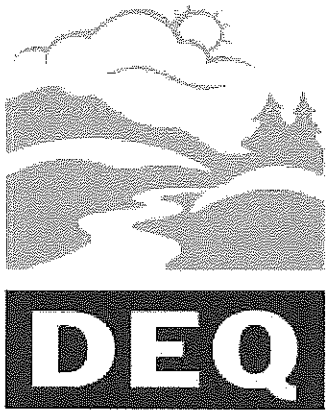
EQCMeeting1of1DOC20020725

Part 1 of 2 Agenda Item A only

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS 07/25/2002



State of Oregon
Department of Environmental Quality

7/25/02 EQC Meeting, Item A Handout

SCHEDULE B

1. Minimum Monitoring and Reporting Requirements.
(unless otherwise approved in writing by the Department)

a. Influent

Item or Parameter	Minimum Frequency	Type of Sample
* Total Flow (MGD)	Daily	Continuous
* Flow Meter Calibration	2/Year	Verification
BOD-5	2/Week	Composite
TSS	2/Week	Composite
pH	3/Week	Grab

b. Outfall Number 001 (Sewage Treatment Plant Outfall)

Item or Parameter	Minimum Frequency	Type of Sample
* Total Flow (MGD)	Daily	Continuous
* Flow Meter Calibration	2/Year	Verification
BOD-5	2/Week	Composite
TSS	2/Week	Composite
pH	3/Week	Grab
Fecal Coliform	1/Week	Grab
Quantity Chlorine Used	Daily	Weight
Chlorine Residual	Daily	Grab
Average Percent Removed (BOD and TSS)	Monthly	Calculation

*Required only at one site, whichever is more appropriate.

d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permittee becomes aware of the overflow. Reporting procedures are described in more detail in Condition D.5.

7. Public Notification of Effluent Violation or Overflow

If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permittee shall take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

8. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Sampling and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and shall be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering

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

5. Reporting of Monitoring Results

Monitoring results shall be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports shall be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated. For a pollutant parameter that may be sampled more than once per day (e.g., Total Chlorine Residual), only the average daily value shall be recorded unless otherwise specified in this permit.

7. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean, except for bacteria which shall be averaged based on a geometric or log mean.

8. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

9. Records Contents

Records of monitoring information shall include:

340-012-0028

Scope of Applicability

Amendments to OAR 340-012-0028 to 340-012-0090 shall only apply to formal enforcement actions issued by the Department on or after the effective date of such amendments and not to any contested cases pending or formal enforcement actions issued prior to the effective date of such amendments. Any contested cases pending or formal enforcement actions issued prior to the effective date of any amendments shall be subject to OAR 340-012-0028 to 340-012-0090 as prior to amendment. The list of violations classified in these rules is intended to be used only for the purposes of setting penalties for violations of law and for other rules set forth in OAR Chapter 340.

Stat. Auth.: ORS 454, ORS 459.995, ORS 466, ORS 467, ORS 468.020 & ORS 468.996
Stats. Implemented: ORS 183.090, ORS 454.635, ORS 454.645, ORS 459.376, ORS 459.995, ORS 465.900, ORS 466.210, ORS 466.880 - ORS 466.895, ORS 468.090 - ORS 468.140, ORS 468A.990, ORS 468.992, ORS 468B.025, ORS 468B.220 & ORS 468B.450
Hist.: DEQ 4-1989, f. & cert. ef. 3-14-89; DEQ 15-1990, f. & cert. ef. 3-30-90; DEQ 21-1992, f. & cert. ef. 8-11-92; Renumbered from 340-012-0080

340-012-0030

Definitions

Unless otherwise required by context, as used in this Division:

(1) "Class One Equivalent" or "Equivalent", which is used only for the purposes of determining the value of the "P" factor in the civil penalty formula, means two Class Two violations, one Class Two and two Class Three violations, or three Class Three violations.

(2) "Commission" means the Environmental Quality Commission.

(3) "Compliance" means meeting the requirements of the Commission's and Department's statutes, rules, permits or orders.

(4) "Director" means the Director of the Department or the Director's authorized deputies or officers.

(5) "Department" means the Department of Environmental Quality.

(6) "Documented Violation" means any violation which the Department or other government agency records after observation, investigation or data collection.

(7) "Flagrant" means any documented violation where the Respondent had actual knowledge of the law and had consciously set out to commit the violation.

(8) "Formal Enforcement Action" means an action signed by the Director or a Regional Administrator or authorized representatives or deputies which is issued to a Respondent for a documented violation. Formal enforcement actions may require the Respondent to take action within a specified time frame, and/or state the consequences for the violation or continued noncompliance. "Formal enforcement action" includes Notices of Permit Violation, Civil Penalty Assessments, Mutual Agreement and Orders, and other Orders that may be appealed through the contested-case process; but does not include Notices

of Noncompliance issued pursuant to OAR 340-012-0041(1).

(9) "Intentional" means conduct by a person with a conscious objective to cause the result of the conduct.

(10) "Magnitude of the Violation" means the extent and effects of a violator's deviation from the Commission's and Department's statutes, rules, standards, permits or orders. In determining magnitude the Department shall consider all available applicable information, including such factors as: Concentration, volume, percentage, duration, toxicity, and the extent of the effects of the violation. Deviations shall be categorized as major, moderate or minor as set forth in OAR 340-012-0045(1)(a)(B).

(11) "Negligence" or "Negligent" means failure to take reasonable care to avoid a foreseeable risk of committing an act or omission constituting a violation.

(12) "Order" means:

(a) Any action satisfying the definition given in ORS Chapter 183; or

(b) Any other action so designated in ORS Chapters 454, 459, 465, 466, 467, 468, 468A, or 468B.

(c) "Penalty Demand Notice" means a written notice issued by a representative of the Department to a party demanding payment of a stipulated penalty pursuant to the terms of an agreement entered into between the party and the Department.

(13) "Person" includes, but is not limited to, individuals, corporations, associations, firms, partnerships, joint stock companies, public and municipal corporations, political subdivisions, states and their agencies, and the Federal Government and its agencies.

(14) "Prior Significant Action" means any violation established either with or without admission of a violation by payment of a civil penalty, or by a final order of the Commission or the Department, or by judgment of a court.

(15) "Reckless" or "Recklessly" means conduct by a person who is aware of and consciously disregards a substantial and unjustifiable risk that the result will occur or that the circumstance exists. The risk must be of such a nature and degree that disregard thereof constitutes a gross deviation from the standard of care a reasonable person would observe in that situation.

(16) "Residential Open Burning" means the open burning of any domestic wastes generated by a single family dwelling and conducted by an occupant of the dwelling on the dwelling premises. This does not include the open burning of materials prohibited by OAR 340-023-0042(2).

(17) "Respondent" means the person to whom a formal enforcement action is issued.

(18) "Risk of Harm" means the individual or cumulative possibility of harm to public health or the environment caused by a violation or violations. Risk of harm shall be categorized as major, moderate or minor.

(19) "Systematic" means any documented violation which occurs on a regular basis.

(20) "Violation" means a transgression of any statute, rule, order, license, permit, or any part thereof and

IN THE COURT OF APPEALS OF THE STATE OF OREGON

CITY OF SCAPPOOSE, Petitioner, v. DEPARTMENT OF ENVIRONMENTAL QUALITY, Respondent.	TRANSMITTAL OF ENTIRE RECORD AND CERTIFICATE Appellate Court No. A119356

I, Stephanie Hallock, Director of the Department of Environmental Quality, pursuant to ORS 183.482(4), list below and transmit herewith the original of the entire record under review in the above proceeding, except wherein a copy of any document of paper is filed herein, I hereby certify that I have compared the copy with the original and that is a true and correct copy of the original and the whole thereof.

1. Department's Notice of Violation, Department Order, and Assessment of Civil Penalty, dated April 18, 2000
2. City's Answer, Affirmative Defenses, Request for Hearing, dated May 8, 2000
3. City's Motions to Dismiss or for Directed Verdict, dated January 11, 2001
4. Department's Response to City's Motions To Dismiss, dated February 22, 2001
5. City's Reply to Response of Department to City's Motions To Dismiss, dated February 28, 2001
6. Hearing Officer's written decision denying Motions to Dismiss or for Directed Verdict, dated March 14, 2001
7. Department's Hearing Memorandum, dated August 10, 2001
8. City's Post Hearing Brief-Reply, dated August 17, 2001
9. Hearing Decision/Proposed Order, dated September 21, 2001
10. City's Petition for Commission Review, dated October 18, 2002

11. Letter from Mikell O'Mealy, dated October 25, 2001

12. City's Exceptions and Brief to the Rulings and Proposed Order of Hearing Officer, dated November 21, 2001

13. Department's Response to Petitioner's Exceptions and Brief, dated December 21, 2001

14. Memorandum from Stephanie Hallock, Director of Department of Environmental Quality, to Environmental Quality Commission, with attachments, dated July 3, 2002

15. Final Order from the Environmental Quality Commission, dated August 20, 2002

16. City's Petition for Judicial Review, dated September 20, 2002

17. Transmittal of Entire Record under Review and Certificate

* Transcript of telephone preconference hearing held November 1, 2000, before Hearing Officer Ken Betterton (Separate Folder)

* Transcript of Hearing held January 11, 2001, before Hearing Officer Ken Betterton (Separate Folder)

* Transcript of telephone conference held May 29, 2001, before Hearing Officer Ken Betterton (Separate Folder)

* Transcript of Hearing held July 25, 2001, before Hearing Officer Ken Betterton (Separate Folder)

* Exhibits from Hearing of January 11, 2001 and July 25, 2001 (Separate Envelope)

* Transcript of Review held July 25, 2002, before the Environmental Quality Commission, (Separate Folder)

Dated at Portland, Oregon this 20 day of November 2002, with the seal of the Department of Environmental Quality affixed hereto.

for

Stephanie Hallock, Director
Department of Environmental Quality

JORDAN SCHRADER
ATTORNEYS AT LAW

September 20, 2002

State Court Administrator
Supreme Court Building
1163 State Street
Salem OR 97310

Re: *City of Scappoose v. Department of Environmental Quality*
Final Contested Case Hearing Order No. WQ/M-NWR-00-010
Our File No. 42629/30022

Dear Court Administrator:

Enclosed for filing on behalf of City of Scappoose is the original Petition for Judicial Review in the above-referenced matter. Also, enclosed is our firm's check in the amount of $140.00 for the filing fee, together with a confirmation card.

Please insert the Court of Appeals case number on the confirmation card, together with the date of filing of the same and return it to our office at your earliest convenience.

Very truly yours,

JORDAN SCHRADER

Christopher L. Reive

Enclosures

cc: City of Scappoose
Stephanie Hallock, Director
Lynne Perry, Esq.

CHRISTOPHER L. REIVE

Admitted
egon and Washington

Direct Dial
503.598.5544

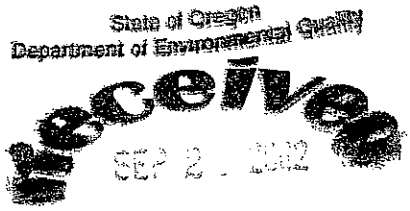
E-mail
chris.reive@jordanschrader.com

JORDAN SCHRADER
ATTORNEYS AT LAW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

September 20, 2002

State of Oregon, Department of Environmental Quality
Stephanie Hallock, Director
811 SW 6th Avenue
Portland OR 97204



State of Oregon, Department of Justice
Lynne Perry, Esq.
Assistant Attorney General
1162 Court St NE
Salem OR 97301

CHRISTOPHER L. REIVE

Admitted
Oregon and Washington

Re: **Petition for Judicial Review**
Final Contested Case Hearing Order No. WQ/M-NWR-00-010
Our File No. 42629/30022

Dear Ms. Hallock & Ms. Perry:

Enclosed are service copies of the City of Scappoose's Petition for Judicial Review in the above-referenced matter.

Very truly yours,

JORDAN SCHRADER

Christopher L. Reive

Enclosures

cc: City of Scappoose

Direct Dial
503.598.5544

E-mail
chris.reive@jordanschrader.com

IN THE COURT OF APPEALS OF THE STATE OF OREGON

CITY OF SCAPPOOSE,

Petitioner,

v.

DEPARTMENT OF ENVIRONMENTAL QUALITY of the State of Oregon,

Respondent.

Final Contested Case Hearing Order
Agency No.: WQ/M-NWR-00-010

CA No. _____

PETITION FOR JUDICIAL REVIEW

A. Petitioner City of Scappoose seeks judicial review of the Final Contested Case Hearing Order issued by the Hearings Officer for the State of Oregon on September 21, 2001, in Case No. WQ/M-NWR-00-010 and which was affirmed by the Environmental Quality Commission on August 20, 2002. A copy of the Final Contested Case Hearing Order ("Order") is attached hereto and incorporated herein as Exhibit "A". The parties and attorneys to this review are:

City of Scappoose
PO Box P
Scappoose OR 97056-0677

Petitioner

Christopher L. Reive, OSB #83305
Jordan Schrader PC
PO Box 230669
Portland OR 97281

Attorneys for Petitioner

/////

JORDAN SCHRADER PC
Attorneys at Law
PO Box 230669
Portland OR 97281
Telephone: 503.598.7070 Fax: 503.598.7373

State of Oregon, Department of Environmental Quality
Stephanie Hallock, Director
811 SW Sixth Ave
Portland OR 97204

Respondent

State of Oregon, Department of Justice
Lynne Perry, Esq.
Assistant Attorney General
1162 Court St. NE
Salem OR 97301

Attorneys for Respondent

B. Petitioner was a party to the administrative proceeding which resulted in the Order from which review is sought.

C. The Order should be reversed because it erroneously interprets provisions of law and a correct interpretation of the law compels the result that no civil penalty be assessed or ordered to be paid by Petitioner.

D. Petitioner is not willing to stipulate that the agency record may be shortened.

Dated this 20th day of September, 2002.

JORDAN SCHRADER PC
Attorneys for Petitioner

By: _____
Christopher L. Reive, OSB #83305

JORDAN SCHRADER PC
Attorneys at Law
PO Box 230669
Portland OR 97281
Telephone: 503.598.7070 Fax: 503.598.7373

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION
OF THE STATE OF OREGON

In the Matter of	)	
	)	Final Contested
City of Scappoose,	)	Case Hearing Order
	)	
Petitioner	)	No. WQ/M-NWR-00-010

On July 25, 2002, the Environmental Quality Commission considered the appeal of the City of Scappoose to the Order issued by Hearing Officer Ken L. Betterton on September 21, 2001. The Commission considered the exceptions and brief submitted by the City and the brief submitted on behalf of the Department of Environmental Quality. The Commission also heard oral argument presented by Christopher L. Reive on behalf of the City and Jeffrey R. Bachman, Environmental Law Specialist, and Assistant Attorney General Lynne Perry on behalf of the Department.

The Commission affirms the Hearing Order, incorporated herein as Attachment A.

Dated this 20th day of August, 2002.

Stephanie Hallock

Stephanie Hallock, Director
Department of Environmental Quality
On behalf of the
Environmental Quality Commission

Notice of Appeal Rights

RIGHT TO JUDICIAL REVIEW: You have the right to appeal this Order to the Oregon Court of Appeals pursuant to ORS 183.482. To appeal you must file a petition for judicial review with the Court of Appeals within 60 days from the day this Order was served on you. If this Order was personally delivered to you, the date of service is the day you received the Order. If this Order was mailed to you, the date of service is the day it was *mailed*, not the day you received it. If you do not file a petition for judicial review within the 60-day time period, you will lose your right to appeal.

Return to: Department of Environmental Quality
Attention: Anne R. Price
811 SW 6th Ave.
Portland, Oregon 97204-1390

Attachment A

GENC8313

Ref No.: G60393
Case No: 01-GAP-00071
Case Type: DEQ

STATE OF OREGON
Before the Hearing Officer Panel
For the
DEPARTMENT OF ENVIRONMENTAL QUALITY
875 Union Street NE
Salem, Oregon 97311

Dec Mailed: 09/21/01
Mailed by: LMV

HEARING DECISION

CITY OF SCAPPOOSE
PO BOX P

SCAPPOOSE OR 97056 0677

DEPARTMENT OF ENVIRONMENTAL QUALITY
811 SW 6TH AVE

PORTLAND OR 97204 1334

CHRISTOPHER REIVE, ATTORNEY
JORDAN SCHRADER
PO BOX 230669
PORTLAND OR 97281 0669

JEFF BACHMAN
DEQ ENFORCEMENT SECTION
811 SW 6TH AVE
PORTLAND OR 97204 1334

LYNNE PERRY
ASST ATTORNEY GENERAL
1162 COURT ST NE
SALEM OR 97301-4095

The following **HEARING DECISION** was served to the parties at their respective addresses.

STATE OF OREGON
BEFORE THE HEARING OFFICER PANEL
FOR THE ENVIRONMENTAL QUALITY COMMISSION

IN THE MATTER OF:	)	
	)	**PROPOSED ORDER**
	)	
City of Scappoose,	)	Hearing Officer Panel Case No. G60393
	)	Agency Case No. WQ/M-NWR-00-010
Respondent.	)	COLUMBIA COUNTY

HISTORY OF THE CASE

The Department of Environmental Quality (DEQ) issued a Notice of Violation, Department Order, and Assessment of Civil Penalty pursuant to Oregon Revised Statutes (ORS), ORS 468.126 through 468.140, ORS Chapter 183, and Oregon Administrative Rules (OAR), OAR Chapter 340, Divisions 11 and 12, to Respondent City of Scappoose (City) on April 18, 2000.

The notice alleges (1) that on or about December 9 and 17, 1998 respondent violated ORS 468B.025(2) by violating a condition (Schedule B, Condition 1) of its National Pollutant Discharge Elimination System (NPDES) permit by failing to report the results of sample analysis for biochemical oxygen demand by intentionally reporting false sample results on its discharge monitoring report; (2) that on or about September 16, 1999 respondent violated ORS 468B.025(2) by violating Schedule B, Condition 1b of its permit by failing to maintain the accuracy of its flowmeter through twice annual calibration; (3) that on or about July 6, 10 and 20, 1998 respondent violated ORS 468B.025(2) by violating General Condition B.1 of its permit by failing to provide adequate laboratory controls and appropriate quality assurance procedures; and (4) that on or about December 9 and 17, 1998 respondent violated ORS 468B.025(2) by violating General Condition B.1 of its permit by failing to provide adequate laboratory controls and appropriate quality assurance procedures. DEQ also requested a department order in its notice that respondent submit for review and approval within 120 days a comprehensive quality assurance plan for all data generated at the respondent's wastewater facility. The notice seeks assessment of a civil penalty against respondent in the amount of $12,000 for the violation set forth in allegation (1) in the notice.

Respondent filed an answer to the notice of violations on May 8, 2000, in which respondent denied the allegations and the magnitude of the penalty.

A telephone pre hearing conference with the parties was held on November 1, 2000.

A hearing was held in Scappoose, Oregon on January 11, 2001 before Ken L. Betterton, administrative law judge. Jeff Bachman, environmental law specialist, represented DEQ. Christopher L. Reive, attorney at law, represented respondent. James Sheetz and Robert Baumgarter testified as witnesses for DEQ. Holly Ploetz testified as a witness for respondent. At the end of DEQ's case, respondent filed written motions to dismiss or for directed verdict to DEQ's notice. The hearing was continued to give DEQ time to file a written response to the motions. DEQ filed its response on February 22, 2001. Respondent filed its reply to DEQ's response on March 1, 2001. On March 14, 2001 I issued a written decision denying all of respondent's motions.

A telephone pre hearing conference with the parties was held on May 29, 2001.

A further hearing conference with the parties was held on July 25, 2001 in Portland, Oregon. Jeff Bachman represented DEQ. Christopher Reive represented respondent. Steve Wabschall testified as a witness for respondent. DEQ filed its written closing argument on August 10, 2001. Respondent filed its written closing argument on August 17, 2001. I then closed the record and took the matter under advisement.

Respondent admitted it committed the violations in allegations (2), (3) and (4) in the notice, for which DEQ did not seek a civil penalty. The parties also stipulated that respondent has met the requirements of the department order.

The only remaining issue to be addressed in this decision is allegation (1), whether on or about December 9 and 17, 1998 respondent violated ORS 468B.025(2) by violating Schedule B, Condition 1 of its permit by intentionally reporting false sample results on its discharge monitoring report, and if so, what civil penalty should be imposed.

EVIDENTIARY RULING

Hearing officer Exhibits A and D, Exhibit 2, and Exhibits 101 through 117 and 119 were admitted into the record without objection. DEQ withdrew Exhibit 1. DEQ objected to Exhibit 118 on relevancy grounds. Exhibit 118 is relevant. I overruled the objection and admitted Exhibit 118 into the record.

ISSUES

(1) Whether respondent violated a condition of its NPDES permit by intentionally reporting false test results on its discharge monitoring report.

(2) If respondent intentionally reported false test results, whether its conduct was flagrant.

(3) If respondent intentionally reported false results, what civil penalty should be imposed.

FINDINGS OF FACT

(1) DEQ issued a National Pollutant Discharge Elimination System Waste Discharge (NPDES) permit under the Federal Clean Water Act to the City of Scappoose (City) on September 29,

1992. The NPDES permit allowed the City to construct, install, modify or operate a wastewater collection, treatment, control and disposal system and discharge adequately treated wastewater to public waters. (Exhibit 101.) The City has operated under the NPDES permit since September 1992.

(2) The City owns and operates a municipal wastewater treatment plant that provides domestic wastewater treatment for the City, and for industrial wastewater from Steinfeld's Pickles, a pickle processing facility that is connected to the City's wastewater collection system. The City discharges treated wastewater, or effluent, into the Multnomah channel of the Willamette River. (*Id.*) The City had about 4,130 residents in 1996. The pickle processing plant operates seasonally with the heaviest discharge into the system in the fall of the year. Most of the wastewater the City treats is from domestic waste.

(3) The NPDES permit requires the City to monitor and report biochemical oxygen demand (BOD) and total suspended solids (TSS) at least twice a week by means of a composite sample technique. (*Id.*, Schedule B.) The BOD determination is an empirical test in which standardized laboratory procedures are used to determine the relative oxygen requirements of wastewater, effluent, and polluted waters. (Exhibit 102, Appendix D at 1.) Monitoring results must be reported on approved forms. The reporting period is each calendar month. Reports for a calendar month must be submitted to DEQ by the 15th day of the following month. (Exhibit 101 at paragraph 2.) Monitoring reports must include the name of each principal operator designated by the permittee (i.e., the City) as responsible for supervising the system during the reporting period. (*Id.*) Although monitoring reports must be submitted on approved forms, DEQ does not provide a specific form for permittees to use. Permittees are free to design or create their own report forms. The permittee must at all times properly operate and maintain all facilities and systems of treatment and control that they install or use to achieve compliance with the conditions of the permit. (*Id.*, General Condition B.) The permit requires appropriate flow measurement devices and methods consistent with accepted scientific practices to be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. (*Id.*, Section C.) The permit requires that monitoring be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.[1] (*Id.*) No other test procedure was specified in the City's permit. Any person who knowingly

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[1] 40 CFR Part 136—Standard Method 5210 B. 5-Day BOD Test provides:

1. General Discussion

a. Principle: The method consists of filling with sample, to overflowing, an airtight bottle of the specified size and incubating it at the specified temperature for 5 d [i.e., days]. Dissolved oxygen is measured initially and after incubation, and the BOD is computed from the difference between initial and final DO. Because the initial DO is determined shortly after the dilution is made, all oxygen uptake occurring after this measurement is included in the BOD measurement.

b. Sampling and storage: Samples for BOD analysis may degrade significantly during storage between collection and analysis, resulting in low BOD values. * * *.

* * * * *.

2. Apparatus

a. Incubation bottles: Use glass bottles having 60 mL or greater capacity (300 mL bottles having a ground-glass stopper and a flared mouth are preferred). * * *.

* * * * *. (Exhibit 102, Appendix D at 3.)

makes any false statement, representation or certification in any record or other document submitted or required to be maintained under the permit, including monitoring reports, is subject to a fine or imprisonment or both. (*Id.*, Section D, paragraph 9.)

(4) Steve Wabschall (Wabschall) has worked for the City for 24 years. He has served as superintendent of the City's wastewater treatment plant for 15 years. Wabschall supervises a staff of three individuals. Wabschall possesses a water supply certification and two wastewater certifications. Wabschall has had no enforcement actions brought against him as plant superintendent from DEQ or from the federal government.

(5) On September 16, 1999 DEQ environmental engineer James Sheetz (Sheetz) conducted an unannounced NPDES permit inspection of the City's wastewater treatment plant. Sheetz did the inspection as part of his regular job duties, and as part of the City's NPDES permit renewal process. NPDES permits are good for five years. Although the City's permit had not been renewed by 1999, the 1992 permit remained in force until it was renewed or cancelled. DEQ tries to inspect all permittees every five years, but funding and staff workload makes it difficult to adhere strictly to a five year inspection schedule. The NPDES waste discharge permit system and DEQ rely on permittees to monitor their own systems, based on accurate input data and monitoring reports. Sheetz last inspected the City's wastewater treatment plant in 1994, although that inspection was not a compliance inspection.

(6) Sheetz's inspection on September 16, 1999 lasted about five and one-half hours. Sheetz talked to Wabschall, observed the plant in operation, reviewed plant records and collected samples. Sheetz selected 1998 operating records for review, and selected the months of July and December 1998 for inspection. Sheetz chose the records for December 9 and 17, 1998 for examination in detail. Sheetz found no discrepancies for December 9 and 17, 1998 for the TSS bench data. The City recorded its sample test results on "bench sheets" contemporaneously with when it conducted its tests. (*See* Exhibit 106, 107.) Wabschall and the City created its own form of bench sheet to record its monthly data to be transferred later to the monthly discharge monitoring reports (DMR) to be filed with DEQ. Wabschall recorded two influent dilution tests for December 9, 1998 to measure 5-day BOD. The start date for the test was December 9, 1998 and the stop date for the test was December 14, 1998. (Exhibit 106.) The average BOD value for the two dilution tests Wabschall ran was 25.3 mg/L.[2] (*Id.*) Wabschall did not record 25.3 mg/L for the BOD result on his bench sheet. Instead, he recorded a BOD result of 100 mg/L on the bench sheet for December 9, 1998. (*Id.*) Wabschall mistakenly recorded the value in the DO Depletion column on the bench sheet, rather than the BOD column on the form, like he should have done. (*Id.*) Wabschall knew, based on his TSS test result, that a BOD value of 25.3 mg/L was too low. He recorded the 5-day BOD test result of 100 mg/L, based on his estimate of what he believed the BOD result should have been, given the TSS result of 94 mg/L he reported for December 9, 1998. Wabschall did not make any note or comment on the bench sheet for the BOD value for December 9, 1998 that his recorded result of 100 mg/L was an estimate. (*Id.*)

[2] The first influent sample had an initial DO of 8.49 and a final DO of 8.20. The DO Depletion for the first sample should have been 29 mg/L [8.49 – 8.20 = .20 x 100 = 29 mg/L]. The second influent sample had an initial DO of 8.46 and a final DO of 8.03. The DO Depletion for the second sample should have been 21.5 mg/L [8.46 – 8.03 = .43 x 50 (adjusted for a different concentration) = 21.5 mg/L]. The average for the two tests was 25.3 (29 + 21.5 divided by 2).

Wabschall used a glass bottle having a capacity of 303 mL for the volume to conduct the test. The commonly accepted capacity of the bottle to conduct the test is 300 mL.

(7) Sheetz also examined the bench sheet for December 17, 1998. Wabschall recorded two influent dilution tests for December 17, 1998 to measure the 5-day BOD. The start date for the test was December 17, 1998, and the stop date for the test was December 22, 1998. (Exhibit 107.) The average BOD value for the two dilution tests Wabschall ran was 38.8 mg/L. (*Id.*) Wabschall did not record 38.8 mg/L for a BOD result on his bench sheet. Instead, he recorded a BOD value of 60 mg/L on the bench sheet for December 17, 1998. (*Id.*) Wabschall mistakenly recorded the value of 60 in the DO Depletion column on the bench sheet, rather than in the BOD column like he should have done. (*Id.*) Wabschall knew a BOD value of 38.8 mg/L was too low for the two tests he had run. He reported the result of 60 mg/L for BOD based on his estimate of what he believed the BOD result should have been, given the TSS result of 84 mg/L he reported for December 17, 1998. Wabschall did not make any note or comment on the BOD bench sheet for December 17, 1998 that his recorded result of 60 mg/L was an estimate. (*Id.*) Wabschall used a glass bottle having a capacity of 303 mL for the volume to conduct the test. The commonly accepted capacity of the bottle to conduct the test is 300 mL.

(8) Wabschall estimated the BOD value from his TSS result based on his belief that a correlation exists between BOD and TSS results. Wabschall based his belief on design estimates used by engineers to calculate capacity for the construction of new wastewater plants that he had read about in a textbook he used in a wastewater class he once took at a local community college. Wabschall used no specific formula to make the estimates of BOD results from TSS that he recorded and reported to DEQ.

(9) Wabschall prepared and signed the DMR on behalf of the respondent for December 1998. (Exhibit 112.) He filed the DMR with DEQ on January 11, 1999. Wabschall recorded the BOD results of 100 mg/L for December 9, 1998 and 60 mg/L for December 17, 1998 on the DMR for December 1998. (*Id.*) Wabschall knew those test results were not the correct results from the data he obtained when he ran tests for both dates. Wabschall did not write anywhere on the DMR that his reported BOD results were estimates. (*Id.*) The DMR contains certification language near the signature line at the bottom of the form where Wabschall signed his name. (*Id.*) The certification reads:

> "I certify under penalty of law that I have personal examines *(sic)* and am familiar with information submitted herein and based on my inquire of those individuals immediately responsible for obtaining the information I believe the submitted information is true and accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment." (*Id.*)

Wabschall knew that the results he recorded and submitted to DEQ for the BOD values for December 9 and 17, 1998 were not the actual test results he obtained when he did the 5-day BOD tests for the two days.

(10) On September 22, 1999 Sheetz telephoned Wabschall with questions about the DMR for December 1998 and the bench sheet records Sheetz had inspected on September 16, 1999.

Wabschall told Sheetz that he knew the BOD values he wrote on the bench sheet for December 9 and 17, 1998, and that he later recorded on the DMR for December 1998, were too low.[3]

(11) DEQ offers technical assistance to permittees to help them conduct their tests and report test results. Wabschall did not seek any assistance from DEQ to complete the DMR for December 1998, nor did he ask for assistance from DEQ on how to conduct BOD tests or how to track down what happened that caused the inaccurate test results he obtained.

(12) Wabschall did not make any notes or comments on the DMR he submitted to DEQ for December 1998 that his recorded values for BOD were estimates. He did not record anywhere on the DMR the actual test results he had obtained, with notes or comments that he believed his test results were incorrect. If the City through Wabschall had made notes or comments to DEQ on the DMR, or on any other document, that his reported values were estimates, DEQ would not have sought to assess a civil penalty against the City for those test results.

(13) DEQ did a study of the City's wastewater treatment plant records for January 1998 through December 1998 in connection with preparing the Notice of Violation, and found no correlation between TSS and BOD values that would enable an individual accurately to estimate a BOD result from an actual TSS result. (Exhibit 2.)

CONCLUSIONS OF LAW

(1) Respondent City of Scappoose violated a condition of its NPDES permit by intentionally reporting false results on its discharge monitoring report for December 1998.

(2) Respondent's conduct was not flagrant.

(3) A $9,600 civil penalty should be imposed against respondent.

OPINION

(1) DEQ has authority to discipline permittees like the City for violations of waste discharge permits. ORS 468B.025(2) provides:

> (2) No person shall violate the conditions of any waste discharge permit issued under ORS 468B.050.[4]

DEQ has alleged that the City's conduct was intentional. ORS 468.126 provides:

> (1) No civil penalty prescribed under ORS 468.140 shall be imposed for a violation of an air, water or solid waste permit issued by the Department of Environmental Quality until

[3] Wabschall mistakenly recorded the BOD result for December 9, 1998 on the line for December 10, 1998 on the DMR. He also mistakenly recorded the BOD for December 17, 1998 on the line for December 18, 1998 on the DMR. DEQ concedes the recording for the wrong dates was a mistake, and does not seek any penalty or claim of violation of any rule for the erroneously designated dates.

[4] ORS 468B.050 sets out when a permit from DEQ is required. The parties acknowledge the City needed a permit to operate its wastewater treatment plant.

> the permittee has received five days' advance warning in writing from the department, specifying the violation and stating that a penalty will be imposed for the violation unless
> * * *.
> * * * * *
> (2) No advance notice shall be required under subsection (1) of this section if:
> (a) The violation is intentional;
> * * * * *.

OAR 340-012-0030(9) provides that unless otherwise required by context, as used in this Division [Division 12, Definitions for Enforcement Procedures and Civil Penalty]:

> (9) "Intentional" means conduct by a person with a conscious objective to cause the result of the conduct.

DEQ argues that the City, acting through its plant superintendent, Steve Wabschall, intentionally reported false test results on the monthly DMR for December 1998 the City filed with DEQ. The City can act only through its agents. Wabschall had authority and the responsibility to conduct wastewater tests pursuant to the NPDES permit and to file reports with DEQ in order to comply with the conditions of the permit.

The City argues that although Wabschall reported false test results, his actions did not meet the definition of "intentional" in DEQ administrative rules. The City contends that although Wabschall knew he was to report accurate information on the DMR, and that he knew he did not report his actual test results values for BOD on the DMR, DEQ has charged the City with reporting "false sample results." The City contends that because Wabschall knew the results from the tests he ran for the 5-day BOD for December 9 and 17, 1998 were obviously inaccurate, the estimated "sample test results" he reported were not intentionally false.

The NPDES permit required the City, through its agent, wastewater plant superintendent Wabschall, to follow the test methodology set out in 40 CFR 136, and to report the test results obtained from following that test methodology. Both the DMR and the permit require the permittee to report accurate and correct information based on those test results. Wabschall reported test results that he knew were inaccurate. The NPDES permit and DEQ rely on permittees to monitor themselves. DEQ lacks the resources to constantly check on an on-going basis permittees like the City to make certain they comply with all provisions in the permit. Permittees must report accurate test results and data so that both the permittee and DEQ can be alerted for any variations or discrepancies in the data and then track down problems and make corrections promptly.

OAR 340-012-0030(9) [i.e., "intentional" conduct] requires that the person act with a "conscious objective to cause the result of the conduct." In this case that conduct entailed a conscious objective to report test results knowing that those results were false or inaccurate. Acting intentionally under OAR 340-012-0030(9) does not require that the actor deliberately set out in advance to violate the law. The state of mind or level of conduct of deliberately setting out in advance to violate the law is addressed in DEQ's definition of "flagrant," which can elevate the amount of civil penalty. Wabschall admitted that he knew the test results he reported for BOD values for December 9 and 17, 1998 on the DMR for December 1998 were false or not accurate.

He acted with a conscious objective to report test results he knew were false. DEQ established by a preponderance of the evidence that Wabschall intentionally reported false test results on the DMR report for December 1998.

The City argues that Wabschall estimated the BOD values from the TSS test results he had obtained for December 9 and 17, 1998, and hence could not have intentionally reported false test sample results. The conditions in the NPDES permit did not provide for estimating either BOD or any other test results. The permit requires following established testing methodology and reporting actual test results. Moreover, Wabschall's estimate was nothing more than a rough estimate or a guess. He used no established or accepted formula to make his estimate for BOD values from TSS test results. He just "eyeballed" the TSS test results and made his estimate. Finally, the City presented no persuasive evidence of a demonstrable correlation between BOD and TSS results. DEQ conducted a study of the City's treatment plant from January 1998 through December 1998, and found no such correlation. Wabschall apparently based his opinion of a correlation between TSS and BOD on information he obtained from a textbook he used in a class he took on wastewater treatment at a community college. However, that textbook focused on engineers calculating capacity for designs of wastewater treatment plants. The City presented no persuasive evidence that such correlation, even if it exits, applies to the actual testing of influent samples in an operating plant.

(2) Next is whether the City's conduct should be considered flagrant.

OAR 340-012-0030(7) defines "flagrant":

> (7) "Flagrant means any documented violation where the Respondent had actual knowledge of law and had consciously set out to commit the violation.

Wabschall had actual knowledge of the laws and the provisions in the NPDES permit that required him to report accurate and true test results on the DMR. However, acting fragrantly implies planning or deliberately setting out in advance to violate the law. If Wabschall had that state of mind or purpose, he did a poor job covering his tracks. Wabschall recorded the actual beginning and ending values he obtained for the two samples for December 9 and 17, 1998 on the bench sheets. He then recorded a BOD value that obviously did not compute from those raw test numbers. DEQ inspector Sheetz had no difficulty discovering the erroneous results and calculating from the reported raw numbers what the actual BOD value should have been. If Wabschall had deliberately set out ahead of time to violate the law and report false test results, he could have easily made up beginning and ending raw test numbers to arrive at the BOD value he wished to report. DEQ investigator Sheetz would have had no practical way to go back and verify after the fact whether those raw test numbers were correct because the actual samples used had long since been discarded. Moreover, Wabschall made no effort to cover up what he had done when he talked to Sheetz on September 22, 1999. Sheetz asked him about the bench sheet numbers and the DMR. Wabschall acknowledged that his BOD results were estimates.

Wabschall made several mistakes gathering data and conducting tests. He placed test results in the wrong columns on bench sheets, he matched data with the wrong dates, and he may have used an incorrectly sized bottle to conduct tests. The City's plant under Wabschall's supervision had not been inspected by DEQ for permit compliance prior to September 16, 1998. Wabschall

probably did not anticipate an inspection. Wabschall and the City had to collect lots of data on a continuous basis and conduct numerous tests on influent and effluent. Wabschall no doubt had a good understanding of the operation of his plant and generally on what levels and test results for influent and effluent to expect based on his experience. Alerting DEQ to erroneous test results and possibly flawed testing procedures may have invited additional scrutiny from DEQ and added work for Wabschall and his staff. Reporting his best estimates for BOD values and moving on was the path of least resistance. Although Wabschall acted intentionally in reporting false BOD values, DEQ failed to prove by a preponderance of the evidence that the City acting through Wabschall acted flagrantly.

CIVIL PENALTY

DEQ calculated the requested penalty of $12,000 according to the factors set forth in Exhibit 1 to the Notice of Assessment of Civil Penalty. (Exhibit 104.)

Violations pertaining to water quality shall be classified as Class I if the violation involves intentionally submitting false information. OAR 340-012-0055(1)(m).

The magnitude of the violation is moderate pursuant to OAR 340-012-0045(1) because there is no selected magnitude for the violation in OAR 340-012-0090.

The formula for determining the amount of penalty of each violation is:

$$BP = [(0.1 \times BP) \times (P + H + O + R + C] + EB$$

"BP" is the base penalty which is $3,000 for a Class I moderate magnitude violation in the matrix listed in OAR 340-012-0042(1).

"P" is respondent's prior significant action(s) and receives a value of 0 according to OAR 340-012-0045(1)(c)(A)(ii) because respondent has no prior significant actions.

"H" is the past history of respondent in taking all feasible steps or procedures necessary to correct any prior significant action(s) and receives a value of 0 according to OAR 340-012-0045(1)(c)(B)(ii) because respondent has no prior history.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of 0 according to OAR 340-012-0045(1)(c)(C)(i) because respondent is being assessed separate penalties for each occurrence of the violation.

"R" is the cause of the violation and receives a value of 6 according to OAR 340-012-0045(1)(c)(D)(iii) because respondent acted intentionally as explained in subsection (2) of the Opinion Section of this decision.

"C" is respondent's cooperativeness in correcting the violation and receives a value of 0 according to OAR 340-012-0045(1)(c)(E)(ii) because the effects of the violation could not be corrected.

"EB" is the approximate dollar sum of the economic benefit that the respondent gained through noncompliance according to OAR 340-012-0045(1)(c)(F) and receives a value of 0 due to a lack of evidence upon which to make a determination.

Penalty Calculation:

$$\begin{aligned}\text{Penalty} &= BP + [(0.1 \times BP) \times (P + H + O + R + C)] + EB \\ &= \$3,000 + [(0.1 \times \$3,000) \times (0 + 0 + 6 + 0 + 0)] + \$0 \\ &= \$3,000 + (\$300 \times 6) + \$0 \\ &= \$3,000 + \$1,800 + \$0 \\ &= \$4,800\end{aligned}$$

Because respondent committed violations for two separate days, December 9 and 17, 1998, the penalty should be multiplied by two.[5] The penalty the Commission should impose is $9,600.

PROPOSED ORDER

I propose that the Commission enter an order that respondent City of Scappoose violated ORS 468B.025(2) and 468.126, and impose a civil penalty on respondent in the amount of $9,600.

Dated this 21 day of September, 2001

Ken L. Betterton
Administrative Law Judge
Hearing Officer Panel

Appeal Procedures

If you are not satisfied with this decision, you have the right to have the decision reviewed by the Oregon Environmental Quality Commission. To have the decision reviewed, you must file a "Petition for Review" within 30 days of the date this order is served on you as provided in Oregon Administrative Rule (OAR) 340-011-0132(1) and (2). The Petition for Review must be filed with:

Stephanie Hallock, Director

[5] ORS 468.140 provides:

(1) In addition to any other penalty provided by law, any person who violates any of the following shall incur a civil penalty for each day of violation * * *.
* * * * *
(b) Any provision of * * * ORS chapters 468 * * * and 468B.
* * * * *.

Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204.

Within 30 days of filing the Petition for Review, you must also file exceptions and a brief as in provided in OAR 340-011-0132(3). If the petition, exceptions and brief are filed in a timely manner, the Commission will set the matter for oral argument and notify you of the time and place of the Commission's meeting. The requirements for filing a petition, exceptions and briefs are set out in OAR 340-011-0132.

Unless you timely and appropriately file a Petition for Review as set forth above, this Proposed Order becomes the Final Order of the Environmental Quality Commission 30 days from the date of service on you of this Proposed Order. If you wish to appeal the Final Order, you have 60 days from the date the Proposed Order becomes the Final Order to file a petition for review with the Oregon Court of Appeals. *See* ORS 183.400 *et. seq.*

STATE OF OREGON - HEARING OFFICER PANEL - EMPLOYMENT DEPARTMENT

STATE OF OREGON
BEFORE THE HEARING OFFICER PANEL
FOR THE ENVIRONMENTAL QUALITY COMMISSION

IN THE MATTER OF:	)	
	)	ORDER ASSESSING
	)	CIVIL PENALTY
City of Scappoose,	)	Hearing Officer Panel Case No. G60393
	)	Agency Case No. WQ/M-NWR-00-010
	)	COLUMBIA COUNTY
Respondent.	)	

ORDER

IT IS HEREBY ORDERED that respondent, City of Scappoose, is liable for a civil penalty of $9,600.00, plus interest pursuant to ORS 82.010, from the date this order is signed until paid. If the civil penalty remains unpaid for more than ten (10) days from the date this order is signed, this order may be filed with any County Clerk and execution shall issue thereon.

If a party wishes to appeal this order, the party has thirty (30) days from the date this order is signed to appeal the order to the Environmental Quality Commission. *See* Oregon Administrative Rule (OAR) 340-011-0132. If a party wishes to appeal the decision of the Environmental Quality Commission, the party has sixty (60) days from the date of service of the order by the Commission to file a petition for review with the Oregon Court of Appeals. (*See* ORS 183.480 *et seq.*)

ENVIRONMENTAL QUALITY COMMISSION

Dated this 21 day of September, 2001

Ken L. Betterton
Administrative Law Judge
Hearing Officer Panel

Certificate of Service

County of Marion)
)
State of Oregon)

I certify that on 9/21/01 a true copy of the above Proposed Order was served on each of the parties by depositing the same in the United States Mail in Salem, Oregon, postage paid and certified, and sent to the addresses appearing on the Notice of Hearing unless otherwise noted below.

Laurel Van Fleet

Laurel Van Fleet
Hearing Officer Panel

s:resource/central panel forms

I hereby certify that the within instrument was received for record and recorded in the County of Columbia, State of Oregon.

12511 '02 SEP 27 M1:26

ELIZABETH HUSER, County Clerk

By: [signature] Deputy

Receipt # Bill # of Pages 15

FEES $ 46.00

2

State of Oregon
Department of Environmental Quality Memorandum

Date: July 3, 2002

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item A: Contested Case No. WQ/M-NWR-00-010 regarding City of Scappoose, July 25, 2002 EQC Meeting

Appeal to EQC

On October 18, 2001, the City of Scappoose appealed a Proposed Order (Attachment E) assessing a $9,600 civil penalty for violation of the City's National Pollutant Discharge Elimination System (NPDES) wastewater discharge permit. The violation was for intentional submittal of false data on a discharge monitoring report.

Background

On April 18, 2000, DEQ assessed the City of Scappoose a $12,000 civil penalty (Attachment M) for violating its NPDES wastewater discharge permit by failing to report the results of wastewater monitoring on two occasions in December 1998. DEQ further alleged that the City intentionally reported false test results instead of the actual monitoring results.

