EPA 1992). Criteria for this discharge are summarized below:

Temperature	19 degrees Celsius maximum
pH	6 to 9 standard units
Toxics	No toxics in toxic amounts

Temperature -- Under critical conditions there is no predicted violation of the Water Quality Standards for Surface Waters. Therefore, an effluent limitation for temperature of 19°C was placed in the proposed Order based upon the Department's best professional judgment.

pH--Because of the high buffering capacity of marine water, compliance with the technology-based limits of 6 to 9 will assure compliance with the Water Quality Standards for Surface Waters.

Toxic Pollutants--Federal regulations (40 CFR 122.44) require NPDES permits to contain effluent limits for toxic chemicals in an effluent whenever there is a reasonable potential for those chemicals to exceed the surface water quality criteria. This process occurs concurrently with the derivation of technology-based effluent limits. Facilities with technology-based effluent limits defined in regulation are not exempted from meeting the Water Quality Standards for Surface Waters or from having surface water quality-based effluent limits.

The following toxics were determined to be present in the influent ground water (see Appendix C for details):

- numerous chlorinated and nonchlorinated organic constituents that contaminate the ground water due to past operations at the facility;
- selected metals in the ground water from contaminated fill used in the area of the LPI facility.

Effluent limits were derived for 1,1 dichloroethene, 1,2 dichloroethane, dichloromethane, tetrachloroethene, trichloroethene, benzene, pentachlorophenol, and zinc, which were determined to have a reasonable potential to cause a violation of the Water Quality Standards (see table 3).

WHOLE EFFLUENT TOXICITY

The Water Quality Standards for Surface Waters require that the effluent not cause toxic effects in the receiving waters. Many toxic pollutants cannot be detected by commonly available detection methods. However, toxicity can be measured directly by exposing living organisms to the wastewater in laboratory tests and measuring the response of the organisms. Toxicity tests measure the aggregate toxicity of the whole effluent, and therefore this approach is called whole effluent toxicity (WET) testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity. LPI will be conducting WET testing under this Order.

Acute toxicity tests measure mortality as the significant response to the toxicity of the effluent. Dischargers who monitor their wastewater with acute toxicity tests are providing an indication of the potential lethal effect of the effluent to organisms in the receiving environment.

Chronic toxicity tests measure various sublethal toxic responses such as retarded growth or reduced reproduction. Chronic toxicity tests often involve either a complete life cycle test of an organism with an extremely short life cycle or a partial life cycle test on a critical stage of one of a test organism's life cycles. Organism survival is also measured in some chronic toxicity tests.

In accordance with WAC 173-205-040, LPI's effluent has been determined to have the potential to contain toxic chemicals. The proposed Order contains requirements for whole effluent toxicity testing as authorized by RCW 90.48.520 and 40 CFR 122.44 and in accordance with procedures in Chapter 173-205 WAC. The proposed Order requires LPI to conduct toxicity testing for one year in order to characterize both the acute and chronic toxicity of the effluent.

If acute or chronic toxicity is measured during effluent characterization at levels that, in accordance with WAC 173-205-050(2)(a), have a reasonable potential to cause receiving water toxicity, then the proposed Order will set a limit on the acute or chronic toxicity. The proposed Order will then require LPI to conduct WET testing in order to monitor for compliance with either an acute toxicity limit, a chronic toxicity limit, or both an acute and a chronic toxicity

limit. The proposed Order also specifies the procedures LPI must use to come back into compliance if the limits are exceeded.

Accredited WET testing laboratories meet acceptable WET testing protocols, data requirements, and reporting format. Accredited laboratories are knowledgeable about WET testing and capable of calculating an NOEC, LC_{50}, EC_{50}, IC_{25}, etc. All accredited labs have been provided the most recent version of the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* which is referenced in the Order. Any Permittee interested in receiving a copy of this publication may call the Ecology Publications Distribution Center 360-407-7472 for a copy. Ecology recommends that Permittees send a copy of the acute or chronic toxicity sections(s) of their permits to their laboratory of choice.

If the WET tests conducted to characterize the effluent indicate that no reasonable potential exists to cause receiving water toxicity, LPI will not be given WET limits and will only be required to retest the effluent prior to application for Order renewal in order to demonstrate that toxicity has not increased in the effluent.

If LPI makes process or material changes which, in the Department's opinion, results in an increased potential for effluent toxicity, then the Department may require additional effluent characterization in a regulatory Order, by Order modification, or in the Order renewal. Toxicity is assumed to have increased if WET testing conducted for submission with a Order application fails to meet the performance standards in WAC 173-205-020, "whole effluent toxicity performance standard." LPI may demonstrate to the Department that changes have not increased effluent toxicity by performing additional WET testing after the time the process or material changes have been made.

HUMAN HEALTH

Washington's water quality standards now include 91 numeric health-based criteria that must be considered in NPDES permits. These criteria were promulgated for the state by the U.S. EPA in its National Toxics Rule (Federal Register, Volume 57, No. 246, Tuesday, December 22, 1992).