On January 11, 2001, the Department presented its case to the Hearing Officer. At the conclusion of DEQ's argument, the City filed three written motions to dismiss the civil penalty, or for a directed verdict finding for the City. The City claimed that DEQ did not give proper notice to the City under the Administrative Procedures Act (ORS 183) and ORS 468.126[1]. Specifically, the City said DEQ's Notice of Civil Penalty Assessment (Attachment M) did not cite an exception to the requirement in ORS 468.126 that it give the City an advanced warning and an opportunity to correct the violation before assessing a civil penalty. The City also argued that DEQ's Notice did not allege conduct that violated the City's permit and that even if it had properly alleged a violation, it had not proved at the hearing that the City committed the alleged violations. The Hearing Officer denied the motions in a March 14, 2001 written opinion (Attachment H). The contested case hearing concluded on July 25, 2001, and the Hearing Officer issued his Proposed Order on September 21, 2001.

[1] Oregon Revised Statute (ORS) 468.126 requires the Department to give certain permittees five days advanced warning before assessing a civil penalty. If the permittee corrects the violation within five days of receiving the warning, the Department may not assess a civil penalty. There are exceptions set forth in ORS 468.126 that allow the Department, when the conditions of the exception are met, to assess a civil penalty without first issuing a warning.

Findings of fact made by the Hearing Officer are summarized as follows:

The City operates a municipal wastewater treatment plant that collects domestic sewage and food processing wastewater and discharges treated effluent to the Multnomah Channel of the Willamette River. The City's permit requires it to perform twice weekly monitoring of its influent for biochemical oxygen demand (BOD) and total suspended solids and to report the results of its monitoring to DEQ on monthly discharge monitoring reports. The permit requires the BOD determination to be made using an empirical test with standardized laboratory procedures.

On December 9 and 17, 1998, the City's treatment plant operator, Steve Wabschall, ran influent BOD tests that resulted in values of 25.3 and 33.8 milligrams per liter (mg/L) BOD, respectively. Mr. Wabschall believed that the results obtained on both occasions were too low to be accurate. When he prepared the City's Discharge Monitoring Report for December 1998, instead of reporting the test results he obtained, Mr. Wabschall reported his own estimate of influent BOD, 60 mg/L for December 9 and 100 mg/L for December 17. Mr. Wabschall believed he could estimate influent BOD based on the results for influent total suspended solids (TSS). Mr. Wabschall knew that the BOD values he recorded and submitted to DEQ were not the actual results he obtained, but did not write anywhere on the report that the results were estimates. In preparation for the case hearing, DEQ performed a study of the City's wastewater treatment plant records for January 1998 through December 1998 and found no correlation between TSS and BOD that would enable Mr. Wabschall to accurately estimate a BOD result from a TSS result (Attachment N2).

In his Conclusions of Law, the Hearing Officer found that the City violated a condition of its NPDES permit by intentionally reporting false results on its December 1998 discharge monitoring report, but that the City's conduct was not flagrant. The Hearing Officer proposed that a $9,600 civil penalty be assessed against the City.

In its appeal of the Proposed Order (Attachment B), the City took exception to:

1. The Hearing Officer's failure to grant its motion to dismiss based on DEQ's alleged failure to give the City the statutory notice required by ORS 183 and 468.126(1).
2. The Hearing Officer's failure to grant its motion to dismiss based on DEQ's alleged failure to describe conduct in the Notice constituting a violation.

3. The Hearing Officer's Proposed Findings of Fact 6, 7 and 9, to the extent the Hearing Officer found that Mr. Wabschall intended to report test results for the data entries at issue in the case.
4. The Hearing Officer's Proposed Conclusion of Law 1, that Scappoose "intentionally" reported "false results on its discharge monitoring report for December 1998."

City Exception 1

The City argued that the Commission's prior contested case hearing decisions required that the Department cite in the Notice the precise statutory exception allowing assessment of a civil penalty without the advanced warning required by ORS 468.126. In its response brief (Attachment A), the Department argued that the Commission should preclude the City from raising the defense of inadequate notice. In his ruling on the motion, the Hearing Officer determined that the City was barred from raising the defense of inadequate notice because it failed to do so in its Answer to the violation Notice (Attachment L) or before the hearing. The City did not appeal this ruling and the Department argued that the City should not be allowed to raise the inadequate notice defense before the Commission. The Hearing Officer also found that even if the City had timely raised the inadequate notice defense, the Department's Notice met all the requirements of ORS 183 and 468. Should the Commission agree to hear the inadequate notice defense, the Department requested in its brief that the Commission adopt the Hearing Officer's finding that the Notice was adequate.

City Exception 2

The City also argues that the Department did not allege conduct in the Notice that constituted a violation. In the Notice, the Department alleged that the City violated Schedule B, Condition 1, "by failing to report the results of sample analysis for biological oxygen demand. Respondent intentionally submitted false sample results on its Discharge Monitoring Report." The City contends that Schedule B, Condition 1, requires the City to report "monitoring results" which are not necessarily "sample results." The City claims that it did submit "monitoring results" when it reported alleged estimates of influent BOD rather than the sample results Mr. Wabschall considered clearly inaccurate. The Hearing Officer found that Schedule B, Condition 1, of the City's permit did require the City to report the actual results of its sampling analysis. The Hearing Officer stated that the permit required the City to use the sampling methodology set forth in 40 Code of Federal Regulations 136 and to report the results of that methodology. The Department requested the Commission adopt the Hearing Officer's reasoning, arguing that the language of the permit is clear in requiring the City to report the actual analytical

results of the sampling methodology specified by the permit.

City Exceptions 3 and 4

In its third and fourth exceptions, the City argues that Mr. Wabschall did not intend to report false test results, so the City therefore could not intentionally have violated its permit. The City alleged that 1) Mr. Wabschall knew the test results were inaccurate; 2) he believed that he could estimate a more accurate value; 3) in accordance with the City's second exception, it was never required to report test results anyway; and 4) DEQ provided no guidance or other information to permit holders explaining how to handle test data that is known to be invalid or inaccurate. In its response brief, the Department argued that the City's interpretation of the term "intentional" is not supported by the definition set forth in rule. The City claims that, for its conduct to be intentional, Mr. Wabschall must have had a conscious objective to violate the law. The Department states in its brief (Attachment A) that the standard for *intentional conduct* put forth by the City is actually that for *flagrant conduct*, as defined by rule. The Department argued that to prove *intentional*, the Department need only prove that the data was false and Mr. Wabschall had the conscious objective to submit that data to the Department. Whether or not it was his objective to violate the law is irrelevant. The Department noted in its brief that Mr. Wabschall 1) consciously prepared and signed the monitoring report for December 1998 on behalf of the City; 2) consciously failed to report the actual results of the required monitoring; 3) consciously created the BOD data submitted; and 4) consciously filed the monitoring report with the Department, without notation reflecting that the BOD data on the report was generated by any means other than the required analytical methodology.

EQC Authority

The Commission has the authority to hear this appeal under OAR 340-011-0132.

Alternatives

The Commission may:

1. As requested by the City, dismiss the penalty by adopting the City's exceptions 1 or 2, or 3 and 4.
2. As requested by the Department, uphold the Hearing Officer's Proposed Order.

In reviewing the proposed order, findings of fact, and conclusions of law, the Commission may substitute its judgment for that of the Hearing Officer except as

noted below.[2] The proposed order was issued under current statutes and rules governing the Hearing Officer Panel Pilot Project.[3] Under these statutes, the Department's contested case hearings must be conducted by a hearing officer appointed to the panel, and the Commission's authority to review and reverse the Hearing Officer's decision is limited by the statutes and the rules of the Department of Justice that implement the project. [4]

The most important limitations are as follows:

(1) The Commission may not modify the form of the Hearing Officer's Proposed Order in any substantial manner without identifying and explaining the modifications. [5]

(2) The Commission may not modify a recommended finding of historical fact unless it finds that the recommended finding is not supported by a preponderance of the evidence. [6] Accordingly, the Commission may not modify any historical fact unless it has reviewed the entire record or at least all portions of the record that are relevant to the finding.

(3) The Commission may not consider any new or additional evidence, but may only remand the matter to the Hearing Officer to take the evidence. [7]

The rules implementing these statutes also have more specific provisions addressing how Commissioners must declare and address any ex parte communications and potential or actual conflicts of interest.[8]

In addition, the Commission has established by rule a number of other procedural provisions, including:

(1) The Commission will not consider matters not raised before the hearing officer unless it is necessary to prevent a manifest injustice. [9]

(2) The Commission will not remand a matter to the Hearing Officer to consider new or additional facts unless the proponent of the new evidence has properly filed a written motion explaining why evidence was not presented to the

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[2] OAR 340-011-0132.
[3] Or Laws 1999 Chapter 849.
[4] *Id.* at § 5(2); § 9(6).
[5] *Id.* at § 12(2).
[6] *Id.* at § 12(3). A historical fact is a determination that an event did or did not occur or that a circumstance or status did or did not exist either before or at the time of the hearing.
[7] *Id.* at § 8; OAR 137-003-0655(4).
[8] OAR 137-003-0655(5); 137-003-0660.
[9] OAR 340-011-132(3)(a).

hearing officer.[10]

Attachments The complete, official case record is attached:

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B. City's Exceptions and Brief, dated November 21, 2001
C. Letter from Mikell O'Mealy, dated October 25, 2001
D. Petition for Commission Review, dated October 18, 2001
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G. Department's Hearing Memorandum, dated August 10, 2001
H. Hearing Officer's Order Denying Respondents Motions to Dismiss or for Directed Verdict, dated March 14, 2001
I. City's Reply to Response of Department to City Motions to Dismiss, dated February 28, 2001
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Attachment N.2. is the Department's Exhibit (Note: Exhibit N.1. was submitted but withdrawn before development of the formal record.)
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[10] *Id.* at (4).

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117. DEQ Enforcement Section Referral, City of Scappoose, dated January 25, 2000
118. Formulas Required for Wastewater Treatment, author, page, publication publisher, publication date unknown
119. "Population Loading and Population Equivalent"

Documents Available Upon Request OAR Chapter 340, Division 11, ORS Chapter 468

Report Prepared By:

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Phone: (503) 229-5301

State of Oregon

Department of Environmental Quality Memorandum

Date: July 3, 2002

To: Environmental Quality Commission

From: Stephanie Hallock, Director S. Hallock

Subject: Agenda Item A: Contested Case No. WQ/M-NWR-00-010 regarding City of Scappoose, July 25, 2002 EQC Meeting

Appeal to EQC

On October 18, 2001, the City of Scappoose appealed a Proposed Order (Attachment E) assessing a $9,600 civil penalty for violation of the City's National Pollutant Discharge Elimination System (NPDES) wastewater discharge permit. The violation was for intentional submittal of false data on a discharge monitoring report.

Background

On April 18, 2000, DEQ assessed the City of Scappoose a $12,000 civil penalty (Attachment M) for violating its NPDES wastewater discharge permit by failing to report the results of wastewater monitoring on two occasions in December 1998. DEQ further alleged that the City intentionally reported false test results instead of the actual monitoring results.

On January 11, 2001, the Department presented its case to the Hearing Officer. At the conclusion of DEQ's argument, the City filed three written motions to dismiss the civil penalty, or for a directed verdict finding for the City. The City claimed that DEQ did not give proper notice to the City under the Administrative Procedures Act (ORS 183) and ORS 468.126[1]. Specifically, the City said DEQ's Notice of Civil Penalty Assessment (Attachment M) did not cite an exception to the requirement in ORS 468.126 that it give the City an advanced warning and an opportunity to correct the violation before assessing a civil penalty. The City also argued that DEQ's Notice did not allege conduct that violated the City's permit and that even if it had properly alleged a violation, it had not proved at the hearing that the City committed the alleged violations. The Hearing Officer denied the motions in a March 14, 2001 written opinion (Attachment H). The contested case hearing concluded on July 25, 2001, and the Hearing Officer issued his Proposed Order on September 21, 2001.

[1] Oregon Revised Statute (ORS) 468.126 requires the Department to give certain permittees five days advanced warning before assessing a civil penalty. If the permittee corrects the violation within five days of receiving the warning, the Department may not assess a civil penalty. There are exceptions set forth in ORS 468.126 that allow the Department, when the conditions of the exception are met, to assess a civil penalty without first issuing a warning.

Findings of fact made by the Hearing Officer are summarized as follows:

The City operates a municipal wastewater treatment plant that collects domestic sewage and food processing wastewater and discharges treated effluent to the Multnomah Channel of the Willamette River. The City's permit requires it to perform twice weekly monitoring of its influent for biochemical oxygen demand (BOD) and total suspended solids and to report the results of its monitoring to DEQ on monthly discharge monitoring reports. The permit requires the BOD determination to be made using an empirical test with standardized laboratory procedures.

On December 9 and 17, 1998, the City's treatment plant operator, Steve Wabschall, ran influent BOD tests that resulted in values of 25.3 and 33.8 milligrams per liter (mg/L) BOD, respectively. Mr. Wabschall believed that the results obtained on both occasions were too low to be accurate. When he prepared the City's Discharge Monitoring Report for December 1998, instead of reporting the test results he obtained, Mr. Wabschall reported his own estimate of influent BOD, 60 mg/L for December 9 and 100 mg/L for December 17. Mr. Wabschall believed he could estimate influent BOD based on the results for influent total suspended solids (TSS). Mr. Wabschall knew that the BOD values he recorded and submitted to DEQ were not the actual results he obtained, but did not write anywhere on the report that the results were estimates. In preparation for the case hearing, DEQ performed a study of the City's wastewater treatment plant records for January 1998 through December 1998 and found no correlation between TSS and BOD that would enable Mr. Wabschall to accurately estimate a BOD result from a TSS result (Attachment N2).

In his Conclusions of Law, the Hearing Officer found that the City violated a condition of its NPDES permit by intentionally reporting false results on its December 1998 discharge monitoring report, but that the City's conduct was not flagrant. The Hearing Officer proposed that a $9,600 civil penalty be assessed against the City.

In its appeal of the Proposed Order (Attachment B), the City took exception to:

1. The Hearing Officer's failure to grant its motion to dismiss based on DEQ's alleged failure to give the City the statutory notice required by ORS 183 and 468.126(1).
2. The Hearing Officer's failure to grant its motion to dismiss based on DEQ's alleged failure to describe conduct in the Notice constituting a violation.

3. The Hearing Officer's Proposed Findings of Fact 6, 7 and 9, to the extent the Hearing Officer found that Mr. Wabschall intended to report test results for the data entries at issue in the case.
4. The Hearing Officer's Proposed Conclusion of Law 1, that Scappoose "intentionally" reported "false results on its discharge monitoring report for December 1998."

City Exception 1

The City argued that the Commission's prior contested case hearing decisions required that the Department cite in the Notice the precise statutory exception allowing assessment of a civil penalty without the advanced warning required by ORS 468.126. In its response brief (Attachment A), the Department argued that the Commission should preclude the City from raising the defense of inadequate notice. In his ruling on the motion, the Hearing Officer determined that the City was barred from raising the defense of inadequate notice because it failed to do so in its Answer to the violation Notice (Attachment L) or before the hearing. The City did not appeal this ruling and the Department argued that the City should not be allowed to raise the inadequate notice defense before the Commission. The Hearing Officer also found that even if the City had timely raised the inadequate notice defense, the Department's Notice met all the requirements of ORS 183 and 468. Should the Commission agree to hear the inadequate notice defense, the Department requested in its brief that the Commission adopt the Hearing Officer's finding that the Notice was adequate.

City Exception 2

The City also argues that the Department did not allege conduct in the Notice that constituted a violation. In the Notice, the Department alleged that the City violated Schedule B, Condition 1, "by failing to report the results of sample analysis for biological oxygen demand. Respondent intentionally submitted false sample results on its Discharge Monitoring Report." The City contends that Schedule B, Condition 1, requires the City to report "monitoring results" which are not necessarily "sample results." The City claims that it did submit "monitoring results" when it reported alleged estimates of influent BOD rather than the sample results Mr. Wabschall considered clearly inaccurate. The Hearing Officer found that Schedule B, Condition 1, of the City's permit did require the City to report the actual results of its sampling analysis. The Hearing Officer stated that the permit required the City to use the sampling methodology set forth in 40 Code of Federal Regulations 136 and to report the results of that methodology. The Department requested the Commission adopt the Hearing Officer's reasoning, arguing that the language of the permit is clear in requiring the City to report the actual analytical

results of the sampling methodology specified by the permit.

City Exceptions 3 and 4

In its third and fourth exceptions, the City argues that Mr. Wabschall did not intend to report false test results, so the City therefore could not intentionally have violated its permit. The City alleged that 1) Mr. Wabschall knew the test results were inaccurate; 2) he believed that he could estimate a more accurate value; 3) in accordance with the City's second exception, it was never required to report test results anyway; and 4) DEQ provided no guidance or other information to permit holders explaining how to handle test data that is known to be invalid or inaccurate. In its response brief, the Department argued that the City's interpretation of the term "intentional" is not supported by the definition set forth in rule. The City claims that, for its conduct to be intentional, Mr. Wabschall must have had a conscious objective to violate the law. The Department states in its brief (Attachment A) that the standard for *intentional conduct* put forth by the City is actually that for *flagrant conduct*, as defined by rule. The Department argued that to prove *intentional*, the Department need only prove that the data was false and Mr. Wabschall had the conscious objective to submit that data to the Department. Whether or not it was his objective to violate the law is irrelevant. The Department noted in its brief that Mr. Wabschall 1) consciously prepared and signed the monitoring report for December 1998 on behalf of the City; 2) consciously failed to report the actual results of the required monitoring; 3) consciously created the BOD data submitted; and 4) consciously filed the monitoring report with the Department, without notation reflecting that the BOD data on the report was generated by any means other than the required analytical methodology.

EQC Authority

The Commission has the authority to hear this appeal under OAR 340-011-0132.

Alternatives

The Commission may:

1. As requested by the City, dismiss the penalty by adopting the City's exceptions 1 or 2, or 3 and 4.
2. As requested by the Department, uphold the Hearing Officer's Proposed Order.

In reviewing the proposed order, findings of fact, and conclusions of law, the Commission may substitute its judgment for that of the Hearing Officer except as

noted below.[2] The proposed order was issued under current statutes and rules governing the Hearing Officer Panel Pilot Project.[3] Under these statutes, the Department's contested case hearings must be conducted by a hearing officer appointed to the panel, and the Commission's authority to review and reverse the Hearing Officer's decision is limited by the statutes and the rules of the Department of Justice that implement the project. [4]

The most important limitations are as follows:

(1) The Commission may not modify the form of the Hearing Officer's Proposed Order in any substantial manner without identifying and explaining the modifications. [5]
(2) The Commission may not modify a recommended finding of historical fact unless it finds that the recommended finding is not supported by a preponderance of the evidence. [6] Accordingly, the Commission may not modify any historical fact unless it has reviewed the entire record or at least all portions of the record that are relevant to the finding.
(3) The Commission may not consider any new or additional evidence, but may only remand the matter to the Hearing Officer to take the evidence. [7]

The rules implementing these statutes also have more specific provisions addressing how Commissioners must declare and address any ex parte communications and potential or actual conflicts of interest.[8]

In addition, the Commission has established by rule a number of other procedural provisions, including:

(1) The Commission will not consider matters not raised before the hearing officer unless it is necessary to prevent a manifest injustice. [9]
(2) The Commission will not remand a matter to the Hearing Officer to consider new or additional facts unless the proponent of the new evidence has properly filed a written motion explaining why evidence was not presented to the

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Documents Available Upon Request OAR Chapter 340, Division 11, ORS Chapter 468

Report Prepared By:

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Phone: (503) 229-5301

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF: CITY OF SCAPPOOSE Petitioner,	Case No. G60393 RESPONSE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY TO PETITIONER'S EXCEPTIONS AND BRIEF TO THE RULINGS AND PROPOSED ORDER OF HEARING OFFICER

INTRODUCTION

The City of Scappoose (City) operates a wastewater treatment facility, the discharges from which are authorized by an NPDES permit issued by the Department of Environmental Quality (Department or DEQ). On April 18, 2000, the Department issued the City a Notice of Violation, Department Order, and Assessment of Civil Penalty (Notice) assessing the City a civil penalty of $12,000 for violation of NPDES wastewater monitoring and reporting requirements. The City appealed the Notice. On September 21, 2001, the Hearing Officer issued a Proposed Order finding that the City had violated its permit, but reducing the City's penalty to $9,600 upon finding that the violations were intentional but not flagrant.

The City has appealed the Proposed Order to the Commission. In its appeal brief, the City asks the Commission to make four exceptions to the Hearing Officer's Proposed Order. The Department requests that the Commission deny the City's Exceptions.

DISCUSSION

I. Exceptions 1 and 2: Denial of Motions to Dismiss.

The City moved to dismiss the Department's Notice at the conclusion of the Department's case, and roughly eight months after it filed its answer to the Notice. It did so on

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two grounds: (a) that the Department failed to comply with certain notice requirements, and (b) that the Department's Notice failed to state a claim for which relief may be granted. Judge Betterton correctly denied both motions. (Ruling of March 14, 2001, attached.)

a. Compliance with Notice Requirements.

The Commission should preclude the City from appealing the Hearing Officer's denial of its motion to dismiss the case for lack of proper notice. Judge Betterton denied the City's motion to dismiss the civil penalty assessment for failure to comply with notice requirements on two independent, but equally sufficient grounds: (1) that the City failed to timely raise its defense of insufficient notice in its Answer to the Department's Notice, and (2) that the Notice did comply with the requirements of Oregon Revised Statute 183.090 and 183.415. The City, however, only took exception to the latter. See Petitioner's Exceptions and Brief to the Rulings and Proposed Order of Hearing Officer, Exceptions, Pages 3-6. Because the City did not file an exception to the Hearing Officer's denial of the motion to dismiss on the ground that the City did not timely raise its defense of insufficient notice, the City should be precluded from raise that defense before the Commission.

In his ruling on the City's motion, Judge Betterton first determined that the City was obligated to plead any alleged deficiency in the Notice prior to the hearing or in its answer:

> "Respondent could and should have raised the issue in Motion (1)(A) either as a separate motion to dismiss filed prior to hearing, or in its answer. The issue in Motion (1)(A) goes to the sufficiency of the pleading or the notice of violation, and is a matter that can be raised by examining the face of the notice of violation itself. Respondent is precluded from raising this issue at the conclusion of DEQ's case-in-chief. Respondent's Motion (1)(A) is denied." (March 14, 2001 ruling, at 1).

As noted above, the City did not file its motions to dismiss until DEQ closed its case at the hearing, eight months after it filed its Answer.[1] OAR 340-011-0107(2) provides in relevant part as follows:

[1] Answer filed May 8, 2000; motions to dismiss filed January 11, 2001.

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"In the answer, the party shall admit or deny all factual matters and shall affirmatively allege any and all affirmative claims or defenses the party may have and the reasoning in support thereof. Except for good cause shown:

* * *

(b) Failure to raise a claim or defense shall be presumed to be a waiver of such claims or defenses;

* * *."

Thus, Judge Betterton properly denied the motion because the City had already waived this defense.

Judge Betterton also denied the City's challenge to the adequacy of the notice on the merits. ORS 468.126(1) requires five days' advance written notice of civil penalties imposed for violation of NPDES permits. The notice requirement is, however, subject to several exceptions, as noted in ORS 468.126(2). ORS 468.126(2)(a) expressly provides that advance notice is *not* required if the alleged violation was intentional.

DEQ's Notice expressly states that it is issued pursuant to ORS 468.126. Notice Section IV, ¶ 1 further alleges an intentional violation:

"On or about December 9 and 17, 1998, Respondent violated ORS 468B.025(2) by violating a condition of its Permit. Specifically, Respondent violated Schedule B, Condition 1. Respondent ***intentionally*** reported false sample results on its Discharge Monitoring Report. These are Class I violations pursuant to OAR 340-012-0055(1)(m)." (Emphasis added.)

As a result, Judge Betterton denied the City's motion, finding in relevant part:

"DEQ alleges in its notice of violation that respondent acted intentionally. No advance notice is required if the alleged violation is intentional. ORS 468.126(2)(a). Respondent has cited no persuasive authority that DEQ must plead a reference to ORS 468.126(2)(a) in its notice of violation. DEQ's allegations in its notice of violation do not require that it give the advance written notice required by ORS 468.126(1). DEQ's notice of violation dated April 18, 2000 complies with ORS 183.090 and 183.415(1)." (March 14, 2001 ruling at 1).

The City continues to maintain, however, that ORS 183.415 required the Notice to specifically cite the exception to the advanced notice requirement in ORS 468.126(2) on which the Department relied. The City relies solely on the authorities Judge Betterton found unpersuasive and ignores a ruling by the Oregon Court of Appeals that fully resolves the issue.

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Simply put, ORS 468.126 does not express any actual pleading requirements. The relevant pleading requirements are found in ORS 183.415. The crux of the City's argument is that even though the Department plead both ORS 468.126 *and* an intentional violation, ORS 183.415(2) required it to plead specifically its reliance on subsection ORS 468.126(2)(a).

It is unclear how the City would benefit from such a citation in light of DEQ's allegation that the City acted intentionally. Nevertheless, the Oregon Court of Appeals has already determined that ORS 183.415 does *not* require what the City alleges is missing. *Doherty v. Oregon Water Resources Director*, 92 Or App 22, 33-34, 758 P2d 865 (Or App 1988)(rejecting argument that notice inadequate for failure to specify a statutory subsection because text of notice and reference to statute as a whole made the relationship between the subsections "obvious"; omission was not material and petitioner was not prejudiced). Before Judge Betterton, the City attempted to distinguish the *Doherty* case by arguing that *Doherty* did not involve a civil penalty. That is a distinction without a difference. The requirements of ORS 183.415 are no different when a civil penalty is at issue.

For its part, the City relies on four contested case rulings. Three can be distinguished without much discussion.[2] In the fourth ruling, *DEQ v. Neu-Glo Candles, Inc.*, 1988 WL 163165 (October 27, 1988), the hearings officer determined that ORS 183.415(2) imposed an independent obligation to cite the statutory exception relied upon (e.g. ORS 468.126(2)(a)). In that case, DEQ asserted that the violation alleged fell within two of the enumerated exceptions (those in (2)(b) and (2)(e)) but did not attempt to prove that the violation fell within (2)(b) and neither alleged a violation subject to the exception in (2)(e) nor satisfied the independent notice

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[2] In *DEQ v. Thomas H. Scott*, 1990 WL 283207 (1990), DEQ failed to present evidence establishing that the violation fell within the exception in ORS 468.126(2) on which it relied. In *DEQ v. Elliot-Jochimsen Construction, Inc.*, 1988 WL 167438 (1988), the exception upon which DEQ relied was not found in DEQ's rule with respect to the five-day notice (OAR 340-012-0040). Thus, DEQ failed to satisfy the independent notice requirement in its rule. Finally, *DEQ v. Bill R. Labenske, Jr., dba Guarantee Construction, 1989 WL 12077 (1989)*, the hearings officer determined that although DEQ relied on the exception in (2)(a) for intentional violations, DEQ had failed either to allege or to prove an intentional act.

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requirement in OAR 340-012-0040. In the present case, DEQ both alleged and proved an intentional violation subject to the exception in ORS 468.126(2)(a). Regardless of that distinction, the Commission is not at liberty to rely on *Neu-Glo Candles* given the superior authority to the contrary found in *Doherty*.[3]

Finally, it is worth noting that despite the City's failure to address this issue in its Brief to the Commission, the City's initial response to the Department's argument that the motions were untimely actually supports DEQ's position with respect to the sufficiency of the notice. Before Judge Betterton, the City argued, in part, as follows:

> "By its motions, [the City] has addressed the issue of DEQ's failure to satisfy its legal burden of properly pleading and proving its case. These issues are raised for the first time **after DEQ rested its case** because they are not relevant or complete until that time." (Respondent's Reply at 2, emphasis in original).

This begs the question. How can the Notice be deficient *on its face*, as the City now argues in its first exception, if the issue was not "relevant or complete" until *after* DEQ rested its case (i.e., until all of the proof has been presented)? The answer is, it cannot.

In sum, Judge Betterton properly denied this motion on both procedural and substantive grounds.

b. DEQ properly alleged a claim upon which relief can be granted.

The City asserts that DEQ failed to allege a claim in Section IV, Paragraph 1 for which relief can be granted. Section IV, Paragraph 1 alleges that the City violated ORS 468B.025(2) by violating a condition of its permit. Paragraph 1 further describes the violation alleged, namely, that Respondent failed to report the results of the analysis of its biochemical oxygen demand (BOD) sample and reported false results on its discharge monitoring report (or DMR).

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[3] The hearings officer's failure to rely on *Doherty* is potentially explained by the fact that *Doherty* was reissued on reconsideration only two weeks before the *Neu-Glo Candles* decision was issued. (*Doherty*, 92 Or App 22 [July 6, 1988, reconsideration allowed and opinion clarified October 12, 1988]).

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Nothing more is required to allege a claim. ORS 183.415(2)(c) and (d) require a reference to the statutes involved and "a short and plain statement of the matters asserted or charged." DEQ need not reference the specific permit condition by number at all.

Moreover, Schedule B, Condition 1 lays out the minimum monitoring and reporting requirements to which the City is subject. The allegation is not that Respondent failed to deliver a report, but that the Respondent reported something *other than* the results derived from the sampling methodology required by Schedule B, Condition 1. Thus, the allegation in Notice Section IV Paragraph 1 is proper and states a claim upon which relief can be granted.

The City's argument rests on a fairly tortured reading of the permit. The gist of the City's argument is that it was not required to report the results of the sampling analysis conducted using the methodology specified by the permit. According to the City, Permit Schedule B, Condition 1 may specify minimum monitoring and reporting frequencies and the type of samples to be taken, but Schedule B, Condition 2 only requires the permittee to report "monitoring" results. In other words, the City argues that with respect to BOD, the term "monitoring results" does not necessarily mean "sampling results," meaning that the City is at liberty to report something other than its sampling results (e.g., the plant operator's best-guess).

The flaw in this analysis is readily apparent. It is undisputed that the permit obligates the City to "monitor" and to report "monitoring results." The monitoring methodology is not, however, left, as the City suggests, to the discretion of the permittee. Section C.3 of the permit, entitled "Monitoring Procedures" states that "monitoring must be conducted according to test procedures approved under 40 CFR [Code of Federal Regulations] 136, unless other test procedures have been specified." No other test procedures are specified in the City's permit. Suffice it to say, an operator's "best-guess" is not a test procedure approved under 40 CFR Part 136 for purposes of monitoring BOD. (Were that the case, one would have to wonder why the City has, for the past nine years, gone to the expense of collecting samples twice a week and

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analyzing them for BOD using Standard Method 5210B, an approved method under 40 CFR Part 136.)

The City's argument is premised upon the use of the term "monitoring" rather than "sampling" in Schedule B, Condition 2. Use of the term "monitoring," merely reflects the reality that all of the items or parameters to be monitored do not require sampling and analysis, however. Some parameters require sampling and analysis (e.g. BOD, TSS, pH, sludge analysis); some parameters do not (e.g. flow, flow meter calibration, % volatile solids reduction, locations of sludge application). In this context, "sampling" would be a misnomer with respect to many parameters. The term "monitoring results" encompasses both sample results (for those items requiring sampling) and the results of other observations/calculations/information (for those parameters that do not require sampling).

The City also relies on the reference to the term "information" found in the compliance certification[4] as evidence that an operator need not submit "test results." The City cannot reasonably argue that the conditions of the permit are somehow altered by the general language of a certification designed to secure compliance with those very same conditions. Permittees are required to submit various types of information, some of which is generated by sampling, some of which is not. The permit specifies the manner in which each parameter is to be monitored and requires submission of those monitoring results. In this context, submission of information generated by a different method (here, guesswork), particularly when the submission purports to satisfy permit requirements, prevents that submission from being "true, accurate and complete."

In sum, the City was obligated to report the actual test results for BOD. The City did not do so. Thus, it failed to report the results of sample analysis for biological oxygen demand, as alleged in DEQ's Notice. Moreover, rather than submitting nothing, the City provided a "guess"

[4] The preparer of a Discharge Monitoring Report to be submitted to the Department is required to sign a certification on the report which reads: "I certify under penalty of law that I have personally examined and am familiar with the information submitted herein: and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information submitted is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fines and imprisonment."

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on the form on which it was to report its test results (and without alerting DEQ to the fact that the submission was a guess). In doing so, the City can reasonably be viewed as having submitted false test results as alleged. Both of these independent bases are claims on which relief can be granted. Judge Betterton properly denied this motion.

II. Exceptions 3 and 4: Findings and Conclusions

The City asserts that the portions of Proposed Findings of Fact Nos. 6, 7, and 9 stating that the treatment plant superintendent reported or intended to report test results and the proposed Conclusion of Law that the City intentionally violated its permit by reporting false results are not supported by evidence in the record. The Hearing Officer's Proposed Findings of Fact Nos. 6, 7 and 9 and his conclusion that the City intentionally violated its permit by reporting false results are amply supported by evidence in the record and should be adopted by the Commission in its final order.

At issue in the City's exceptions is whether the City acted intentionally in submitting the December 1998 discharge monitoring report. OAR 340-012-0030(9) defines "intentional" as "conduct by a person with the conscious objective to cause the result of conduct." The City contends that unless the treatment plant superintendent knew that the values he recorded on the DMR were false, the conduct was not intentional. The City's intent is not, however, determined by what the superintendent may or may not have believed about the relative accuracy of his self-described "estimates."

The City need not have, and DEQ need not prove, a conscious objective to violate the law in order to establish an intentional violation. *See e.g., In the Matter of Pacific Air Helicopters, Inc.*, 1997 WL 276631 (Or Env Qual Com. 1997)(an "intentional" violation "does not mean that the [Respondent] had to intentionally violate the law, but only consciously engage in the conduct that led to the violation."). It is undisputed that the results submitted to DEQ on the monitoring report were not the actual test results derived when the City analyzed the December 9 and 17,

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1998 BOD samples using Standard Method 5210B. The City concurs with Judge Betterton's findings to that effect:

> "[The treatment plant superintendent] knew that the results he recorded and submitted to DEQ for the BOD values for December 9 and 17, 1998 were not the actual test results he obtained when he did the 5-day BOD tests for the two days." (Proposed Finding No. 9, Proposed Order at 5).[5]

The evidence clearly supports the conclusion that the superintendent: (1) consciously prepared and signed the monitoring report for December 1998 on behalf of the City; (2) consciously failed to report the actual results of the required monitoring; (3) consciously created the BOD data submitted; and (4) consciously filed the monitoring report with DEQ, with no notation reflecting that the BOD data on that report was generated by means other than the required analytical methodology. (See Proposed Finding of Fact No. 9). That evidence is more than sufficient to establish that the violation was intentional.

The City asserts that there is no evidence of intent to deceive or misrepresent the quality of the influent. In suggesting that proof of intent to deceive is necessary to support a finding of intentional violation, the City is effectively arguing that the Department should be held to the standard of proof for a flagrant violation. OAR 340-012-0030(7) defines "flagrant" as "any documented violation where Respondent has actual knowledge of the law and consciously set out to commit the violation." The Commission's intent to have "intentional" and "flagrant" represent two distinct mental states, could not be clearer. OAR 340-012-0045(1)(c)(D) provides for application of different aggravating factors for such violations: 6 in the case of an intentional violation and 10 in the case of a flagrant violation. DEQ is not arguing before the Commission that the violation was flagrant (despite ample support for such a theory) and should not be held to that standard.[6]

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[5] The City agrees that this finding is accurate (Exceptions and Brief at 9-10).

[6] In his testimony, the superintendent acknowledged that he knew that submitting false data is a violation. The hearings officer found that the superintendent knew that the BOD data he submitted was inaccurate. "Wabschall reported the test results that he knew were inaccurate....In this case that conduct entailed a conscious objective to

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The City also takes the position that it reported no test results and, as a consequence, Judge Betterton erred in finding that the superintendent reported or intended to report test results, and in concluding that the City reported false results. DEQ disagrees.

There is no dispute that the City submitted its monitoring report with the intent and expectation that by doing so it was fulfilling its obligations under the permit. As more fully summarized above, the permit requires the City to monitor BOD using specified procedures and to report the results of that monitoring to DEQ on approved forms every month. (See Proposed Finding of Fact No. 3.) In short, it was required to submit test results. By purporting to comply with its permit by submitting a monitoring report for December 1998, in the standard form, without any notation that the recorded values for BOD were merely estimates, and then certifying that the information in its submission was "true, complete, and accurate," (See Proposed finding of Fact No. 9 and 12), the City represented (or misrepresented) to DEQ that it was submitting the required test results. Under these circumstances, the City cannot reasonably claim that its submission should be treated as anything *other* than test results.

Much of the City's defense seems to be "good intentions."[7] The difficulty with this defense is readily apparent. The City is basically arguing that a permittee is entitled to alter or adjust its monitoring results without alerting DEQ to the adjustment, based only on its belief, whether well-founded or not, that its monitoring results are not accurate. Taking that argument to its logical conclusion, determinations as to permit compliance would be based on the integrity or intent of the person making the adjustment, rather than the actual quality of the wastewater

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report test results knowing the results were false or inaccurate." Proposed Order at 7. That is sufficient to support a conclusion that the violation was not only intentional, but also flagrant.

[7] The City relies on the purported Hobson's choice between knowingly submitting inaccurate information and providing a guess that it believes to be more representative. That dilemma is not real. Regardless of the cause of the inaccuracy, the permit makes plain the permittee's obligation to provide accurate information and report noncompliance. General Conditions D.6 and D.7 require the permittee to report any noncompliance on the monitoring report and to correct information if it becomes aware that it has submitted inaccurate information in an earlier report. (The obvious corollary being that the permittee should notify DEQ of inaccurate information if it is *already* aware of a problem at the time the information is submitted). The City neither sought technical assistance from DEQ nor noted on the monitoring report that it believed the BOD results to be incorrect. (See Proposed Findings of Fact 11 and 12, to which the City does not take exception.)

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being discharged. Presumably, those permittees that are deemed to be well-intentioned (by what standard is unclear) would not be in violation. That position is unsupportable. However well-intentioned, adjustments to the actual test results constitute permit violations.

Moreover, the City's position wholly undermines the system of accurate self-reporting on which the NPDES program relies. As an initial matter, there is no evidence that the superintendent's guess was accurate (or even more accurate than the test results). But even if his guess was accurate, one has to wonder why, in the opinion of an experienced treatment plant supervisor, the actual BOD results were "wrong." As the City correctly notes, the relevant wastestream is long gone and could not be retested. (Exceptions and Brief at 7.) By "self-correcting" the City deprived DEQ of the actual test results, which could have signaled, among other things, a problem with treatment plant operation or operator sampling techniques. By masking the actual results, the City not only masked evidence of other potential permit compliance issues[8], but also masked information that would have alerted DEQ to the City's need for technical assistance with respect to its sampling methods or plant operations.

In sum, the Proposed Findings of Fact and Conclusions of Law with which the City takes exception are accurate statements of both the facts and the law. The Proposed Order should be finalized without revision.

If, however, the Commission determines that any of the challenged findings or conclusions are not supported by evidence in the record, the appropriate consequence is *not* dismissal of the Notice, but modification of the Proposed Order. (See OAR 340-011- 0132 (5) and 137-003-0665). It is undisputed that the City failed to submit the actual test results. In fact, the City itself takes the position that it did not submit *any* test results. (Exceptions and Brief at 10). The City cannot have it both ways. If it did not submit test results, which for the reasons discussed above it was required to do, the City still violated its permit on the dates and for the

[8] See e.g. General Condition B.1, which requires proper operation and maintenance of the facility, including "adequate lab controls, and appropriate quality assurance procedures."

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reasons outlined in the Notice and Proposed Order. The Notice alleged a failure to report the results of sample analysis for BOD and the evidence established this violation and the fact that it was intentional. Thus, if the Commission determines that the challenged findings and conclusion are inaccurate or incomplete, it need not dismiss the Notice but need only remand the matter to the hearings officer for clarification.

CONCLUSION

For the reasons cited herein, the City's Exceptions should be denied and the Proposed Order should be finalized.

DATED this 21 day of December 2001.

Respectfully submitted,

HARDY MYERS
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Lynne Perry, #90456
Assistant Attorney General
Of Attorneys for Department of Environmental Quality

Jeff Bachman,
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Office of Compliance and Enforcement
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CERTIFICATE OF FILING/SERVICE

I certify that on December 21, 2001, I filed the original Response of Oregon Department of Environmental Quality To Petitioner's Exceptions and Brief To The Rulings and Proposed Order of the Hearing Officer with the Environmental Quality Commission, c/o Mikell O'Mealy, DEQ 811 SW Sixth Ave., Portland, OR 97204, by Personal Service.

DATED this 21 day of December 2001

Jeffrey R. Bachman
Office of Compliance and Enforcement
DEQ

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CERTIFICATE OF SERVICE

I hereby certify that on the 21 day of December, 2001, I served a true, exact, and full copy of this Response of Oregon Department of Environmental Quality To Petitioner's Exceptions and Brief on the following party.

Christopher L. Reive
Jordan Schader
P.O. Box 230669
Portland, OR 97281

DATED this 21 day of December, 2001

Jeffrey R. Bachman
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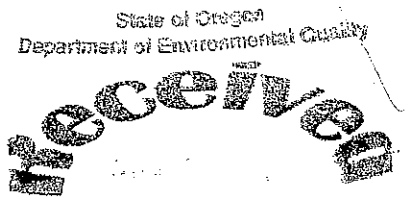
JORDAN SCHRADER
ATTORNEYS AT LAW

Formerly
Tarlow Jordan & Schrader

HAND DELIVERED

November 21, 2001



Ms. Mikell O'Mealy
Assistant to the Environmental Quality Commission
811 SW 6th Avenue
Portland OR 97204

Re: *In the Matter of City of Scappoose*
Case No.: WQ/M-NWR-00-010
Our File No. 42629/30022

Dear Ms. O'Mealy:

Enclosed and personally delivered for filing this date, November 21, 2001, is Petitioner's Exceptions and Brief to the Rulings and Proposed Order of Hearing Officer in the above-captioned matter.

Please file the enclosed pleadings immediately, complete the enclosed confirmation card and return the same to our office. If you have any questions in regard to this matter, please contact Debra Braddock, the paralegal assigned to this case.

Very truly yours,

JORDAN SCHRADER

Christopher L. Reive

Enclosure

cc: Jeff Bachman (via hand delivery)
City of Scappoose

CHRISTOPHER L. REIVE

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BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

In the Matter of:	Case No. WQ/M-NWR-00-010
CITY OF SCAPPOOSE, Petitioner	Hearing Officer Panel Case No.: G60393
	PETITIONER'S EXCEPTIONS AND BRIEF TO THE RULINGS AND PROPOSED ORDER OF HEARING OFFICER

Petitioner, City of Scappoose ("Scappoose"), hereby excepts from the rulings of Administrative Law Judge Ken L. Betterton ("Judge Betterton") and to his Proposed Order Assessing Civil Penalty, as detailed below and for the reasons stated below:

EXCEPTIONS

Scappoose excepts to:

1. Judge Betterton's failure to grant Scappoose's Motion to Dismiss the Department's Notice of Violation No.1, which is the subject of the civil penalty the Department seeks to impose, at the close of the Department's case for the reason that the Department failed to give Scappoose the statutory warning required by ORS 468.126(1) .

2. Judge Betterton's failure to grant Scappoose's Motion to Dismiss the Department's Notice of Violation No.1, which is the subject of the civil penalty the Department seeks to impose, at the close of the Department's case for the reason that the Department failed to allege a claim in Section IV, Paragraph 1 for which relief may be granted.

3. Judge Betterton's Proposed Findings of Fact Nos. 6, 7, and 9, to the extent that Judge Betterton declares as fact that Steven Wabschall reported or intended to report "test results" for the data entries at issue in this case for the reason that said findings are not supported by the evidence in the hearing record.

4. Judge Betterton's Proposed Conclusion of Law No.1, that Scappoose "intentionally" reported "false results on its discharge monitoring report for December 1998,"

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thereby violating "a condition" of its NPDES permit for the reason that said conclusion is not supported by the evidence in the hearing record or by the Proposed Findings of Fact.

DESIGNATION OF RECORD ON APPEAL

Scappoose hereby designates all exhibits admitted by Judge Betterton; the audio tapes of the contested case hearing conducted on January 11, 2001 and July 25, 2001; and all pleadings and written submissions of the parties filed prior to Judge Betterton's Proposed Order dated September 21, 2001.

DISCUSSION

Summary of Issues on Appeal

It is undisputed that Scappoose was not given five (5) days' advance warning, in writing, from the Department specifying the violation prior to the subject penalty assessment. It is also undisputed that such prior warning is required as a matter of law unless the Department is entitled to a statutory excuse. The core of this dispute, and this appeal, is whether the Department ever pleaded or, more importantly, proved it was entitled to such an excuse.

The excuse the Department relied on at the contested case hearing before Judge Betterton was its contention that Scappoose, through its employee Steven Wabschall, *intended* to report false *test results* to DEQ on Scappoose's regular discharge monitoring report for December 1998. As discussed below, the evidence and Proposed Findings of Fact do not support this conclusion, and in any event, the Department's allegations before the hearing and through the close of the Department's case did not properly assert its true claim. As a result, the case should have been dismissed at the close of the Department's case.

Exception Nos. 1 and 2, above, were presented to Judge Betterton by written motion at the close of the Department's case. Judge Betterton denied Scappoose's motions. For the reasons stated below, Judge Betterton was wrong as a matter of law. It is important to note that, in spite of Scappoose's motion, the Department has never moved to amend or otherwise correct

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what Scappoose asserts herein are substantive pleading deficiencies. Therefore, if the Commission agrees that the Department failed to give Scappoose the notice to which it was entitled as a matter of law, there is no correction available and the matter must be dismissed

Exception Nos. 3 and 4, above, address the core substantive issue before the Commission on appeal. Judge Betterton concludes that Mr. Wabschall *intended* to report "false results" when he entered the information requested by the discharge monitoring report form used by Scappoose and approved by the Department. This conclusion is not supported by the testimony of any witness, is directly controverted by the testimony of Mr. Wabschall, and is contrary to Judge Betterton's Proposed Findings of Fact. To the extent circumstantial evidence was offered and considered at the hearing, Mr. Wabschall's testimony regarding his training and state of mind was directly supported by Scappoose witness Holly Ploetz. The Department offered nothing to contradict her testimony. Indeed, the Department offered no testimony at all regarding Mr. Wabschall's actual state of mind because the Department seems to feel that the entire case is answered by the documents now in the record; that proof of Mr. Wabschall's state of mind is not important. For the obvious reasons stated below, the Department is wrong.

1. Advance Notice Requirement.

ORS 468.126(1) requires the Department to give Scappoose five (5) days' advance warning in writing before any civil penalty can be assessed against it, subject only to the exceptions set out in ORS 468.126(2). These statutes provide in pertinent part:

> (1) No civil penalty proscribed under ORS 468.140 shall be imposed for a violation of an air, water or solid waste permit issued by the Department of Environmental Quality until the permittee has received five (5) days' advance warning in writing from the Department, specifying the violation and stating that a penalty will be imposed for the violation unless the permittee submits the following to the Department in writing within five (5) working days after receipt of the advanced warning. . .
>
> * * *
>
> (2) No advance notice shall be required under subsection (1) of this section if:

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(a) The violation is intentional;

ORS 468.126.

ORS 183.090 provides that an agency may only impose a civil penalty after giving notice to the person against whom such a penalty is being imposed in accordance with the provisions set forth in ORS 183.415. ORS 183.415(1) requires that in contested cases all parties shall be afforded an opportunity for hearing *after reasonable notice*, served personally or by registered or certified mail. ORS 183.415(2) requires that such notice include:

(a) a statement of the party's right to hearing or a statement of the time and place of the hearing;

(b) a statement of the authority and jurisdiction under which the hearing is to be held;

(c) a reference to the particular sections of the statutes and rules involved; and

(d) a short and plain statement of the matters asserted or charged.

This Commission has declared that the failure to give adequate notice to adverse parties in Department enforcement actions requires dismissal of those actions. For example, in the matter of *DEQ v. Bill R. Labenske, Jr., dba Guarantee Construction,* 1989 WL 12077 (1989), the Respondent appealed a Notice of Assessment of Civil Penalty and the EQC dismissed because the Department failed to provide five (5) days' advance notice of its intent to assess a penalty as required by the statute. The EQC held further that the Department did not establish an exception to its duty to provide five (5) days' notice in that it failed to allege or prove an intentional violation excusing its duty.

Similarly, and more directly on point to this case, in the matter of *DEQ v. Neu-Glo Candles, Inc.,* 1988 WL 163165 (1988), the Department issued a Notice of Assessment of Civil Penalty alleging violation of five provisions of its former rules relating to Emission Standards and Procedural Requirements for Asbestos Abatement. The Respondent answered the notice,

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denied the allegations and requested a hearing. The decision, following a hearing before the EQC, declared that Respondent was not liable as cited for the violations nor for a civil penalty, because the Department did not provide five (5) days' advance notice that a penalty would be imposed and was not excused from its duty to provide such advance notice. Moreover, *for those claims where the Department failed to even plead such an excuse in its Notice of Assessment, the claims were deficient and judgment was entered for the Respondent* . The EQC declared in relevant part:

> DEQ did not provide 5 days' advance notice. Therefore, DEQ must prove its duty to provide the notice was excused.
>
> *DEQ has a further notice burden.* ***It is to allege in its assessment document*** *a statement of its intent to rely on a statutory exception to its duty to provide advance notice.* ORS 183.415(2) provides that the assessment document must include:
>
> (c) A reference to the particular sections of the statutes and rules involved; and
> (d) A short and plain statement of the matters asserted or changed. ORS 183.415(2)(c)(d).
>
> DEQ did allege but did not attempt to prove the exception contained in ORS 468.125(2)(b). DEQ did not allege the exception in ORS 468.125(2)(e) for penalties involving asbestos fiber releases. *By failing to allege ORS 468.125(2)(e) DEQ failed to satisfy the duties imposed by ORS 183.415(2)(c)(d) and cannot gain the benefit from that exception.*
>
> * * *
>
> *Similarly, the Agency is obliged to affirmatively allege its basis for avoiding the statutory notice requirement.*
>
> * * *
>
> In short, DEQ did not provide advance notice as required by ORS 468.125(1), did not prove the excuse from notice which it alleged, did not allege the excuse authorized by ORS 468.125(2)(e), and bore a duty to give notice pursuant to OAR 340-12-040. Consequently, even if DEQ had proved a violation of OAR 340-25-465(4)(a), 340-25-465(4)(b)(A), 340-25-465(10)(e), 340-25-465(10)(b)(B) and 340-25-465(d)(A) in effect at the time of the violation, *notice failures would preclude exaction of a penalty.*

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Id, 1988 WL 163165 at 3-4 (emphasis added, citations and footnotes omitted). See also, *DEQ v. Elliott-Jochimsen Construction, Inc.*, 1988 WL 167438 (1988), and *DEQ v. Thomas H. Scott,* 1990 WL 283207 (1990).

Section IV of the Department's Notice of Violation seeks to impose a civil penalty for one of the four violations alleged therein – Section IV, Paragraph 1 ("Violation No.1"), which is quoted below:

> 1. On or about December 9 and 17, 1998, Respondent violated ORS 468B.025(2) by violating a condition of its Permit. Specifically, Respondent violated Schedule B, Condition 1, of its Permit by failing to report the results of sample analysis [sic] for biological oxygen demand. Respondent intentionally reported false sample results on its Discharge Monitoring Report. These are Class I violations pursuant to OAR 340-012-0055(l)(m).

It is undisputed that the Department has not alleged any excuse or exception to its obligation to give Scappoose 5 days' advance notice prior to attempting to assess a civil penalty. While the Department has alleged (but has not proved) Scappooses' intent to report false sample results on the discharge monitoring report, the Department did not plead that as a basis for excuse from the notice requirement. Indeed, DEQ does not allege anywhere in its Notice of Violation that it is relying on any exception to the five (5) day notice requirement.

The EQC declared in *Neu-Glo Candles, Inc.* that the Department must ***"allege in its assessment document*** *a statement of its intent to rely on a statutory exception to its duty to provide advance notice"* or its claim is deficient and no penalty may be assessed. The Department did not do this at any time prior to the conclusion of its case, and its attempt to assess a civil penalty must be dismissed.

2. Failure to allege conduct that violates Scappoose's permit.

The Department alleged a failure to report test results for biological oxygen demand (BOD) and specifically alleged that this conduct, if proved, violates "Schedule B, Condition 1"

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of the Scappoose NPDES permit. It is undisputed that Schedule B, Condition 1 of the permit does not impose such a requirement.

Schedule B, Condition 1 of the Scappoose permit contains minimum monitoring and reporting frequencies and sample types for the facility's influent and outfall. Schedule B, Condition 2 requires that *monitoring* results be reported on approved forms, such as the discharge monitoring report. Neither Condition of Schedule B, nor any other permit provision, mandates reporting of *sample analyses* results. This distinction is not mere semantics.

The factual record in this case is undisputed that the BOD test results for the dates at issue were not accurate and invalid. Judge Betterton's Findings of Fact Nos. 6 and 7 reflect this; for example, he declares as fact that "Wabschall knew a BOD value of 38.8 mg/L was too low for the two tests he had run." Proposed Finding of Fact No. 7. Indeed, the evidence at hearing was undisputed that the BOD test results at issue in this case were invalid because they failed to meet the testing standards required by the permit. No one knows today why this occurred, but causes like laboratory error, sampling error, equipment failure, or any of several other possible causes for testing failure could be the reason.

The BOD test takes no less than five days to obtain results. Therefore, by the time a BOD test failure is known, the waste stream being sampled is long gone. Yet, there may be other reasonably reliable methods available to the permit holder, based on other monitoring methods employed at the facility, that allow a more accurate report of the quality of the material that was sampled. The situation then faced by the permit holder is irreconcilable; it either reports a sample analysis result that it knows is not correct and thereby knowingly provides an inaccurate report of the quality of the material it sampled, or it can more accurately report the quality of the material based on all of the monitoring information available to it. The Department asserts there is a third option; to report the actual test result and highlight it in some way to identify it as an invalid value. It is undisputed, however, that nothing on the face of the

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approved form allows or provides for this third option, there is no written guidance from the Department that addresses this circumstance and none of the options are clearly mandated by the permit, despite the Department's claims in this case.

The distinct differences in the permit language of Schedule B, Conditions 1 and 2, above, are reasonably interpreted to allow the permitee to rely on *all* of the monitoring data available to it to accurately report the quality of the material it is testing. Indeed, the "form" referenced by Condition 2 and at issue in this case contains the following certification, which the Department requires a representative of the permitee to sign. The certification is cited by Judge Betterton at Proposed Finding of Fact No. 9:

> I certify under penalty of law that I have personal examines (sic) and am familiar with information submitted herein and based on my inquire of those individuals immediately responsible for obtaining the information *I believe the submitted information is true accurate and complete.* I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment (emphasis added).

The undisputed factual record shows that Scappoose monitored and reported the *quality* of influent and outfall on the approved form with the *intent* of conveying as accurate a representation of that quality as was possible under the circumstances. And that accurate report was, in fact, conveyed. Judge Betterton acknowledged this in his Proposed Finding of Fact No. 6:

> Wabschall knew, based on his TSS test result, that a BOD value of 25.3 mg/L was too low. He recorded the 5-day BOD test result of 100 mg/L, based on his estimate of what he believed the BOD result should have been, given the TSS result of 94 mg/L he reported for December 9, 1998.

In sum, the Department's allegation of what Schedule B, Condition 1 requires is inaccurate. Specifically, nothing in that permit Condition declares a requirement to report the results of "sample analyses." The result is that the Department has not stated a claim for which the relief sought can be granted and the violation alleged in Section IV, Paragraph 1 must be dismissed.

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3. There is No Evidence That Scappoose or Wabschall Intended to Report False Test Results.

Exceptions 3 and 4 rest on the analysis detailed immediately above and the following undisputed facts, the referenced Proposed Findings of Fact, and Mr. Wabschall's testimony supporting them:

- Mr. Wabschall *knew* the BOD test results at issue in this case were invalid, and if he had reported them as received from the laboratory he *believed* he would have violated the certification required by of the discharge monitoring report.
- Mr. Wabschall *believed* that he could estimate and report a more accurate value for those samples based on the more reliable and accurate TSS samples taken for those days. [1]
- As discussed above, the permit does not declare that test results or "sample analyses" be reported. And, the certification on the discharge monitoring report does nothing to clarify the matter; it requires true, accurate, and complete "information."
- DEQ has provided no guidance or other information to permit holders explaining how to handle test data that is known to be invalid and inaccurate.

From the above undisputed facts, it is clear that Judge Betterton's Proposed Conclusion of Law No. 1 is not supported by his findings. He declares that Scappoose "intentionally reported false results." Yet, he (correctly) finds as fact that Mr. Wabschall believed that what he reported was more accurate than the test results he had in hand, and that he was aware of the certification when he signed it. Judge Betterton wrote:

> Wabschall knew that the *results* he recorded and submitted to DEQ for the BOD values for December 9 and 17, 1998 were not the actual *test results* he obtained when he did the 5-day BOD tests for the two days.[2]

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[1] Proposed Finding of Fact No. 8.
[2] Proposed Finding of Fact No. 9.

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The above sentence was carefully crafted, and Scappoose agrees that it is true. Mr. Wabschall reported "results," not "test results." Nothing on the discharge monitoring report form references 'test results,' Mr. Wabschall wanted to be accurate, and he thought of no way to follow the form of the discharge monitoring report and use the invalid lab data he had received. So, he intentionally reported "results" he *believed* more accurately represented the quality of the influent he tested on those days. He gleaned the results he reported from other, more accurate, reported test data. Judge Betterton found these to be the facts.

It is also undisputed that Mr. Wabschall believed the results he reported was *information*[3] he was required to report in the discharge monitoring report, that the *information* was accurate and correct, and all of the "sample analyses" on which the information was based was maintained and available to the Department at all times. On these facts, Judge Betterton's Proposed Conclusion of Law No. 1 is not in accord with his own findings and the undisputed record now before the Commission.

The Department defines "intentional" as "conduct by a person with a conscious objective to cause the result of the conduct." OAR 340-012-0030(9). The only finding of a "conscious objective" of Scappoose personnel is Proposed Finding of Fact No. 8, which declares Mr. Wabschall's "belief" that he was accurately reporting the quality of the facility's influent. There is absolutely no proof offered of any intent to deceive or misrepresent that quality. In light of these express findings, there is no basis for Judge Betterton to conclude there was an intent to report "false results." Indeed, the referenced findings must lead the Commission to exactly the opposite conclusion.

On this record, Scappoose respectfully excepts to Judge Betterton's Proposed Conclusion of Law No. 1, and seeks dismissal of the Department's Notice of Assessment of Civil Penalty,

---

[3] The term "information" is used in the language of certification on the discharge monitoring report. There is no reference to "results," "test results," or "sample analysis" in the certification signed by Mr. Wabschall.

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Section IV, Paragraph 1 for its failure to prove the intent required by law to excuse it from the statutory warning requirement of ORS 468.126(1).

Dated this 21st day of November, 2001.

JORDAN SCHRADER
Attorneys for Petitioner City of Scappoose

By: _____
Christopher L. Reive, OSB #83305

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CERTIFICATE OF SERVICE

I hereby certify that I served the foregoing RESPONDENT'S EXCEPTIONS AND BRIEF TO THE RULINGS AND PROPOSED ORDER OF HEARING OFFICER on the following party:

Jeff Bachman
Department of Environmental Quality
Enforcement Section
2020 SW 4th Ave Ste 400
Portland OR 97201-4987

by hand delivering a true copy thereof to said party on the date stated below.

DATED: November 21, 2001.

Christopher L. Reive, OSB #83305
(503) 598-7070
Of Attorneys for Respondent City of Scappoose

TARLOW, JORDAN & SCHRADER
Attorneys at Law
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Portland OR 97281
Telephone: 598-7070 Fax: 598-7373

Oregon
John A. Kitzhaber, M.D., Governor

Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204-1390
(503) 229-5696
TTY (503) 229-6993

October 25, 2001

Christopher L. Reive
Jordan Schrader
P.O. Box 230669
Portland, OR 97281

RE: Appeal to Environmental Quality Commission

Dear Mr. Reive,

On October 22, 2001, the Environmental Quality Commission received your timely request for administrative review by the Commission in DEQ Case No. WQ/M-NWR-00-010.

Pursuant to OAR 340-011-0132, you must file exceptions and brief within thirty days from the filing of the request. The exceptions should specify those findings and conclusions that you object to and include alternative proposed findings. Once your exceptions have been received, the Department will file its answer brief within 30 days. I have enclosed a copy of the applicable administrative rules.

To file exceptions and briefs, please send documents to Mikell O'Mealy, Assistant to the Environmental Quality Commission, at 811 S.W. 6th Avenue, Portland, Oregon, 97204 with copies to Jeff Bachman, Department of Environmental Quality, at the same address.

After the parties file exceptions and briefs, this item will be set for Commission consideration at a regularly scheduled Commission meeting, and the parties will be notified of the date and location. If you have any questions on this process, or need additional time to file exceptions and briefs, please call me at 229-5301 or (800) 452-4011 ext. 5301 within the state of Oregon.

Sincerely,

Mikell O'Mealy
Assistant to the Commission

cc: Jeff Bachman, DEQ

Oregon Administrative Rules 340-011-0132

Alternative Procedure for Entry of a Final Order in Contested Cases Resulting from Appeal of Civil Penalty Assessments

(1) Commencement of Review by the Commission:

(a) Copies of the hearing officer's Order will be served on each of the participants in accordance with OAR 340-011-0097. The hearing officer's Order will be the final order of the Commission unless within 30 days from the date of service, a participant or a member of the Commission files with the Commission and serves upon each participant a Petition for Commission Review. A proof of service should also be filed, but failure to file a proof of service will not be a ground for dismissal of the Petition.

(b) The timely filing of a Petition is a jurisdictional requirement and cannot be waived.

(c) The timely filing of a Petition will automatically stay the effect of the hearing officer's Order.

(d) In any case where more than one participant timely serves and files a Petition, the first to file will be the Petitioner and the latter the Respondent.

(2) Contents of the Petition for Commission Review. A Petition must be in writing and need only state the participant's or a Commissioner's intent that the Commission review the hearing officer's Order.

(3) Procedures on Review:

(a) Petitioner's Exceptions and Brief: Within 30 days from the filing of the Petition, the Petitioner must file with the Commission and serve upon each participant written exceptions, brief and proof of service. The exceptions must specify those findings and conclusions objected to, and also include proposed alternative findings of fact, conclusions of law, and order with specific references to the parts of the record upon which the Petitioner relies. Matters not raised before the hearing officer will not be considered except when necessary to prevent manifest injustice.

(b) Respondent's Brief: Each participant will have 30 days from the date of filing of the Petitioner's exceptions and brief, in which to file with the Commission and serve upon each participant an answering brief and proof of service. If multiple Petitions have been filed, the Respondent must also file exceptions as required in (3)(a) at this time.

(c) Reply Brief: Each participant will have 20 days from the date of filing of a Respondent's brief, in which to file with the Commission and serve upon each participant a reply brief and proof of service.

(d) Briefing on Commission Invoked Review: When one or more members of the Commission wish to review a hearing officer's Order, and no participant has timely filed a Petition, the Chairman will promptly notify the participants of the issue that the Commission desires the participants to brief . The Chairman will also establish the schedule for filing of briefs. The participants must limit their briefs to those issues. When the Commission wishes to review a hearing officer's Order and a participant also requested review, briefing will follow the schedule set forth in subsections (a), (b), and (c) of this section.

(e) Extensions: The Chairman or the Director, may extend any of the time limits contained in this rule except for the filing of a Petition under subsection (1) of this rule. Each extension request must be in writing and be served upon each participant. Any request for an extension may be granted or denied in whole or in part.

JORDAN SCHRADER
ATTORNEYS AT LAW

Formerly
Tarlow Jordan & Schrader

FIRST CLASS AND CERTIFIED MAIL
RETURN RECEIPT REQUESTED

October 18, 2001

Stephanie Hallock, Director
Department of Environmental Quality
811 SW 6th St
Portland OR 97204

Re: **Petition for Commission Review**
Hearing Officer Panel Case No.: G60393
Agency Case No.: WQ/M-NWR-00-010, Columbia County
Our File No. 42629/30022

Dear Ms. Hallock :

Enclosed for filing in connection with the above-referenced matter is Respondent's Petition for Commission Review, together with Exhibit "A" and Certificate of Service with respect thereto.

Very truly yours,

JORDAN SCHRADER

Christopher L. Reive

Enclosures

cc w/enc.: City of Scappoose
Steve Wabschall
Jerry Gilham

CHRISTOPHER L. REIVE

Admitted
Oregon and Washington

Direct Dial
503.598.5544

E-mail
chris.reive@jordanschrader.com

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

In the Matter of:	Case No. WQ/M-NWR-00-010
CITY OF SCAPPOOSE,	Hearing Officer Panel Case No.: G60393
Respondent.	RESPONDENT'S PETITION FOR COMMISSION REVIEW

Pursuant to Oregon Administrative Rule 340-011-0132, respondent City of Scappoose hereby requests that the Environmental Quality Commission review the hearing officer's Proposed Order in the above-referenced case, dated and served by mail on September 21, 2001. A copy of the subject Proposed Order is attached hereto as Exhibit "A."

Dated this 18th day of October, 2001.

JORDAN SCHRADER
Attorneys for Respondent

By: _____
Christopher L. Reive, OSB #83305

JORDAN SCHRADER
Attorneys at Law
PO Box 230669
Portland OR 97281
Telephone: 598-7070 Fax: 598-7373

Ref No.: G60393
Case No: 01-GAP-00071
Case Type: DEQ

STATE OF OREGON
Before the Hearing Officer Panel
For the
DEPARTMENT OF ENVIRONMENTAL QUALITY
875 Union Street NE
Salem, Oregon 97311

Dec Mailed: 09/21/01
Mailed by: LMV

HEARING DECISION

CITY OF SCAPPOOSE
PO BOX P

SCAPPOOSE OR 97056 0677

DEPARTMENT OF ENVIRONMENTAL QUALITY
811 SW 6TH AVE

PORTLAND OR 97204 1334

CHRISTOPHER REIVE, ATTORNEY
JORDAN SCHRADER
PO BOX 230669
PORTLAND OR 97281 0669

JEFF BACHMAN
DEQ ENFORCEMENT SECTION
811 SW 6TH AVE
PORTLAND OR 97204 1334

COPY FOR YOUR INFORMATION

LYNNE PERRY
ASST ATTORNEY GENERAL
1162 COURT ST NE
SALEM OR 97301-4095

The following **HEARING DECISION** was served to the parties at their respective addresses.

EXHIBIT A 60
PAGE 1 OF 17

STATE OF OREGON
BEFORE THE HEARING OFFICER PANEL
FOR THE ENVIRONMENTAL QUALITY COMMISSION

IN THE MATTER OF:	)	
	)	**PROPOSED ORDER**
	)	
City of Scappoose,	)	Hearing Officer Panel Case No. G60393
	)	Agency Case No. WQ/M-NWR-00-010
Respondent.	)	COLUMBIA COUNTY

HISTORY OF THE CASE

The Department of Environmental Quality (DEQ) issued a Notice of Violation, Department Order, and Assessment of Civil Penalty pursuant to Oregon Revised Statutes (ORS), ORS 468.126 through 468.140, ORS Chapter 183, and Oregon Administrative Rules (OAR), OAR Chapter 340, Divisions 11 and 12, to Respondent City of Scappoose (City) on April 18, 2000.

The notice alleges (1) that on or about December 9 and 17, 1998 respondent violated ORS 468B.025(2) by violating a condition (Schedule B, Condition 1) of its National Pollutant Discharge Elimination System (NPDES) permit by failing to report the results of sample analysis for biochemical oxygen demand by intentionally reporting false sample results on its discharge monitoring report; (2) that on or about September 16, 1999 respondent violated ORS 468B.025(2) by violating Schedule B, Condition 1b of its permit by failing to maintain the accuracy of its flowmeter through twice annual calibration; (3) that on or about July 6, 10 and 20, 1998 respondent violated ORS 468B.025(2) by violating General Condition B.1 of its permit by failing to provide adequate laboratory controls and appropriate quality assurance procedures; and (4) that on or about December 9 and 17, 1998 respondent violated ORS 468B.025(2) by violating General Condition B.1 of its permit by failing to provide adequate laboratory controls and appropriate quality assurance procedures: DEQ also requested a department order in its notice that respondent submit for review and approval within 120 days a comprehensive quality assurance plan for all data generated at the respondent's wastewater facility. The notice seeks assessment of a civil penalty against respondent in the amount of $12,000 for the violation set forth in allegation (1) in the notice.

Respondent filed an answer to the notice of violations on May 8, 2000, in which respondent denied the allegations and the magnitude of the penalty.

A telephone pre hearing conference with the parties was held on November 1, 2000.

A hearing was held in Scappoose, Oregon on January 11, 2001 before Ken L. Betterton, administrative law judge. Jeff Bachman, environmental law specialist, represented DEQ. Christopher L. Reive, attorney at law, represented respondent. James Sheetz and Robert Baumgarter testified as witnesses for DEQ. Holly Ploetz testified as a witness for respondent. At the end of DEQ's case, respondent filed written motions to dismiss or for directed verdict to DEQ's notice. The hearing was continued to give DEQ time to file a written response to the motions. DEQ filed its response on February 22, 2001. Respondent filed its reply to DEQ's response on March 1, 2001. On March 14, 2001 I issued a written decision denying all of respondent's motions.

A telephone pre hearing conference with the parties was held on May 29, 2001.

A further hearing conference with the parties was held on July 25, 2001 in Portland, Oregon. Jeff Bachman represented DEQ. Christopher Reive represented respondent. Steve Wabschall testified as a witness for respondent. DEQ filed its written closing argument on August 10, 2001. Respondent filed its written closing argument on August 17, 2001. I then closed the record and took the matter under advisement.

Respondent admitted it committed the violations in allegations (2), (3) and (4) in the notice, for which DEQ did not seek a civil penalty. The parties also stipulated that respondent has met the requirements of the department order.

The only remaining issue to be addressed in this decision is allegation (1), whether on or about December 9 and 17, 1998 respondent violated ORS 468B.025(2) by violating Schedule B, Condition 1 of its permit by intentionally reporting false sample results on its discharge monitoring report, and if so, what civil penalty should be imposed.

EVIDENTIARY RULING

Hearing officer Exhibits A and D, Exhibit 2, and Exhibits 101 through 117 and 119 were admitted into the record without objection. DEQ withdrew Exhibit 1. DEQ objected to Exhibit 118 on relevancy grounds. Exhibit 118 is relevant. I overruled the objection and admitted Exhibit 118 into the record.

ISSUES

(1) Whether respondent violated a condition of its NPDES permit by intentionally reporting false test results on its discharge monitoring report.

(2) If respondent intentionally reported false test results, whether its conduct was flagrant.

(3) If respondent intentionally reported false results, what civil penalty should be imposed.

FINDINGS OF FACT

(1) DEQ issued a National Pollutant Discharge Elimination System Waste Discharge (NPDES) permit under the Federal Clean Water Act to the City of Scappoose (City) on September 29,

1992. The NPDES permit allowed the City to construct, install, modify or operate a wastewater collection, treatment, control and disposal system and discharge adequately treated wastewater to public waters. (Exhibit 101.) The City has operated under the NPDES permit since September 1992.

(2) The City owns and operates a municipal wastewater treatment plant that provides domestic wastewater treatment for the City, and for industrial wastewater from Steinfeld's Pickles, a pickle processing facility that is connected to the City's wastewater collection system. The City discharges treated wastewater, or effluent, into the Multnomah channel of the Willamette River. (*Id.*) The City had about 4,130 residents in 1996. The pickle processing plant operates seasonally with the heaviest discharge into the system in the fall of the year. Most of the wastewater the City treats is from domestic waste.

(3) The NPDES permit requires the City to monitor and report biochemical oxygen demand (BOD) and total suspended solids (TSS) at least twice a week by means of a composite sample technique. (*Id.*, Schedule B.) The BOD determination is an empirical test in which standardized laboratory procedures are used to determine the relative oxygen requirements of wastewater, effluent, and polluted waters. (Exhibit 102, Appendix D at 1.) Monitoring results must be reported on approved forms. The reporting period is each calendar month. Reports for a calendar month must be submitted to DEQ by the 15th day of the following month. (Exhibit 101 at paragraph 2.) Monitoring reports must include the name of each principal operator designated by the permittee (i.e., the City) as responsible for supervising the system during the reporting period. (*Id.*) Although monitoring reports must be submitted on approved forms, DEQ does not provide a specific form for permittees to use. Permittees are free to design or create their own report forms. The permittee must at all times properly operate and maintain all facilities and systems of treatment and control that they install or use to achieve compliance with the conditions of the permit. (*Id.*, General Condition B.) The permit requires appropriate flow measurement devices and methods consistent with accepted scientific practices to be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. (*Id.*, Section C.) The permit requires that monitoring be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.[1] (*Id.*) No other test procedure was specified in the City's permit. Any person who knowingly

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[1] 40 CFR Part 136—Standard Method 5210 B. 5-Day BOD Test provides:

1. General Discussion

a. Principle: The method consists of filling with sample, to overflowing, an airtight bottle of the specified size and incubating it at the specified temperature for 5 d [i.e., days]. Dissolved oxygen is measured initially and after incubation, and the BOD is computed from the difference between initial and final DO. Because the initial DO is determined shortly after the dilution is made, all oxygen uptake occurring after this measurement is included in the BOD measurement.

b. Sampling and storage: Samples for BOD analysis may degrade significantly during storage between collection and analysis, resulting in low BOD values. * * *.

* * * * *.

2. Apparatus

a. Incubation bottles: Use glass bottles having 60 mL or greater capacity (300 mL bottles having a ground-glass stopper and a flared mouth are preferred). * * *.

* * * * *. (Exhibit 102, Appendix D at 3.)

EXHIBIT A 64
PAGE 5 OF 17

makes any false statement, representation or certification in any record or other document submitted or required to be maintained under the permit, including monitoring reports, is subject to a fine or imprisonment or both. (*Id.*, Section D, paragraph 9.)

(4) Steve Wabschall (Wabschall) has worked for the City for 24 years. He has served as superintendent of the City's wastewater treatment plant for 15 years. Wabschall supervises a staff of three individuals. Wabschall possesses a water supply certification and two wastewater certifications. Wabschall has had no enforcement actions brought against him as plant superintendent from DEQ or from the federal government.

(5) On September 16, 1999 DEQ environmental engineer James Sheetz (Sheetz) conducted an unannounced NPDES permit inspection of the City's wastewater treatment plant. Sheetz did the inspection as part of his regular job duties, and as part of the City's NPDES permit renewal process. NPDES permits are good for five years. Although the City's permit had not been renewed by 1999, the 1992 permit remained in force until it was renewed or cancelled. DEQ tries to inspect all permittees every five years, but funding and staff workload makes it difficult to adhere strictly to a five year inspection schedule. The NPDES waste discharge permit system and DEQ rely on permittees to monitor their own systems, based on accurate input data and monitoring reports. Sheetz last inspected the City's wastewater treatment plant in 1994, although that inspection was not a compliance inspection.

(6) Sheetz's inspection on September 16, 1999 lasted about five and one-half hours. Sheetz talked to Wabschall, observed the plant in operation, reviewed plant records and collected samples. Sheetz selected 1998 operating records for review, and selected the months of July and December 1998 for inspection. Sheetz chose the records for December 9 and 17, 1998 for examination in detail. Sheetz found no discrepancies for December 9 and 17, 1998 for the TSS bench data. The City recorded its sample test results on "bench sheets" contemporaneously with when it conducted its tests. (*See* Exhibit 106, 107.) Wabschall and the City created its own form of bench sheet to record its monthly data to be transferred later to the monthly discharge monitoring reports (DMR) to be filed with DEQ. Wabschall recorded two influent dilution tests for December 9, 1998 to measure 5-day BOD. The start date for the test was December 9, 1998 and the stop date for the test was December 14, 1998. (Exhibit 106.) The average BOD value for the two dilution tests Wabschall ran was 25.3 mg/L.[2] (*Id.*) Wabschall did not record 25.3 mg/L for the BOD result on his bench sheet. Instead, he recorded a BOD result of 100 mg/L on the bench sheet for December 9, 1998. (*Id.*) Wabschall mistakenly recorded the value in the DO Depletion column on the bench sheet, rather than the BOD column on the form, like he should have done. (*Id.*) Wabschall knew, based on his TSS test result, that a BOD value of 25.3 mg/L was too low. He recorded the 5-day BOD test result of 100 mg/L, based on his estimate of what he believed the BOD result should have been, given the TSS result of 94 mg/L he reported for December 9, 1998. Wabschall did not make any note or comment on the bench sheet for the BOD value for December 9, 1998 that his recorded result of 100 mg/L was an estimate. (*Id.*)

[2] The first influent sample had an initial DO of 8.49 and a final DO of 8.20. The DO Depletion for the first sample should have been 29 mg/L [8.49 – 8.20 = .20 x 100 = 29 mg/L]. The second influent sample had an initial DO of 8.46 and a final DO of 8.03. The DO Depletion for the second sample should have been 21.5 mg/L [8.46 – 8.03 = .43 x 50 (adjusted for a different concentration) = 21.5 mg/L]. The average for the two tests was 25.3 (29 + 21.5 divided by 2).

Wabschall used a glass bottle having a capacity of 303 mL for the volume to conduct the test. The commonly accepted capacity of the bottle to conduct the test is 300 mL.

(7) Sheetz also examined the bench sheet for December 17, 1998. Wabschall recorded two influent dilution tests for December 17, 1998 to measure the 5-day BOD. The start date for the test was December 17, 1998, and the stop date for the test was December 22, 1998. (Exhibit 107.) The average BOD value for the two dilution tests Wabschall ran was 38.8 mg/L. (*Id.*) Wabschall did not record 38.8 mg/L for a BOD result on his bench sheet. Instead, he recorded a BOD value of 60 mg/L on the bench sheet for December 17, 1998. (*Id.*) Wabschall mistakenly recorded the value of 60 in the DO Depletion column on the bench sheet, rather than in the BOD column like he should have done. (*Id.*) Wabschall knew a BOD value of 38.8 mg/L was too low for the two tests he had run. He reported the result of 60 mg/L for BOD based on his estimate of what he believed the BOD result should have been, given the TSS result of 84 mg/L he reported for December 17, 1998. Wabschall did not make any note or comment on the BOD bench sheet for December 17, 1998 that his recorded result of 60 mg/L was an estimate. (*Id.*) Wabschall used a glass bottle having a capacity of 303 mL for the volume to conduct the test. The commonly accepted capacity of the bottle to conduct the test is 300 mL.

(8) Wabschall estimated the BOD value from his TSS result based on his belief that a correlation exists between BOD and TSS results. Wabschall based his belief on design estimates used by engineers to calculate capacity for the construction of new wastewater plants that he had read about in a textbook he used in a wastewater class he once took at a local community college. Wabschall used no specific formula to make the estimates of BOD results from TSS that he recorded and reported to DEQ.

(9) Wabschall prepared and signed the DMR on behalf of the respondent for December 1998. (Exhibit 112.) He filed the DMR with DEQ on January 11, 1999. Wabschall recorded the BOD results of 100 mg/L for December 9, 1998 and 60 mg/L for December 17, 1998 on the DMR for December 1998. (*Id.*) Wabschall knew those test results were not the correct results from the data he obtained when he ran tests for both dates. Wabschall did not write anywhere on the DMR that his reported BOD results were estimates. (*Id.*) The DMR contains certification language near the signature line at the bottom of the form where Wabschall signed his name. (*Id.*) The certification reads:

> "I certify under penalty of law that I have personal examines *(sic)* and am familiar with information submitted herein and based on my inquire of those individuals immediately responsible for obtaining the information I believe the submitted information is true and accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment." (*Id.*)

Wabschall knew that the results he recorded and submitted to DEQ for the BOD values for December 9 and 17, 1998 were not the actual test results he obtained when he did the 5-day BOD tests for the two days.

(10) On September 22, 1999 Sheetz telephoned Wabschall with questions about the DMR for December 1998 and the bench sheet records Sheetz had inspected on September 16, 1999.

Wabschall told Sheetz that he knew the BOD values he wrote on the bench sheet for December 9 and 17, 1998, and that he later recorded on the DMR for December 1998, were too low.[3]

(11) DEQ offers technical assistance to permittees to help them conduct their tests and report test results. Wabschall did not seek any assistance from DEQ to complete the DMR for December 1998, nor did he ask for assistance from DEQ on how to conduct BOD tests or how to track down what happened that caused the inaccurate test results he obtained.

(12) Wabschall did not make any notes or comments on the DMR he submitted to DEQ for December 1998 that his recorded values for BOD were estimates. He did not record anywhere on the DMR the actual test results he had obtained, with notes or comments that he believed his test results were incorrect. If the City through Wabschall had made notes or comments to DEQ on the DMR, or on any other document, that his reported values were estimates, DEQ would not have sought to assess a civil penalty against the City for those test results.

(13) DEQ did a study of the City's wastewater treatment plant records for January 1998 through December 1998 in connection with preparing the Notice of Violation, and found no correlation between TSS and BOD values that would enable an individual accurately to estimate a BOD result from an actual TSS result. (Exhibit 2.)

CONCLUSIONS OF LAW

(1) Respondent City of Scappoose violated a condition of its NPDES permit by intentionally reporting false results on its discharge monitoring report for December 1998.

(2) Respondent's conduct was not flagrant.

(3) A $9,600 civil penalty should be imposed against respondent.

OPINION

(1) DEQ has authority to discipline permittees like the City for violations of waste discharge permits. ORS 468B.025(2) provides:

> (2) No person shall violate the conditions of any waste discharge permit issued under ORS 468B.050.[4]

DEQ has alleged that the City's conduct was intentional. ORS 468.126 provides:

> (1) No civil penalty prescribed under ORS 468.140 shall be imposed for a violation of an air, water or solid waste permit issued by the Department of Environmental Quality until

[3] Wabschall mistakenly recorded the BOD result for December 9, 1998 on the line for December 10, 1998 on the DMR. He also mistakenly recorded the BOD for December 17, 1998 on the line for December 18, 1998 on the DMR. DEQ concedes the recording for the wrong dates was a mistake, and does not seek any penalty or claim of violation of any rule for the erroneously designated dates.

[4] ORS 468B.050 sets out when a permit from DEQ is required. The parties acknowledge the City needed a permit to operate its wastewater treatment plant.

> the permittee has received five days' advance warning in writing from the department, specifying the violation and stating that a penalty will be imposed for the violation unless
> * * *.
> * * * * *
> (2) No advance notice shall be required under subsection (1) of this section if:
> (a) The violation is intentional;
> * * * * *.

OAR 340-012-0030(9) provides that unless otherwise required by context, as used in this Division [Division 12, Definitions for Enforcement Procedures and Civil Penalty]:

> (9) "Intentional" means conduct by a person with a conscious objective to cause the result of the conduct.

DEQ argues that the City, acting through its plant superintendent, Steve Wabschall, intentionally reported false test results on the monthly DMR for December 1998 the City filed with DEQ. The City can act only through its agents. Wabschall had authority and the responsibility to conduct wastewater tests pursuant to the NPDES permit and to file reports with DEQ in order to comply with the conditions of the permit.

The City argues that although Wabschall reported false test results, his actions did not meet the definition of "intentional" in DEQ administrative rules. The City contends that although Wabschall knew he was to report accurate information on the DMR, and that he knew he did not report his actual test results values for BOD on the DMR, DEQ has charged the City with reporting "false sample results." The City contends that because Wabschall knew the results from the tests he ran for the 5-day BOD for December 9 and 17, 1998 were obviously inaccurate, the estimated "sample test results" he reported were not intentionally false.

The NPDES permit required the City, through its agent, wastewater plant superintendent Wabschall, to follow the test methodology set out in 40 CFR 136, and to report the test results obtained from following that test methodology. Both the DMR and the permit require the permittee to report accurate and correct information based on those test results. Wabschall reported test results that he knew were inaccurate. The NPDES permit and DEQ rely on permittees to monitor themselves. DEQ lacks the resources to constantly check on an on-going basis permittees like the City to make certain they comply with all provisions in the permit. Permittees must report accurate test results and data so that both the permittee and DEQ can be alerted for any variations or discrepancies in the data and then track down problems and make corrections promptly.

OAR 340-012-0030(9) [i.e., "intentional" conduct] requires that the person act with a "conscious objective to cause the result of the conduct." In this case that conduct entailed a conscious objective to report test results knowing that those results were false or inaccurate. Acting intentionally under OAR 340-012-0030(9) does not require that the actor deliberately set out in advance to violate the law. The state of mind or level of conduct of deliberately setting out in advance to violate the law is addressed in DEQ's definition of "flagrant," which can elevate the amount of civil penalty. Wabschall admitted that he knew the test results he reported for BOD values for December 9 and 17, 1998 on the DMR for December 1998 were false or not accurate.

He acted with a conscious objective to report test results he knew were false. DEQ established by a preponderance of the evidence that Wabschall intentionally reported false test results on the DMR report for December 1998.

The City argues that Wabschall estimated the BOD values from the TSS test results he had obtained for December 9 and 17, 1998, and hence could not have intentionally reported false test sample results. The conditions in the NPDES permit did not provide for estimating either BOD or any other test results. The permit requires following established testing methodology and reporting actual test results. Moreover, Wabschall's estimate was nothing more than a rough estimate or a guess. He used no established or accepted formula to make his estimate for BOD values from TSS test results. He just "eyeballed" the TSS test results and made his estimate. Finally, the City presented no persuasive evidence of a demonstrable correlation between BOD and TSS results. DEQ conducted a study of the City's treatment plant from January 1998 through December 1998, and found no such correlation. Wabschall apparently based his opinion of a correlation between TSS and BOD on information he obtained from a textbook he used in a class he took on wastewater treatment at a community college. However, that textbook focused on engineers calculating capacity for designs of wastewater treatment plants. The City presented no persuasive evidence that such correlation, even if it exits, applies to the actual testing of influent samples in an operating plant.

(2) Next is whether the City's conduct should be considered flagrant.

OAR 340-012-0030(7) defines "flagrant":

> (7) "Flagrant means any documented violation where the Respondent had actual knowledge of law and had consciously set out to commit the violation.

Wabschall had actual knowledge of the laws and the provisions in the NPDES permit that required him to report accurate and true test results on the DMR. However, acting fragrantly implies planning or deliberately setting out in advance to violate the law. If Wabschall had that state of mind or purpose, he did a poor job covering his tracks. Wabschall recorded the actual beginning and ending values he obtained for the two samples for December 9 and 17, 1998 on the bench sheets. He then recorded a BOD value that obviously did not compute from those raw test numbers. DEQ inspector Sheetz had no difficulty discovering the erroneous results and calculating from the reported raw numbers what the actual BOD value should have been. If Wabschall had deliberately set out ahead of time to violate the law and report false test results, he could have easily made up beginning and ending raw test numbers to arrive at the BOD value he wished to report. DEQ investigator Sheetz would have had no practical way to go back and verify after the fact whether those raw test numbers were correct because the actual samples used had long since been discarded. Moreover, Wabschall made no effort to cover up what he had done when he talked to Sheetz on September 22, 1999. Sheetz asked him about the bench sheet numbers and the DMR. Wabschall acknowledged that his BOD results were estimates.

Wabschall made several mistakes gathering data and conducting tests. He placed test results in the wrong columns on bench sheets, he matched data with the wrong dates, and he may have used an incorrectly sized bottle to conduct tests. The City's plant under Wabschall's supervision had not been inspected by DEQ for permit compliance prior to September 16, 1998. Wabschall

probably did not anticipate an inspection. Wabschall and the City had to collect lots of data on a continuous basis and conduct numerous tests on influent and effluent. Wabschall no doubt had a good understanding of the operation of his plant and generally on what levels and test results for influent and effluent to expect based on his experience. Alerting DEQ to erroneous test results and possibly flawed testing procedures may have invited additional scrutiny from DEQ and added work for Wabschall and his staff. Reporting his best estimates for BOD values and moving on was the path of least resistance. Although Wabschall acted intentionally in reporting false BOD values, DEQ failed to prove by a preponderance of the evidence that the City acting through Wabschall acted flagrantly.

CIVIL PENALTY

DEQ calculated the requested penalty of $12,000 according to the factors set forth in Exhibit 1 to the Notice of Assessment of Civil Penalty. (Exhibit 104.)

Violations pertaining to water quality shall be classified as Class I if the violation involves intentionally submitting false information. OAR 340-012-0055(1)(m).

The magnitude of the violation is moderate pursuant to OAR 340-012-0045(1) because there is no selected magnitude for the violation in OAR 340-012-0090.

The formula for determining the amount of penalty of each violation is:

$$BP = [(0.1 \times BP) \times (P + H + O + R + C] + EB$$

"BP" is the base penalty which is $3,000 for a Class I moderate magnitude violation in the matrix listed in OAR 340-012-0042(1).

"P" is respondent's prior significant action(s) and receives a value of 0 according to OAR 340-012-0045(1)(c)(A)(ii) because respondent has no prior significant actions.

"H" is the past history of respondent in taking all feasible steps or procedures necessary to correct any prior significant action(s) and receives a value of 0 according to OAR 340-012-0045(1)(c)(B)(ii) because respondent has no prior history.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of 0 according to OAR 340-012-0045(1)(c)(C)(i) because respondent is being assessed separate penalties for each occurrence of the violation.

"R" is the cause of the violation and receives a value of 6 according to OAR 340-012-0045(1)(c)(D)(iii) because respondent acted intentionally as explained in subsection (2) of the Opinion Section of this decision.

"C" is respondent's cooperativeness in correcting the violation and receives a value of 0 according to OAR 340-012-0045(1)(c)(E)(ii) because the effects of the violation could not be corrected.

3" is the approximate dollar sum of the economic benefit that the respondent gained through noncompliance according to OAR 340-012-0045(1)(c)(F) and receives a value of 0 due to a lack of evidence upon which to make a determination.