A determination of the discharge's potential to cause an exceedance of the water quality standards was conducted as required by 40 CFR 122.44(d). The reasonable potential determination was evaluated with procedures given in the Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001) and the Department's Permit Writer's Manual (Ecology Publication 92-109, July, 1994). The determination indicated that LPI has a reasonable potential to cause a violation of water quality standards for human health for tetrachloroethene. Thus effluent limits for tetrachloroethene will be placed in the Order. The resultant effluent limits are as follows:

Maximum Daily Effluent Limit - 19 ug/l

Average Monthly Effluent Limit - 8.85 ug/l

GROUND WATER QUALITY LIMITATIONS

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department shall be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100). LPI will

not discharge to ground and therefore no limitations are required based on potential effects to ground water.

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and the effluent limitations are being achieved.

Monitoring for dioxin is also being required to further characterize the effluent. If present, this pollutant could have a significant impact on the quality of the surface water.

The monitoring schedule is detailed in the proposed Order under Condition S.2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, significance of pollutants, and cost of monitoring.

Monitoring requirements for the influent, effluent, and process control are included in the Order. The Order is structured to require more frequent monitoring during the start-up and early stages of system operations when compared to later operations. This will provide early information to ensure effluent limitations are met and to evaluate treatment efficiency.

LAB ACCREDITATION

With the exception of pH, temperature, and flow, the Order requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories*.

OTHER ORDER CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 173-220-210).

SPILL PLAN

The Department has determined that LPI stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require LPI to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

LPI has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed Order requires LPI to review the plan at least annually and update it as necessary. Changes to the plan must be submitted to the Department.

TREATMENT SYSTEM OPERATING PLAN

In accordance with state and federal regulations, LPI is required to take all reasonable steps to properly operate and maintain the treatment system [40 CFR 122.41(e) and WAC 173-220-150

(1)(g)]. An operation and maintenance manual was submitted as required by state regulation for the construction of wastewater treatment facilities (WAC 173-240-150). It has been determined that the implementation of the procedures in the Treatment System Operating Plan is a reasonable measure to ensure compliance with the terms and limitations in the Order.

GENERAL CONDITIONS

General Conditions are based directly on state and federal laws and regulations and have been standardized for all individual industrial NPDES permits issued by the Department. Although this action is an Order under MTCA, it includes these general NPDES permit conditions to help ensure all substantive requirements of water quality laws and regulations are included.

ORDER ISSUANCE PROCEDURES

ORDER MODIFICATIONS

The Department may modify this Order to impose numerical limitations, if necessary to meet Water Quality Standards for Surface Waters, Sediment Quality Standards, or Water Quality Standards for Ground Waters, based on new information obtained from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

The Department may also modify this Order as a result of new or amended state or federal regulations.

RECOMMENDATION FOR ORDER ISSUANCE

This proposed Order meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, protect human health, aquatic life, and the beneficial uses of waters of the State of Washington. The Department proposes that the Order be in effect for 5 years.

REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. Technical Support Document for Water Quality-based Toxics Control. EPA/505/2-90-001.

1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.

1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.

Washington State Department of Ecology.

1994. Permit Writer's Manual. Publication Number 92-109

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department is proposing to issue a Model Toxics Control Act Agreed Order to the applicant listed on page 1 of this fact sheet. The Order contains conditions and effluent limitations that are described in the rest of this Fact Sheet.

The Department will publish a Public Notice to inform the public of Ecology's intent to issue a MTCA Agreed Order that contains substantive provisions of a NPDES permit as an enforceable attachment to the Order. Interested persons are invited to submit written comments regarding the draft Order. The Order, fact sheet, and related documents are available for inspection at the following locations:

Department of Ecology
Southwest Regional Office
300 Desmond Drive
Lacey, WA 98503

Department of Ecology
Eastern Regional Office
4601 North Monroe, Suite 202
Spokane, WA 99205-1295

Written comments should be mailed to:

Keith L. Stoffel
Site Manager
Department of Ecology
Eastern Regional Office
4601 North Monroe, Suite 202
Spokane, WA 99205

Any interested party may comment on the draft Order or request a public hearing on this draft Order within the thirty-(30) day comment period. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft Order (WAC 173-220-090). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this Order will be mailed an individual notice of hearing (WAC 173-220-100).

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this Order.

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the Order. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this Order.

Further information may be obtained from Mr. Keith Stoffel, Site Manager, (509/456-3176), or by writing to the address listed above.

The NPDES substantive provisions and accompanying fact sheet were written by Mr. Martin Werner, Environmental Engineer, Hazardous Waste & Toxics Reduction Program.

APPENDIX B--GLOSSARY

Acute Toxicity--The lethal effect of a compound on an organism that occurs in a short period of time, usually 48 to 96 hours.

AKART-- An acronym for "all known, available, and reasonable methods of treatment".

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Average Monthly Discharge Limitation --The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

Bypass--The intentional diversion of waste streams from any portion of a treatment facility.

Chronic Toxicity--The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean Water Act (CWA)--The Federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Critical Condition--The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Dilution Factor--A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction e.g., a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Engineering Report--A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

Minor Facility--A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing Zone--An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The area of the authorized mixing zone is specified in a facility's permit and follows procedures outlined in state regulations (Chapter 173-201A WAC).

National Pollutant Discharge Elimination System (NPDES)--The NPDES (Section 402 of the Clean Water Act) is the Federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the State of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both State and Federal laws.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Responsible Corporate Officer-- A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Upset--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, lack of preventative maintenance, or careless or improper operation.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

APPENDIX C—WASTEWATER CHARACTERIZATION