Penalty Calculation:

$$\begin{aligned}\text{Penalty} &= BP + [(0.1 \times BP) \times (P + H + O + R + C)] + EB \\ &= \$3,000 + [(0.1 \times \$3,000) \times (0 + 0 + 6 + 0 + 0)] + \$0 \\ &= \$3,000 + (\$300 \times 6) + \$0 \\ &= \$3,000 + \$1,800 + \$0 \\ &= \$4,800\end{aligned}$$

Because respondent committed violations for two separate days, December 9 and 17, 1998, the penalty should be multiplied by two.[5] The penalty the Commission should impose is $9,600.

PROPOSED ORDER

I propose that the Commission enter an order that respondent City of Scappoose violated ORS 468B.025(2) and 468.126, and impose a civil penalty on respondent in the amount of $9,600.

Dated this 21 day of September, 2001

Ken L. Betterton
Administrative Law Judge
Hearing Officer Panel

Appeal Procedures

If you are not satisfied with this decision, you have the right to have the decision reviewed by the Oregon Environmental Quality Commission. To have the decision reviewed, you must file a "Petition for Review" within 30 days of the date this order is served on you as provided in Oregon Administrative Rule (OAR) 340-011-0132(1) and (2). The Petition for Review must be filed with:

Stephanie Hallock, Director

[5] ORS 468.140 provides:

(1) In addition to any other penalty provided by law, any person who violates any of the following shall incur a civil penalty for each day of violation * * *.
* * * * *
(b) Any provision of * * * ORS chapters 468 * * * and 468B.
* * * * *

Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204.

Within 30 days of filing the Petition for Review, you must also file exceptions and a brief as in provided in OAR 340-011-0132(3). If the petition, exceptions and brief are filed in a timely manner, the Commission will set the matter for oral argument and notify you of the time and place of the Commission's meeting. The requirements for filing a petition, exceptions and briefs are set out in OAR 340-011-0132.

Unless you timely and appropriately file a Petition for Review as set forth above, this Proposed Order becomes the Final Order of the Environmental Quality Commission 30 days from the date of service on you of this Proposed Order. If you wish to appeal the Final Order, you have 60 days from the date the Proposed Order becomes the Final Order to file a petition for review with the Oregon Court of Appeals. *See* ORS 183.400 *et. seq.*

STATE OF OREGON - HEARING OFFICER PANEL - EMPLOYMENT DEPARTMENT

STATE OF OREGON
BEFORE THE HEARING OFFICER PANEL
FOR THE ENVIRONMENTAL QUALITY COMMISSION

IN THE MATTER OF:	)	
	)	ORDER ASSESSING
	)	CIVIL PENALTY
City of Scappoose,	)	Hearing Officer Panel Case No. G60393
	)	Agency Case No. WQ/M-NWR-00-010
	)	COLUMBIA COUNTY
Respondent.	)	

ORDER

IT IS HEREBY ORDERED that respondent, City of Scappoose, is liable for a civil penalty of $9,600.00, plus interest pursuant to ORS 82.010, from the date this order is signed until paid. If the civil penalty remains unpaid for more than ten (10) days from the date this order is signed, this order may be filed with any County Clerk and execution shall issue thereon.

If a party wishes to appeal this order, the party has thirty (30) days from the date this order is signed to appeal the order to the Environmental Quality Commission. *See* Oregon Administrative Rule (OAR) 340-011-0132. If a party wishes to appeal the decision of the Environmental Quality Commission, the party has sixty (60) days from the date of service of the order by the Commission to file a petition for review with the Oregon Court of Appeals. (*See* ORS 183.480 *et seq.*)

ENVIRONMENTAL QUALITY COMMISSION

Dated this 21 day of September, 2001

Ken L. Betterton
Administrative Law Judge
Hearing Officer Panel

Certificate of Service

County of Marion)
)
State of Oregon)

I certify that on 9/21/01 a true copy of the above Proposed Order was served on each of the parties by depositing the same in the United States Mail in Salem, Oregon, postage paid and certified, and sent to the addresses appearing on the Notice of Hearing unless otherwise noted below.

Laurel Van Fleet

Laurel Van Fleet
Hearing Officer Panel

s:resource/central panel forms

EXHIBIT A 76
PAGE 17 OF 17

CERTIFICATE OF SERVICE

I hereby certify that on 18th day of October 2001, I served the foregoing RESPONDENT'S PETITION FOR COMMISSION REVIEW on the following parties at the following addresses:

Jeff Bachman
Department of Environmental Quality
Enforcement Section
2020 SW 4th Ave Ste 400
Portland OR 97201-4987

by mailing to them a true and correct copy thereof, placed in a sealed envelope addressed to them at the addresses set forth above, and deposited in the U.S. Post Office at Portland, Oregon on said day with postage prepaid.

Christopher L. Reive, OSB #83305
(503) 598-7070
Of Attorneys for Respondent City of Scappoose

JORDAN SCHRADER
Attorneys at Law
PO Box 230669
Portland OR 97281
Telephone: (503) 598-7070 Fax: (503) 598-7373

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Ref No.: G60393
Case No: 01-GAP-00071
Case Type: DEQ

STATE OF OREGON
Before the Hearing Officer Panel
For the
DEPARTMENT OF ENVIRONMENTAL QUALITY
875 Union Street NE
Salem, Oregon 97311

Dec Mailed: 09/21/01
Mailed by: LMV

Orig sent to
Ce clerk to file Item

HEARING DECISION

CITY OF SCAPPOOSE
PO BOX P

SCAPPOOSE OR 97056 0677

DEPARTMENT OF ENVIRONMENTAL QUALITY
811 SW 6TH AVE

PORTLAND OR 97204 1334

CHRISTOPHER REIVE, ATTORNEY
JORDAN SCHRADER
PO BOX 230669
PORTLAND OR 97281 0669

JEFF BACHMAN
DEQ ENFORCEMENT SECTION
811 SW 6TH AVE
PORTLAND OR 97204 1334

LYNNE PERRY
ASST ATTORNEY GENERAL
1162 COURT ST NE
SALEM OR 97301-4095

The following **HEARING DECISION** was served to the parties at their respective addresses.

STATE OF OREGON
BEFORE THE HEARING OFFICER PANEL
FOR THE ENVIRONMENTAL QUALITY COMMISSION

IN THE MATTER OF:	)	
	)	**PROPOSED ORDER**
	)	
City of Scappoose,	)	Hearing Officer Panel Case No. G60393
	)	Agency Case No. WQ/M-NWR-00-010
Respondent.	)	COLUMBIA COUNTY

HISTORY OF THE CASE

The Department of Environmental Quality (DEQ) issued a Notice of Violation, Department Order, and Assessment of Civil Penalty pursuant to Oregon Revised Statutes (ORS), ORS 468.126 through 468.140, ORS Chapter 183, and Oregon Administrative Rules (OAR), OAR Chapter 340, Divisions 11 and 12, to Respondent City of Scappoose (City) on April 18, 2000.

The notice alleges (1) that on or about December 9 and 17, 1998 respondent violated ORS 468B.025(2) by violating a condition (Schedule B, Condition 1) of its National Pollutant Discharge Elimination System (NPDES) permit by failing to report the results of sample analysis for biochemical oxygen demand by intentionally reporting false sample results on its discharge monitoring report; (2) that on or about September 16, 1999 respondent violated ORS 468B.025(2) by violating Schedule B, Condition 1b of its permit by failing to maintain the accuracy of its flowmeter through twice annual calibration; (3) that on or about July 6, 10 and 20, 1998 respondent violated ORS 468B.025(2) by violating General Condition B.1 of its permit by failing to provide adequate laboratory controls and appropriate quality assurance procedures; and (4) that on or about December 9 and 17, 1998 respondent violated ORS 468B.025(2) by violating General Condition B.1 of its permit by failing to provide adequate laboratory controls and appropriate quality assurance procedures. DEQ also requested a department order in its notice that respondent submit for review and approval within 120 days a comprehensive quality assurance plan for all data generated at the respondent's wastewater facility. The notice seeks assessment of a civil penalty against respondent in the amount of $12,000 for the violation set forth in allegation (1) in the notice.

Respondent filed an answer to the notice of violations on May 8, 2000, in which respondent denied the allegations and the magnitude of the penalty.

A telephone pre hearing conference with the parties was held on November 1, 2000.

A hearing was held in Scappoose, Oregon on January 11, 2001 before Ken L. Betterton, administrative law judge. Jeff Bachman, environmental law specialist, represented DEQ. Christopher L. Reive, attorney at law, represented respondent. James Sheetz and Robert Baumgarter testified as witnesses for DEQ. Holly Ploetz testified as a witness for respondent. At the end of DEQ's case, respondent filed written motions to dismiss or for directed verdict to DEQ's notice. The hearing was continued to give DEQ time to file a written response to the motions. DEQ filed its response on February 22, 2001. Respondent filed its reply to DEQ's response on March 1, 2001. On March 14, 2001 I issued a written decision denying all of respondent's motions.

A telephone pre hearing conference with the parties was held on May 29, 2001.

A further hearing conference with the parties was held on July 25, 2001 in Portland, Oregon. Jeff Bachman represented DEQ. Christopher Reive represented respondent. Steve Wabschall testified as a witness for respondent. DEQ filed its written closing argument on August 10, 2001. Respondent filed its written closing argument on August 17, 2001. I then closed the record and took the matter under advisement.

Respondent admitted it committed the violations in allegations (2), (3) and (4) in the notice, for which DEQ did not seek a civil penalty. The parties also stipulated that respondent has met the requirements of the department order.

The only remaining issue to be addressed in this decision is allegation (1), whether on or about December 9 and 17, 1998 respondent violated ORS 468B.025(2) by violating Schedule B, Condition 1 of its permit by intentionally reporting false sample results on its discharge monitoring report, and if so, what civil penalty should be imposed.

EVIDENTIARY RULING

Hearing officer Exhibits A and D, Exhibit 2, and Exhibits 101 through 117 and 119 were admitted into the record without objection. DEQ withdrew Exhibit 1. DEQ objected to Exhibit 118 on relevancy grounds. Exhibit 118 is relevant. I overruled the objection and admitted Exhibit 118 into the record.

ISSUES

(1) Whether respondent violated a condition of its NPDES permit by intentionally reporting false test results on its discharge monitoring report.

(2) If respondent intentionally reported false test results, whether its conduct was flagrant.

(3) If respondent intentionally reported false results, what civil penalty should be imposed.

FINDINGS OF FACT

(1) DEQ issued a National Pollutant Discharge Elimination System Waste Discharge (NPDES) permit under the Federal Clean Water Act to the City of Scappoose (City) on September 29,

1992. The NPDES permit allowed the City to construct, install, modify or operate a wastewater collection, treatment, control and disposal system and discharge adequately treated wastewater to public waters. (Exhibit 101.) The City has operated under the NPDES permit since September 1992.

(2) The City owns and operates a municipal wastewater treatment plant that provides domestic wastewater treatment for the City, and for industrial wastewater from Steinfeld's Pickles, a pickle processing facility that is connected to the City's wastewater collection system. The City discharges treated wastewater, or effluent, into the Multnomah channel of the Willamette River. (*Id.*) The City had about 4,130 residents in 1996. The pickle processing plant operates seasonally with the heaviest discharge into the system in the fall of the year. Most of the wastewater the City treats is from domestic waste.

(3) The NPDES permit requires the City to monitor and report biochemical oxygen demand (BOD) and total suspended solids (TSS) at least twice a week by means of a composite sample technique. (*Id.*, Schedule B.) The BOD determination is an empirical test in which standardized laboratory procedures are used to determine the relative oxygen requirements of wastewater, effluent, and polluted waters. (Exhibit 102, Appendix D at 1.) Monitoring results must be reported on approved forms. The reporting period is each calendar month. Reports for a calendar month must be submitted to DEQ by the 15th day of the following month. (Exhibit 101 at paragraph 2.) Monitoring reports must include the name of each principal operator designated by the permittee (i.e., the City) as responsible for supervising the system during the reporting period. (*Id.*) Although monitoring reports must be submitted on approved forms, DEQ does not provide a specific form for permittees to use. Permittees are free to design or create their own report forms. The permittee must at all times properly operate and maintain all facilities and systems of treatment and control that they install or use to achieve compliance with the conditions of the permit. (*Id.*, General Condition B.) The permit requires appropriate flow measurement devices and methods consistent with accepted scientific practices to be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. (*Id.*, Section C.) The permit requires that monitoring be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.[1] (*Id.*) No other test procedure was specified in the City's permit. Any person who knowingly

---

[1] 40 CFR Part 136—Standard Method 5210 B. 5-Day BOD Test provides:

1. General Discussion

a. Principle: The method consists of filling with sample, to overflowing, an airtight bottle of the specified size and incubating it at the specified temperature for 5 d [i.e., days]. Dissolved oxygen is measured initially and after incubation, and the BOD is computed from the difference between initial and final DO. Because the initial DO is determined shortly after the dilution is made, all oxygen uptake occurring after this measurement is included in the BOD measurement.

b. Sampling and storage: Samples for BOD analysis may degrade significantly during storage between collection and analysis, resulting in low BOD values. * * *.

* * * * *.

2. Apparatus

a. Incubation bottles: Use glass bottles having 60 mL or greater capacity (300 mL bottles having a ground-glass stopper and a flared mouth are preferred). * * *.

* * * * *. (Exhibit 102, Appendix D at 3.)

makes any false statement, representation or certification in any record or other document submitted or required to be maintained under the permit, including monitoring reports, is subject to a fine or imprisonment or both. (*Id.*, Section D, paragraph 9.)

(4) Steve Wabschall (Wabschall) has worked for the City for 24 years. He has served as superintendent of the City's wastewater treatment plant for 15 years. Wabschall supervises a staff of three individuals. Wabschall possesses a water supply certification and two wastewater certifications. Wabschall has had no enforcement actions brought against him as plant superintendent from DEQ or from the federal government.

(5) On September 16, 1999 DEQ environmental engineer James Sheetz (Sheetz) conducted an unannounced NPDES permit inspection of the City's wastewater treatment plant. Sheetz did the inspection as part of his regular job duties, and as part of the City's NPDES permit renewal process. NPDES permits are good for five years. Although the City's permit had not been renewed by 1999, the 1992 permit remained in force until it was renewed or cancelled. DEQ tries to inspect all permittees every five years, but funding and staff workload makes it difficult to adhere strictly to a five year inspection schedule. The NPDES waste discharge permit system and DEQ rely on permittees to monitor their own systems, based on accurate input data and monitoring reports. Sheetz last inspected the City's wastewater treatment plant in 1994, although that inspection was not a compliance inspection.

(6) Sheetz's inspection on September 16, 1999 lasted about five and one-half hours. Sheetz talked to Wabschall, observed the plant in operation, reviewed plant records and collected samples. Sheetz selected 1998 operating records for review, and selected the months of July and December 1998 for inspection. Sheetz chose the records for December 9 and 17, 1998 for examination in detail. Sheetz found no discrepancies for December 9 and 17, 1998 for the TSS bench data. The City recorded its sample test results on "bench sheets" contemporaneously with when it conducted its tests. (*See* Exhibit 106, 107.) Wabschall and the City created its own form of bench sheet to record its monthly data to be transferred later to the monthly discharge monitoring reports (DMR) to be filed with DEQ. Wabschall recorded two influent dilution tests for December 9, 1998 to measure 5-day BOD. The start date for the test was December 9, 1998 and the stop date for the test was December 14, 1998. (Exhibit 106.) The average BOD value for the two dilution tests Wabschall ran was 25.3 mg/L.[2] (*Id.*) Wabschall did not record 25.3 mg/L for the BOD result on his bench sheet. Instead, he recorded a BOD result of 100 mg/L on the bench sheet for December 9, 1998. (*Id.*) Wabschall mistakenly recorded the value in the DO Depletion column on the bench sheet, rather than the BOD column on the form, like he should have done. (*Id.*) Wabschall knew, based on his TSS test result, that a BOD value of 25.3 mg/L was too low. He recorded the 5-day BOD test result of 100 mg/L, based on his estimate of what he believed the BOD result should have been, given the TSS result of 94 mg/L he reported for December 9, 1998. Wabschall did not make any note or comment on the bench sheet for the BOD value for December 9, 1998 that his recorded result of 100 mg/L was an estimate. (*Id.*)

[2] The first influent sample had an initial DO of 8.49 and a final DO of 8.20. The DO Depletion for the first sample should have been 29 mg/L [8.49 – 8.20 = .20 x 100 = 29 mg/L]. The second influent sample had an initial DO of 8.46 and a final DO of 8.03. The DO Depletion for the second sample should have been 21.5 mg/L [8.46 – 8.03 = .43 x 50 (adjusted for a different concentration) = 21.5 mg/L]. The average for the two tests was 25.3 (29 + 21.5 divided by 2).

Wabschall used a glass bottle having a capacity of 303 mL for the volume to conduct the test. The commonly accepted capacity of the bottle to conduct the test is 300 mL.

(7) Sheetz also examined the bench sheet for December 17, 1998. Wabschall recorded two influent dilution tests for December 17, 1998 to measure the 5-day BOD. The start date for the test was December 17, 1998, and the stop date for the test was December 22, 1998. (Exhibit 107.) The average BOD value for the two dilution tests Wabschall ran was 38.8 mg/L. (*Id.*) Wabschall did not record 38.8 mg/L for a BOD result on his bench sheet. Instead, he recorded a BOD value of 60 mg/L on the bench sheet for December 17, 1998. (*Id.*) Wabschall mistakenly recorded the value of 60 in the DO Depletion column on the bench sheet, rather than in the BOD column like he should have done. (*Id.*) Wabschall knew a BOD value of 38.8 mg/L was too low for the two tests he had run. He reported the result of 60 mg/L for BOD based on his estimate of what he believed the BOD result should have been, given the TSS result of 84 mg/L he reported for December 17, 1998. Wabschall did not make any note or comment on the BOD bench sheet for December 17, 1998 that his recorded result of 60 mg/L was an estimate. (*Id.*) Wabschall used a glass bottle having a capacity of 303 mL for the volume to conduct the test. The commonly accepted capacity of the bottle to conduct the test is 300 mL.

(8) Wabschall estimated the BOD value from his TSS result based on his belief that a correlation exists between BOD and TSS results. Wabschall based his belief on design estimates used by engineers to calculate capacity for the construction of new wastewater plants that he had read about in a textbook he used in a wastewater class he once took at a local community college. Wabschall used no specific formula to make the estimates of BOD results from TSS that he recorded and reported to DEQ.

(9) Wabschall prepared and signed the DMR on behalf of the respondent for December 1998. (Exhibit 112.) He filed the DMR with DEQ on January 11, 1999. Wabschall recorded the BOD results of 100 mg/L for December 9, 1998 and 60 mg/L for December 17, 1998 on the DMR for December 1998. (*Id.*) Wabschall knew those test results were not the correct results from the data he obtained when he ran tests for both dates. Wabschall did not write anywhere on the DMR that his reported BOD results were estimates. (*Id.*) The DMR contains certification language near the signature line at the bottom of the form where Wabschall signed his name. (*Id.*) The certification reads:

> "I certify under penalty of law that I have personal examines *(sic)* and am familiar with information submitted herein and based on my inquire of those individuals immediately responsible for obtaining the information I believe the submitted information is true and accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment." (*Id.*)

Wabschall knew that the results he recorded and submitted to DEQ for the BOD values for December 9 and 17, 1998 were not the actual test results he obtained when he did the 5-day BOD tests for the two days.

(10) On September 22, 1999 Sheetz telephoned Wabschall with questions about the DMR for December 1998 and the bench sheet records Sheetz had inspected on September 16, 1999.

Wabschall told Sheetz that he knew the BOD values he wrote on the bench sheet for December 9 and 17, 1998, and that he later recorded on the DMR for December 1998, were too low.[3]

(11) DEQ offers technical assistance to permittees to help them conduct their tests and report test results. Wabschall did not seek any assistance from DEQ to complete the DMR for December 1998, nor did he ask for assistance from DEQ on how to conduct BOD tests or how to track down what happened that caused the inaccurate test results he obtained.

(12) Wabschall did not make any notes or comments on the DMR he submitted to DEQ for December 1998 that his recorded values for BOD were estimates. He did not record anywhere on the DMR the actual test results he had obtained, with notes or comments that he believed his test results were incorrect. If the City through Wabschall had made notes or comments to DEQ on the DMR, or on any other document, that his reported values were estimates, DEQ would not have sought to assess a civil penalty against the City for those test results.

(13) DEQ did a study of the City's wastewater treatment plant records for January 1998 through December 1998 in connection with preparing the Notice of Violation, and found no correlation between TSS and BOD values that would enable an individual accurately to estimate a BOD result from an actual TSS result. (Exhibit 2.)

CONCLUSIONS OF LAW

(1) Respondent City of Scappoose violated a condition of its NPDES permit by intentionally reporting false results on its discharge monitoring report for December 1998.

(2) Respondent's conduct was not flagrant.

(3) A $9,600 civil penalty should be imposed against respondent.

OPINION

(1) DEQ has authority to discipline permittees like the City for violations of waste discharge permits. ORS 468B.025(2) provides:

> (2) No person shall violate the conditions of any waste discharge permit issued under ORS 468B.050.[4]

DEQ has alleged that the City's conduct was intentional. ORS 468.126 provides:

> (1) No civil penalty prescribed under ORS 468.140 shall be imposed for a violation of an air, water or solid waste permit issued by the Department of Environmental Quality until

[3] Wabschall mistakenly recorded the BOD result for December 9, 1998 on the line for December 10, 1998 on the DMR. He also mistakenly recorded the BOD for December 17, 1998 on the line for December 18, 1998 on the DMR. DEQ concedes the recording for the wrong dates was a mistake, and does not seek any penalty or claim of violation of any rule for the erroneously designated dates.

[4] ORS 468B.050 sets out when a permit from DEQ is required. The parties acknowledge the City needed a permit to operate its wastewater treatment plant.

> the permittee has received five days' advance warning in writing from the department, specifying the violation and stating that a penalty will be imposed for the violation unless
> * * *.
> * * * * *
> (2) No advance notice shall be required under subsection (1) of this section if:
> (a) The violation is intentional;
> * * * * *.

OAR 340-012-0030(9) provides that unless otherwise required by context, as used in this Division [Division 12, Definitions for Enforcement Procedures and Civil Penalty]:

> (9) "Intentional" means conduct by a person with a conscious objective to cause the result of the conduct.

DEQ argues that the City, acting through its plant superintendent, Steve Wabschall, intentionally reported false test results on the monthly DMR for December 1998 the City filed with DEQ. The City can act only through its agents. Wabschall had authority and the responsibility to conduct wastewater tests pursuant to the NPDES permit and to file reports with DEQ in order to comply with the conditions of the permit.

The City argues that although Wabschall reported false test results, his actions did not meet the definition of "intentional" in DEQ administrative rules. The City contends that although Wabschall knew he was to report accurate information on the DMR, and that he knew he did not report his actual test results values for BOD on the DMR, DEQ has charged the City with reporting "false sample results." The City contends that because Wabschall knew the results from the tests he ran for the 5-day BOD for December 9 and 17, 1998 were obviously inaccurate, the estimated "sample test results" he reported were not intentionally false.

The NPDES permit required the City, through its agent, wastewater plant superintendent Wabschall, to follow the test methodology set out in 40 CFR 136, and to report the test results obtained from following that test methodology. Both the DMR and the permit require the permittee to report accurate and correct information based on those test results. Wabschall reported test results that he knew were inaccurate. The NPDES permit and DEQ rely on permittees to monitor themselves. DEQ lacks the resources to constantly check on an on-going basis permittees like the City to make certain they comply with all provisions in the permit. Permittees must report accurate test results and data so that both the permittee and DEQ can be alerted for any variations or discrepancies in the data and then track down problems and make corrections promptly.

OAR 340-012-0030(9) [i.e., "intentional" conduct] requires that the person act with a "conscious objective to cause the result of the conduct." In this case that conduct entailed a conscious objective to report test results knowing that those results were false or inaccurate. Acting intentionally under OAR 340-012-0030(9) does not require that the actor deliberately set out in advance to violate the law. The state of mind or level of conduct of deliberately setting out in advance to violate the law is addressed in DEQ's definition of "flagrant," which can elevate the amount of civil penalty. Wabschall admitted that he knew the test results he reported for BOD values for December 9 and 17, 1998 on the DMR for December 1998 were false or not accurate.

He acted with a conscious objective to report test results he knew were false. DEQ established by a preponderance of the evidence that Wabschall intentionally reported false test results on the DMR report for December 1998.

The City argues that Wabschall estimated the BOD values from the TSS test results he had obtained for December 9 and 17, 1998, and hence could not have intentionally reported false test sample results. The conditions in the NPDES permit did not provide for estimating either BOD or any other test results. The permit requires following established testing methodology and reporting actual test results. Moreover, Wabschall's estimate was nothing more than a rough estimate or a guess. He used no established or accepted formula to make his estimate for BOD values from TSS test results. He just "eyeballed" the TSS test results and made his estimate. Finally, the City presented no persuasive evidence of a demonstrable correlation between BOD and TSS results. DEQ conducted a study of the City's treatment plant from January 1998 through December 1998, and found no such correlation. Wabschall apparently based his opinion of a correlation between TSS and BOD on information he obtained from a textbook he used in a class he took on wastewater treatment at a community college. However, that textbook focused on engineers calculating capacity for designs of wastewater treatment plants. The City presented no persuasive evidence that such correlation, even if it exits, applies to the actual testing of influent samples in an operating plant.

(2) Next is whether the City's conduct should be considered flagrant.

OAR 340-012-0030(7) defines "flagrant":

> (7) "Flagrant means any documented violation where the Respondent had actual knowledge of law and had consciously set out to commit the violation.

Wabschall had actual knowledge of the laws and the provisions in the NPDES permit that required him to report accurate and true test results on the DMR. However, acting fragrantly implies planning or deliberately setting out in advance to violate the law. If Wabschall had that state of mind or purpose, he did a poor job covering his tracks. Wabschall recorded the actual beginning and ending values he obtained for the two samples for December 9 and 17, 1998 on the bench sheets. He then recorded a BOD value that obviously did not compute from those raw test numbers. DEQ inspector Sheetz had no difficulty discovering the erroneous results and calculating from the reported raw numbers what the actual BOD value should have been. If Wabschall had deliberately set out ahead of time to violate the law and report false test results, he could have easily made up beginning and ending raw test numbers to arrive at the BOD value he wished to report. DEQ investigator Sheetz would have had no practical way to go back and verify after the fact whether those raw test numbers were correct because the actual samples used had long since been discarded. Moreover, Wabschall made no effort to cover up what he had done when he talked to Sheetz on September 22, 1999. Sheetz asked him about the bench sheet numbers and the DMR. Wabschall acknowledged that his BOD results were estimates.

Wabschall made several mistakes gathering data and conducting tests. He placed test results in the wrong columns on bench sheets, he matched data with the wrong dates, and he may have used an incorrectly sized bottle to conduct tests. The City's plant under Wabschall's supervision had not been inspected by DEQ for permit compliance prior to September 16, 1998. Wabschall

probably did not anticipate an inspection. Wabschall and the City had to collect lots of data on a continuous basis and conduct numerous tests on influent and effluent. Wabschall no doubt had a good understanding of the operation of his plant and generally on what levels and test results for influent and effluent to expect based on his experience. Alerting DEQ to erroneous test results and possibly flawed testing procedures may have invited additional scrutiny from DEQ and added work for Wabschall and his staff. Reporting his best estimates for BOD values and moving on was the path of least resistance. Although Wabschall acted intentionally in reporting false BOD values, DEQ failed to prove by a preponderance of the evidence that the City acting through Wabschall acted flagrantly.

CIVIL PENALTY

DEQ calculated the requested penalty of $12,000 according to the factors set forth in Exhibit 1 to the Notice of Assessment of Civil Penalty. (Exhibit 104.)

Violations pertaining to water quality shall be classified as Class I if the violation involves intentionally submitting false information. OAR 340-012-0055(1)(m).

The magnitude of the violation is moderate pursuant to OAR 340-012-0045(1) because there is no selected magnitude for the violation in OAR 340-012-0090.

The formula for determining the amount of penalty of each violation is:

$$BP = [(0.1 \times BP) \times (P + H + O + R + C] + EB$$

"BP" is the base penalty which is $3,000 for a Class I moderate magnitude violation in the matrix listed in OAR 340-012-0042(1).

"P" is respondent's prior significant action(s) and receives a value of 0 according to OAR 340-012-0045(1)(c)(A)(ii) because respondent has no prior significant actions.

"H" is the past history of respondent in taking all feasible steps or procedures necessary to correct any prior significant action(s) and receives a value of 0 according to OAR 340-012-0045(1)(c)(B)(ii) because respondent has no prior history.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of 0 according to OAR 340-012-0045(1)(c)(C)(i) because respondent is being assessed separate penalties for each occurrence of the violation.

"R" is the cause of the violation and receives a value of 6 according to OAR 340-012-0045(1)(c)(D)(iii) because respondent acted intentionally as explained in subsection (2) of the Opinion Section of this decision.

"C" is respondent's cooperativeness in correcting the violation and receives a value of 0 according to OAR 340-012-0045(1)(c)(E)(ii) because the effects of the violation could not be corrected.

"EB" is the approximate dollar sum of the economic benefit that the respondent gained through noncompliance according to OAR 340-012-0045(1)(c)(F) and receives a value of 0 due to a lack of evidence upon which to make a determination.

Penalty Calculation:

$$\begin{aligned}\text{Penalty} &= BP + [(0.1 \times BP) \times (P + H + O + R + C)] + EB \\ &= \$3{,}000 + [(0.1 \times \$3{,}000) \times (0 + 0 + 6 + 0 + 0)] + \$0 \\ &= \$3{,}000 + (\$300 \times 6) + \$0 \\ &= \$3{,}000 + \$1{,}800 + \$0 \\ &= \$4{,}800\end{aligned}$$

Because respondent committed violations for two separate days, December 9 and 17, 1998, the penalty should be multiplied by two.[5] The penalty the Commission should impose is $9,600.

PROPOSED ORDER

I propose that the Commission enter an order that respondent City of Scappoose violated ORS 468B.025(2) and 468.126, and impose a civil penalty on respondent in the amount of $9,600.

Dated this 21 day of September, 2001

Ken L. Betterton
Administrative Law Judge
Hearing Officer Panel

Appeal Procedures

If you are not satisfied with this decision, you have the right to have the decision reviewed by the Oregon Environmental Quality Commission. To have the decision reviewed, you must file a "Petition for Review" within 30 days of the date this order is served on you as provided in Oregon Administrative Rule (OAR) 340-011-0132(1) and (2). The Petition for Review must be filed with:

Stephanie Hallock, Director

[5] ORS 468.140 provides:

(1) In addition to any other penalty provided by law, any person who violates any of the following shall incur a civil penalty for each day of violation * * *.
* * * * *
(b) Any provision of * * * ORS chapters 468 * * * and 468B.
* * * * *.

Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204.

Within 30 days of filing the Petition for Review, you must also file exceptions and a brief as in provided in OAR 340-011-0132(3). If the petition, exceptions and brief are filed in a timely manner, the Commission will set the matter for oral argument and notify you of the time and place of the Commission's meeting. The requirements for filing a petition, exceptions and briefs are set out in OAR 340-011-0132.

Unless you timely and appropriately file a Petition for Review as set forth above, this Proposed Order becomes the Final Order of the Environmental Quality Commission 30 days from the date of service on you of this Proposed Order. If you wish to appeal the Final Order, you have 60 days from the date the Proposed Order becomes the Final Order to file a petition for review with the Oregon Court of Appeals. *See* ORS 183.400 *et. seq.*

STATE OF OREGON - HEARING OFFICER PANEL - EMPLOYMENT DEPARTMENT

STATE OF OREGON
BEFORE THE HEARING OFFICER PANEL
FOR THE ENVIRONMENTAL QUALITY COMMISSION

IN THE MATTER OF:	)	
	)	ORDER ASSESSING
	)	CIVIL PENALTY
City of Scappoose,	)	Hearing Officer Panel Case No. G60393
	)	Agency Case No. WQ/M-NWR-00-010
	)	COLUMBIA COUNTY
Respondent.	)	

ORDER

IT IS HEREBY ORDERED that respondent, City of Scappoose, is liable for a civil penalty of $9,600.00, plus interest pursuant to ORS 82.010, from the date this order is signed until paid. If the civil penalty remains unpaid for more than ten (10) days from the date this order is signed, this order may be filed with any County Clerk and execution shall issue thereon.

If a party wishes to appeal this order, the party has thirty (30) days from the date this order is signed to appeal the order to the Environmental Quality Commission. *See* Oregon Administrative Rule (OAR) 340-011-0132. If a party wishes to appeal the decision of the Environmental Quality Commission, the party has sixty (60) days from the date of service of the order by the Commission to file a petition for review with the Oregon Court of Appeals. (*See* ORS 183.480 *et seq.*)

ENVIRONMENTAL QUALITY COMMISSION

Dated this 21 day of September, 2001

Ken L. Betterton
Administrative Law Judge
Hearing Officer Panel

Certificate of Service

County of Marion)
)
State of Oregon)

I certify that on 9/21/01 a true copy of the above Proposed Order was served on each of the parties by depositing the same in the United States Mail in Salem, Oregon, postage paid and certified, and sent to the addresses appearing on the Notice of Hearing unless otherwise noted below.

Laurel Van Fleet

Laurel Van Fleet
Hearing Officer Panel

ORIGINAL

RECEIVED
AUG 20 2001
Employment Hearings

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF: CITY OF SCAPPOOSE, Respondent.	Case No. WQ/M-NWR-00-0 RESPONDENT'S POST HEARING BRIEF-REPLY

The following statement from its Hearing Memorandum summarizes the Department's entire case:

> Despite Mr. Wabschall's denials, the preponderance of the evidence demonstrates that Mr. Wabschall knew that the law required him to report true information on the discharge monitoring report, but that he chose instead to report data he knew to be false.

Hearing Memorandum, page 12, lines 19-21. This misstates the record and the City of Scappoose's (the "City") defense. As a result, the Department's claim must fail.

Mr. Wabschall has never denied that he believed the law required that he report "true information." But, the Department hasn't alleged the failure to report "true information." Instead, the Department alleges:

> Respondent violated Schedule B, Condition 1, of its Permit by failing to report **the results of sample analysis** (sic) for biological oxygen demand. Respondent intentionally reported **false sample results** on its Discharge Monitoring Report.

Notice of Assessment of Civil Penalty, page 2, line 2-4.

Mr. Wabschall testified, repeatedly, that he was aware of his obligation to submit "information" that was "true accurate and complete." *See* Hearing Exhibit No. 112. It is undisputed that the actual sample results at issue here were not accurate. They were declared

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invalid and inaccurate by the testing protocol dictated by the Permit, and, it is undisputed that Mr. Wabschall knew that the sample results were invalid and inaccurate at the time of reporting.

Mr. Wabschall testified that, rather than report "sample results" he knew were neither accurate nor complete, he entered a value for each invalid test result onto the City's Discharge Monitoring Report that was his honest best estimate of a true, accurate, and complete report of the quality of the influent being tested on those days. Mr. Wabschall explained at length the basis for his belief, which arose from his extensive experience as a licensed wastewater treatment plant operator, his education, and his personal experience with the performance of the City's wastewater treatment plant. The Department's attempts to prove that Mr. Wabschall's honestly held opinions were (and are) wrong completely miss the mark, because it doesn't matter whether Mr. Wabschall was honestly right or wrong. The Department has alleged and must prove intentional misconduct in this case. Therefore, what matters is what Mr. Wabschall believed at the time, and his uncontroverted testimony on this is absolutely clear.

Moreover, Mr. Wabschall's belief was objectively reasonable. With regard to his belief in the accuracy of the information he reported to DEQ, Mr. Wabschall explained the relationship he has observed between the concentration of total suspended solids (TSS) and biological oxygen demand (BOD). Mr. Wabschall's testimony described the relatively uniform nature of the domestic sewage that is processed in the City's wastewater treatment plant, the correlation between biological contamination (solid biomass – TSS) and oxygen demand caused by the natural breakdown of that biomass through bacterial action in the plant and in nature. He described how that total oxygen demand is measured for regulatory purposes by the BOD test required by the Permit. He testified that, in his actual experience, an increase in biomass (TSS) coming into the plant causes an increase in the ultimate measure of oxygen demand (BOD) that

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contamination places on the plant's treatment system and the receiving stream. He also testified that this belief is not just based on his personal experience at the City's Plant. Mr. Wabschall explained that he has been taught that such a correlation exists, and offered Hearing Exhibits 118 and 119 in support of that testimony. Those exhibits, which Mr. Wabschall testified he received during training he received in his profession, show that total "Population Equivalent," for the purposes of wastewater treatment plant design, is typically estimated at 0.2 lbs/person/day and 0.22 lbs/person/day for BOD and TSS respectively. The testimony is uncontroverted that these values are industry-accepted standards for estimating the amount of biological contamination predictably received from residential wastewater. Mr. Wabschall testified that he believes the close correlation of TSS and BOD (0.2 and 0.22, respectively) in estimating the same value (population equivalent) supports his conclusion that these measurements are closely correlated in nature – and of course he is right.

Finally, the values actually reported for BOD on the discharge monitoring report reflect his best estimates. They are correlated to reliable TSS readings for the subject days, and Mr. Wabschall testified he took those reported TSS values into account when entering what he believed were far more true, accurate, and complete reports of the quality of the influent than the invalid and inaccurate sample results he had in hand. *See* Hearing Exhibits 106 and 107.

With regard to his belief that he was required to report "true, accurate, and complete information," not "sample results", Mr. Wabschall testified that he was very aware of the exact wording of the certification he was required to sign on the "form approved by the Department." *See* Hearing Exhibit 101 (Permit), Section C, Condition 5. The Department cites Permit Schedule B, Condition 1, in its Notice of Assessment in support of its claim, but nothing in that Permit condition references "sample results." Neither the Department's legal representative nor

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any Department witness could point out to the City's representative or the hearings officer anything in the Permit that deals with "sample results."

When asked what the Permit requires an operator to do when presented with inaccurate and incomplete test results, Ms. Holly Ploetz responded by declaring that there is no easy answer. Ms. Ploetz, whose wastewater treatment plant operator training program is funded in part with federal dollars, testified that the Department has provided no written guidance to operators or trainers as to what to do, that the reporting form provides no guidance or even any space to allow the operator to offer an explanation to the Department of an invalid test result, and the Permit doesn't otherwise address the problem at all.

It is fundamental to the Department's case that what the permit holder is supposed to do with invalid and inaccurate test results is crystal clear from a plain reading of the Permit. Yet, the testimony of every witness, the Department's responses to the hearing officer's questions, and the Department's somewhat confused references to inapplicable Permit Conditions in its Notice of Assessment shows that what the operator is supposed to do is not at all clear. In contrast, it is absolutely clear and undisputed that Mr. Wabschall acted with the intent to comply with the City's reporting responsibilities. His actions were reasonable and done with a belief that he was complying with the City's Permit.

The City incorporates, without repeating here, the undersigned's verbal comments made by way of closing argument upon the completion of testimony. In particular, the City incorporates its contentions with regard to the legal standard of "intent" and "flagrant," which the Department has failed to satisfy in this matter. Simply stated, there is no evidence that Mr. Wabschall or anyone else from the City intended the "result" alleged by the Department. *See* OAR 340-012-0030(9). The Department has made no effort to present such evidence, because none exists.

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CONCLUSION

For all of the reasons stated above, the Department's attempt to assess a civil penalty must fail. The Department has not established by a preponderance of evidence, in fact by any evidence at all, that the City intended to submit false information to the Department. In the absence of such intent, there is no legal basis for a civil penalty.

Respectfully submitted.

Dated this 17th day of August, 2001.

JORDAN SCHRADER
Attorneys for Respondent

By: _____
Christopher L. Reive, OSB #83305

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CERTIFICATE OF SERVICE

I hereby certify that on the 17th of August 2001, I filed an original RESPONDENT'S POST HEARING BRIEF-REPLY with Ken L. Betterton, Employment Department, Hearings Section, General, Hearings Panel, 875 Union Street NE, Salem, Oregon 97311, by facsimile (503-947-1532) and by first class mail, and served a copy thereof by facsimile and first class mail to:

Jeff Bachman
Department of Environmental Quality
Enforcement Section
2020 SW Fourth Ave Ste 400
Portland OR 97201-4987
Fax: (503) 229-6945

DATED August 17, 2001.

JORDAN SCHRADER
Attorneys for Respondent

James E. Oliver, Jr., OSB #94399
(503) 598-7070

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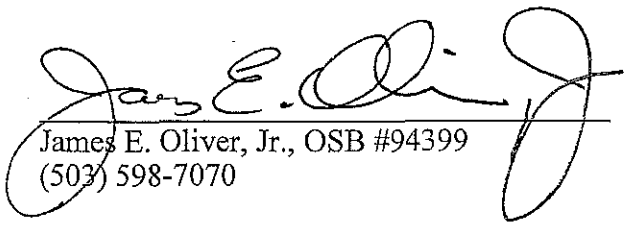
Jeff Bachman
Department of Environmental Quality
Enforcement Section
811 SW 6th St 10th Fl
Portland OR 97204
Fax: (503) 229-6762

DATED August 17, 2001.

JORDAN SCHRADER
Attorneys for Respondent



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T-J-S

JOB #656

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JORDAN SCHRADER

ATTORNEYS AT LAW

Fax Transmittal Cover

To:	Ken L. Betterton	From:	Chris Reive
	Employment Department, Hearings Section	Matter #:	42629/30022
Fax:	503-947-1532	Total Pages:	7
Phone:		Date:	August 17, 2001
Re:	City of Scappoose / DEQ Enforcement	cc:	

☐ FYI ☐ As requested ☐ Please review and reply Originals will ☑ will not ☐ follow

Comments/Description of documents being faxed:

Due to a revision of the Certificate of Service, the Respondent's Post Hearing Brief-Reply is being re-faxed to you.

Please contact the Service Center at 503.598.7070 or toll free at 1.888.598.7070 if there is any problem with this fax.

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**** INCOMPLETE DESTINATION(S) HIGHLIGHTED BELOW ****

JOB #655

	DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	STATUS
001	8/17	11:21A	280#30022#5032296762	EC--S	01'02"	008	OK L1
002		11:23A	280#3	-----S	00'00"	000	N/A L1

JORDAN SCHRADER

ATTORNEYS AT LAW

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To:	Jeff Bachman	From:	Chris Reive
	DEQ / Enforcement Section	Matter #:	42629/30022
Fax:	503-229-6762	Total Pages:	7
Phone:	503-229-5950	Date:	August 17, 2001
Re:	City of Scappoose / DEQ Enforcement	cc:	

☐ FYI ☐ As requested ☐ Please review and reply Originals will ☑ will not ☐ follow

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Copy of Respondent's Post Hearing Brief-Reply

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Oregon
John A. Kitzhaber, M.D., Governor

Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204-1390
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August 10, 2001

Ken L. Betterton,
Administrative Law Judge
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Christopher L. Reive
Tarlow Bennett and Schrader
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Lake Oswego, OR 97035
Fax: (503) 598-7373

By Facsimile and Certified Mail

Re: Hearing Memorandum
In the Matter of:
City of Scappose
No. WQ/M-NWR-00-010
Columbia County

Dear Gentleman:

Please find enclosed the Department's Hearing Memorandum in the referenced case. If you have questions, please contact me at (503) 229-5950.

Sincerely,

Jeff Bachman
Environmental Law Specialist

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF: CITY OF SCAPPOOSE	HEARING MEMORANDUM No. WQ/M-NWR-00-010 COLUMBIA COUNTY

This Hearing Memorandum is offered in support of Notice of Assessment of Civil Penalty (Notice) No. WQ/M-NWR-00-010, issued April 18, 2000, to the City of Scappoose by the Department of Environmental Quality (the Department).

I. APPLICABLE STATUTES AND ADMINISTRATIVE RULES

The Department issued the Notice pursuant to Oregon Revised Statutes (ORS) Chapters 468 and 183, and Oregon Administrative Rules (OAR) Chapter 340, Divisions 11 and 12. The Department alleges that the City of Scappoose violated a substantive provision of ORS 468B.

II. ISSUES

1. Did the City of Scappoose violate ORS 468B.025(2) by violating a condition of its National Pollutant Discharge Elimination System Permit by submitting false information on its December 1999 Discharge Monitoring Report.

2. If so, did the City intentionally submit the false information such that the Department is not barred from assessing a civil penalty pursuant to ORS 468.126.

3. If so, did the Department correctly calculate the penalty assessed in the Notice?

III. FACTS

The evidence entered into the record by the Department and the City establishes the following undisputed facts. The City operates a municipal wastewater collection, treatment and disposal system pursuant to a permit issued by the Department. The City's treatment plant receives primarily domestic sewage generated by the residents of Scappoose. The plant receives one industrial wastestream generated by the Steinfeldt's food processing plant. Steinfeldt's does not operate year round, but on a seasonal basis that coincides with the fall harvest of the crops it

processes. The City discharges treated wastewater, or effluent, to the Multnomah Channel of the Willamette River.

Scappoose's permit requires it to monitor the concentration of pollutants in the wastewater coming into the plant, or influent, and the concentrations in the effluent discharged to the Multnomah Channel. The City monitors effluent to determine whether the it is within the limits placed on how much pollution the City may discharge to the Channel. By monitoring the influent, the City determines whether its plant is meeting the treatment efficiency standard required by the permit for removal of pollutants from the wastewater coming into the plant before the wastewater is discharged to public waters.

The permit also requires the City to report the results of its monitoring monthly to the Department in a document referred to as a discharge monitoring report or DMR. Biochemical oxygen demand (BOD) and total suspended solids (TSS) are among the pollutants the City is required to monitor. BOD measures the amount of nutrients in the wastewater, which, when discharged, causes increased propagation of bacteria and algae, which in turn reduce the amount of dissolved oxygen available for fish and other aquatic species.

On September 16, 1999, Department Water Quality Engineer James Sheetz conducted an inspection of the City's wastewater treatment plant to determine the City's compliance with its permit and other applicable laws. As part of his inspections, Mr. Sheetz pulled, at random, records of the City's influent and effluent monitoring for December 9 and 17, 1998. These records included documents referred to as "bench sheets". Bench sheets are intended to document the results of laboratory analysis performed by City on its wastewater samples. The bench sheets further document the mathematical calculations through which the City uses the raw laboratory data to arrive at the final monitoring results that are reported on the DMR. In reviewing the bench sheets for the December 9 and 17, 1998 influent BOD monitoring, Mr. Sheetz found that the influent BOD values reported for those days on the December 1998 discharge monitoring report were not the values produced by following the required analytical method.

At hearing, the City's treatment plant operator, Steve Wabschall, admitted that he did not record the BOD values which resulted from the required analytical method on the discharge monitoring report. Because the numbers produced by the required method were obviously erroneous, Mr. Wabschall claimed that he estimated the influent BOD results from the influent TSS results, which he believed were valid.

IV. ARGUMENT

A. The Department Proved Intentional Conduct.

Respondent asserts that the Department should be barred, pursuant to ORS 468.126, from assessing a civil penalty because it has not proven that the violation in Section IV, Paragraph 1, of the Notice of Civil Penalty Assessment, was intentional. Respondent argues that the Department must prove that the City, acting through its operator, Mr. Wabschall, knowingly submitted false information for the Department to assess a civil penalty. Respondent's argument fails because it is inconsistent with the Environmental Quality Commission's definition of intentional. Furthermore, if the City's interpretation were accepted, it would destroy the distinction the EQC clearly intended to make in its rules between "intentionally" caused violations and "flagrantly" caused violations.

OAR 340-012-0030(9) defines "intentional" as "conduct by a person with a conscious objective to cause the result of the conduct." It is undisputed that Respondent intentionally entered "estimated" data on a discharge monitoring report and intentionally submitted that report to the Department. The result of the conduct was "estimated" data was reported to the Department in lieu of the data derived from the required monitoring. Respondent had the conscious objective to achieve that result when it acted. That's sufficient. Respondent need not have, and the Department need not prove, a conscious objective to violate the law in order to establish an intentional violation. *In the Matter of Pacific Air Helicopters, Inc.*, 1997 WL 276631 (Or Env Qual Com. 1997)(an "intentional" violation "does not mean that the [Respondent] had to intentionally violate the law, but only consciously engage in the conduct that

led to the violation."). Thus, the Department has proved an intentional violation as alleged in Section IV, Paragraph 1 of the Notice.

The City argues that the definition of intentional applied by the Department would result in virtually every permit violation being considered an intentional violation because sewage treatment plants are "intentionally built and intentionally operated." Essentially, the City accuses the Department of applying intentional as if it were synonymous with proximate cause. The City overreaches in its argument in its attempts to avoid a civil penalty. There is any number of potential permit violations where the Department's interpretation would not result in a finding of intentional. Take for example, the City's violation, cited in the Notice, for failing to keep its flow meter calibrated. The failure to do so was the result of an oversight, not as a result of a conscious choice and so is not an intentional violation. Any number of violations could be the result of an omission caused by an oversight, or of intentional conduct where the result was unintended.

The Department is not required to prove that Mr. Wabschall knew that the data was false or intended to submit false data to prove the violation intentional. In suggesting that proof of intent to submit false data is necessary for a finding that a violation is intentional, the City argues that the Department should be held to the standard necessary to prove a flagrant violation. OAR 340-012-0030(7) defines "flagrant" as "any documented violation where Respondent has actual knowledge of the law and consciously set out to commit the violation." In his testimony regarding the preparer's certification of accuracy on the DMR, Mr. Wabschall said that he knew submitting false data is a violation. If Mr. Wabschall intentionally submitted false information, when he knew, by his own admission, that submitting false information is a violation, he would have "consciously set out to commit the violation," and the City, by extension, would have committed a flagrant violation.

The Environmental Quality Commission's intent to have "intentional" and "flagrant" represent two distinct mental states, could not be more clear. OAR 340-012-0045(1)(c)(D) provides for different aggravating factors, 6 in the case of intentional and 10 in the case of

flagrant, be applied to a base civil penalty. Of course the Department has alleged in its civil penalty assessment that not only was the City's violation intentional, but also flagrant. That issue is addressed later in this memorandum. But as for the threshold issue, the Department has met its burden of proving that, at a minimum, the City's violation was intentional and ORS 468.126 and OAR 340-012-0040 do not bar the Department from assessing the City a penalty.

B. Equitable Arguments

The City made several equitable arguments against the Department's penalty assessment, two of which this memorandum addresses in turn.

1. Reporting Requirements

Among the equitable arguments the City made is that its permit does not clearly state that sample analysis results must be reported even if faulty sampling or analysis produces obviously erroneous results. The permit, however, as explained in detail in the Department's Response to the City's motion to dismiss, expressly requires that the results of sampling and analysis conducted according to required methodology be reported, regardless of whether the permittee believes the results to be valid. The Department will not rehash here arguments made in its Response, but instead requests that the Hearing Officer review the Response. There are, however, several points the Department would like to make here for the first time, or re-emphasize.

Schedule B of the permit states that a composite sample of influent shall be monitored for BOD twice per week and the monitoring results shall be reported to the Department monthly on approved forms. Section C.3 of the permit states that all monitoring "must be conducted according to the test procedures approved under 40 CFR 136, unless other test procedures have been specified in this permit." No other test methods are specified the permit, so the City was required to utilize one of the approved procedures in 40 Code of Federal Regulations 136. For BOD monitoring on December 9 and 17, 1998, the City chose to employ Standard Method 5210B, an approved method listed in 40 CFR 136. Because the results produced by Standard Method 5210B were obviously erroneous, Mr. Wabschall chose to instead report other BOD

values for those days on the City's December 1998 discharge monitoring report. The language of the permit, however, is clear. The permit does not give the City the option of reporting other values when performing the approved sampling and analysis procedures produces an erroneous result.

What then was Mr. Wabschall to do when faced with the clear requirement to report results from Standard Method 5210B analysis when he had no valid data to report? The City would have the Hearing Officer believe that Mr. Wabschall, an experienced operator with three weeks before he had to file the DMR, could think of no better solution than to report guesstimated BOD values without notifying the Department. Mr. Wabschall, of course, had a number of options which would not have mislead the Department into believing that every thing was fine with the City's sampling and monitoring program.

On the day the erroneous analytical results were produced, Mr. Wabschall simply could have opened the phone book, looked up the Department's number, called, and asked for assistance in resolving his problem. Or, Mr. Wabschall could have reported the analytical results and included a note explaining his concerns about the validity of the BOD results when he mailed in the discharge monitoring report. Mr. Wabschall could have reported the result and wrote a note on the discharge monitoring report itself. Mr. Wabschall could also have, as the Department witnesses testified was common practice, asterisked the reported value as an estimate.

Any of these responses would have notified the Department that the City had a problem running its BOD analyses and, as the Department witnesses testified, no enforcement action would have followed. As the analytical results were invalid on their face, Mr. Wabschall could even have just reported those results as the permit requires and done nothing else, which would also have alerted the Department that the City was having problems in its monitoring program. Instead, Mr. Wabschall chose to report guesstimated values and to represent those values as having been produced by the required methodology.

In presenting its case, the City tried to characterize Mr. Wabschall's choice as that of a conscientious individual left to fend for himself by a demanding and uncaring agency. This ignores the fact that the Department does in fact provide technical assistance on a regular basis to those permittees who request it. Unfortunately, the legislature does not provide the Department with resources sufficient to regularly contact permittees and ask if they are having problems that require assistance. As Mr. Sheetz testified, given limited resources, the Department must prioritize. One means of prioritizing is to offer technical assistance to permittees whom the Department understands are having problems. Mr. Wabschall and the City never took any direct action to alert the Department of its monitoring program problem, nor, as explained above, could the Department have discerned it from the discharge monitoring reports. Absent any evidence that the City was having problems, and given its limited resources, the Department cannot be be expected seek out permittees who may be having problems complying with their obligations.

2. Estimating BOD from TSS is a Not a Valid Means for Calculating BOD

As with the City's argument on the clarity of the permit's reporting requirements, this issue was also addressed in the Department's Response to the motion to dismiss and the Department again urges the Hearing Officer to review the Response as part of his deliberations. That Response, however, was prepared before Mr. Wabschall testified and the Department addresses his testimony on this question below.

Mr. Wabschall said many times during his testimony that the BOD values he reported for December 9 and 17, 1998 were the most accurate estimate of the actual values he could make given the information he had available at the time. His formal education limited to high school and continuing education required to maintain his operator's certification, Mr. Wabschall declared himself qualified to estimate BOD from TSS results. Mr. Wabschall did so despite the fact that he could not provide a single example where anyone anywhere suggested that BOD can be estimated from TSS. According to Mr. Wabschall, he decided that he can accurately estimate BOD from TSS based on (1) his "experience" and, (2) design estimates, found in a textbook, of the average amount of BOD and TSS in domestic wastewater generally. The design estimates

allegedly relied on by Mr. Wabschall are intended to be used engineers determining the necessary capacity for sewage treatment facilities.

Mr. Wabschall has no reasonable basis for assuming that the design estimates are somehow valid for use in complying with the City's monitoring and reporting obligations under its permit. As for experience, the City provided no evidence of any experience on the part of Mr. Wabschall that would reasonably lead him to believe there was a correlation between BOD and TSS. During cross-examination, Mr. Wabschall admitted that he has no mathematical formula for converting a TSS value to BOD, nor had he reviewed the historic influent BOD and TSS data for his facility on his way to concluding that he could accurately estimate one from the other. If he had, Mr. Wabschall might have realized, as the statistical analysis graphically illustrated in the Department's Exhibit 2 proves, there was a very poor correlation between influent TSS and BOD values at Scappoose in the year leading up to and including December 1998.

During its re-direct examination of Mr. Wabschall, the City tried to shore up its case on this point by having him cite data from influent sampling and analysis conducted by a contract laboratory. Careful review of the data, collected in September 1999 through October 2000, however, shows no more of a correlation than the Department's statistical analysis of the data from 1998. This is true even if you exclude the data from months when it could be assumed that the Steinfeldt's food processing plant was operating.

For example, on March 29, 2000, influent BOD (460 parts per million) was 31% lower than TSS (668 ppm). One week later, later on April 6, 2000, BOD was 9% lower than TSS, 250 ppm to 276 ppm. One week after that, on April 13, 2000, BOD was 361% greater than TSS, 470 ppm to 130 ppm. The Department could go on giving example after example. It is sufficient to say, however, that the contract lab data fails to show with any consistency that BOD values increase or decrease when TSS increases or decreases, or that when they do increase or decrease at the same time, the increase or decreases are of similar magnitude.

Furthermore, the very BOD values "estimated" by Mr. Wabschall show no consistency with each other as would be expected if he thought there was a relationship between BOD and

TSS. When pressed on cross-examination about how he arrived at the actual numbers for December 9 and 17, 1998, he recorded in the discharge monitoring report, Mr. Wabschall would only say that they were based on his "experience." For December 9, 1998, the City reported an influent TSS result of 94 ppm and an influent BOD of 100 ppm. On December 17, 1998, the City reported an influent TSS value of 84 ppm, but an influent BOD of 60 ppm. Mr. Wabschall offered no explanation of why his experience told him to estimate a BOD value slightly higher than the TSS value on December 9, but then to estimate a BOD significantly lower than the TSS value on December 17.

C. The Violation was Caused by the City's Flagrant Conduct

The calculation of the civil penalty the Department assessed the City is set forth in Exhibit 1 of the Notice. The City has objected specifically to the Department's finding that the violation in Section 4, Paragraph 1, of the Notice was caused by the City's flagrant conduct.

OAR 340-012-0030(7) defines "flagrant" as "any documented violation where Respondent has actual knowledge of the law and consciously set out to commit the violation." In determining whether the City's conduct meets this standard, the Hearing Officer must look to the mental state of Mr. Wabschall. The City, as a non-natural legal person, cannot act but through the actions of its employees and officials. In its Response to the City's motion to dismiss, the Department included a copy of the City's most recent permit renewal application, filed on June 29, 1994. On that application, the City identifies Mr. Wabschall as the Responsible Official for compliance with the permit. When Mr. Wabschall acted in his capacity as the wastewater treatment plant operator, as the City's responsible official, it was the City acting as well. The Department need not prove, as suggested by the City, that it was an actual policy, written or otherwise, of the City to disregard the law and file false information on its discharge monitoring reports. Nor must the Department prove that Mr. Wabschall was directed by a higher ranking employee or official to falsify data. If the Department proved, by a preponderance of the evidence, that Mr. Wabschall had actual knowledge of the law and consciously set out to commit the violation, the penalty aggravation for flagrant conduct must be upheld.

Mr. Wabschall admitted at hearing that he had actual knowledge of the law against reporting false information during his testimony concerning the preparer's certification of accuracy on the DMR. As might be expected, Mr. Wabschall denied consciously setting out to submit false information on the discharge monitoring report. The Department must therefore prove that Mr. Wabschall's denial is not credible. To do so, the Department must show that it is more likely than not that Mr. Wabschall knew the data was false when he put it on the discharge monitoring report and submitted the DMR to the Department.

It is undisputed that the data reported on the form did not result from the analytical method required. The question remains, if, knowing that, Mr. Wabschall actually believed he was submitting true information to the Department. If he knew the information was not true and consciously chose to report it to the Department over data produced by Standard Method 5210B, than the City flagrantly committed the violation.

In determining whether Mr. Wabschall believed he was submitting true information, the Department urges the Hearing Officer to consider: (1) Mr. Wabschall's claim that he couldn't think of anything else to do when faced with obviously erroneous data, (2) his testimony regarding how he came to believe that he could estimate BOD from TSS, (3) his failure to provide any adequate explanation of how he arrived at the alleged estimates he actually reported, (4) the inconsistency of the estimates themselves, (5) the proven lack of correlation between influent BOD and TSS values at Scappoose's treatment plant, and (6) Mr. Wabschall's readily apparent belief that BOD monitoring is merely busy work, of little practical value, imposed by bureaucrats.

Mr. Wabschall claims that he was at a loss of what to do when analysis by Standard Method 5210B resulted in obviously erroneous data. The only thing he could of think of to do was fall back on his knowledge that he could estimate BOD from TSS. This knowledge was based on his "experience" and on design estimate averages for BOD and TSS in domestic wastewater intended to be used by engineers determining the capacity for new sewage treatment facilities. As far as his experience, Mr. Wabschall never specifically explained what were the

actual experiences that led him to believe that there was a correlation between influent BOD and TSS at the Scappoose plant. He admitted that he never reviewed any historical data in allegedly coming to that conclusion. The data that was reviewed for this case, covering the year 1998 and September 1999 to October 2000, shows a very poor correlation. So what exactly is this experience that Mr. Wabschall kept referring to? He never said. Mr. Wabschall also lacks credibility when he professes his dedication to professionalism and high standards on the one hand, and then claims to believe that extrapolating from general design estimates is a scientifically valid means for determining concentrations of pollutants in a specific wastewater stream.

During cross-examination, Mr. Wabschall was unable to explain how he arrived at the specific "estimates" he put on the discharge monitoring report. For example, when asked why he "estimated" influent BOD on December 9, 1998 as 100 ppm, rather than 90 ppm or 110 ppm, his only answer was that he had based it on his "experience" and what he had been taught. At best, the value of 100 ppm was an arbitrary number selected from a range of possible values. How then could Mr. Wabschall believe that number to be true? The arbitrariness of the reported influent BOD values for December 9 and 17 is further evidenced by the fact that the numbers were not arrived at in the same fashion. For December 9, the ratio of BOD to TSS is nearly 1:1, with the BOD value slightly greater. For December 17, the ratio of BOD to TSS is only .7:1. If Mr. Wabschall had been estimating, the BOD to TSS ratios would have been more consistent.

As part of its case, the City went to great effort to disparage BOD monitoring. Mr. Wabschall testified that it is of no use to him in making day to day decisions in running the treatment plant, and that from what he has heard, BOD monitoring is not often accurate even when performed correctly. Mr. Wabschall's hearsay testimony as to the validity of the BOD test lacks any probative weight as he has neither the education nor experience to pass judgment on the accuracy of the monitoring. His testimony regarding the uselessness of the monitoring, because he uses TSS results, not BOD, to make operational adjustments, is indicative of his state

of mind when he chose to report arbitrary values for influent BOD data, rather than the data resulting from the required methodology.

If, as Mr. Wabschall testified, BOD monitoring is a mostly useless exercise, it is easy to understand why he could decide that having erroneous test results was, as he said, "not a major problem," and that reporting a fictitious number was all right so long as it too was not erroneous on its face.

BOD monitoring, however, is not a mostly useless exercise. Permittees are required to perform it so that they can calculate removal efficiencies as required by their permits. Removal efficiencies are not monitored for the purpose of figuring out when a treatment plant is nearing the end of its useful life, as Mr. Wabschall testified. Instead, as the Department's Robert Baumgartner testified, how well a plant is operating is equally important to protecting water quality as is plant meeting its effluent limitations. The effluent limitations in a permit are based on the Department's best estimate of what the best available treatment technology can achieve. The goal of the federal Clean Water Act, however, which Oregon's water quality statutes and rules are intended to implement, is to end the discharge of all pollutants to public waters. See 33 U.S.C. 1251(1). The purpose of the removal efficiency standard is to require permittees to do the best they can to minimize discharge of pollutants, and not just what they have to do to meet their effluent limitations.

Despite Mr. Wabschall's denials, the preponderance of the evidence demonstrates that Mr. Wabschall knew that the law required him to report true information on the discharge monitoring report, but that he chose instead to report data he knew to be false. As Mr. Wabschall, acting in his capacity as the City's responsible official or wastewater treatment and permit compliance, had actual knowledge of the law and consciously set out to commit the violation, the City's conduct was flagrant.

V. CONCLUSION

The Department asks the Hearing Officer to carefully review the facts in this case and apply the relevant law, which we believe will lead to a Proposed Order upholding the

Department's civil penalty assessment as issued. The Department is not accusing Mr. Wabschall of malicious intent. Mr. Wabschall appears to be, except for this lapse in judgment, a competent and conscientious operator. His lapse, however, was in taking it upon himself to conclude that BOD monitoring and removal efficiencies are of little practical value in protecting water quality, such that it was not particularly important that he report true and accurate values for BOD. Because of the risk this type of thinking poses to the system for protecting water quality, the Department chose to assess a civil penalty in this case.

As was made amply clear during the hearing, the Department lacks the resources to aggressively check up on permittees and make sure that they are reporting true and accurate monitoring results. The Department, and the public it serves, must be able to trust that the data reported by pollution sources is accurate if it is to fulfill its mission of restoring and protecting water quality. The City of Scappoose failed to hold up its end of the trust relationship and the Department's civil penalty is intended to be a disincentive to the City of Scappoose and other pollution sources against taking their monitoring and reporting obligations lightly.

8/10/01
Date

Jeff Bachman
Environmental Law Specialist
Department of Environmental Quality

CERTIFICATE OF SERVICE

I hereby certify that I served the Hearing Memorandum within on the 10th day of August, 2001 upon

Ken L. Betterton,
Administrative Law Judge
Oregon Employment Department
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Fax: (503) 947-1532

Christopher L. Reive
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by facsimile and by mailing a true copy of the above by placing it in a sealed envelope, with postage prepaid at the U.S. Post Office in Portland, Oregon, on August 10, 2001

Department of Environmental Quality Deborah Nesbit

Oregon
John A. Kitzhaber, M.D., Governor

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March 14, 2001

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Re: City of Scappoose (G60393)

Respondent filed motions to dismiss or for directed verdict at the conclusion of DEQ's case-in-chief on January 11, 2001. I gave DEQ time to file written argument in response to the motions, and I gave respondent time to file a rely to the response. DEQ filed its response on February 22, 2001. Respondent filed its reply on March 1, 2001.

Generally, motions to dismiss are made prior to a hearing. Motions for a directed verdict are made by a responding party at the conclusion of the moving party's case-in-chief. The fact that respondent denominates its motions as both motions to dismiss and motions for a directed verdict clouds the issues.

DEQ argues that all respondent's motions are barred by OAR 340-011-0107, by respondent's failure to plead those defenses in its answer.

I will address respondent's motions in turn.

Motion (1)(A), that DEQ failed under ORS 468.126(1) to give respondent five days' advance written warning specifying the violation prior to the penalty assessment, and that the notice of violation does not allege an exception to the five-day notice requirement.

DEQ alleges in its notice of violation that respondent acted intentionally. No advance notice is required if the alleged violation is intentional. ORS 468.126(2)(a). Respondent has cited no persuasive authority that DEQ must plead a reference to ORS 468.126(2)(a) in its notice of violation. DEQ's allegations in its notice of violation do not require that it give the advance written notice required by ORS 468.126(1). DEQ's notice of violation dated April 18, 2000 complies with ORS 183.090 and 183.415(1).

Respondent could and should have raised the issue in Motion (1)(A) either as a separate motion to dismiss filed prior to hearing, or in its answer. The issue in Motion (1)(A) goes to the sufficiency of the pleading or the notice of violation, and is a matter that can be raised by examining the face of the notice of violation itself. Respondent is precluded from raising this issue at the conclusion of DEQ's case-in-chief. Respondent's Motion (1)(A) is denied.

Motion (1)(B), that DEQ failed to allege a claim in Section IV, Paragraph 1 for which relief may be granted because DEQ has not alleged conduct that violates respondent's permit.

Respondent argues that Schedule B, Condition 1 of its NPDES permit does not impose a reporting requirement, but rather only imposes a frequency and sample-types of respondent's influent and outflow. Allegation 1 in Paragraph IV of the Notice of Violation alleges that respondent violated ORS 468B.025(2) by violating a condition of its permit. The allegation then refers to Schedule B, Condition 1 of the permit, and alleges that respondent failed to report the results of sample analysis for biological oxygen demand, and that respondent intentionally reported false sample results on its Discharge Monitoring Reports. Schedule B, Condition 1 of the permit refers to and includes "Minimum Monitoring and Reporting Requirements." Allegation 1 sufficiently states a claim. Respondent's Motion (1)(B) is denied.

Motions (2) and (3), that DEQ failed to prove its allegation, and failed to prove intentional and flagrant conduct.

Respondent's Motions (2) and (3) go to the sufficiency of the evidence presented by DEQ in its case-in-chief. Those motions are properly addressed by a motion for directed verdict, and are not matters that respondent could have or needed to plead in its answer pursuant to OAR 340-011-0107.

The test for a motion for directed verdict is whether the unrebutted evidence presented by DEQ in its case-in-chief, viewed in the light most favorable to DEQ, could lead a fact finder to conclude that respondent violated its permit by failing to report the results of sample analysis for biological oxygen demand, and whether respondent intentionally reported false sample results on its discharge monitoring report. DEQ presented sufficient evidence to meet that test. That is not to say that after respondent presents its case a fact finder will conclude that respondent acted intentionally, or that respondent's conduct should be considered flagrant for purposes of calculating any penalty that might be imposed if a violation is found. Respondent's Motions (2) and (3) are denied.

The Hearing Officer Panel staff will get in touch with the parties shortly to schedule the continued hearing in this matter.

Sincerely,

Ken L. Betterton
Hearing Officer

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VIA FEDERAL EXPRESS

February 28, 2001

Ken L. Betterton, Administrative Law Judge
Employment Department, Hearings Section (General)
Hearings Panel
875 Union St NE
Salem OR 97311

Re: *In the Matter of City of Scappoose*
Case No.: G60393
Our File No. 42629/30022

Dear Judge Betterton:

Enclosed for filing in the above-referenced matter is Respondent's Reply to Response of Oregon Department of Environmental Quality to Respondent's Motions to Dismiss (No. WQ/M-NWR-00-010, Columbia County).

Very truly yours,

TARLOW JORDAN & SCHRADER

Christopher L. Reive

Enclosure
cc w/enc: City of Scappoose
Lynne A. Perry, Esq.
Jeff Bachman, DEQ

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF CITY OF SCAPPOOSE, Respondent.	Case No. G60393 RESPONDENT'S REPLY TO RESPONSE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY TO RESPONDENT'S MOTIONS TO DISMISS (No. WQ/M-NWR-00-010, COLUMBIA COUNTY)

Respondent City of Scappoose ("Scappoose") replies to the opposition of the State of Oregon Department of Environmental Quality ("DEQ") to Respondent's motions to dismiss as follows:

I. Pleading Requirements.

DEQ argues that each of the motions to dismiss filed by Scappoose are barred by its failure to plead those defenses in its Answer, citing OAR 340-011-0107 as its sole support. This regulation is part of the Oregon Administrative Rules generally applicable to contested cases and is subject to the statutory enactments of ORS 468.126, ORS 183.090 and ORS 183.415 and, of course, common principals of judicial administration and equity. The regulation cited states that an answer shall be filed within 21 days of the date of mailing a Notice of Violation, shall admit or deny all factual matters, and shall affirmatively allege affirmative claims or defenses in support thereof. The regulation also provides that **except for good cause shown** failure to raise a claim or defense shall be presumed a waiver. OAR 340-011-0107 (2)(d) also provides that **subject to ORS 183.415(10)** evidence shall not be taken on any issue not raised in the Notice and Answer.

ORS 183.415(10) provides as follows:

> The officer presiding at the hearing **shall ensure that the record developed at the hearing shows a full and fair inquiry into the facts necessary for consideration of all issues** properly

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before the presiding officer in the case.

By its motions, Respondent has addressed the issue of DEQ's failure to satisfy its legal burden of properly pleading and proving its case. These issues are raised for the first time **after DEQ rested its case** because they are not relevant or complete until that time. Indeed, to the extent the matters raised by Respondent address fundamental pleading and service concepts such as the necessary notice due Respondent as a matter of law and proof concepts such as DEQ's failure to offer **any** direct evidence on Respondent's state of mind (intent), these are not defenses at all. These issues are essential elements of DEQ's *prima facie* case. They arise and become relevant only after DEQ has had a full and fair opportunity to plead, discover, and present its case, which DEQ had in this case.

For example, Respondent has pointed out that DEQ has utterly failed in its statutory and regulatory obligation to give Respondent notice of its intent to rely on a statutory exemption to assess a civil penalty without prior written warning. Such clear prior written notice is required by the legislature and the EQC as a matter of pleading and proof because such notice is essential to the protection of recognized property interests of Respondents who are presumed by law to be unaware of their rights without such prior warnings. Under this presumption, to require a Respondent to plead in advance a "defense" about which it has no presumed knowledge, and to therefore exempt DEQ from the obligation to give such notice because Respondent's lack of knowledge results in failure to raise the issue by a prior pleading, is to nullify the protections the legislature declared essential.

Moreover, and as shown above, even if the Hearing Officer declares that such circumstances are defenses as contemplated by the regulation cited by DEQ, Respondent (unlike DEQ) has not rested its case. Any failure to raise a defense in an answer is not an absolute wavier of that defense until Respondent has rested and declared its proof complete. Defenses may be added by amendment to the answer for good cause. The Hearing Officer has discretion

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pursuant to the statute to hear all evidence necessary to ensure that the record constitutes a full and fair inquiry into all issues under consideration. For example, *In the Matter of: Donna Bergquist, DBA Callahan's Siskiyou Lodge*, 2000 WL 33153135, the Respondent's affirmative defenses where addressed and ruled on by the Hearing Officer notwithstanding the fact that they were not raised in the Respondent's answer. The written decision in that case indicates that DEQ waived the pleading requirement of OAR 340-011-0107(2) in accordance with the Department of Justice Legal Memorandum of October 31, 2000. Scappoose requests only the same consideration, if required at all.

At its core, the lack of advance notice by DEQ in this instance is a fundamental policy consideration which the Hearing Officer has discretion under the law to take into account regardless of any technical pleading defect. ORS 468.126(1) provides that **no civil penalty prescribed under ORS 468.140 shall be imposed until the permittee has received five days' advance warning in writing from the Department.** ORS 183.090(2) provides that **a person against whom a civil penalty is to be imposed shall be served with a notice in the form provided in ORS 183.415.** ORS 183.415(2) mandates what that Notice must include, and Subsection (c) mandates that the Notice include **a reference to the particular statutes and rules involved, as well as a short and plain statement of the matters asserted or charged.**

The form of Notice served by the DEQ in this case, and the proof offered by DEQ at the hearing on its compliance with these statutory requirements as a predicate to being able to assess any civil penalty in this matter at all, is simply defective. DEQ's failure was complete when it rested its case, and disallowance of the benefit of a civil penalty is mandated by law. This is not a technical pleading issue. This is an issue of fundamental fairness at the core of administrative law and procedure.

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II. Advance notice was required and DEQ cannot benefit from exception.

DEQ cites *Doherty v. Oregon Water Resources Director,* 758 P2d 865 (1988), as support for its position that it need not have notified Scappoose of its intent to assess a civil penalty nor alleged in its Notice the reason for its failure to notify. The facts of *Doherty* are distinguishable from those in the instant case because **no civil penalty was assessed in that case.** At issue in *Doherty* was a hearing notice precedent to the issuance of an order regarding water withdrawal from a critical ground water area. In that case, the DEQ's notice expressly referred to ORS 537.730(1)(a), but did expressly refer to ORS 537.730(1)(d). On appeal the Court held that the notice was sufficient and there was no violation of ORS 183.415(2)(c). This case is inapplicable in that it does not involve a Notice of Violation and Assessment of Civil Penalty.

In contrast, and notwithstanding DEQ's misleading characterizations of the case law cited by Respondent, these cases are on point and mandate dismissal of the violation. The EQC in *DEQ v. Bill R. Labenske, Jr., DBA Guarantee Construction,* 1989 WL 120777 (1989) declares that DEQ cannot simply rest on its conclusion that a violation is intentional, but must affirmatively act with respect to its Notice to entitle itself to the use of the intentional violation exception to the advance notice requirement.

> DEQ contends that it was not required to provide notice prior to assessment in this case, because the violation was intentional. **Even if the exception for intentional violations were otherwise applicable under the case facts, DEQ has not acted to avail itself of the exception as required by statute.**

Id., 1989 WL 120777, 2 (emphasis added).

In order to avail itself of the exception, the applicable statutes and the EQC's regulations require DEQ's Notice to include both a reference to the **particular sections** of the statutes and rules involved and a short and plain statement of the matter asserted or charged. In *Labenske* the DEQ failed to do both. DEQ failed to reference the specific statutory exception to the advance notice requirement and it also failed to plainly state that the alleged violation was intentional.

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The quotation cited by DEQ in footnote 2 of its Response bears repeating:

> . . . DEQ failed to advise *Guarantee* that an intentional violation was charged **and failed to advise that intention was DEQ's justification for omitting the advance notice to which *Guarantee* would otherwise be entitled.**

Id., (emphasis added).

DEQ has committed the same error with respect to Respondent in this case. Insertion alone of the adjective "intentional" in Section IV, paragraph 1 of the Notice, without a specific reference to the statutory subsection excepting intentional violations from the advanced notice requirement, and without a short and plain statement of DEQ's justification for omitting advance notice to which Scappoose would otherwise be entitled, violates the EQC ruling in *Labenske*. As a result, DEQ failed to avail itself of the benefit of the statutory exception.

In its Response, DEQ argues that *DEQ v. Neu-Glo Candles, Inc.*, 1988 WL 163165 (1988), is wholly limited by the facts of that particular case. The ruling in *Neu-Glo* is simple. The Respondent was determined not to be liable as cited for violation of rules pertaining asbestos removal requirements, in part, because DEQ did not give five days' advance notice that a penalty would be imposed and was not excused from the duty to provide that notice. The opinion states that:

> DEQ did not provide 5 days advance notice. Therefore DEQ must prove its duty to provide the notice was excused.
>
> DEQ has a further notice burden. It is to **allege in its assessment document a statement of its intent to rely on a statutory exception** to its duty to provide advance notice.

Id., 1988 WL 163165, 3 (emphasis added).

The decision could not be clearer. It repeatedly states that **the agency is obliged to affirmatively allege its basis for avoiding a statutory notice requirement and that by failing to so allege "DEQ failed to satisfy the duties imposed by ORS 183.415(2)(c) and (d) and**

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cannot gain the benefit of that exception." Id., 1988 WL 163165, 4 (emphasis added). Moreover, even if DEQ had proved a violation of the asbestos removal requirements in effect at the time of that violation, the decision held that **"notice failures would preclude exaction of a penalty."** Id., 1988 WL 163165, 4 (emphasis added).

The factual circumstances of this case are remarkably similar. DEQ chose not to give five days' written notice of its intent to assess a penalty. Yet, its assessment document in this case is silent as to any allegation regarding advance notice. It does not allege that advance notice was given under the statute; nor does it allege that advance notice was not required because Scappoose's conduct was intentional. Neither does the assessment document refer to the "particular sections of the statutes and rules" which it argues entitles it to forego five days' advance notice.

Not only must DEQ satisfy the initial notice burden of alleging its intent to rely on a specific statutory exception to its duty, it must also establish that the section alleged applies to the facts in a given case. In other words, the burden is on DEQ to not only allege in its assessment document with sufficient specificity the statutory exception to the notice requirement it relies upon; it must also satisfy the burden of proof that the alleged exception is applicable. In the present case, DEQ failed on both accounts. DEQ's assessment document fails to adequately allege its intention to rely on the intentional violation exception and DEQ further failed to establish any intentional violation. In its case in chief presented on January 11, 2001, DEQ failed to establish that Scappoose committed any intentional violation of its NPDES Permit. Therefore, no civil penalty can be imposed.

ORS 468.126(2)(a) provides that no advance notice shall be required under subsection (1) of the statute if "the **violation** is intentional." Advance notice is not excused for any intentional "conduct," only intentional conduct which constitutes a "violation." DEQ's Notice of Violation, Section IV, Paragraph 1 states at line 4 that:

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Respondent intentionally reported false sample results on its discharge monitoring report.

Such conduct was not proved to have occurred or to have violated any permit provision cited by DEQ in its Notice. The alleged violation No. 1 is the only allegation subject to an attempt to assess a civil penalty. DEQ cited permit Schedule B, Condition 1, as the basis for the alleged violation and penalty. In spite of considerable testimony regarding the language of that permit provision, and about Schedule B, Condition 2 (which was not pleaded at all), no witness could reference a single provision in the cited permit condition that had been violated by Respondent's alleged conduct. DEQ's witness declared that a 'failure' to report laboratory analytical results, regardless of the known inaccuracy of the results, violated the permit. Yet, on cross-examination, that same witness conceded that no such requirement to report sampling results exists in the cited permit provision. DEQ had every opportunity to amend its Notice to correct its error and to offer additional proof on the existence of a violation of Permit Schedule B, Condition 1. It did not, and DEQ's allegation fails a matter of proof.

III. DEQ has not established a violation of the Permit.

In response to DEQ's written argument in Section C of its opposition to Respondent's motions to dismiss, Respondent incorporates its comments above. DEQ describes alleged violations of General Condition C.1, General Condition C.3, General Condition C.6, General Condition D.6, General Condition D.7 and General Condition 8. None of the above Permit provisions referred to in DEQ's Response where even mentioned in its Notice of Violation, or at the hearing. No testimony was presented on these new claims, and no notice given to Respondent or the Hearing Officer of such reliance on these provisions. And, DEQ has rested its case. The case record is clear. DEQ has neither proved its pleaded claim, nor is it now entitled to prove unpleaded claims.

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CONCLUSION

For all of the reasons discussed in detail above, Scappoose's motions should be granted and DEQ's Notice of Assessment of Civil Penalty should be dismissed.

DATED this 28th day of February, 2001.

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Attorneys for City of Scappoose

By: _____
Christopher L. Reive, OSB #83305

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CERTIFICATE OF SERVICE

I hereby certify that on the 28th of February 2001, I filed an original of RESPONDENT'S REPLY TO RESPONSE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY TO RESPONDENT'S MOTIONS TO DISMISS with Ken L. Betterton, Employment Department, Hearings Section, General, Hearings Panel, 875 Union Street NE, Salem, Oregon 97311, by Federal Express, and served a copy thereof by first class mail to:

Lynne A. Perry
Assistant Attorney General
Department of Justice, General Counsel Division
1162 Court Street NE
Salem OR 97301-4096

Department of Environmental Quality
Enforcement Section
Jeff Bachman
2020 SW Fourth Ave Ste 400
Portland OR 97201-4987

DATED: February 28, 2001.

Christopher L. Reive, OSB #83305
(503) 598-7070
Attorney for City of Scappoose

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HARDY MYERS
Attorney General

PETER D. SHEPHERD
Deputy Attorney General

DEPARTMENT OF JUSTICE
GENERAL COUNSEL DIVISION

February 22, 2001

HAND DELIVERY

Ken L. Betterton
Employment Department
Hearings Section, General
Hearing Panel
875 Union Street NE
Salem, OR 97311

Re: *City of Scappoose:* Case No. G60393
DEQ No: WQ/M-NWR-00-010
DOJ File No. 340310-GN0055-01

Dear Mr. Betterton:

Enclosed please find the Response of Oregon Department of Environmental Quality to the Motions to Dismiss of Respondent City of Scappoose.

Sincerely,

Lynne Perry
Assistant Attorney General
Natural Resources Section

LAP:cad/GEN76023
Enclosure
c (by fax and mail - w/encl.): Christopher L. Reive, Attorney at Law
Jeff Bachman, DEQ

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BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF: CITY OF SCAPPOOSE Respondent,	Case No. G60393 RESPONSE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY TO RESPONDENT'S MOTIONS TO DISMISS

The Oregon Department of Environmental Quality (DEQ) responds to the Motions to Dismiss of Respondent City of Scappoose (Respondent) as follows:

DISCUSSION

I. Respondent's defenses are barred by failure to plead them in its answer.

Each of the matters raised by Respondent in its motions are barred by Respondent's failure to plead those defenses in its answer as required by OAR 340-011-0107. OAR 340-011-0107(2) provides in relevant part as follows:

> "In the answer, the party shall admit or deny all factual matters and shall affirmatively allege any and all affirmative claims or defenses the party may have and the reasoning in support thereof. Except for good cause shown:
>
> (a) Factual matters not controverted shall be presumed admitted;
> (b) Failure to raise a claim or defense shall be presumed to be a waiver of such claims or defenses;
> (c) New matters alleged in the answer shall be presumed to be denied unless admitted in subsequent pleading or stipulation by the Department or Commission; and
> (d) Subject to 183.415(10) evidence shall not be taken on any issue not raised in the notice and the answer unless such is specifically raised by a subsequent petitioner for party status and is determined to be within the scope of the proceeding by the presiding officer."

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Respondent's May 8, 2000 answer raises only one affirmative defense:

> "For purposes of DEQ's calculation of the amount of the civil penalty assessed, the magnitude of violation and the "R" factor are not appropriate for the violaiton alleged in Section IV, paragraph 1." (Answer, ¶ 10.)[1]

Respondent has not offered any basis in law or in fact for raising defenses in its motions that were not timely raised in its answer. For that reason, each of the motions to dismiss should be denied.

II. Response to Motion 1.

A. DEQ was not required to give five days' advance notice.

Respondent asserts that the allegations in Notice Section IV, ¶ 1 are insufficient as a matter of law because DEQ failed to plead expressly its reliance on one of the exceptions to the five-day notice requirement enumerated in ORS 468.126(2). The level of specificity Respondent seeks is not required.

ORS 468.126(1) requires five days' advance written notice of civil penalties imposed for violation of water permits. The notice requirement is, however, subject to several exceptions, as noted in subsection (2). ORS 468.126(2)(a) expressly provides that advance notice is not required if the alleged violation is intentional.

DEQ's notice expressly states that it is issued pursuant to ORS 468.126. Notice Section IV, ¶ 1 further alleges an intentional violation:

> "On or about December 9 and 17, 1998, Respondent violated ORS 468B.025(2) by violating a condition of its Permit. Specifically, Respondent violated Schedule B, Condition 1. Respondent *intentionally* reported false sample results on its Discharge Monitoring Report. These are Class I violations pursuant to OAR 340-012-0055(1)(m)." (Emphasis added.)

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[1] Respondent also purports to reserve the right to raise additional defenses prior to hearing (answer ¶11), but it is evident from OAR 340-011-0107 that Respondent is not entitled to do so.

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ORS 183.415(2) requires nothing more. *Doherty v. Oregon Water Resources Director*, 92 Or App 22, 33-34, 758 P2d 865 (Or App 1988)(rejecting argument that notice inadequate for failure to specify a statutory subsection because text of notice and reference to statute as a whole made the relationship between the subsections "obvious").[2]

Respondent cites four earlier hearings officer rulings in which DEQ was deemed not to have given the required five days' advance. Each is factually distinguishable. In *DEQ v. Thomas H. Scott*, 1990 WL 283207 (1990), DEQ simply failed to present evidence establishing that the violation fell within the exception in ORS 468.126(2) on which it relied. In *DEQ v. Elliot-Jochimsen Construction, Inc.*, 1988 WL 167438 (1988), the exception upon which DEQ relied was not found in DEQ's rule with respect to the five-day notice (OAR 340-012-0040). Thus, DEQ failed to satisfy the independent notice requirement in its rule.

In *DEQ v. Neu-Glo Candles, Inc.*, 1988 WL 163165 (1988), DEQ asserted that the violation alleged fell within two of the enumerated exceptions, those in (2)(b) and (2)(e). DEQ did not attempt to prove that the violation fell within (2)(b). Further, DEQ neither alleged a violation subject to the exception in (2)(e) nor satisfied the independent notice requirement in OAR 340-012-0040. The text of *Neu-Glo Candles* cited by Respondent is wholly dependent on and limited by the facts of that particular case.[3] Finally, in *Labenske*, the hearings officer

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[2] The ruling in *DEQ v. Bill R. Labenske, Jr., dba Guarantee Construction*, 1989 WL 12077 (1989) is not inconsistent with *Doherty*. In *Labenske*, the hearings officer noted that:

> "In keeping with ORS 183.415, DEQ's notice was required to include a short and plain statement that Guarantee's violation was intentional. By failing to include that statement, *or* a reference to ORS 468.125(2)(a), DEQ failed to advise Guarantee that an intentional violation was charged and failed to advise that intention was DEQ's justification for omitting the advance notice to which Guarantee would otherwise be entitled." (Emphasis added.)

Here, DEQ expressly alleged that the violation was intentional.

[3] This is evident from *Doherty*, which pre-dates *Neu-Glo*, as well as from *Labenske*, a case decided by the very same hearings officer only one year later.

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determined that although DEQ relied on the exception in (2)(a) for intentional violations, DEQ had failed either to allege or to prove an intentional act.

In sum, these cases are simply not on point where, as here, the notice not only references the statute involved but also alleges an intentional violation. Further, unlike the cases cited, the exception for intentional violations in ORS 468.126(2)(a) is wholly consistent with the exception found in DEQ's notice rule, OAR 340-012-0040(2)(a).

B. DEQ properly alleged a claim upon which relief can be granted.

Respondent asserts that DEQ failed to allege a claim in Section IV, Paragraph 1 for which relief can be granted. Section IV, Paragraph 1 alleges that Respondent violated ORS 468B.025(2) by violating a condition of its permit. Paragraph 1 further describes the violation alleged, namely, that Respondent failed to report the results of the analysis of its biolochemical oxygen demand (BOD) sample and reported false results on its discharge monitoring report (DMR). Nothing more is required.

As Respondent points out, ORS 183.415(2)(c) and (d) require a reference to the statutes involved and "a short and plain statement of the matters asserted or charged." DEQ need not reference the specific permit condition by number at all.

Further, Schedule B, Condition 1 pertains to the minimum monitoring and reporting requirements to which Respondent is subject. The allegation is not that Respondent failed to deliver a report, but that the Respondent reported something other than the results derived from the sampling required by Schedule B, Condition 1. Thus, the allegation in Section IV,

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Paragraph 1 is proper and states a claim for which relief can be granted.

C. DEQ has established a violation of the permit.

Respondent also alleges a failure of proof. DEQ understands Respondent to argue that despite the monitoring and reporting requirements in the permit, Respondent is at liberty to deliver other, fictitious information when it has reason to believe that the required monitoring results are not representative for one reason or another. It relies on the purported Hobson's choice between knowingly submitting inaccurate information and providing a guess that it believes to be more representative. Both the permit conditions and the evidence introduced at hearing demonstrate, however, that the purported dilemma is not real, and any apparent dilemma was solely attributable to Respondent's noncompliance with other permit terms and inadequate training of its employees.

The permit expressly provides that the sampling and measurements taken shall be representative of the volume and nature of the monitored discharge. General Condition C.1. In an effort to assure accuracy, the permittee must conduct its monitoring according to specified test procedures. General Condition C.3.[4] To the extent that Respondent's data was in error, the errors were attributable to Respondent's failure to follow the required procedures. (Ex. 102.)

But regardless of the cause of the inaccuracy, the permit makes plain the permittee's obligation to provide accurate information and report noncompliance. General Conditions D.6 and D.7 require the permittee to report any noncompliance on the discharge monitoring report (DMR) and to correct information if it becomes aware that it has submitted inaccurate information in an earlier report. (The obvious corollary being that the permittee should notify DEQ of inaccurate

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[4] The permittee is also at liberty to conduct additional, nonrequired monitoring, in which case the permittee would be expected to submit both sets of monitoring results. General Condition C.6.

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information if it is *already* aware of a problem at the time the information is submitted). General Condition 8 requires that the DMR include a signed certification to the effect that the information is accurate and complete.

When Respondent suspected that its results were not accurate or representative, it merely needed to note fact on the DMR. Here, however, Respondent neither reported the initial results nor reported the potential discrepancy. It merely made up results to replace those it believed flawed and then certified the fictitious numbers to be accurate-- without alerting DEQ. That approach was not an option.

Further, that approach is unsupported by the evidence introduced at the hearing. DEQ not only proved that Mr. Wabschall, Respondent's wastewater plant superintendent, had other options, it also proved that he had no reason to believe or assume that the December 9, 1998 and December 17, 1998 influent BOD results he reported were accurate, (much less more accurate than those derived from the required analyses).

Respondent claims that Mr. Wabschall relied on training received from, or guidance materials provided by, Holly Ploetz, a community college instructor. Testifying for Respondent, Ms. Ploetz stated that she teaches her students that in domestic sewage a relationship exists between total suspended solids (TSS) results and BOD results. According to Ms. Ploetz, if a treatment plant operator does not observe a relationship between these two parameters over time, that should prompt the operator *to question the validity of the data.*

Respondent asserts that Mr. Wabschall took this instruction (i. e. *to question the validity of the data*) as a license not only to report BOD values he had "estimated" from TSS results but also to certify those values as "true , accurate, and complete." There is no evidence to justify this approach. Ms. Ploetz herself testified that she *never* instructs her students that they can use TSS

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results to estimate and report BOD. In fact, the evidence introduced at hearing indicates that Ms. Ploetz would not know "how" one would go about making such an estimate. Instead, Ms. Ploetz admitted that she is unaware of any equation or formula for estimating BOD from TSS, any regulation which allows sources to do so, or any scientific or technical journal articles or papers which recommend it.[5] Thus, regardless of his sincerity, Mr. Wabschall had no reasonable basis for assuming that the December 9, 1998 and December 17, 1998 BOD numbers he derived from the influent TSS results and then reported on the DMR were accurate, or even close.

Respondent also claims that Mr. Wabschall could not think of anything else to do when confronted with a reporting obligation and what he believed to be invalid analytical results. As Ms. Ploetz, DEQ Environmental Engineer Jim Sheetz, and Mr. Baumgartner all testified, it is not uncommon for treatment plant operators to run into problems performing analyses and end up with results that they suspect are invalid. Mr. Sheetz and Mr. Baumgartner each testified that the "common practice" among permittees in these situations is to report the actual test results and "flag" the data on the DMR so DEQ understands that the data is questionable. If questionable data is flagged, reporting of that data is not considered a violation. Ms. Ploetz testified that in her classes and workshops, she instructs her students that when confronted with invalid test results, they should report the actual test results, but identify the results as an estimate.

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[5] By contrast, Robert Baumgartner, a water quality program manager for DEQ, testified that there is no statistical correlation between BOD and TSS either in general or with respect to Respondent's case. DEQ introduced into evidence a graph plotting all the influent BOD and TSS values reported by Respondent for 1998, the year in which the violations occurred. The graph shows *no* relationship or correlation between influent TSS and BOD results.

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In short, Respondent's argument is premised on its assertion that Mr. Wabschall "learned" that he could estimate BOD from TSS from Ms. Ploetz (based only on her instruction that an absence of a relationship between BOD and TSS should prompt him to question the data and despite the fact that she apparently provided no "instruction" on making such an estimate) but that he (and the City's other operators) simultaneously failed to learn from her that they should report test results they believe to be invalid in a way that would alert DEQ to that fact. Further, Mr. Wabschall, who according to Ms. Ploetz, is an experienced operator, also failed to conjure up this common practice solution on his own *or* to call DEQ for guidance.

At best, Respondent's defense seems to be "good intentions." The difficulty with this defense is readily apparent. Respondent argues that a permittee in its position is entitled to alter or "adjust" its monitoring results before submission and without alerting DEQ to the "adjustment," based only on that permittee's belief, whether well-founded or not, that its monitoring results are not "right." Taking that argument to its logical conclusion, determinations as to permit "compliance" would then be based solely on the integrity or intent of the person making the adjustment, rather than the basis for or accuracy of the adjustment or the actual quality of the wastewater being discharged. If the permittee is deemed well-intentioned (by what standard is unclear), the permittee would not be in violation. This position is cleary unsupportable.

D. DEQ has proved intentional conduct.

Respondent asserts that the violation in Section IV, Paragraph 1 should be dismissed for failure to prove intentional or flagrant conduct. That is not the case. It is undisputed that Respondent intentionally entered "adjusted" data on a discharge monitoring report and

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intentionally submitted that report to DEQ. The result of the conduct was to cause the adjusted data to be reported to DEQ in lieu of the data derived from the required monitoring. Respondent had the conscious objective to achieve that result when it acted. That's sufficient. Respondent need not have, and DEQ need not prove, a conscious objective to violate the law in order to establish an intentional violation. *In the Matter of Pacific Air Helicopters, Inc.*, 1997 WL 276631 (Or Env Qual Com. 1997)(an "intentional" violation "does not mean that the [Respondent] had to intentionally violate the law, but only consciously engage in the conduct that led to the violation."). Thus, DEQ has proved an intentional violation as alleged in Section IV, Paragraph 1 of the Notice.

A flagrant violation requires that one have knowledge of the law and consciously set out to commit the violation. DEQ believes that it has proved a flagrant violation in this case and, as a result, its penalty assessment is correct. If, however, the Hearings Officer determines otherwise, the appropriate consequence is not dismissal but merely adjustment of the penalty by adjusting the penalty factor "R," from "flagrant" to "intentional."

III. Response to Motion 2

A. Respondent is liable for the accurate completion of discharge monitoring reports.

Respondent argues in its second motion that it cannot be held liable for the intentional conduct of its employees. It is unclear, however, that the concept of vicarious liability is even relevant here. First, DEQ has not alleged a tort but rather a statutory violation attributable to Respondent's failure to comply with its own permit. The statute and the permit impose an obligation to perform certain acts upon *Respondent*. Respondent assigned certain of those acts to an employee. That employee was Mr. Wabschall, who is identified as the "Responsible Official"

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on Respondent's NPDES permit application. (Attached as Exhibit A.) Having done so, Respondent cannot reasonably disavow itself of Mr. Wabschall's performance of those acts.[6]

Second, Respondent cannot simultaneously deny wrongdoing and assert that a tort has been committed. Respondent asserts that "[i]t timely and regularly monitored the **quality** of the influent and outfall on the approved form with the **intent** of conveying as accurate a representation of that quality as was possible under the circumstances." (Motion 1, at 7; Emphasis in original.) Having argued that the intentional acts accomplished through its employee were reasonable and within the law, Respondent cannot claim that the very same acts are tortious acts for which it should not be held liable.

Third, without conceding that the concept of vicarious liability is even applicable under these circumstances, the relevant inquiry leaves no question that Respondent is liable for the acts of its employee. The case of *Bray v. American Property Management Corp.* (159 Or App 356) relied upon by Respondent was subsequently vacated by the Oregon Supreme Court. *Bray*, 329 Or 317, 984 P2d 854. The case was remanded to the Court of Appeals for further consideration in light of two intervening rulings by the Supreme Court: *Fearing v. Bucher*, 328 Or 367, 977 P2d 1163 (1999) and *Lourim v. Swenson*, 328 Or 380, 977 P2d 1157 (1999).

The more recent cases, *Bray* included, clarify that the focus of the inquiry is *not* whether the employee was acting in the interest of the employer or whether the employee was hired to carry out the tortious act but rather whether the complained of acts resulted from or were an outgrowth of the exercise of the employee's duties. *Harris v. Pameco*, 170 Or App 164 (2000);

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[6] Respondent appears to be between a rock and a hard place. If Respondent succeeds in disavowing itself from the acts of this employee, Respondent has arguably opened itself up to further liability, in that it has failed to fulfill the permit obligations otherwise performed by this employee. In other words, if it did not intend to rely on the monitoring and reporting of this employee, or an employee working in this capacity, Respondent is roughly 7-8 years behind in its monitoring and reporting obligations.

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Bray, 164 Or App 134, 138-39, 988 P2d 933 (1999) (employer liable if acts within the scope of employment resulted in the acts that led to the injury).

As the Court of Appeals noted in *Barrington v. Sandberg*, 164 Or App 292, 295, 991 P2d 1071(1999) (Citing *Fearing*, 328 Or at 377):

> "The essential point is that the performance of the employee's duties must be a necessary precursor to the misconduct and that the misconduct must be a direct outgrowth of, and have been engendered by, conduct that was within the scope of the employee's employment. *It is not necessary that the misconduct itself be of a kind that the employer hired the employee to perform.*" (Emphasis added.)

The reports at issue were prepared by the Superintendent in charge of the wastewater treatment plant that is the subject of the permit. As noted above, Respondent asserts that the intent was to convey as accurate a representation of the water quality as possible. Mr. Wabschall's act of reporting monitoring results—hopefully, as accurately as possible—was necessarily within the scope of his employment and accomplished in the performance of those duties. (See Exhibit A.) DEQ need not establish that Respondent actually hired or directed Mr. Wabschall to falsify or "adjust" the reports.

Thus, although the applicability of a vicarious liability theory is questionable under the circumstances, there is ample evidence in the record to establish that preparation and submission of the reports on Respondent's behalf was squarely within the scope of Mr. Wabschall's job duties.

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CONCLUSION

For the reasons cited herein, Respondent's motions to dismiss should be denied.

DATED this 22nd day of February 2001.

Respectfully submitted,

HARDY MYERS
Attorney General

Lynne Perry

Lynne Perry, #90456
Assistant Attorney General
Of Attorneys for Department of Justice,
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ARTMENT OF ENVIRONMENTAL QUALITY
Business Office
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APPLICATION

FOR *RENEWAL* OF NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT (NPDES-R)

STATE OF OREGON

DEQ USE ONLY
App. No.: 95760
File No.: 19980
Received: JUL 15 1994
WQ EPA No.: OR-

$800.00 CK 19284

A. REFERENCE INFORMATION

City of Scappoose
Official Name of Applicant (Owner)

Columbia Ave. Wastewater Plant
Facility Name

P.O. Box "P"
Mailing Address

Scappoose | Oregon | 97056
City | State | Zip

Steven Wabschall
Responsible Official

Wastewater Treatment Plant Superintendent
Title

34345 E. Columbia | 543-7183
Address or Location | Phone

Present Permit No.: 100677
Date Expires: 5-31-95

Enter Site Location by Latitude and Longitude:

LATITUDE			LONGITUDE		
1. Deg.	2. Min.	3. Sec.	1. Deg.	2. Min.	3. Sec.
N 44	3	99	W 122	22	18

Joe Lewis
Alternate Responsible Official or Chief Operator

Chief Operator
Title

34345 E. Colmbia | 543-7183
Address or Location | Phone

Description of activities requiring a permit from the Department: (Check all that apply.)

___ Construct, install or modify waste collection, treatment, or disposal facilities.
X Operate waste collection, treatment, or disposal facilities.
X Discharge treated wastewaters into the waters of Multnomah Channel
___ (Other) _____

B. GENERAL QUESTIONS

Have the treatment or disposal methods employed, as indicated in previous applications, been altered in any way since the last application was submitted?
☐ Yes ☒ No (If yes, explain.)

Has the quantity or quality of wastes discharged, as indicated in previous applications, been significantly changed in any way since the last application was submitted? ☐ Yes ☒ No (If yes, explain.)

C. SPECIAL QUESTIONS AND REQUESTED INFORMATION

If any changes in operations or waste quantity or quality are anticipated in the near future, please attach an explanation or proposal.
Please attach a brief report which indicates your progress in meeting the requirements and limitations of your present permit.

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED IN THIS APPLICATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Signature of Owner (Or Legally Authorized Representative) | Wastewater Treatment Plant Superintendent (Title) | 6/29/94 (Date)

Exhibit A

CERTIFICATE OF SERVICE

I hereby certify that on the 22nd day of February 2001, I filed an original of the RESPONSE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY TO RESPONDENT'S MOTIONS TO DISMISS with Ken L. Betterton, Employment Department, Hearings Section, General, Hearing Panel, 875 Union Street NE, Salem, Oregon 97311, by hand delivery, and served a copy thereof by facsimile and first class mail on:

Christopher L. Reive
Tarlow Jordan & Schrader
P. O. Box 230669
Portland, OR 97281

Lynne Perry

Lynne A. Perry, #90456
Assistant Attorney General
Of Attorneys for Department of Justice,
State of Oregon

ORIGINAL

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF: CITY OF SCAPPOOSE, Respondent.	Case No. WQ/M-NWR-00-010
	RESPONDENT'S MOTIONS TO DISMISS OR FOR DIRECTED VERDICT
	Hearing Date: January 11, 2001, 9:30 a.m.

Respondent, City of Scappoose ("Scappoose"), hereby moves for dismissal or, in the alternative, for directed verdict against the Department of Environmental Quality's (the Department's) Notice of Violation, Order and Assessment of Civil Penalty No. WQ/M-NWR-00-010 ("Notice of Violation") for the reasons stated below:

1. The Department's Notice of Violation No. 1, which is the subject of the civil penalty Department seeks to impose, is deficient and must be dismissed.

It is undisputed that Scappoose was not given five (5) days' advance warning, in writing, from the Department specifying the violation prior to the subject penalty assessment, and the Notice of Violation does not allege an exception or excuse to the statutory five (5) day notice requirement. As a result, the Department's allegations in Section IV, Paragraph 1, for which it seeks the assessment of a civil penalty, are insufficient as a matter of law.

Moreover, and as an independent basis for dismissal of the alleged violations referenced in Section IV, Paragraph 1, the conduct described therein and the proof offered by the Department at the hearing on this matter does not constitute a violation of Scappoose's National Pollution Discharge Elimination System (NPDES) Permit.

(A) Advance Notice Requirement.

ORS 468.126(1) requires the Department to give Scappoose five (5) days' advance

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warning in writing before any civil penalty can be assessed against it, subject only to the exceptions set out in ORS 468.126(2). These statutes provide in pertinent part:

> (1) No civil penalty proscribed under ORS 468.140 shall be imposed for a violation of an air, water or solid waste permit issued by the Department of Environmental Quality until the permittee has received five (5) days' advance warning in writing from the Department, specifying the violation and stating that a penalty will be imposed for the violation unless the permittee submits the following to the Department in writing within five (5) working days after receipt of the advanced warning. . .
>
> * * *
>
> (2) No advance notice shall be required under subsection (1) of this section if:
>
> (a) The violation is intentional;
>
> (b) The water or air violation would not normally occur for five (5) consecutive days;
>
> (c) The permittee has received prior advanced warning of any violation of the permit within the 36 months immediately preceding the violation;
>
> (d) The permittee is subject to the federal operating permit program under ORS 468A.300 to 468A.320 and violates any rule or standard adopted or permit or order issued under ORS 468A and applicable to the permittee; or
>
> (e) The requirement to provide such notice would disqualify a State program from federal approval or delegation.

ORS 468.126.

ORS 183.090 provides that an agency may only impose a civil penalty after giving notice to the person against whom such a penalty is being imposed in accordance with the provisions set forth in ORS 183.415. ORS 183.415(1) requires that in contested cases all parties shall be afforded an opportunity for hearing after reasonable notice, served personally or by registered or certified mail. ORS 183.415(2) requires that such notice include: (a) a statement of the party's right to hearing or a statement of the time and place of the hearing; (b) a statement of the authority and jurisdiction under which the hearing is to be held; (c) a reference to the particular **sections of the statutes and rules involved**; and (d) a short and plain **statement of the matters asserted** or charged. The failure to give such advance notice in the pleading filed by the

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Department has been declared by the Environmental Quality Commission (EQC) to be grounds for dismissal of attempts by the Department to assess civil penalties.

For example, in the matter of *DEQ v. Bill R. Labenske, Jr., dba Guarantee Construction,* 1989 WL 12077 (1989), the Respondent appealed a Notice of Assessment of Civil Penalty and a hearing was held before the EQC, which dismissed the Notice of Assessment because the Department failed to provide five days' advance notice of its intent to assess a penalty as required by the statute. The EQC held further that the Department did not establish an exception to its duty to provide five days' notice in that it failed to allege or prove an intentional violation excusing its duty.

Similarly, and more directly on point to this case, in the matter of *DEQ v. Neu-Glo Candles, Inc.,* 1988 WL 163165 (1988), the Department issued a Notice of Assessment of Civil Penalty alleging violation of five provisions of its former rules relating to Emission Standards and Procedural Requirements for Asbestos. The Respondent answered the notice, denied the allegations, and requested a hearing. The decision, following a hearing before the EQC, declared that Respondent was not liable as cited for the violations or for a civil penalty, because the Department did not provide five days' advance notice that a penalty would be imposed and it was not excused from its duty to provide such advance notice. Moreover, for those claims where the Department failed to even plead such an excuse in its Notice of Assessment, the claims were deficient and judgment was entered for the Respondent . The opinion declares in relevant part:

> DEQ did not provide 5 days' advance notice. Therefore, DEQ must prove its duty to provide the notice was excused.
>
> **DEQ has a further notice burden. It is to allege in its assessment document a statement of its intent to rely on a statutory exception to its duty to provide advance notice.** ORS 183.415(2) provides that the assessment document must include:

/////

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(c) A reference to the particular sections of the statutes and rules involved; and

(d) A short and plain statement of the matters asserted or changed. ORS 183.415(2)(c) and (d).

DEQ did allege but did not attempt to prove the exception contained in ORS 468.125(2)(b). DEQ did not allege the exception in ORS 468.125(2)(e) for penalties involving asbestos fiber releases. **By failing to allege ORS 468.125(2)(e) DEQ failed to satisfy the duties imposed by ORS 183.415(2)(c) and (d) and cannot gain the benefit from that exception.**

The agency's view of the importance of providing formal notice of defenses to be employed at a hearing is illustrated by OAR 340-11-107(2) which provides in pertinent part:

'(1) Answer Required: Consequences of Failure to Answer.

* * *

(2) In the answer the party shall admit or deny all factual matters and shall affirmatively allege any and all affirmative claims or defenses the party may have and the reasoning in support thereof.'

Similarly, the Agency is obliged to affirmatively allege its basis for avoiding the statutory notice requirement.

* * *

In short, DEQ did not provide advance notice as required by ORS 468.125(1), did not prove the excuse from notice which it alleged, did not allege the excuse authorized by ORS 468.125(2)(e), and bore a duty to give notice pursuant to OAR 340-12-040. Consequently, even if DEQ had proved a violation of OAR 340-25-465(4)(a), 340-25-465(4)(b)(A), 340-25-465(10)(e), 340-25-465(10)(b)(B) and 340-25-465(d)(A) in effect at the time of the violation, **notice failures would preclude exaction of a penalty.**

Id, 1988 WL 163165 at 3-4 (emphasis added, citations and footnotes omitted). See also, *DEQ v. Elliott-Jochimsen Construction, Inc.*, 1988 WL 167438 (1988), and *DEQ v. Thomas H. Scott,* 1990 WL 283207 (1990).

Section IV of the Department's Notice of Violation seeks to impose a total civil penalty of $12,000 for only one of the four violations alleged therein - Section IV, Paragraph 1

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("Violation No.1"), which is quoted below:

> 1. On or about December 9 and 17, 1998, Respondent violated ORS 468B.025(2) by violating a condition of its Permit. Specifically, Respondent violated Schedule B, Condition 1, of its Permit by failing to report the results of sample analysis [sic] for biological oxygen demand. Respondent intentionally reported false sample results on its Discharge Monitoring Report. These are Class I violations pursuant to OAR 340-012-0055(l)(m).

Just as in *Neu-Glo Candles, Inc., supra,* it is undisputed that the Department has not alleged any excuse or exception to its obligation to give Scappoose five days' advance notice prior to attempting to assess a civil penalty. While the Department has alleged (but has not proved) Scappooses' intent to report false sample results on the DMR, the Department did not plead that as a basis for excuse from the notice requirement. Indeed, DEQ failed to allege anywhere in its Notice of Violation that it is relying on **any exception** to the five day notice requirement.

The EQC declared in *Neu-Glo Candles, Inc.* that the Department "is obliged to affirmatively allege its basis for avoiding the statutory notice requirement" or its claim is deficient and no penalty may be assessed. The Department has not met its pleading (or proof) burden in this case, Scappoose has not been given "formal notice of defenses to be employed at a hearing" with respect to Section IV, Paragraph 1 of the Notice of Violation, and that portion of the Notice and the attempt to assess a civil penalty must be dismissed.

B. The Department has failed to allege a claim in Section IV, Paragraph 1 for which relief may be granted, in that the Department has not alleged conduct that violates Scappoose's permit.

As noted above, the Department has alleged that a failure to report the results of sample analyses for biological oxygen demand violates Schedule B, Condition 1 of the Scappoose NPDES permit. However, as the permit itself and the hearing record makes clear, Schedule B, Condition 1 of the permit does not impose such a requirement. Instead, it simply mandates the frequency and sample-types of the permitee's wastewater influent and outflow. There is no mention of the "results of sample analysis" in that section of the permit.

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Additionally, the Notice of Violation alleges that Scappoose intentionally reported false sample results on its Discharge Monitoring Report. As above, Schedule B, Condition 1 of the permit is not implicated in such alleged conduct.

2. Judgment Must be Entered Against The Department's Alleged Violation No. 1 Based on a Failure of Proof.

Violation No. 1 alleges that Scappoose violated Schedule B, Condition 1 of its permit by "**failing to report** the results of sample analysis [sic] for biological oxygen demand." It also alleges that Scappoose "intentionally **reported false sample results on its Discharge Monitoring Report**" in December 1998. It is clear from these allegations and the hearing record that the Discharge Monitoring Report for December 1998 is the basis of these alleged violations. However, the proof received at the hearing was clear; the DMR did not contain false sample analysis results, reported intentionally or otherwise. Instead, the subject DMR contained as accurate a report as was available to Scappoose of the quality of its facility's influent, as required by the permit.

Schedule B, Condition 1 of the Scappoose permit contains minimum monitoring and reporting frequencies and sample types for the facility's influent and outfall. Is not applicable to the content alleged. Schedule B, Condition 2 which is not alleged by the Department as the basis for any claim, requires that *monitoring* results be reported on approved forms, such as the Discharge Monitoring Report. Neither Condition of Schedule B, nor any other permit provision, mandates reporting of *sample analyses* results. This distinction between monitoring results and sample analysis is not mere semantics.

As the record has shown in this case, sample analyses do not always accurately represent the quality of the material being tested due to laboratory error, sampling error, equipment failure, or any of several other possible causes for failure of the test. By the time that test failure is known, the material being sampled is long gone. Yet, there may be other reasonably reliable methods available to the permit holder, based on other monitoring methods employed at the

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facility, that allow a more accurate report of the quality of the material that was sampled. The situation then faced by the permit holder is irreconcilable; it either reports a sample analysis result that it knows is not correct and thereby knowingly provides an inaccurate report of the quality of the material it sampled, or it can more accurately report the quality of the material based on all of the monitoring information available to it. Neither course is clearly mandated by the permit, despite the Department's claims in this case. The language of Condition 2 is reasonably interpreted to allow the permitee some ability to rely on all of the monitoring data available to it to accurately report the quality of the material it is testing. And, it is absolutely clear that the Department has provided no guidance to the permit holder on how to resolve this circumstance.

The uncontested factual record before the hearing's officer is that Scappoose complied with all of the conditions and specifications of Schedule B of its permit. It timely and regularly monitored the **quality** of influent and outfall on the approved form with the **intent** of conveying as accurate a representation of that quality as was possible under the circumstances. And that accurate report was, in fact, conveyed. Accordingly, judgement must be entered in favor of Scappoose and against the Department for the violation alleged in Section IV, Paragraph 1.

3. The Violation Alleged in Section IV, Paragraph 1 of the Notice of Violation Should Be Dismissed Because the Department Has Failed to Prove Intentional or Flagrant Conduct.

The Department has alleged that Scappoose intentionally reported false results on its DMR. As stated above, the information reported on the DMR was not false. Moreover, there is no evidence from the Department's case in chief that proves Scappoose intended to report false results. The proof was that Scappoose accurately maintained laboratory records of its sample analyses (the "bench sheets"), provided those records to the Department upon request, and relied on those records to prepare the subject DMR. To the extent any sample analyses (BOD for December 9 and 17, 1998) were adjusted before reporting a value on the DMR, the proof was

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that adjustment was based on the appropriate and honest conclusion that the sample analyses were inaccurate based on universally accepted standards of evaluating such data. The Department, indeed, acknowledges in its own documents the that adjustment was reasonably based on the available and more reliable monitoring data. (Exhibit 102). On these facts, there is no basis to conclude that Scappoose intended to (or did) falsely report the quality of the material it sampled. Nor is there proof that Scappoose intended to deceive the Department with respect to the quality of its influent and outflow, nor did it create such a deception. The information which was required to be reported in the DMR was accurate and correct, and the information on which it was based (the "sample analyses") was maintained and available to the Department at all times.

The Department defines "intentional" as "conduct by a person with a conscious objective to cause the result of the conduct." OAR 340-012-0030(9). The Department's record is devoid of proof of any "conscious objective" of Scappoose personnel other than to accurately report the quality of its facility influent and outflow. And this objective was, in fact, accomplished. There is absolutely no proof offered of any intent to deceive or misrepresent that quality and no such misrepresentation occurred.

The Department has also characterized Scappoose's conduct as "flagrant" in Exhibit 1 to the Notice of Violation. Thus, the "R" value for purposes of computing the civil penalty assessed was given a value of 10. "Flagrant" is defined as "any documented violation where the Respondent had actual knowledge of the law and had consciously set out to commit the

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violation." OAR 340-012-0030(7). Again, there is absolutely no record that would support such a finding on the facts proved by the Department herein.

Dated this 11th day of January, 2001.

TARLOW, JORDAN & SCHRADER
Attorneys for Respondent

By: _____
Christopher L. Reive, OSB #83305

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CERTIFICATE OF SERVICE

I hereby certify that I served the foregoing RESPONDENT'S MOTIONS TO DISMISS OR FOR DIRECTED VERDICT on the following party:

Jeff Bachman
Department of Environmental Quality
Enforcement Section
2020 SW 4th Ave Ste 400
Portland OR 97201-4987

by hand delivering a true copy thereof to said party on the date stated below.

DATED: January 11, 2001.

Christopher L. Reive, OSB #83305
(503) 598-7070
Of Attorneys for Respondent City of Scappoose

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Attorneys at Law
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BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

EXHIBIT # 4

IN THE MATTER OF: CITY OF SCAPPOOSE, Respondent.	RESPONDENT'S ANSWER, AFFIRMATIVE DEFENSES, REQUEST FOR CONTESTED CASE HEARING, REQUEST FOR AN INFORMAL MEETING AND NOTICE OF APPEAL OF CIVIL PENALTY AND ORDER NO. WQ/M-NWR-00-010 COLUMBIA COUNTY

Respondent, City of Scappoose ("Scappoose"), for its Answer, Affirmative Defenses, Request for Contested Case Hearing, Request for an Informal Meeting and Notice of Appeal of Civil Penalty and Order ("Answer") in response to the above Notice of Violation, Department Order and Assessment of Civil Penalty, hereby admits, denies and alleges as follows:

ANSWER

1.

Admits Section I.

2.

Admits Section II.

3.

Admits Section III, in its entirety.

4.

Denies Section IV, paragraph 1.

5.

Denies Section IV, paragraph 2.

6.

Denies Section IV, paragraph 3.

/////

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7.

Denies Section IV, paragraph 4.

8.

To the extent that Section V "Department Order" assumes the truth of the preceding DEQ allegations, Scappoose hereby admits and denies the same to be consistent with the above admissions and denials and the hereafter-described defenses.

9.

Except as expressly admitted above, Scappoose denies the rest and remainder of Department's Notice of Violation, Department Order and Assessment of Civil Penalty.

AFFIRMATIVE DEFENSES

10.

For purposes of DEQ's calculation of the amount of the civil penalty assessed, the magnitude of violation and the "R" factor are not appropriate for the violation alleged in Section IV, paragraph 1.

11.

Scappoose hereby reserves the right to assert such additional defenses prior to hearing as may be supported by facts that may develop during discovery.

REQUEST FOR CONTESTED CASE HEARING

12.

Pursuant to Department regulations, Scappoose hereby requests a contested case hearing before the Commission regarding these alleged violations.

REQUEST FOR INFORMAL MEETING

13.

Scappoose also requests an informal meeting on this matter with Department representatives prior to the contested case hearing referenced above.

NOTICE OF APPEAL

14.

To the extent a Notice of Appeal is required by law, Scappoose hereby appeals the Commission's Order to correct alleged violations that are in reasonable dispute herein.

Dated this 8th day of May, 2000.

TARLOW, JORDAN & SCHRADER

By: */s/ E. ANDREW JORDAN*
E. Andrew Jordan, OSB #72138
Christopher L. Reive, OSB #83305
Telephone: (503) 598-7070
Of Attorneys for Respondent City of Scappoose

CERTIFICATE OF SERVICE

I hereby certify that I served the foregoing RESPONDENT'S ANSWER, AFFIRMATIVE DEFENSES, REQUEST FOR CONTESTED CASE HEARING, REQUEST FOR AN INFORMAL MEETING AND NOTICE OF APPEAL OF CIVIL PENALTY AND ORDER NO. WQ/M-NWR-00-010 COLUMBIA COUNTY on the following party:

DEQ Rules Coordinator
Office of the Director
811 SW Sixth Avenue
Portland OR 97204

by causing to be hand delivered a true and correct copy thereof to said party on the date stated below.

DATED: May 8, 2000.

/s/ E. ANDREW JORDAN
E. Andrew Jordan, OSB #72138
(503) 598-7070
Of Attorneys for Respondent City of Scappoose

TARLOW, JORDAN & SCHRADER
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Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

ENFORCEMENT SECTION

April 18, 2000

CERTIFIED MAIL Z 440 760 631

City of Scappoose
Attn. Steve Wabschall
P.O. Box P
Scappoose, OR 97056

Re: Notice of Violation,
Department Order, and
Assessment of Civil Penalty
No. WQ/M-NWR-00-010
Columbia County

On September 17, 1999, DEQ Water Quality Engineer Jim Sheetz conducted an inspection of the City of Scappoose's wastewater treatment works. The City's treatment works operates pursuant to a National Pollutant Discharge Elimination System permit. During his inspection, Mr. Sheetz reviewed the City's records for July and December 1998 and documented the following violations of the City's permit.

(1) Intentionally submitting false data on a discharge monitoring report. Mr. Sheetz found that the City submitted false data for biological oxygen demand (BOD) results for December 9 and 17, 1998. When BOD analyses produced obviously anomalous results, City staff made up BOD data instead of determining the cause and correcting the results.

(2) Failing to calibrate the facility's flow meter twice annually.

(3) Failing to provide adequate laboratory controls and appropriate quality assurance procedures. On July 6, 10, and 20, 1998, the City used erroneous procedures to calculate fecal colilform results. On December 9 and 17, 1998, the City used erroneous procedures to calculate biological oxygen demand results.

The regulatory system that protects water quality in Oregon relies almost exclusively on honest and accurate reporting by pollution sources, such as the City of Scappoose. Accurate reporting by sources is the keystone on which all efforts, both public and private, to restore and protect Oregon's water resources is based. Without it, the system cannot function. Therefore, the Department considers falsification of required water quality data to be among the most serious of violations.

Because of the violations cited above, the City is liable for a civil penalty assessment. In the enclosed Notice, I have assessed a civil penalty of $12,000 for intentionally submitting false data on a Discharge Monitoring Report. In determining the amount of the penalty, I used the procedures set forth in Oregon Administrative Rule (OAR) 340-012-0045. The Department's findings and civil penalty determination are attached to the Notice as Exhibit 1.

2020 SW Fourth Avenue
Suite 400
Portland, OR 97201-4987
(503) 229-5528
TTY (503) 229-5471

Appeal procedures are outlined in Section VII of the Notice. If the City fails to either pay or appeal the penalty within twenty (20) days, a Default Order will be entered against it.

If the City wishes to discuss this matter, or if it believe there are mitigating factors which the Department might not have considered in assessing the civil penalty, the City may request an informal discussion by attaching a request to its appeal. The City's request to discuss this matter with the Department will not waive its right to a contested case hearing.

I look forward to the City's cooperation in complying with Oregon environmental law in the future. However, if any additional violations occur, the City may be assessed additional civil penalties.

Copies of referenced rules are enclosed. Also enclosed is a copy of the Department's internal management directive regarding civil penalty mitigation for Supplemental Environmental Projects (SEPs). If the City is interested in having a portion of the civil penalty fund an SEP, it should review the enclosed SEP directive. Exceptional pollution prevention could result in partial penalty mitigation.

If you have any questions about this action, please contact Jeff Bachman with the Department's Enforcement Section in Portland at 229-5950.

Sincerely,

Langdon Marsh
Director

Enclosures
cc: Jim Sheetz, Northwest Region, DEQ
Water Quality Division, DEQ
Department of Justice
Environmental Protection Agency
Environmental Quality Commission
Columbia County District Attorney

EXHIBIT # 1

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

IN THE MATTER OF: CITY OR SCAPPOOSE	)	NOTICE OF VIOLATION, DEPARTMENT ORDER, AND ASSESSMENT OF CIVIL PENALTY No. WQ/M-NWR-00-010 COLUMBIA COUNTY
Respondent.	)	

I. AUTHORITY

This Notice of Assessment of Civil Penalty (Notice) is issued to Respondent, the City of Scappoose, by the Department of Environmental Quality (Department) pursuant to Oregon Revised Statutes (ORS) 468.126 through 468.140, ORS Chapter 183, and Oregon Administrative Rules (OAR) Chapter 340, Divisions 11 and 12.

II. PERMIT

On September 29, 1992, the Department issued National Pollutant Discharge Elimination System Permit No. 100677 (Permit) to Respondent. The Permit authorizes Respondent to construct, install, modify, or operate a wastewater collection, treatment, control and disposal system and to discharge to public waters adequately treated wastewaters in accordance with the requirements and limitations in the Permit. The Permit expired on May 31, 1995, but remains in effect until a new permit is issued. The Permit was in effect at all material times.

III. FINDINGS

1. Respondent operates a wastewater treatment works at 2000 Columbia Avenue, Scappoose, Oregon.

2. On September 16, 1999, DEQ staff conducted a compliance inspection of Respondent's treatment works.

IV. VIOLATIONS

Based upon the above noted inspection, Respondent has violated the following provisions of Oregon water quality law and its Permit.

1. On or about December 9 and 17, 1998, Respondent violated ORS 468B.025(2) by violating a condition of its Permit. Specifically, Respondent violated Schedule B, Condition 1, of its Permit by failing to report the results of sample analysis for biological oxygen demand. Respondent intentionally reported false sample results on its Discharge Monitoring Report. These are Class I violations pursuant to OAR 340-012-0055(1)(m).

2. On or about September 16, 1999, Respondent violated ORS 468B.025(2) by violating a condition of its Permit. Specifically, Respondent violated Schedule B, Condition 1b, by failing to maintain the accuracy of its flowmeter through twice annual calibration. This is a Class II violation pursuant to OAR 340-012-0055(2)(g).

3. On or about July 6, 10, and 20, 1998, Respondent violated ORS 468B.025(2) by violating a condition of its Permit. Specifically, Respondent violated General Condition B.1 of its Permit by failing to provide adequate laboratory controls and appropriate quality assurance procedures. Respondent use erroneous procedures to calculate fecal coliform results. These are Class II violations pursuant to OAR 340-012-0055(2)(g).

4. On or about December 9 and 17, 1998, Respondent violated ORS 468B.025(2) by violating a condition of its Permit. Specifically, Respondent violated General Condition B.1 of its Permit by failing to provide adequate laboratory controls and appropriate quality assurance procedures. Respondent use erroneous procedures to calculate biological oxygen demand results. These are Class II violations pursuant to OAR 340-012-0055(2)(g).

V. DEPARTMENT ORDER

1. Immediately initiate actions necessary to correct all the above cited violations and come into full compliance with Oregon's laws and rules.

2. Within 120 days of receipt of this Notice and Order, submit for Department review and approval a comprehensive quality assurance program plan for all data generated at the facility. The program plan shall include specific procedures for addressing anomalous results and an independent audit process.

3. Within 30 days of written notice from the Department of deficiencies in the program and plan, correct the identified deficiencies and resubmit the program plan.

4. Immediately upon receipt of written Department approval of the program plan, implement the program.

VI. ASSESSMENT OF CIVIL PENALTIES

The Department imposes a civil penalty of $12,000 for the violations in Section IV, paragraph 1 above. The findings and determination of Respondent's civil penalty pursuant to OAR 340-012-0045 are attached and incorporated as Exhibit 1.

VII. OPPORTUNITY FOR CONTESTED CASE HEARING

Respondent has the right to have a formal contested case hearing before the Environmental Quality Commission (Commission) or its hearings officer regarding the matters set out above, at which time Respondent may be represented by an attorney and subpoena and cross-examine witnesses. **The request for hearing must be made in writing, must be received by the Department's Rules Coordinator within twenty (20) days from the date of service of this Notice, and must be accompanied by a written "Answer" to the charges contained in this Notice.**

In the written Answer, Respondent shall admit or deny each allegation of fact contained in this Notice, and shall affirmatively allege any and all affirmative claims or defenses to the assessment of this civil penalty that Respondent may have and the reasoning in support thereof. Except for good cause shown:

1. Factual matters not controverted shall be presumed admitted;

2. Failure to raise a claim or defense shall be presumed to be a waiver of such claim or defense;

3. New matters alleged in the Answer shall be presumed to be denied unless admitted in subsequent pleading or stipulation by the Department or Commission.

Send the request for hearing and Answer to: **DEQ Rules Coordinator, Office of the Director, 811 S.W. Sixth Avenue, Portland, Oregon 97204.** Following receipt of a request for hearing and an Answer, Respondent will be notified of the date, time and place of the hearing.

Failure to file a timely request for hearing and Answer may result in the entry of a Default Order for the relief sought in this Notice.

Failure to appear at a scheduled hearing or meet a required deadline may result in a dismissal of the request for hearing and also an entry of a Default Order.

The Department's case file at the time the Notice was issued may serve as the record for purposes of entering the Default Order.

VIII. OPPORTUNITY FOR INFORMAL DISCUSSION

In addition to filing a request for a contested case hearing, Respondent may also request an informal discussion with the Department by attaching a written request to the hearing request and Answer.

IX. PAYMENT OF CIVIL PENALTY

The civil penalty is due and payable ten (10) days after the Order imposing the civil penalty becomes final by operation of law or on appeal. Respondent may pay the penalty before that time. Respondent's check or money order in the amount of $20,000 should be made payable to "State Treasurer, State of Oregon" and sent to the **Business Office, Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 97204.**

4/18/00
Date

Langdon Marsh, Director

EXHIBIT 1

FINDINGS AND DETERMINATION OF RESPONDENT'S CIVIL PENALTY
PURSUANT TO OREGON ADMINISTRATIVE RULE (OAR) 340-012-0045

VIOLATION: Violating a waste discharge permit condition in violation of ORS 468B.025(2).

CLASSIFICATION: This is a Class I violation pursuant to OAR 340-012-0055(1)(m).

MAGNITUDE: The magnitude of the violation is moderate. Pursuant to OAR 340-012-0045(1) the magnitude is moderate is there is no selected magnitude for the violation in OAR 340-012-0090.

CIVIL PENALTY FORMULA: The formula for determining the amount of penalty of each violation is:
$BP + [(0.1 \times BP) \times (P + H + O + R + C)] + EB$

"BP" is the base penalty, which is $3,000 for a Class I, moderate magnitude violation in the matrix listed in OAR 340-012-0042(1).

"P" is Respondent's prior significant action(s) and receives a value of 0 as Respondent has no prior significant actions.

"H" is the past history of Respondent in taking all feasible steps or procedures necessary to correct any prior significant action(s) and receives a value of 0 as Respondent has no prior significant actions.

"O" is whether or not the violation was a single occurrence or was repeated or continuous during the period of the violation and receives a value of 0 as Respondent is being assessed separate penalties for each occurrence of the violation.

"R" is the cause of the violation and receives a value of 10 as the violation was caused by Respondent's flagrant conduct. Respondent consciously and purposefully submitted data it knew was false to the Department, knowing that the law requires true data to be submitted.

"C" is Respondent's cooperativeness in correcting the violation and receives a value of 0 as the violation could not be corrected once it had occurred.

"EB" is the approximate dollar sum of the economic benefit that the Respondent gained through noncompliance, and receives a value of 0 as there is insufficient information on which to base a finding.

PENALTY CALCULATION:

$$\begin{aligned} \text{Penalty} = BP &+ [(0.1 \times BP) \times (P + H + O + R + C)] + EB \\ &= \$3,000 + [(0.1 \times \$3,000) \times (0 + 0 + 0 + 10 + 0)] + \$0 \\ &= \$3,000 + [(\$300 \times 10)] + \$0 \\ &= \$3,000 + \$3,000 + \$0 \\ &= \$6,000 \end{aligned}$$

Respondent committed two violations. Respondent's total civil penalty is therefore $12,000.

EXHIBIT LIST
HEARING OFFICER PANEL

City of Scappoose

Agency: DEQ **Hearing Officer:** KB

Case Name: City of Scappoose **Agency Rep:**

Agency Case No.: **Respondent's Rep:**

Panel Case No.: G60393 **Date of Hearing:** June 11 01

ALJ

Exhibit #	Description	Offered (✓)	Received (✓)
A	Answer	✓	✓
B	Notice	✓	✓
C	Notice Contested Case Rights	✓	✓
D	Notice of Hearing July 25	✓	✓

EXHIBIT LIST
HEARING OFFICER PANEL

Agency: DEQ **Hearing Officer:** KB

Case Name: City of Scappoose **Agency Rep:** ____________

Agency Case No.: ____________ **Respondent's Rep:** ____________

Panel Case No.: G60393 **Date of Hearing:** 1-11-01

DEQ

Exhibit #	Description	Offered (✓)	Received (✓)
1	table	withdrawn	
2	Graph	✓	✓

R

INDEX OF EXHIBITS

101. National Pollutant Discharge Elimination System Waste Discharge Permit No. 100677, issued to Respondent by Charles K. Ashbaker on September 29, 1992.

102. NPDES Inspection Report, dated December 29, 1999, by James R. Sheets.

103. Notice of Noncompliance No. WQ-NWR-2000-001, Permit No. 100677, File No. 78980, EPA No. OR-002242-2, issued on January 25, 2000.

104. Notice of Violation, Department Order and Assessment of Civil Penalty No. WQ/M-NWR-00-010 Columbia County, issued to Respondent by Langdon Marsh, Director of the Department of Environmental Quality on April 18, 2000.

105. Pages 5-3 through 5-6 (inclusive) of *Standard Methods for the Examination of Water and Wastewater*, Eaton, Clesceri and Greenberg, Eds., 19th ed. (1995).

106 and 107. Respondent's reports, dated December 9, 1998, December 17, 1998, which are referred to by James R. Sheets in his NPDES Inspection Report.

108 thru 111. Respondent's reports dated July 6, 1998, July 10, 1998, July 20, 1998 and September 24, 1999, which are referred to by James R. Sheets in his NPDES Inspection Report.

112. Respondent's Discharge Monitoring Report for December 1998.

113. City of Scappoose Contract Laboratories Analysis, performed by Amtest Laboratory at the request of Respondent.

114. City of Scappoose Quality Control plan, dated April 2000.

115. *Quality Assurance Guidelines, NPDES and WPCF Self-Monitoring Laboratories,* DEQ Laboratories and Applied Research Division, Quality Assurance Section, date stamped October 30, 1991.

116. *Lab Procedures for Wastewater Treatment Plants,* Holly Ploetz, Linn-Benton Community College, 3rd Revision, 1995.

117 Enforcement Section Doc
R-118 Formula - objection by DEQ - overruled -
R 119 Reports

FILE COPY

BEFORE THE ENVIRONMENTAL QUALITY COMMISSION

OF THE STATE OF OREGON

EXHIBIT # 4

IN THE MATTER OF: CITY OF SCAPPOOSE, Respondent.	RESPONDENT'S ANSWER, AFFIRMATIVE DEFENSES, REQUEST FOR CONTESTED CASE HEARING, REQUEST FOR AN INFORMAL MEETING AND NOTICE OF APPEAL OF CIVIL PENALTY AND ORDER NO. WQ/M-NWR-00-010 COLUMBIA COUNTY

Respondent, City of Scappoose ("Scappoose"), for its Answer, Affirmative Defenses, Request for Contested Case Hearing, Request for an Informal Meeting and Notice of Appeal of Civil Penalty and Order ("Answer") in response to the above Notice of Violation, Department Order and Assessment of Civil Penalty, hereby admits, denies and alleges as follows:

ANSWER

1.

Admits Section I.

2.

Admits Section II.

3.

Admits Section III, in its entirety.

4.

Denies Section IV, paragraph 1.

5.

Denies Section IV, paragraph 2.

6.

Denies Section IV, paragraph 3.

/////

TARLOW, JORDAN & SCHRADER
Attorneys at Law
PO Box 230669

7.

Denies Section IV, paragraph 4.

8.

To the extent that Section V "Department Order" assumes the truth of the preceding DEQ allegations, Scappoose hereby admits and denies the same to be consistent with the above admissions and denials and the hereafter-described defenses.

9.

Except as expressly admitted above, Scappoose denies the rest and remainder of Department's Notice of Violation, Department Order and Assessment of Civil Penalty.

AFFIRMATIVE DEFENSES

10.

For purposes of DEQ's calculation of the amount of the civil penalty assessed, the magnitude of violation and the "R" factor are not appropriate for the violation alleged in Section IV, paragraph 1.

11.

Scappoose hereby reserves the right to assert such additional defenses prior to hearing as may be supported by facts that may develop during discovery.

REQUEST FOR CONTESTED CASE HEARING

12.

Pursuant to Department regulations, Scappoose hereby requests a contested case hearing before the Commission regarding these alleged violations.

REQUEST FOR INFORMAL MEETING

13.

Scappoose also requests an informal meeting on this matter with Department representatives prior to the contested case hearing referenced above.

NOTICE OF APPEAL

14.

To the extent a Notice of Appeal is required by law, Scappoose hereby appeals the Commission's Order to correct alleged violations that are in reasonable dispute herein.

Dated this 8th day of May, 2000.

TARLOW, JORDAN & SCHRADER

By: */s/ E. ANDREW JORDAN*
E. Andrew Jordan, OSB #72138
Christopher L. Reive, OSB #83305
Telephone: (503) 598-7070
Of Attorneys for Respondent City of Scappoose

CERTIFICATE OF SERVICE

I hereby certify that I served the foregoing RESPONDENT'S ANSWER, AFFIRMATIVE DEFENSES, REQUEST FOR CONTESTED CASE HEARING, REQUEST FOR AN INFORMAL MEETING AND NOTICE OF APPEAL OF CIVIL PENALTY AND ORDER NO. WQ/M-NWR-00-010 COLUMBIA COUNTY on the following party:

DEQ Rules Coordinator
Office of the Director
811 SW Sixth Avenue
Portland OR 97204

by causing to be hand delivered a true and correct copy thereof to said party on the date stated below.

DATED: May 8, 2000.

/s/ E. ANDREW JORDAN
E. Andrew Jordan, OSB #72138
(503) 598-7070
Of Attorneys for Respondent City of Scappoose

TARLOW, JORDAN & SCHRADER
Attorneys at Law
PO Box 230669
Portland OR 97281

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Ref No: G60393
Case Type: DEQ
Agency Case No: WQMNWR00-010
Issued By SALEM

STATE OF OREGON
Before the Hearing Officer Panel
For the
DEPARTMENT OF ENVIRONMENTAL QUALITY
875 Union Street NE
Salem, Oregon 97311

Date Mailed: 11/20/00
Mailed By: LMV

EXHIBIT # B

CHANGE IN NOTICE OF HEARING

CITY OF SCAPPOOSE
PO BOX P
SCAPPOOSE OR 97056 0677

DEPARTMENT OF ENVIRONMENTAL QUALITY
811 SW 6TH AVE
PORTLAND OR 97204 1334

CHRISTOPHER REIVE, ATTORNEY
2 CENTERPOINTE DR FL 6

LAKE OSWEGO OR 97035 8618

JEFF BACHMAN
DEQ ENFORCEMENT SECTION
2020 SW 4TH AVE STE 400
PORTLAND OR 97201 4959

THE HEARING SCHEDULED FOR:

ADMINISTRATIVE LAW JUDGE:	BETTERTON
DATE:	TUESDAY, NOVEMBER 21, 2000
TIME:	9:30 AM PT
PLACE OF HEARING:	SCAPPOOSE CITY HALL MUNICIPAL COURT CHAMBER 33568 E COLUMBIA SCAPPOOSE OR

HAS BEEN CHANGED TO:

ADMINISTRATIVE LAW JUDGE:	**BETTERTON**
DATE:	**THURSDAY, JANUARY 11, 2001**
TIME:	**9:30 AM PT**
PLACE OF HEARING:	**SCAPPOOSE CITY HALL** **MUNICIPAL COURT CHAMBER** **33568 E COLUMBIA** **SCAPPOOSE**

If you have <u>questions</u> prior your hearing, call: 1-888-577-2422.
If you are calling from the Salem area, please use: 947-1515.

BE PROMPT AT TIME OF HEARING. INQUIRE IN LOCATION'S LOBBY AREA REGARDING HEARING ROOM. If you need directions, call: 1-800-311-3394.

DEPARTMENT OF ENVIRONMENTAL QUALITY HEARINGS EXHIBIT # C

IMPORTANT INFORMATION FOR PREPARING FOR YOUR HEARING

NOTICE OF CONTESTED CASE RIGHTS AND PROCEDURES

Under ORS 183.413(2), you must be informed of the following:

1. Law that applies. The hearing is a contested case and it will be conducted under ORS Chapter 183 and Oregon Administrative Rules of the Department of Environmental Quality, Chapters 137 and 340.

2. Rights to an attorney. You may represent yourself at the hearing, or be represented by an attorney or an authorized representative, such as a partner, officer, or an employee. If you are a company, corporation, organization or association, you must be represented by an attorney or an authorized representative. Prior to appearing on your behalf, an authorized representative must provide a written statement of authorization. If you choose to represent yourself, but decide during the hearing that an attorney is necessary, you may request a recess. About half of the parties are not represented by an attorney. DEQ will be represented by an Assistant Attorney General or an Environmental Law Specialist.

3. Hearings officer. The person presiding at the hearing is known as the hearings officer. The hearings officer is an employee of the Central Hearing Officer Panel under contract with the Environmental Quality Commission. The hearings officer is not an employee, officer or representative of the agency.

4. Appearance at hearing. If you withdraw your request for a hearing, notify either DEQ or the hearing officer that you will not appear at the hearing, or fail to appear at the hearing, a final default order will be issued. This order will be issued only upon a prima facie case based on DEQ's file. No hearing will be conducted.

5. Address changes. It is your responsibility to notify DEQ and the hearings officer of any change in your address or a withdrawal or change of your representative.

6. Interpreters. If you have a disability or do not speak English, the hearings officer will arrange for an interpreter. DEQ will pay for the interpreter if (1) you require the interpreter due to a disability or (2) you file with the hearings officer a written statement under oath that you are unable to speak English and you are unable to obtain an interpreter yourself. You must provide at least 14 days notice of your need for an interpreter before the hearing.

7. Witnesses. All witnesses will be under oath or affirmation to tell the truth. All parties and the hearings officer will have the opportunity to ask questions of all witnesses. DEQ or the hearings officer will issue subpoenas for witnesses on your behalf if you show that their testimony is relevant to the case and is reasonably needed to establish your position. If you are represented by

an attorney, your attorney may issue subpoenas. Payment of witness fees and mileage is your responsibility.

8. Order of evidence. A hearing is similar to a court trial but less formal. The purpose of the hearing is to determine the facts and whether DEQ's action is appropriate. In most cases, DEQ will offer its evidence first in support of its action. You will then have an opportunity to present evidence to oppose DEQ's evidence. Finally, DEQ and you will have an opportunity to rebut any evidence.

9. Burden of presenting evidence. The party who proposes a fact or position has the burden of proving that fact or position. You should be prepared to present evidence at the hearing which will support your position. You may present physical or written evidence, as well as your own testimony.

10. Admissible evidence. Only relevant evidence of a type relied upon by reasonably prudent persons in the conduct of their serious affairs will be considered. Hearsay evidence is not automatically excluded. Rather, the fact that it is hearsay generally affects how much the Commission will rely on it in reaching a decision.

There are four kinds of evidence:

a. Knowledge of DEQ and the hearings officer. DEQ or the hearings officer may take "official notice" of conclusions developed as a result of its knowledge in its specialized field. This includes notice of general, technical or scientific facts. You will be informed should DEQ or the hearings officer take "official notice" of any fact and you will be given an opportunity to contest any such facts.

b. Testimony of witnesses. Testimony of witnesses, including you, who have knowledge of facts may be received in evidence.

c. Writings. Written documents including letters, maps, diagrams and other written materials may be received in evidence.

d. Experiments, demonstrations and similar means used to prove a fact. The results of experiments and demonstrations may be received in evidence.

11. Objections to evidence. Objections to the consideration of evidence must be made at the time the evidence is offered. Objections are generally made on one of the following grounds:

a. The evidence is unreliable;

b. The evidence is irrelevant or immaterial and has no tendency to prove or disprove any issue involved in the case;

c. The evidence is unduly repetitious and duplicates evidence already received.

12. Continuances. There are normally no continuances granted at the end of the hearing for you to present additional testimony or other evidence. Please make sure you have all your evidence ready for the hearing. However, if you can show that the record should remain open for additional evidence, the hearings officer may grant you additional time to submit such evidence.

13. Record. A record will be made of the entire proceeding to preserve the testimony and other evidence for appeal. This will be done by tape recorder. This tape and any exhibits received in the record will be the whole record of the hearing and the only evidence considered by the hearings officer. A copy of the tape is available upon payment of a minimal amount, as established by DEQ. A transcript of the record will not normally be prepared, unless there is an appeal to the Court of Appeals.

14. Proposed and Final Order. The hearing officer has the authority to issue a proposed order based on the evidence at the hearing. The proposed order will become the final order of the Environmental Quality Commission if you do not petition the Commission for review within 30 days of service of the order. The date of service is the date the order is mailed to you; not the date that you receive it. The Department must receive your petition seeking review within 30 days. See OAR 340-011-0132.

15. Appeal. If you are not satisfied with the decision of the Commission, you have 60 days from the date of service of the order, to appeal this decision to the Court of Appeals. See ORS 183.480 *et seq.*

Ref No: G60393
Agency Case No: WQMNWR00-010
Case Type: DEQ

STATE OF OREGON
Before the Hearing Officer Panel
For the
DEPARTMENT OF ENVIRONMENTAL QUALITY
875 Union Street NE
Salem, Oregon 97311

Date Mailed: 05/31/01
Mailed By: LMV

NOTICE OF HEARING

CITY OF SCAPPOOSE
PO BOX P
SCAPPOOSE OR 97056 0677

DEPARTMENT OF ENVIRONMENTAL QUALITY
811 SW 6TH AVE
PORTLAND OR 97204 1334

CHRISTOPHER REIVE, ATTORNEY
2 CENTERPOINTE DR FL 6

LAKE OSWEGO OR 97035 8618

JEFF BACHMAN
DEQ ENFORCEMENT SECTION
811 SW 6TH AVE
PORTLAND OR 97204 1334

LYNNE PERRY
ASST ATTORNEY GENERAL
1162 COURT ST NE
SALEM OR 97301-4095

EXHIBIT # 2

HEARING DATE AND TIME	***HEARING PLACE***	***ADMINISTRATIVE LAW JUDGE***
WEDNESDAY, JULY 25, 2001 9:30 AM PT	DEPT OF ENVIRONMENTAL QUALITY 2020 SW 4TH PORTLAND OREGON	BETTERTON

If you have questions prior to your hearing, call toll-free: 1-800-311-3394.
If you are calling from the Salem area, please use: 947-1515.

BE PROMPT AT TIME OF HEARING. INQUIRE IN LOCATION'S LOBBY AREA REGARDING HEARING ROOM. If you need directions, call the above number.

The issue(s) to be considered are:

THE ALLEGATIONS SET FORTH IN THE NOTICE OF VIOLATION, DEPARTMENT ORDER, AND ASSESSMENT OF CIVIL PENALTY, DATED APRIL 18, 2000, ISSUED TO THE CITY OF SCAPPOOSE BY DEQ.

This is a continuation of the hearing which was previously held.

Pg. 2

EXHIBIT # 2

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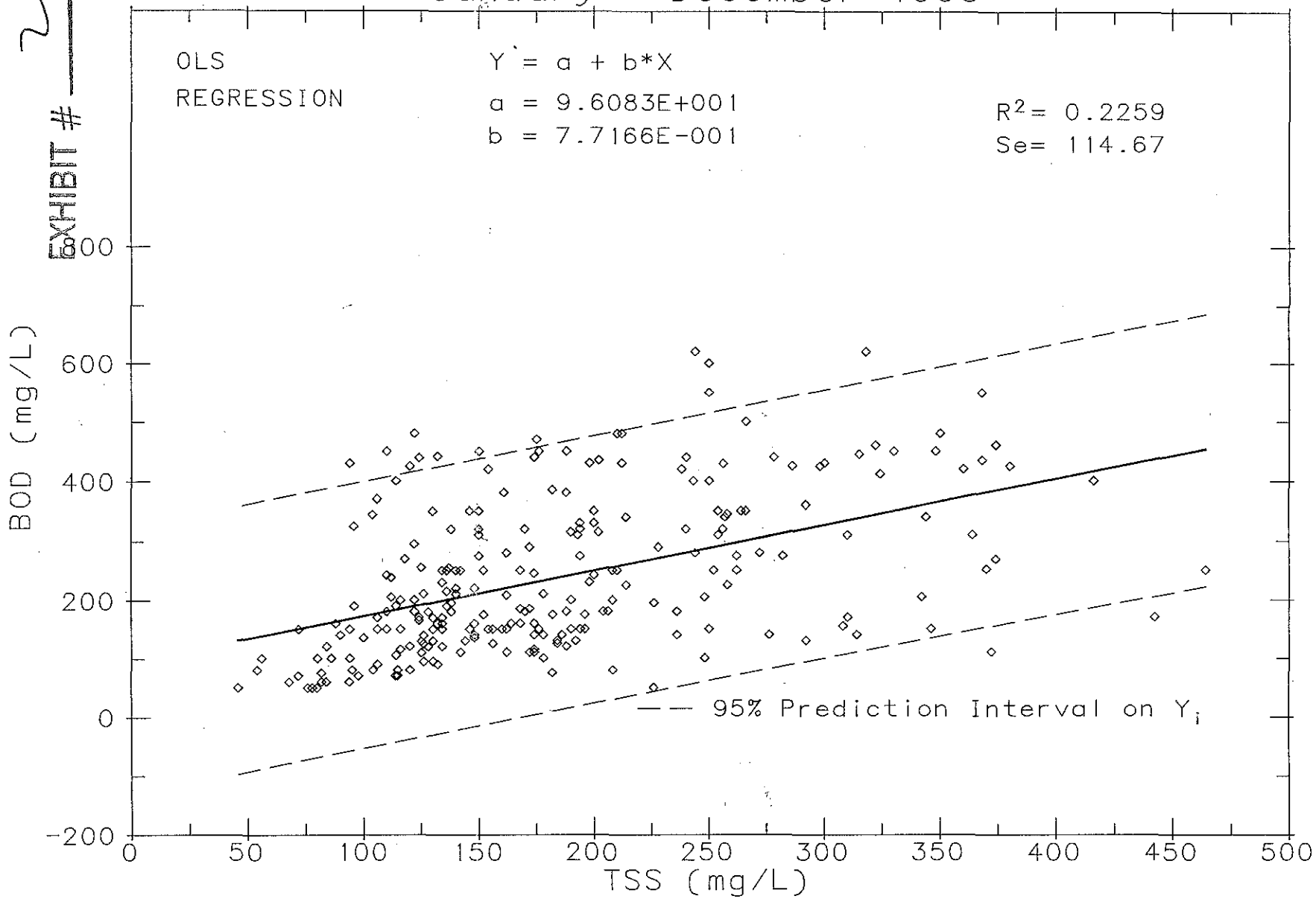
Scappoose Influent BOD vs TSS
January - December 1998



WQ-COLU
Scappoose, City of
F 78980

Expiration Date: 5-31-95
Permit Number: 100677
File Number: 78980
Page 1 of 9 Pages

MODIFICATION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT

Department of Environmental Quality
1500 S.W. First Avenue, Suite 750
Portland, OR 97201
Telephone: (503) 229-5263

Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

---

ISSUED TO:

City of Scappoose
34345 Columbia Blvd.
P.O. Box "P"
Scappoose, Oregon 97056

SOURCES COVERED BY THIS PERMIT:

Type of Waste	Outfall Number	Outfall Location
Domestic Sewage	001	R.M. 10.5

PLANT TYPE AND LOCATION:

Extended Aeration
Sewage Treatment Plant
2000 Columbia Ave.
Honeyman Road
Treatment System Class: III
Collection System Class: II

RECEIVING SYSTEM INFORMATION:

Basin: Willamette
Sub-Basin: Lower Willamette
Stream: Multnomah Channel
Hydro Code: 22P-MULT 10.5 D
County: Columbia

EPA REFERENCE NO: OR 002242-0

Issued in response to Application No. 998383 received July 12, 1990.
Modified in response to Application No. 997445 received January 13, 1992.

This permit is issued based on the land use findings in the permit record.

Charles K. Ashbaker, Manager
Water Quality, Northwest Region

SEP 2 9 1992
Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify, or operate a wastewater collection, treatment, control and disposal system and discharge to public waters adequately treated wastewaters only from the authorized discharge point or points established in Schedule A and only in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

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Unless authorized by another NPDES permit, each other direct and indirect discharge to public waters is prohibited.

EXHIBIT
tabbies
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SCHEDULE A

1. Waste Discharge Limitations not to be Exceeded After Permit Issuance. (Existing Limits)

a. Outfall Number 001 (Sewage Treatment Plant Discharge)

(1) June 1 - October 31:

Parameter	Average Effluent Concentrations Monthly	Weekly	Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lb/day
a. BOD-5	20 mg/l	30 mg/l	83	125	166
b. TSS	20 mg/l	30 mg/l	83	125	166

(2) November 1 - May 30:

Parameter	Average Effluent Concentrations Monthly	Weekly	Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lb/day
a. BOD-5	30 mg/l	30 mg/l	125	188	250
b. TSS	30 mg/l	30 mg/l	125	188	250

*Based on average dry weather design flow to the facility equaling 0.50 MGD.

(3) Other parameters (year-round)

a. pH	Shall be within the range 6.0 - 9.0
b. BOD and TSS Removal Efficiency	Shall not be less than 85% monthly average
c. Chlorine Dosage	Shall be equal to or greater than 25 pounds per day.

(4) Not withstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which violate Water Quality Standards as adopted in OAR 340-41-445 except in the defined mixing zone:

The mixing zone shall extend from the shore side of the outfall to one-half the width of the channel, 200 feet downstream and 200 feet upstream.

2. Waste Discharge Limitations not to be Exceeded After Completion of New Sewage Treatment Plant and the Incorporation of Steinfeld's Process Wastewater.

a. Outfall Number 001 (Sewage Treatment Plant Discharge)

(1) May 1 - October 31:

Parameter	Average Effluent Concentrations Monthly	Weekly	Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lb/day	Mo Avg kg/d	Wk Avg kg/d	Daily Max kg/d
a. BOD-5	21 mg/l	29 mg/l	260	367	474	118	166	215
b. TSS	20 mg/l	30 mg/l	253	380	506	115	172	230
c. FC/100ml	200	400						

(2) November 1 - April 30:

Parameter	Average Effluent Concentrations Monthly	Weekly	Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lb/day
a. BOD-5	32 mg/l	47 mg/l	403	579	754
b. TSS	25 mg/l	37 mg/l	315	473	630
c. FC/100ml	200	400			

*Based on average dry weather design flow to the facility equaling 1.515 MGD.

(3) Other parameters (year-round)

a. pH	Shall be within the range 6.0 - 9.0
b. BOD and TSS Removal Efficiency	Shall not be less than 85% monthly average
c. Total Residual Chlorine	Shall not exceed 0.1 mg/l

(4) Not withstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which violate Water Quality Standards as adopted in OAR 340-41-445 except in the defined mixing zone:

The mixing zone shall extend from the shore side of the outfall to one-half the width of the channel, 200 feet downstream and 200 feet upstream.

SCHEDULE B

1. Minimum Monitoring and Reporting Requirements.
(unless otherwise approved in writing by the Department)

a. Influent

Item or Parameter	Minimum Frequency	Type of Sample
* Total Flow (MGD)	Daily	Continuous
* Flow Meter Calibration	2/Year	Verification
BOD-5	2/Week	Composite
TSS	2/Week	Composite
pH	3/Week	Grab

b. Outfall Number 001 (Sewage Treatment Plant Outfall)

Item or Parameter	Minimum Frequency	Type of Sample
* Total Flow (MGD)	Daily	Continuous
* Flow Meter Calibration	2/Year	Verification
BOD-5	2/Week	Composite
TSS	2/Week	Composite
pH	3/Week	Grab
Fecal Coliform	1/Week	Grab
Quantity Chlorine Used	Daily	Weight
Chlorine Residual	Daily	Grab
Average Percent Removed (BOD and TSS)	Monthly	Calculation

*Required only at one site, whichever is more appropriate.

c. Sludge Management

Item or Parameter	Minimum Frequency	Type of Sample
Sludge analysis including: Total solids (% dry wt.) Volatile solids (% dry wt.) Volatile suspended solids (% dry wt.) Sludge nitrogen NH_3-N; NO_3-N; & TKN (% dry wt.) Sludge metals content for Pb; Zn; Cu; Ni; & Cd (mg/kg) Phosphorus (% dry wt.) Potassium (% dry wt.) pH (standard units)	Annually in June	Composite sample to be representative of the product to be land applied.
Record of % volatile solids reduction accomplished through digestion	Monthly	Calculation (See Note 1)
Record of sludge fecal coliform and fecal streptococci (enterroci) (per gram of volatile solids)	Monthly when land applying sludge.	Composite sample representative of the product to be land applied.
Record of locations where sludge is applied (Site location map to be maintained at treatment facility for review upon request by DEQ)	Each Occurrence	Date, volume & locations where sludge is applied recorded on site location map.

Notes:

1) Calculation of the % volatile solids reduction is to be based on comparison of a representative grab sample of total and volatile solids entering either the treatment works, or the secondary clarifier solids wasted to the treatment facility's aerobic digesters and a representative composite sample of sludge solids applied to land.

Monitoring reports (DMRs) shall include a record of the location, quantity and method of use of all sludge removed from the treatment facility and a record of all applicable equipment breakdowns and bypassing.

2. Reporting Procedures

Monitoring results shall be reported on approved forms. The reporting period is the calendar month. Reports must be submitted to the Department by the 15th day of the following month.

All monitoring reports shall indicate the wastewater system classification as shown on page 1 of this permit and include the name of each principal operator designated by the permittee as responsible for supervising the system during the reporting period, and their certificate classification and grade level.

SCHEDULE C

Compliance Schedules and Conditions

1. By November 1, 1992, the permittee shall submit a revised sludge management plan for approval by the Department of Environmental Quality. This revised sludge management plan shall account for additional sludge volumes resulting from plant expansion and the adequacy of existing sludge disposal practices.

2. The permittee shall have in place a program to identify and reduce inflow and infiltration into the sewage collection system. An annual report shall be submitted to the Department by September 1 each year which details sewer collection maintenance activities that have been done in the previous year and outlines those activities planned for the following year.

3. The permittee is expected to meet the compliance dates which have been established in this schedule. Either prior to or no later than 14 days following any lapsed compliance date, the permittee shall submit to the Department a notice of compliance or noncompliance with the established schedule. The Director may revise a schedule of compliance if he determines good and valid cause resulting from events over which the permittee has little or no control.

SCHEDULE D

Special Conditions

1. All sludge shall be managed in accordance with a sludge management plan approved by the Department of Environmental Quality. No substantial changes shall be made in sludge management activities which significantly differ from operations specified under the approved plan without the prior written approval of the Department.

   In the event the permittee finds it necessary to remove accumulated sludge solids from the lagoons, the permittee shall submit and obtain Department approval of a sludge management plan developed in accordance with Administrative Rule, Chapter 340, Division 50 "Land Application and Disposal of Sewage Treatment Plant Sludge and Sludge Derived Products Including Septage" prior to removing sludge.

2. The permittee shall comply with Oregon Administrative Rules (OAR), Chapter 340, Division 49, "Regulations Pertaining To Certification of Wastewater System Operator Personnel" and accordingly:

   a. The permittee shall have its wastewater system supervised by one or more operators who are certified in a classification and grade level (equal to or greater) that corresponds with the classification (collection and /or treatment) of the system to be supervised as specified on page one of this permit.

   Note: A "supervisor" is defined as the person exercising authority for establishing and executing the specific practice and procedures of operating the system in accordance with the policies of the permittee and requirements of the waste discharge permit. "Supervise" means responsible for the technical operation of a system, which may affect its performance or the quality of the effluent produced. Supervisors are not required to be on-site at all times.

   b. The permittee's wastewater system may not be without supervision (as required by Special Condition 2a. above) for more than thirty (30) days. During this period, and at any time that the supervisor is not available to respond on-site (i.e. vacation, sick leave or off-call), the permittee must make available another person who is certified at no less than one grade level lower than the system classification.

   c. If the wastewater system has more than one daily shift, the permittee shall have the shift supervisor, if any, certified at no less than one grade level lower than the system classification.

   d. The permittee is responsible for ensuring the wastewater system has a properly certified supervisor available at all times to respond on-site at the request of the permittee and to any other operator.

e. The permittee shall notify the Department of Environmental Quality in writing within thirty (30) days of replacement or redesignation of certified operators responsible for supervising wastewater system operation. The notice shall be filed with the Water Quality Division, Operator Certification Program (see address on page one). This requirement is in addition to the reporting requirements contained under Schedule B of this permit.

f. Upon written request, the Department may grant the permittee reasonable time, not to exceed 120 days, to obtain the services of a qualified person to supervise the wastewater system. The written request must include justification for the time needed, a schedule for recruiting and hiring, the date the system supervisor availability ceased, and the name of the alternate system supervisor(s) as required by 2.b. above.

NPDES GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468.720 and is grounds for enforcement action; for permit termination, suspension, or modification; or for denial of a permit renewal application.

2. Penalties for Violations of Permit Conditions

Oregon Law (ORS 468.140) allows the Director to impose civil penalties up to $10,000 per day for violation of a term, condition, or requirement of a permit.

In addition, Oregon Law (ORS 468.990) classifies a willful or negligent violation of the terms of a permit or failure to get a permit as a misdemeanor and a person convicted thereof shall be punishable by a fine of not more than $25,000 or by imprisonment for not more than one year, or by both. Each day of violation constitutes a separate offense.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition, upon request of the Department, the permittee shall correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application shall be submitted at least 180 days before the expiration date of this permit.

The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions

This permit may be modified, suspended, revoked and reissued, or terminated for cause including, but not limited to, the following:

a. Violation of any term, condition, or requirement of this permit, a rule, or a statute;

b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the permittee for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants

The permittee shall comply with any applicable 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 the permit has not yet been modified to incorporate the requirement.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit References

Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. 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 the permit.

2. Duty to Halt or Reduce Activity

For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent

necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities

a. Definitions

(1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality and/or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes 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. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.

(1) Bypass is prohibited unless:

(a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied 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; and

(c) The permittee submitted notices and requests as required under paragraph c of this section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects and any alternatives to

bypassing, when the Director determines that it will meet the three conditions listed above in paragraph b(1) of this section.

c. Notice and request for bypass.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section D, Paragraph D-5.

4. Upset

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

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Section B.4.c. of these General Conditions are met. No determination made during administrative review of claims that non-compliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the causes(s) of the upset;

(2) The permitted facility was at the time being properly operated; and

(3) The permittee submitted notice of the upset as required in Section D.5., hereof (24-hour notice).

(4) The permittee complied with any remedial measures required under Section A.3 hereof.

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

5. Treatment of Single Operational Event

For purposes of this permit, A Single Operational Event which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation. A single operational event is an exceptional incident which causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one Clean Water Act effluent discharge pollutant parameter. A single operational event does not include Clean Water Act violations involving discharge without an NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational event is a violation.

6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations

a. Definitions

(1) "Overflow" means the diversion and discharge of waste streams from any portion of the wastewater conveyance system including pump stations, through a designed overflow device or structure, other than discharges to the wastewater treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the conveyance system or pump station which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow.

(3) "Uncontrolled overflow" means the diversion of waste streams other than through a designed overflow device or structure, for example to overflowing manholes or overflowing into residences, commercial establishments, or industries that may be connected to a conveyance system.

b. Prohibition of overflows. Overflows are prohibited unless:

(1) Overflows were unavoidable to prevent an uncontrolled overflow, loss of life, personal injury, or severe property damage; and

(2) There were no feasible alternatives to the overflows, such as the use of auxiliary pumping or conveyance systems, or maximization of conveyance system storage; and

(3) The overflows are the result of an upset as defined in Condition B4 and meeting all requirements of this condition.

c. Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any means.

d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permittee becomes aware of the overflow. Reporting procedures are described in more detail in Condition D.5.

7. Public Notification of Effluent Violation or Overflow

If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permittee shall take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

8. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Sampling and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and shall be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering

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

5. Reporting of Monitoring Results

Monitoring results shall be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports shall be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated. For a pollutant parameter that may be sampled more than once per day (e.g., Total Chlorine Residual), only the average daily value shall be recorded unless otherwise specified in this permit.

7. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean, except for bacteria which shall be averaged based on a geometric or log mean.

8. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

9. Records Contents

Records of monitoring information shall include:

a. The date, exact place, time and methods of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

10. Inspection and Entry

The permittee shall allow the Director, or an authorized representative upon the presentation of credentials to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and

d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall comply with Oregon Administrative Rules (OAR) 340, Division 52, "Review of Plans and Specifications". Except where exempted under OAR 340-52, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers shall be commenced until the plans and specifications are submitted to and approved by the Department. The permittee shall give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit shall be transferred to a third party without prior written approval from the Director. The permittee shall notify the Department when a transfer of property interest takes place.

4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

5. Twenty-Four Hour Reporting

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally (by telephone) within 24 hours from the time the permittee becomes aware of the circumstances. During normal business hours, the Department's Regional office shall be called. Outside of normal business hours, the Department shall be contacted at 1-800-452-0311 (Oregon Accident Response System). A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain:

a. A description of the noncompliance and its cause;

b. The period of noncompliance, including exact dates and times;

c. The estimated time noncompliance is expected to continue if it has not been corrected; and

d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

e. Public notification steps taken, pursuant to General Condition B-7.

The following shall be included as information which must be reported within 24 hours under this paragraph:

a. Any unanticipated bypass which exceeds any effluent limitation in this permit.

b. Any upset which exceeds any effluent limitation in the permit.

c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in the permit.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

6. Other Noncompliance

The permittee shall report all instances of non-compliance not reported under Section D4 or D5, at the time monitoring reports are submitted. The reports shall contain:

a. A description of the noncompliance and its cause;

b. The period of noncompliance, including exact dates and times;

c. The estimated time noncompliance is expected to continue if it has not been corrected; and

d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it shall promptly submit such facts or information.

8. Signatory Requirements

All applications, reports or information submitted to the Department shall be signed and certified in accordance with 40 CFR 122.22.

9. Falsification of Reports

State law provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $1,000 per violation, or by imprisonment for not more than six months per violation, or by both.

10. Changes to Indirect Dischargers - [Applicable to Publicly Owned Treatment Works (POTW) only]

The permittee must provide adequate notice to the Department of the following:

a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants and;

b. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

c. For the purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

SECTION E. DEFINITIONS

1. BOD means five-day biochemical oxygen demand.

2. TSS means total suspended solids (non-filterable residue).

3. Mg/l means milligrams per liter.

4. Kg means kilograms.

5. M^3/d means cubic meters per day.

6. MGD means million gallons per day.

7. Composite sample means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.

8. FC means fecal coliform bacteria.

9. Technology based permit effluent limitations means technology-based treatment requirements as defined in 40 CFR 125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-41.

10. CBOD means five day carbonaceous biochemical oxygen demand.

11. Grab sample means an individual discrete sample collected over a period of time not to exceed 15 minutes.

12. Quarter means January through March, April through June, July through September, or October through December.

13. Month means calendar month.

14. Week means a calendar week of Sunday through Saturday.

15. Total residual chlorine means combined chlorine forms plus free residual chlorine.

16. The term "bacteria" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and enterococci bacteria.

17. POTW means a publicly owned treatment works.

NPDES Inspection Report

City of Scappoose
Scappoose, Oregon

FY 2000

WATER QUALITY SOU INSPECTION FORM

Permittee: City of Scappoose	Source Address/ Phone Number: 2000 Columbia Ave. (503) 543-7183	Date Inspected: 1999-09-16
Facility Name: Scappoose STP		Official Contacted/Title: Steve Wabschall, Supt.
File Number (Site ID No.): 78980	Mailing Address: City of Scappoose PO Box P, Scappoose, OR 97056	
EPA ID Number (NPDES Only): OR 002242-0		
Permit Number: 100677	Type of Inspection: ☒ Compliance ☐ Technical Assistance ☐ Land Application/Reuse	Samples Taken: ☐ YES ☐ NO ☒ SPLIT
Permit Exp. Date: 5-31-95		System Classification: III Treatment II Collection

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COMPLIANCE STATUS	In Comp	Not In Comp	On Sch
Schedule A Waste Discharge Limitations	☒	☐	☐
Schedule B Monitoring & Reporting	☐	☒	☐
Schedule C Compliance Conditions	☒	☐	☐
Schedule D Special Conditions	☒	☐	☐
General Conditions	☐	☒	☐
SFO or MAO Requirements N/A	☐	☐	☐

VIOLATIONS NOTED: See attached inspection report.

SUMMARY OF INSPECTION FINDINGS & COMMENTS / RECOMMENDATIONS

See attached Inspection Report.

Report approved and NONs Authorized: 2000-01-03
Robert P. Baumgartner
Manager, NWR, WQ Source Control

COPIES TO: (City of Scappoose) EPA-000, DEQ-ENF, QA CHEMIST DEQ LAB
REPORT FINAL ON 2000-01-03

☒ CONTINUED ON ATTACHED PAGE

PREPARATION TIME: 8.0 HRS
INSPECTION TIME: 8.0 HRS
(include travel to & from) 24 0
FOLLOW-UP TIME: ___ HRS
(Inspection write-up, enforcement if necessary)
cc: ☐ Water Quality Division ☒ Permittee

James R. Sheetz, P.E — NWR — 229-5740
Inspector's Name (Please Print) — Region & Office

James R Sheetz
Inspector Signature — Date: 10/4/99

MWWC13 — 0053.5 (6/95)

Contents

SECTION 1—GENERAL

A periodic compliance inspection of the City of Scappoose wastewater treatment facility was conducted by the Oregon Department of Environmental Quality (DEQ) on September 16, 1999. This inspection report describes the existing facilities, the inspection procedures, and the inspection results for an NPDES permit compliance inspection of the City of Scappoose, Oregon. Figures and process flow diagrams are given in the "Figures" section of this report. See Appendix A for the NPDES permit.

WQ-Columbia County
City of Scappoose
File No.: 78980
Permit No.: 100677
Periodic Compliance Inspection

Permittee:
City of Scappoose
34345 Columbia Avenue
P.O. Box P
Scappoose, OR 97056
Superintendent: Steve Wabschall
Phone: 503-543-7183

SECTION 2—FACILITY DESCRIPTION

Introduction

The City of Scappoose owns and operates a municipal wastewater treatment plant that provides domestic wastewater treatment for the city and industrial wastewater treatment for wastewater from Steinfeld's Pickles, a pickle processing facility that is connected to the city wastewater collection system.

Collection System Description

The collection system for the City of Scappoose served 4,130 residents in 1996. The city is growing rapidly due to its proximity to Portland. Several new subdivisions have been built in the last few years and growth is expected to continue at a fast pace.

The collection system consists of approximately 27 000 m of gravity sewers and approximately 1800 m of force mains, the majority of which was installed in 1972.

The collection system includes five pump stations. A sixth pump station is associated with the treatment plant. The collection system pump stations and their rated redundant capacity (capacity with the largest pump out of service) are:

- Smith Road – 22 L/s
- Keys Landing – 9.5 L/s
- Highway 30 – 19 L/s

- Seven Oaks – 9.5 L/s
- Springlake Drive – 8.8 L/s

The Smith Road Pump Station is being renovated.

Treatment Process Description

The existing wastewater treatment plant is of the activated sludge type and was upgraded in 1993. See Figure 1 for a schematic of the treatment plant layout.

Raw sewage enters the headworks by gravity. The headworks consists of a single concrete channel with one 760 mm Channel Monster grinder. The capacity is approximately 175 L/s.

An influent pump station is a wet well/dry well type with four centrifugal pumps operated by variable frequency drives. The pumps are controlled by a bubbler system to measure the liquid level in the wet well. The station is located beneath the blower building. The station's redundant capacity is 153 L/s.

Influent flow is measured using a 230 mm Parshall flume and a sonic meter, which are located upstream of the aeration basin.

The aeration basin is a single basin with earthen dikes. It is 3.7 m deep with a volume of approximately 7200 m^3. Initially, the basin was equipped with five high-speed surface aerators, each of 30 kW capacity for a total of 150 kW. Subsequently, to improve mixing, two of the surface aerators were replaced with two 30 kW aspirating aerators.

The plant has two 15 m diameter clarifiers. Each has a 4.6 m side wall depth, and a surface area of 182.4 m^2.

The pump station for return activated sludge (RAS) and waste activated sludge (WAS) is located between the two clarifiers and consists of three RAS pumps and two WAS pumps. The WAS pumps can be used with either clarifier and can draw from the clarifier sump or the RAS tubes. The RAS pumps are controlled by variable frequency drives.

Effluent flow is measured using a 90-degree V-notch weir that is located just upstream of the ultraviolet disinfection channel. An 457 mm Cipolletti weir was supplied with the 1993 upgrade and can be installed when flow exceeds the capacity of the V-notch weir.

Disinfection is provided with an ultraviolet light system consisting of two banks of lights with 11 modules of eight lights. Each bank is sized to treat the peak daily flow so complete redundancy is provided.

Treated and disinfected effluent is pumped to an outfall to the Multnomah Channel. The station consists of a wet well and four vertical turbine pumps with two-speed motors. The discharge pipe is 305 mm in diameter and it is approximately 4.8 km to the outfall.

The plant was designed for sludge treatment in three basins: an aerobic digestion tank, an aerated lagoon, and a storage lagoon. The

sludge first enters the aerobic digestion tank and flows in series through five compartments where oxygen is supplied by diffused air. The design included five high-speed surface aerators for an aerated lagoon followed by the storage lagoon. Currently, the lagoon is not being aerated and is functioning as a facultative (or anaerobic) storage pond. A thick crust has formed on the lagoon. The plant was designed for liquid sludge removal with distribution on land with a sludge truck. However, this method is not in use and sludge is handled as a cake with land application on adjacent city-owned land.

The treatment plant has two standby generators. An 85-kW natural gas generator is located in the blower building and will power the influent pump station and lighting. A 125 kW diesel generator located in the effluent pump station will power the effluent pump station, UV disinfection, and selected lighting.

Industrial Pretreatment

Seinfelds is a pickle processing plant with seasonal operation and that discharges to the city collection system. The wastewater from Steinfelds is treated through a microscreen and then flows to a city-operated pretreatment facility where the following are accomplished: pH adjustment, surge control, and flow and load measurement.

An automatic sampler collects BOD and TSS samples.

Surge control is provided by an 31 m^3 basin with a restricted orifice outlet.

The pH is adjusted using two caustic soda feed pumps, a pH probe, and an analyzer.

SECTION 3—INSPECTION PROCEDURES AND RESULTS

This section describes the NPDES inspection procedures and results.

Participants

The NPDES inspection was conducted on September 16, 1999, by James R. Sheetz, PE, DEE, of the Oregon Department of Environmental Quality, Northwest Region, Water Quality Source Control Section, 2020 SW 4th Avenue, Suite 400, Portland, OR 97201 (phone 503-229-5740). Present for the City of Scappoose were the superintendent, Steve Wabschall, and an operator, Steve Smith.

Inspection Procedures

I arrived at the wastewater treatment plant at approximately 1000 hours on Thursday, September 16, 1999. I identified myself to Steve Wabschall, the superintendent of the plant. The compliance inspection

was unannounced in advance of my arrival. The inspection was concluded at about 1530 hours on September 16, 1999.

The inspection included observation of the facility operation, review of laboratory records, and collection of split samples. The Smith Road Pump Station, which was being renovated, was observed. Also, the Multnomah Channel at the outfall was observed. These activities are described below.

Observation of Facility Operation

The first inspection activity consisted of a walk around the facilities and discussion of the operation of the components. I observed each treatment plant component and noted the following:

1. **Influent Pump Station.** Mr. Wabschall reported that the influent pump station occasionally experiences plugging of one of the four centrifugal pumps because only grinding is provided on the influent flow. He reported that this is not a major problem because the procedure to unplug the pumps is not difficult and is performed in a short time when needed, and there is adequate redundant pump capacity.

2. **Influent Flow Meter.** I observed the influent flow meter, which is a 230 mm Parshall flume. The influent composite sample is normally taken from this flume. Operation appeared to be normal.

3. **Aeration Basin.** I observed the mixed liquor of the aeration basin. The mixed liquor appeared to be in good condition and typical for the type of process. By good condition, I mean that the mixed liquor was a rich, chocolate brown color with minimal foaming and no areas that appeared to be deficient in oxygen. The dikes of the aeration basin appeared to be in good condition. Weeds on the banks needed to be removed.

   I discussed the aeration equipment with Mr. Wabschall. He explained that the conversion of two of the surface aerators to aspirating aerators had improved mixing considerably and he has had no difficulty maintaining DO in the aeration basin. He said the mixed liquor is about 2000 to 3000 mg/L. He also noted that the city received an award from PGE for energy conservation for the aspirating aerators.

4. **Clarifiers.** I observed the two final clarifiers. The overflow was generally clear of floc. However, slime and algae growths needed to be removed from the weirs. Otherwise, operation appeared to be normal.

5. **Effluent Flow Meter.** I observed the effluent flow meter and 90-degree V-notch weir. A calibration problem is described below.

6. **UV Disinfection.** I observed the UV disinfection system. Operation appeared to be normal.

7. **Effluent Pump Station.** I observed the old chlorine contact tank, which serves as the wet well for the effluent pumps. Slime and algae growths needed to be removed from the tank walls and baffles.

   I observed the effluent pump station. One pump and motor had been removed for repair. Mr. Wabschall showed me the rewired motor and the new pump. He said he was awaiting a crane to lift the pump and motor back in place. I observed the emergency generator for the effluent pumps. Mr. Wabschall noted that the generator is automatically started on a periodic basis to check its operability.

8. **Aerobic Digester.** I observed the aerobic digester, which was created from the old plant. Waste activated sludge is treated in series through five compartments before it is pumped to the sludge lagoons. One of the compartments was out of service because sludge had recently been drawn off to the sludge lagoon. Mr. Wabschall reported that there is 40 days detention time in the aerobic digester. Operation appeared to be normal.

9. **Sludge Lagoons.** I observed the sludge lagoons. One of the lagoons was designed to be an aerated lagoon. Aeration has been discontinued and a crust has formed over the sludge. Sludge is now removed in cake form for land application on adjacent city-owned land. No odors were detected from the sludge lagoons. Mr. Wabschall reported that there is 1 to 2 years detention time in the sludge lagoons and the digested sludge contains about 40 percent volatile solids. I informed Mr. Wabschall that he needs to review with Bruce Henderson, NWR biosolids specialist, about the change of sludge handling from liquid to cake and to provide information that may be needed for an updated sludge management plan.

10. **Smith Road Pump Station.** I observed the renovation work underway at the Smith Road Pump Station. This is a buried wet well/dry well station. The station is in a flood zone so some of the work involves flood protection. The controls were being relocated to a new building set above flood level. Three new pumps and drives will be installed. Standby power will be added. I judged the construction to be about 50 percent complete. A draft of the operation and maintenance manual is due to the Department for review.

11. **Outfall.** I observed the Multnomah Channel in proximity to the outfall. The outfall is approximately 4.8 km from the treatment plant. I observed no effects, such as discoloration or foaming, in the water.

Flow Measurement

An effort was made to verify the accuracy of the influent and effluent flow meters, as described below.

The calculations to verify the accuracy of the influent and effluent flow meters are given in Appendix B. The results of this evaluation are that the influent flow meter appears to be operating correctly and is within 2 percent of the true instantaneous and total flow. The effluent flow meter is underreporting instantaneous and total flow by about 25 percent. The instantaneous and total flow is about 75 percent of the true value. Discharge monitoring reports of effluent flow and mass loads are 75 percent of the true values.

Mr. Wabschall noted that he has attempted to have the effluent flow meter calibrated in the past.

The NPDES permit (Appendix A) requires in Schedule B, Condition 1, that the influent and effluent flow meters be calibrated at least twice annually. Moreover, the General Conditions, Section C, Monitoring and Records, Condition 2, Flow Measurements, requires that "The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device." The Department interprets this general condition to mean calibrated annually, unless more restrictive requirements exist in the permit. The sonic flow meter is capable of measuring the head to an accuracy of better than 98 to 102 percent of the true value (2 percent error).

Because the NPDES self-monitoring system is dependent upon accurate input data, the failure of the facility to keep the effluent meter properly calibrated is a Class II permit violation.

The facility needs to perform a comprehensive evaluation of flow measuring calibration procedures and to submit a report of the results to the Department. The calibration procedures should be added to the operation and maintenance manual.

Records Review

Operating records for 1998 were reviewed. The months of July and December 1998 were selected for inspection.

July 1998 Records

The records for July 1998 were inspected. Total suspended solids bench data and calculations were checked. No discrepancies were found. Fecal coliform bench data and calculations were also checked. Erroneous procedures were being used to calculate the fecal coliform results reported on the DMRs, as described below.

Fecal coliform tests are performed by the wastewater treatment plant operators. The bench data and calculations for the fecal coliform data for July 6, 10, and 20, 1998 were analyzed and found not to conform to the requirements of 40 CFR 136, which refers to method 9222 D in Standard Methods for the Examination of Water and Wastewater. (See Appendix C.)

The facility normally runs three dilutions of the effluent using the membrane filter technique. The dilutions are: 10, 25 and 50 mL. Standard Methods requires that for the measurement of fecal coliform by the membrane filter technique only filters with counts between 20 and 60 coliform colonies and not more than 200 colonies of all types are to be counted. Generally, the facility has been reporting results with no filters in an acceptable range of counts.

Standard Methods provides for a method to count filters when there are no filters with counts in the acceptable range (20 to 60). The procedure is to sum the counts of all filters, divide by the sum of the dilutions, and multiply by 100. For example, 50-, 25-, and 10-mL dilutions with counts of 15, 6, and <1, respectively, would be reported as 25/100 mL calculated as follows:

$$\frac{[(15+6+0)(100)]}{(50+25+10)} = \frac{25}{100mL}$$

If any one dilution had a count in the acceptable range, that dilution would be reported and the other results would not be used. If more than one dilution has a count in the acceptable range, the count from the largest volume of sample should be reported. This is based on the theory that the largest sample volume is the most representative.

As shown in Appendix C, the facility has not used the correct procedures for reporting fecal coliform. The facility has been calculating the mean of the results of the three dilutions whether or not the counts are in an acceptable range.

The facility needs to run a wider range of dilutions in order to get at least one filter with 20 to 60 fecal coliform colonies, as specified by Standard Methods. If none of the dilutions are in an acceptable range, then the result to be reported should be calculated as described above.

The requirement to perform accurate monitoring and reporting is given in the General Conditions, Section C, Monitoring and Records, Condition 3, Monitoring Procedures: *Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.* This refers to Standard Methods, Method 9222D, which is shown in Appendix C.

Because the NPDES self-monitoring system is dependent upon accurate input data, the failure of the facility to correctly run fecal coliform tests and to correctly report results is a Class II permit violation.

The facility needs to conduct a comprehensive quality control review of fecal coliform testing procedures. A report should be provided to the Department describing the results of the QA/QC review and QA/QC procedures to be inserted in the operations and maintenance manual.

December 1998 Records

The records for December 1998 were also inspected. The records for December 9, 1998, and December 17, 1998, were examined in detail. No discrepancies were found for the Total Suspended Solids (TSS) bench data and calculations for these selected days.

Five-Day Biochemical Oxygen Demand (BOD_5) bench data, calculations, and reporting were analyzed for December 9 and 17, 1998. The BOD tests do not meet the requirements of Standard Methods. The NPDES permit requires that the test procedures of 40 CFR 136 be followed in performing the analyses. This regulation refers to Standard Method 5210B, a copy of which is included in Appendix D along with the inspection analysis calculations.

The discrepancies between the required analytical and reporting procedures of method 5210B and the procedures followed by the facility are described below.

Acceptable results must have a DO depletion of 2 mg/L. The influent and effluent data for December 9 and 17, 1998, did not meet this requirement. Depletions were less than 2 mg/L.

The influent BOD_5 results for December 9 and 17, 1998 are fictitious numbers. The actual DO depletions for December 9, 1998 resulted in a calculated BOD_5 of 25.3 mg/L but a made up value of 100 mg/L was reported. The actual DO depletions for December 17, 1998 resulted in a calculated BOD_5 of 38.8 mg/L but a made up value of 60 mg/L was reported. In a follow up phone call on September 22, 1998, Mr. Wabschall said he knew the actual calculated values were too low for the influent BOD_5 so more realistic numbers were reported.

A glucose-glutamic acid check was not being run with each set of analyses. This check is to demonstrate that the seed is viable and should produce a BOD_5 of 198 mg/L +/- 30.5 mg/L.

One of the causes of insufficient DO depletions may be that the sample is too dilute and only the DO depletion of the seed is actually being measured. As much as 300 mL of sample (no dilution) may need to be run to get acceptable depletions. Another cause may be a lack of viable seed or toxic constituents.

A discrepancy was noted relative to the day for which the data was reported compared to the date the analyses were run. The BOD, TSS, and FC results for samples set up on December 9 and 17, 1998, which presumably were the same as the end of the 24 hour compositing period, were reported on the DMR as December 10 and 18, 1998. The results should have been reported for December 9 and 17, 1998, the end of the compositing period. Mr. Wabschall could not explain why the results were reported a day later than the day the samples were set up.

Because the NPDES self-monitoring system is dependent upon accurate and honest input data, the failure of the facility to correctly run and to honestly report BOD_5 test results is a Class I permit violation.

The facility needs to conduct a comprehensive quality assurance/quality control review of BOD testing procedures. A report should be provided to the Department describing the results of the QA/QC review along with recommended information to be inserted in the operations and maintenance manual. The QA/QC procedures should be sufficient to ensure that all necessary quality checks are performed during data analysis and reporting and that periodic audits are performed by a qualified individual who is independent of the internal laboratory staff. The requirement for a QA program is given in 40 CFR 122.41 (see Appendix D of this report).

Split Sample Results

A grab sample was collected from the influent at the same location as the composite sampler, the Parshall flume inlet. A grab sample was collected from the effluent at the end of the UV disinfection channel. Both samples were split with Mr. Wabschall. Split samples were analyzed for the following parameters:

Split Samples		
Outfall	**Type and Location**	**Parameters**
Influent	Grab – Influent at Parshall flume inlet	BOD_5, TSS
001	Grab - Final Effluent after UV Disinfection	BOD_5, TSS, Fecal Coliform

Additional analyses performed on the DEQ sample are: COD, TOC, and Total Metals. The permittee was not required to perform these additional analyses.

Conventional Pollutants

Split Sample Data Results

Conventional pollutants monitored are Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), pH, and Fecal Coliform (FC). Sample data represent conditions for a grab sample on 9/16/99 at about 1500 hours. (See Appendix E for split sample data.) Split sample results are as follows:

Conventional Pollutants				
Parameter	**Location**	**Scappoose**	**DEQ**	**RPD**
BOD_5	Influent	300 mg/L	1100 mg/L	-114%
BOD_5	Outfall 001, Final Effluent	8.1 mg/L	3 mg/L	92%
TSS	Influent	316 mg/L	310 mg/L	2%
TSS	Outfall 001, Final Effluent	5.0 mg/L	1 mg/L	133%
pH	Outfall 001, Final Effluent	--	7.6	NA

Conventional Pollutants				
Parameter	**Location**	**Scappoose**	**DEQ**	**RPD**
FC	Outfall 001, Final Effluent	41 CFU/0.1 L	>600 CFU/0.1 L	NA

Compliance with Effluent Limitations

The permit for this facility includes effluent limitations for conventional pollutants, as listed below.

Effluent Limitations May 1-Oct 1					
Parameter	Avg. Effluent Conc.		Mo. Avg.	Wk. Avg.	Daily Max
	mg/L	mg/L	kg/d	kg/d	kg/d
BOD_5	21	29	118	166	215
TSS	20	30	115	172	230
FC/100 mL	200	400	--		
Effluent Limitations Year Around					
pH		6.0-9.0			
BOD and TSS removal eff.		not <85%			
Total Chlorine Residual		NA - UV in use			

Using the effluent flow "true" value resulting from the inspection of 45.9 L/s (see calculations in Appendix F of this report) and DEQ data, the daily maximum values for the day of the inspection (1999-09-16) are given below.

$$m_{BOD5} = (45.9\frac{L}{s})(3\frac{mg}{L})(\frac{g}{10^3 mg})(\frac{kg}{10^3 g})(86400\frac{s}{d}) = 11.9\frac{kg}{d}\ BOD$$

$$m_{TSS} = (45.9\frac{L}{s})(1\frac{mg}{L})(\frac{g}{10^3 mg})(\frac{kg}{10^3 g})(86400\frac{s}{d}) = 3.9\frac{kg}{d}\ TSS$$

The daily maximum mass of BOD and TSS discharged on the day of the inspection were within the effluent limitations for those parameters.

Data was not collected to independently check monthly and weekly average limitations.

Percent removal calculations are as follows:

$$BOD\ \% = \frac{1100-3}{1100}(100) = 99.7\%$$

$$TSS\% = \frac{310-1}{310}(100) = 99.7\%$$

The percent removals of BOD and TSS on the day of the inspection were within the effluent limitations for those parameters.

Inter-laboratory Results

Although the split sample results indicate that the facility is in compliance with the permit effluent limits, the inter-laboratory results indicate problems with the permittee's BOD_5 and FC analytical procedures. The influent BOD_5 results differ widely between labs with DEQ reporting 1100 mg/L and the permittee reporting 300 mg/L. The FC results for the effluent also differ widely with DEQ reporting >600 CFU/0.1 L and the permittee reporting 41 CFU/0.1 L.

As described previously, a QA/QC evaluation and procedures document is needed for this facility. The inter-laboratory differences support that conclusion.

Unconventional Pollutants

Unconventional pollutants that were sampled include: Chemical Oxygen Demand (COD) and Total Organic Carbon (TOC). These parameters are additional measures of the organic content of wastewater and were not split with the permittee. They were selected for analysis to compare with BOD results, as follows:

Parameter	DEQ Data Result
TOC	6 mg/L
COD	17 mg/L
BOD_5	3 mg/L

The results for TOC and COD are consistent with the BOD_5 result.

Toxic Pollutants

Toxic pollutants that were sampled include: Total Metals.

The metals measured in the effluent are given in Appendix E, Split Sampling Results. The metals reported for the effluent sample are generally below the Table 20 instream fresh water chronic concentrations (see Appendix G). None of the results indicate a cause for concern.

Sources of Assistance

Because the inspection identified several areas of operations and laboratory quality control that need improvement, a partial list of consultants known to specialize in wastewater treatment operations and maintenance is given below for use by the permittee in obtaining assistance.

Listed below are operations and compliance specialists for domestic wastewater systems that are known to have provided on-site technical assistance and system performance evaluations/needs assessments:		
Holly Ploetz	USEPA Oregon TA (CWA 104(g) Grantee) Fee paid by grant	Linn-Benton C.C. Water Quality Technology 6500 SW Pacific Blvd. Albany OR 978321-3774 541-917-4621
Doug Osburn or Ed Bickell	Rural Water/RUS TA Circuit Rider Program Fee paid by grant	Oregon Assn. of Water Utilities (OAWU) 12312 Silverton Road NE Silverton OR 97381 503-873-8353
Pat Curran, PE	Private Consultant Fee basis	Curran-McLeod, Inc. 6655 SW Hampton, Suite 210 Portland OR 97223 503-684-3478
Woodie M. Muirhead, PE	Private Consultant Fee Basis	Brown and Caldwell Eng. 9620 SW Barbur Blvd. Portland OR 503-244-7005
Reynolds "Dale" Richwine, PE	Private Consultant Fee Basis	Richwine Environmental, Inc. PO Box 7717 Beaverton OR 97007-7177 503-617-1721
Note: The LBCC EPA grant funded on-site TA program is ideal for DEQ referral regarding operational non-compliance, including self-monitoring issues (sampling and testing). They are a compliance assistance partner with DEQ with funding limitations to only POTWs who have past or potential for EPA construction funding. OAWU is funded in part by National Rural Water and the Rural Service Utilities and may assist private and public facilities and cooperatives (mobile home owners associations, etc.) The private consultants listed are well-respected and long-time operations experts. This list not intended to recommend or endorse the individuals or firms. It is up to the user to verify qualifications and experience.		

Inspection Conclusions

The facility was not in compliance with its NPDES permit. The following corrective actions are needed:

1. Calibrate the effluent flow meter for both instantaneous and totalizer flow measurements. Submit a report to the Department demonstrating accurate calibration of the effluent flow meter and a description of the procedures to be followed for periodic re-

calibration. The procedures should be inserted in the operation and maintenance manual.

2. Perform a thorough evaluation of quality control procedures for BOD_5 and fecal coliform, as well as other regulated parameters, and ensure that the analytical and quality control procedures of Standard Methods are followed. Submit a report describing improved laboratory quality assurance/quality control procedures needed or implemented. Submit QA/QC procedures for insertion in the operation and maintenance manual.
3. Submit for Department review a draft of the operation and maintenance manual for the Smith Road Pump Station.
4. Establish an executive level policy or guidance applicable to wastewater plant personnel that all analytical results will be reported accurately and honestly even if the data appear unusual. Such data should be flagged (noted) as questionable but still reported accurately. QA/QC corrective procedures should then be implemented.

Permittee Response to Inspection

Subsequent to the inspection covered by this report, the Department received on 1999-11-01 a response to some of the items discussed during the inspection. The response is given in Appendix H, Permittee Response. Comments on this response are given below.

Effluent Flow Meter Calibration

The effluent flow meter calibration described in the report is a beginning. However, a formal procedure for calibration of flow meters should be prepared. The calibration procedure should include a physical check as described but should also include procedures for calibration of the associated instruments. The calibration should be performed annually and documentation of the results should be retained in the facility files and available for inspection.

BOD and Fecal Coliform Testing

The procedures suggested are a beginning. However, formal QA/QC procedures are needed.

The test data submitted for BOD is still not correct. Seed control should result in the seeded dilution water having a DO depletion in the range of 0.6 to 1.0 mg/L, not 1.4 mg/L as shown. Multiple dilutions should be run for the seed control. Glutamic acid QC checks should be performed. The seed correction should be performed by subtracting the seed correction (in the range of 0.6 to 1.0 mg/L) from the DO depletion

of the various dilutions. Although the procedure used of adding the seed correction to the final DO gives the right answer, the procedure is wrong. This illustrates the need for complete and formal QA/QC procedures for this facility.

The National Institute of Standards and Technology may have proficiency testing services that could be used as an additional QC check.

Report Prepared By:

James R. Sheetz 1999-12-29

James R. Sheetz, PE, DEE Date

Sr. Environmental Engineer

FIGURES

Figure 1- Plant Layout Schematic

APPENDICES

Appendix A – NPDES Permit

WQ-COLU
Scappoose, City of
F 75980

Expiration Date: 5-31-95
Permit Number: 100677
File Number: 78980

MODIFICATION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT

Department of Environmental Quality
1500 S.W. First Avenue, Suite 750
Portland, OR 97201
Telephone: (503) 229-5263

Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

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ISSUED TO:

City of Scappoose
34345 Columbia Blvd.
P.O. Box "P"
Scappoose, Oregon 97056

SOURCES COVERED BY THIS PERMIT:

Type of Waste	Outfall Number	Outfall Location
Domestic Sewage	001	R.M. 10.5

PLANT TYPE AND LOCATION:

Extended Aeration
Sewage Treatment Plant
2000 Columbia Ave.
Honeyman Road
Treatment System Class: III
Collection System Class: II

RECEIVING SYSTEM INFORMATION:

Basin: Willamette
Sub-Basin: Lower Willamette
Stream: Multnomah Channel
Hydro Code: 22P-MULT 10.5 D
County: Columbia

EPA REFERENCE NO: OR 002242-0

Issued in response to Application No. 998383 received July 12, 1990.
Modified in response to Application No. 997445 received January 13, 1992.

This permit is issued based on the land use findings in the permit record.

SEP 2 9 1992

Charles K. Ashbaker, Manager
Water Quality, Northwest Region

Date

PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to construct, install, modify, or operate a wastewater collection, treatment, control and disposal system and discharge to public waters adequately treated wastewaters only from the authorized discharge point or points established in Schedule A and only in conformance with all the requirements, limitations, and conditions set forth in the attached schedules as follows:

Unless authorized by another NPDES permit, each other direct and indirect discharge to public waters is prohibited.

SCHEDULE A

1. Waste Discharge Limitations not to be Exceeded After Permit Issuance. (Existing Limits)

a. Outfall Number 001 (Sewage Treatment Plant Discharge)

(1) June 1 - October 31:

Parameter	Average Effluent Concentrations Monthly	Weekly	Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lb/day
a. BOD-5	20 mg/l	30 mg/l	83	125	166
b. TSS	20 mg/l	30 mg/l	83	125	166

(2) November 1 - May 30:

Parameter	Average Effluent Concentrations Monthly	Weekly	Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lb/day
a. BOD-5	30 mg/l	30 mg/l	125	188	250
b. TSS	30 mg/l	30 mg/l	125	188	250

*Based on average dry weather design flow to the facility equaling 0.50 MGD.

(3) Other parameters (year-round)

a. pH	Shall be within the range 6.0 - 9.0
b. BOD and TSS Removal Efficiency	Shall not be less than 85% monthly average
c. Chlorine Dosage	Shall be equal to or greater than 25 pounds per day.

(4) Not withstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which violate Water Quality Standards as adopted in OAR 340-41-445 except in the defined mixing zone:

The mixing zone shall extend from the shore side of the outfall to one-half the width of the channel, 200 feet downstream and 200 feet upstream.

2. Waste Discharge Limitations not to be Exceeded After Completion of New Sewage Treatment Plant and the Incorporation of Steinfeld's Process Wastewater.

a. Outfall Number 001 (Sewage Treatment Plant Discharge)

(1) May 1 - October 31:

Parameter	Average Effluent Concentrations Monthly	Weekly	Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lb/day	Mo Avg kg/d	Wk Avg kg/d	Daily Max kg/d
a. BOD-5	21 mg/l	29 mg/l	260	367	474	118	166	215
b. TSS	20 mg/l	30 mg/l	253	380	506	115	172	230
c. FC/100ml	200	400						

(2) November 1 - April 30:

Parameter	Average Effluent Concentrations Monthly	Weekly	Monthly* Average lb/day	Weekly* Average lb/day	Daily* Maximum lb/day
a. BOD-5	32 mg/l	47 mg/l	403	579	754
b. TSS	25 mg/l	37 mg/l	315	473	630
c. FC/100ml	200	400			

*Based on average dry weather design flow to the facility equaling 1.515 MGD.

(3) Other parameters (year-round)

a. pH	Shall be within the range 6.0 - 9.0
b. BOD and TSS Removal Efficiency	Shall not be less than 85% monthly average
c. Total Residual Chlorine	Shall not exceed 0.1 mg/l

(4) Not withstanding the effluent limitations established by this permit, no wastes shall be discharged and no activities shall be conducted which violate Water Quality Standards as adopted in OAR 340-41-445 except in the defined mixing zone:

The mixing zone shall extend from the shore side of the outfall to one-half the width of the channel, 200 feet downstream and 200 feet upstream.

SCHEDULE B

1. Minimum Monitoring and Reporting Requirements.
(unless otherwise approved in writing by the Department)

a. Influent

Item or Parameter	Minimum Frequency	Type of Sample
* Total Flow (MGD)	Daily	Continuous
* Flow Meter Calibration	2/Year	Verification
BOD-5	2/Week	Composite
TSS	2/Week	Composite
pH	3/Week	Grab

b. Outfall Number 001 (Sewage Treatment Plant Outfall)

Item or Parameter	Minimum Frequency	Type of Sample
* Total Flow (MGD)	Daily	Continuous
* Flow Meter Calibration	2/Year	Verification
BOD-5	2/Week	Composite
TSS	2/Week	Composite
pH	3/Week	Grab
Fecal Coliform	1/Week	Grab
Quantity Chlorine Used	Daily	Weight
Chlorine Residual	Daily	Grab
Average Percent Removed (BOD and TSS)	Monthly	Calculation

*Required only at one site, whichever is more appropriate.

c. Sludge Management

Item or Parameter	Minimum Frequency	Type of Sample
Sludge analysis including: Total solids (% dry wt.) Volatile solids (% dry wt.) Volatile suspended solids (% dry wt.) Sludge nitrogen NH_3-N; NO_3-N; & TKN (% dry wt.) Sludge metals content for Pb; Zn; Cu; Ni; & Cd (mg/kg) Phosphorus (% dry wt.) Potassium (% dry wt.) pH (standard units)	Annually in June	Composite sample to be representative of the product to be land applied.
Record of % volatile solids reduction accomplished through digestion	Monthly	Calculation (See Note 1)
Record of sludge fecal coliform and fecal streptococci (enterroci) (per gram of volatile solids)	Monthly when land applying sludge.	Composite sample representative of the product to be land applied.
Record of locations where sludge is applied (Site location map to be maintained at treatment facility for review upon request by DEQ)	Each Occurrence	Date, volume & locations where sludge is applied recorded on site location map.

Notes:

1) Calculation of the % volatile solids reduction is to be based on comparison of a representative grab sample of total and volatile solids entering either the treatment works, or the secondary clarifier solids wasted to the treatment facility's aerobic digesters and a representative composite sample of sludge solids applied to land.

Monitoring reports (DMRs) shall include a record of the location, quantity and method of use of all sludge removed from the treatment facility and a record of all applicable equipment breakdowns and bypassing.

2. Reporting Procedures

Monitoring results shall be reported on approved forms. The reporting period is the calendar month. Reports must be submitted to the Department by the 15th day of the following month.

All monitoring reports shall indicate the wastewater system classification as shown on page 1 of this permit and include the name of each principal operator designated by the permittee as responsible for supervising the system during the reporting period, and their certificate classification and grade level.

SCHEDULE C

Compliance Schedules and Conditions

1. By November 1, 1992, the permittee shall submit a revised sludge management plan for approval by the Department of Environmental Quality. This revised sludge management plan shall account for additional sludge volumes resulting from plant expansion and the adequacy of existing sludge disposal practices.

2. The permittee shall have in place a program to identify and reduce inflow and infiltration into the sewage collection system. An annual report shall be submitted to the Department by September 1 each year which details sewer collection maintenance activities that have been done in the previous year and outlines those activities planned for the following year.

3. The permittee is expected to meet the compliance dates which have been established in this schedule. Either prior to or no later than 14 days following any lapsed compliance date, the permittee shall submit to the Department a notice of compliance or noncompliance with the established schedule. The Director may revise a schedule of compliance if he determines good and valid cause resulting from events over which the permittee has little or no control.

SCHEDULE D

Special Conditions

1. All sludge shall be managed in accordance with a sludge management plan approved by the Department of Environmental Quality. No substantial changes shall be made in sludge management activities which significantly differ from operations specified under the approved plan without the prior written approval of the Department.

   In the event the permittee finds it necessary to remove accumulated sludge solids from the lagoons, the permittee shall submit and obtain Department approval of a sludge management plan developed in accordance with Administrative Rule, Chapter 340, Division 50 "Land Application and Disposal of Sewage Treatment Plant Sludge and Sludge Derived Products Including Septage" prior to removing sludge.

2. The permittee shall comply with Oregon Administrative Rules (OAR), Chapter 340, Division 49, "Regulations Pertaining To Certification of Wastewater System Operator Personnel" and accordingly:

   a. The permittee shall have its wastewater system supervised by one or more operators who are certified in a classification and grade level (equal to or greater) that corresponds with the classification (collection and /or treatment) of the system to be supervised as specified on page one of this permit.

   Note: A "supervisor" is defined as the person exercising authority for establishing and executing the specific practice and procedures of operating the system in accordance with the policies of the permittee and requirements of the waste discharge permit. "Supervise" means responsible for the technical operation of a system, which may affect its performance or the quality of the effluent produced. Supervisors are not required to be on-site at all times.

   b. The permittee's wastewater system may not be without supervision (as required by Special Condition 2a. above) for more than thirty (30) days. During this period, and at any time that the supervisor is not available to respond on-site (i.e. vacation, sick leave or off-call), the permittee must make available another person who is certified at no less than one grade level lower than the system classification.

   c. If the wastewater system has more than one daily shift, the permittee shall have the shift supervisor, if any, certified at no less than one grade level lower than the system classification.

   d. The permittee is responsible for ensuring the wastewater system has a properly certified supervisor available at all times to respond on-site at the request of the permittee and to any other operator.

e. The permittee shall notify the Department of Environmental Quality in writing within thirty (30) days of replacement or redesignation of certified operators responsible for supervising wastewater system operation. The notice shall be filed with the Water Quality Division, Operator Certification Program (see address on page one). This requirement is in addition to the reporting requirements contained under Schedule B of this permit.

f. Upon written request, the Department may grant the permittee reasonable time, not to exceed 120 days, to obtain the services of a qualified person to supervise the wastewater system. The written request must include justification for the time needed, a schedule for recruiting and hiring, the date the system supervisor availability ceased, and the name of the alternate system supervisor(s) as required by 2.b. above.

NPDES GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468.720 and is grounds for enforcement action; for permit termination, suspension, or modification; or for denial of a permit renewal application.

2. Penalties for Violations of Permit Conditions

Oregon Law (ORS 468.140) allows the Director to impose civil penalties up to $10,000 per day for violation of a term, condition, or requirement of a permit.

In addition, Oregon Law (ORS 468.990) classifies a willful or negligent violation of the terms of a permit or failure to get a permit as a misdemeanor and a person convicted thereof shall be punishable by a fine of not more than $25,000 or by imprisonment for not more than one year, or by both. Each day of violation constitutes a separate offense.

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition, upon request of the Department, the permittee shall correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application shall be submitted at least 180 days before the expiration date of this permit.

The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions

This permit may be modified, suspended, revoked and reissued, or terminated for cause including, but not limited to, the following:

a. Violation of any term, condition, or requirement of this permit, a rule, or a statute;

b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts; or

c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the permittee for a permit modification or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants

The permittee shall comply with any applicable 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 the permit has not yet been modified to incorporate the requirement.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.

8. Permit References

Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and standards for sewage sludge use or disposal established under Section 405(d) of the Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. 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 the permit.

2. Duty to Halt or Reduce Activity

For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee shall, to the extent

necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities

a. Definitions

(1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality and/or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes 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. Severe property damage does not mean economic loss caused by delays in production.

b. Prohibition of bypass.

(1) Bypass is prohibited unless:

(a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;

(b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied 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; and

(c) The permittee submitted notices and requests as required under paragraph c of this section.

(2) The Director may approve an anticipated bypass, after considering its adverse effects and any alternatives to

bypassing, when the Director determines that it will meet the three conditions listed above in paragraph b(1) of this section.

c. Notice and request for bypass.

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, if possible at least ten days before the date of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section D, Paragraph D-5.

4. Upset

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

b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Section B.4.c. of these General Conditions are met. No determination made during administrative review of claims that non-compliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the causes(s) of the upset;

(2) The permitted facility was at the time being properly operated; and

(3) The permittee submitted notice of the upset as required in Section D.5., hereof (24-hour notice).

(4) The permittee complied with any remedial measures required under Section A.3 hereof.

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

5. Treatment of Single Operational Event

For purposes of this permit, A Single Operational Event which leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation. A single operational event is an exceptional incident which causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one Clean Water Act effluent discharge pollutant parameter. A single operational event does not include Clean Water Act violations involving discharge without an NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational event is a violation.

6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations

a. Definitions

(1) "Overflow" means the diversion and discharge of waste streams from any portion of the wastewater conveyance system including pump stations, through a designed overflow device or structure, other than discharges to the wastewater treatment facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the conveyance system or pump station which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow.

(3) "Uncontrolled overflow" means the diversion of waste streams other than through a designed overflow device or structure, for example to overflowing manholes or overflowing into residences, commercial establishments, or industries that may be connected to a conveyance system.

b. Prohibition of overflows. Overflows are prohibited unless:

(1) Overflows were unavoidable to prevent an uncontrolled overflow, loss of life, personal injury, or severe property damage; and

(2) There were no feasible alternatives to the overflows, such as the use of auxiliary pumping or conveyance systems, or maximization of conveyance system storage; and

(3) The overflows are the result of an upset as defined in Condition B4 and meeting all requirements of this condition.

c. Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any means.

d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permittee becomes aware of the overflow. Reporting procedures are described in more detail in Condition D.5.

7. Public Notification of Effluent Violation or Overflow

If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permittee shall take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

8. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Sampling and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and shall be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering

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

5. Reporting of Monitoring Results

Monitoring results shall be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports shall be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated. For a pollutant parameter that may be sampled more than once per day (e.g., Total Chlorine Residual), only the average daily value shall be recorded unless otherwise specified in this permit.

7. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean, except for bacteria which shall be averaged based on a geometric or log mean.

8. Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

9. Records Contents

Records of monitoring information shall include:

a. The date, exact place, time and methods of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

10. Inspection and Entry

The permittee shall allow the Director, or an authorized representative upon the presentation of credentials to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and

d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall comply with Oregon Administrative Rules (OAR) 340, Division 52, "Review of Plans and Specifications". Except where exempted under OAR 340-52, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers shall be commenced until the plans and specifications are submitted to and approved by the Department. The permittee shall give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

2. Anticipated Noncompliance

The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit shall be transferred to a third party without prior written approval from the Director. The permittee shall notify the Department when a transfer of property interest takes place.

4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

5. Twenty-Four Hour Reporting

The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally (by telephone) within 24 hours from the time the permittee becomes aware of the circumstances. During normal business hours, the Department's Regional office shall be called. Outside of normal business hours, the Department shall be contacted at 1-800-452-0311 (Oregon Accident Response System). A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain:

a. A description of the noncompliance and its cause;

b. The period of noncompliance, including exact dates and times;

c. The estimated time noncompliance is expected to continue if it has not been corrected; and

d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

e. Public notification steps taken, pursuant to General Condition B-7.

The following shall be included as information which must be reported within 24 hours under this paragraph:

a. Any unanticipated bypass which exceeds any effluent limitation in this permit.

b. Any upset which exceeds any effluent limitation in the permit.

c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in the permit.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

6. Other Noncompliance

The permittee shall report all instances of non-compliance not reported under Section D4 or D5, at the time monitoring reports are submitted. The reports shall contain:

a. A description of the noncompliance and its cause;

b. The period of noncompliance, including exact dates and times;

c. The estimated time noncompliance is expected to continue if it has not been corrected; and

d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. Duty to Provide Information

The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permittee shall also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it shall promptly submit such facts or information.

8. Signatory Requirements

All applications, reports or information submitted to the Department shall be signed and certified in accordance with 40 CFR 122.22.

9. Falsification of Reports

State law provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction be punished by a fine of not more than $1,000 per violation, or by imprisonment for not more than six months per violation, or by both.

10. Changes to Indirect Dischargers - **[Applicable to Publicly Owned Treatment Works (POTW) only]**

The permittee must provide adequate notice to the Department of the following:

a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Clean Water Act if it were directly discharging those pollutants and;

b. Any substantial change in the volume or character of pollutants being introduced into the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

c. For the purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

SECTION E. DEFINITIONS

1. BOD means five-day biochemical oxygen demand.

2. TSS means total suspended solids (non-filterable residue).

3. Mg/l means milligrams per liter.

4. Kg means kilograms.

5. M^3/d means cubic meters per day.

6. MGD means million gallons per day.

7. Composite sample means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.

8. FC means fecal coliform bacteria.

9. Technology based permit effluent limitations means technology-based treatment requirements as defined in 40 CFR 125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-41.

10. CBOD means five day carbonaceous biochemical oxygen demand.

11. Grab sample means an individual discrete sample collected over a period of time not to exceed 15 minutes.

12. Quarter means January through March, April through June, July through September, or October through December.

13. Month means calendar month.

14. Week means a calendar week of Sunday through Saturday.

15. Total residual chlorine means combined chlorine forms plus free residual chlorine.

16. The term "bacteria" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and enterococci bacteria.

17. POTW means a publicly owned treatment works.

Appendix B –Analysis of Flow Measurement Calibration

Oregon Department of Environmental Quality 2020 S.W. Fourth Avenue Portland, Oregon 97201 503-229-5263 FAX 503-229-6945	Calculations By: James R. Sheetz, P.E. Water Quality Source Control Section 503-229-5740

Date:	Project:	Page:
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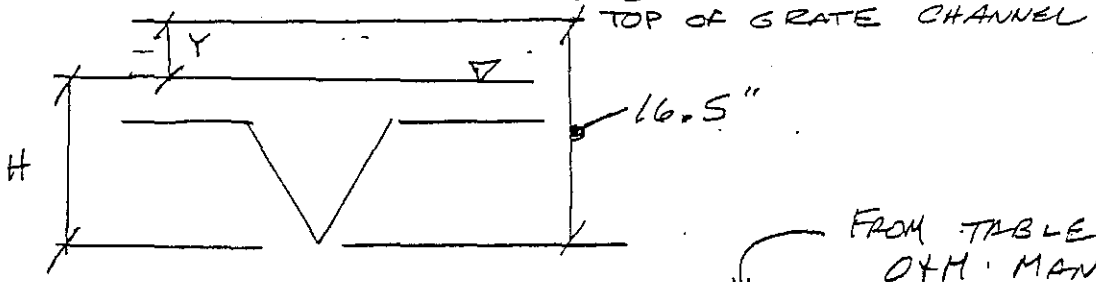
CHECK EFFLUENT FLOW METER:

DATE OF CHECK = 9/16/99

90° V-NOTCH EFFLUENT WEIR



FROM TABLE IN O+M MANUAL

TIME	Y IN.	H IN./FT	TRUE (ACTUAL) Q gpm	INDICATED Q gpm	Q_I/Q_A
1110	5.25	11.25/0.94	961	749	0.78
1115	5.5	11.0/0.92	910.9	579	0.64
1130	5.25	11.25/0.94	961	737	0.77
1215	5.5	11.0/0.92	910.9	686	0.75
1305	7.0	9.5/0.79	622	503	0.81
1400 MEAN	8.75	7.75/0.65	382 791.3	308 593.6	0.81

MEAN $Q_I/Q_A = \frac{593.6}{791.3} = 0.75$

MEAN ERROR = $1 - 0.75 = 0.25 = 25\%$

MEASUREMENT ERROR = 25%

Oregon Department of Environmental Quality 2020 S.W. Fourth Avenue Portland, Oregon 97201 503-229-5263 FAX 503-229-6945	Calculations By: James R. Sheetz, P.E. Water Quality Source Control Section 503-229-5740

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CHECK EFFL. FLOW METER (CONT):

TOTALIZER CHECK

TIME	TOTALIZER READING
1130	67,939,830
1400	68,026,175

86,345 gal. TOTALIZER INDICATED

FOR 1130 - 1400 - ACTUAL

	ACTUAL Q gpm	Q' gpm	PERIOD min.	TOTAL gal	Q L/s
1130	961				
		935.9	45	42115.5	59.0
1215	910.9				
		766.5	50	38,325	48.4
1305	622				
		502	55	27,610	31.7
1400	382				
MEAN	(718.9)(150 min) = 107835 gal			108,050.5 gal (TRUE ACTUAL)	⇐

FOR 1130 - 1400 - INDICATED

	INDICATED Q gpm	Q' gpm	PERIOD min.	TOTAL gal.
1130	737			
		711.5	45	32017.5
1215	686			
		594.5	50	29,725
1305	503			
		405.5	55	22302.5
1400	308			
MEAN	(558.5 gpm)(150 min) = 83775 gal			84,045 gal INDICATED ⇐

Oregon Department of Environmental Quality 2020 S.W. Fourth Avenue Portland, Oregon 97201 503-229-5263 FAX 503-229-6945	Calculations By: James R. Sheetz, P.E. Water Quality Source Control Section 503-229-5740

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TOTALIZER

INDICATED = 86,345 gal. (REPORTED VALUE)

CALC. FROM INSTANT. INDICATED. = 84,045 gal.

$Q_{1\ TOTAL} / Q_{2\ TOTAL} = \frac{86\,345}{84,045} = 1.027$

2.7%

TOTALIZER AND INDICATOR AGREE

TRUE (ACTUAL) TOTAL = 108,050.5 gal (150 min)

INDICATED TOTAL = 86,345 gal (REPORTED) (150 min)

$\frac{Q_{IND.}}{Q_{ACTUAL}} = \frac{86\,345\ gal}{108\,050.5} = 0.80$

TOTALIZER IS INDICATING 80% OF TRUE VALUE ⟸

(SHOULD BE 1 OR 2% OF TRUE VALUE)

FOR COMPLIANCE DETERMINATION USE THE TRUE ACTUAL VALUE

$Q = \left(\frac{108\,050.5\ gal}{150\ min}\right)\left(\frac{min}{60s}\right)\left(\frac{3.7854\ L}{gal}\right) = 45.94\ L/s$

Q_{TRUE} = 45.94 L/s (FROM 150 MIN SAMPLING)

Oregon Department of Environmental Quality
2020 S.W. Fourth Avenue
Portland, Oregon 97201
503-229-5263 FAX 503-229-6945

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Control Section 503-229-5740

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CHECK INFLUENT FLOW METER:

9" PARSHALL FLUME

H = 0.84' FROM STAFF GAGE

INDICATED FLOW = 1036 gpm

TRUE FLOW = 1055 gpm

$$\text{ACCURACY} = \frac{Q_{INDICATED}}{Q_{TRUE}} = \frac{1036}{1055} = 0.98$$

= 98% OK

INFLUENT METER IS WITHIN 98% OF TRUE – OK ⟸

CHECK TOTALIZER FOR MONTH OF DEC 98:

OVER 30 DAYS THE TOTAL INFLUENT FLOW AND THE TOTAL EFFLUENT FLOW SHOULD BE CLOSE (LESS THAN 5%)

SEE DEC 98 DMR

TOTAL INFLUENT = 27.462×10^6 GAL

" EFFLUENT 17.388×10^6 GAL

$$Q_{EFF}/Q_{IN} = \frac{17.388 \times 10^6}{27.462 \times 10^6} = 0.63 \quad 63\%$$

EFFL. 27% UNDER INFL. ⟸

Appendix C – Analysis of Fecal Coliform Test Procedures

Oregon Department of Environmental Quality
2020 S.W. Fourth Avenue
Portland, Oregon 97201
503-229-5263 FAX 503-229-6945

Calculations By:
James R. Sheetz, P.E.
Water Quality Source
Control Section 503-229-5740

Date:	**Project:**	**Page:**
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CHECK FC. REPORTING (EFFLUENT):

DATE	DILUTION mL	RAW COUNT no.	TRUE DENSITY	REPORTED DENSITY
7/6/98	10	0	$\frac{(0+3+5)(10^2)}{85\text{ mL}} = \frac{800}{85}$	7/100mL (BENCH) + DMR
	25	3		
	50	5	9.4/100mL	
7/10/98	10	1	$\frac{(1+4+6)(100)}{85} = \frac{1100}{85}$	10/100mL (BENCH) + DMR
	25	4		
	50	6	12.9/100mL	
7/20/98	10	2	$\frac{(2+6+10)(100)}{85} = \frac{1800}{85}$	20/100mL (BENCH) + DMR
	25	6		
	50	10	21.2/100mL	

OPERATOR COMPUTES DENSITY AS FOLLOWS:

		COUNT		DENSITY	
7/6/98	10mL	0	x	10	= 0
	25mL	3	x	4	= 12
	50mL	5	x	2	= 10
				22/3	= 7/100mL

MEAN OF DILUTIONS

STANDARD METHOD PROCEDURE IS:

$$\frac{(\Sigma \text{ COUNTS})(100)}{\text{TOTAL SAMPLE}} = \frac{(0+3+5)(100)}{85} = \frac{800}{85} =$$

9.4/100 mL

FECAL COLIFORM TEST PROCEDURE IS INCORRECT AND RESULTS IN UNDER REPORTING OF FC DENSITY ←

ALSO - SHOULD USE DILUTION WITH 20-60 COUNTS

City of Scappoose

Wastwater Treatnemt Plant

Laboratory Analysis

Date: 7, 6, 98 Duty Op. SMS/aeb

	INFLUENT	EFFLUENT	W A S SETTING	TIME
FINAL	9397047	93460361	Min. ON 2	
INITIAL	8930815	93230333	Min. OFF 58	
TOTAL MGD	.466	.237		

AERATION BASIN MLSS

	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.				
SETT.	220			
DRY WT.	42900	42900	43470	43470
TARE WT.	40680	41400	40460	41460
MLSS	2220	1500.	3010	2010.

SUSPENDED SOLIDS

	INFLUENT TOTAL	INFLUENT VOLATILE	EFFLUENT TOTAL	EFFLUENT VOLATILE
VOL.				
DRY WT.	40910	40910	40560	
TARE WT.	40360	40390	40530	
SUSPENDED	110	104.	3.0	

SUSPENDED SOLIDS

	STIENFELD TOTAL	STIENFELD VOLATILE	EFFLUENT TOTAL	EFFLUENT VOLATILE
VOL.				
DRY WT.	41820	41820		
TARE WT.	40500	40790		
SUSPENDED	264	206.		

DRYING OVEN TEMP.	FECAL/BATH TEMP.	BOD INCU. TEMP.	OTHER

METTLER BAL. TEMP.	INF. TEMP.	EFF. TEMP.	OTHER
	7.20	6.63	

FC

Fecal

FECAL

10 - 0 0

25 - 3 12

50 - 5 10

RAW - TNC

7/20

Steinfelds = 7.85

tapwater = 7.95

City of Scappoose

Wastewater Treatment Plant

Laboratory Analysis

Date: 7/10/98 Duty Op. DWS / SMS

	INFLUENT	EFFLUENT	W A S SETTING	TIME
FINAL	11831214	94632486	Min. ON 2	
INITIAL	11289420	94390318	Min. OFF 58	
TOTAL MGD	.542	.242		

AERATION BASIN MLSS

	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.				
SETT.				
DRY WT.	43310	43310	43010	
TARE WT.	40770	41620	40580	
MLSS	2540.	1690.	2430.	

SUSPENDED SOLIDS

	INFLUENT		EFFLUENT	
	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.				
DRY WT.	41380	41380	40890	
TARE WT.	40880	40860	40840	
SUSPENDED	100.	104.	5.0	

SUSPENDED SOLIDS

	STIENFELD		EFFLUENT	
	TOTAL	VOLATILE	TOTAL	VC
VOL.				
DRY WT.	42070			
TARE WT.	40890			
SUSPENDED	1.36.			

DRYING OVEN TEMP.	FECAL/BATH TEMP.	BOD INCU. TEMP.	OTHER

FC

METTLER BAL. TEMP.	INF. TEMP.	EFF. TEMP.	OTHER
	7.19	6.98	

Fecal

Fecal
10 - 1 10
25 - 4 17 = 10/100
50 6 12
RAW

Steinfelds 7.05
Tap Water 7.53

City of Scappoose

Wastwater Treatnemt Plant

Laboratory Analysis

Date: 7, 20, 98

Duty Op. SMS/aeb

	INFLUENT	EFFLUENT	W A S SETTING	TIME
FINAL	18043114	97679454	Min. ON 7	
INITIAL	17506870	97400228	Min. OFF 58	
TOTAL MGD	.536	.279		

AERATION BASIN MLSS

	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.				
SETT.	239			
DRY WT.	43220	43220	43280	
TARE WT.	40400	41470	40550	
MLSS	2820.	1750.	2730.	

SUSPENDED SOLIDS

	INFLUENT		EFFLUENT	
	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.				
DRY WT.	41750	41750	39940	
TARE WT.	40340	40830	39870	
SUSPENDED	282.	184.	7.0	

SUSPENDED SOLIDS

	STIENFELD		EFFLUENT	
	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.				
DRY WT.	41470			
TARE WT.	40930			
SUSPENDED	108.			

DRYING OVEN TEMP.	FECAL/BATH TEMP.	BOD INCU. TEMP.	OTHER

FC

METTLER BAL. TEMP.	INF. TEMP.	EFF. TEMP.	OTHER
	7.09	6.79	

Fecal

Fecal
10 - 2 20
25 - 6 24 (29/100)
50 - 10 20
RAW - TNC

Steinfelds = 6.86
tap water = 7.96

DATE	FLOW MGD		PLANT INFLUENT					PLANT EFFLUENT										
JULY 1998	INFL	EFF	PH	BOD MG/L	TSS SOLIDS	VOL. SOLIDS	TEMP	PH	DO MG/L	BOD MG/L	% BOD REM	LBS BOD DISC.	S.S. MG/L	% S.S. REM	LBS S.S. DISC.	FECAL COUNT	No. UV ON	UV DETN.
											****	****		****	****			****
01-Jul	0.601	0 296	7.3	210	126	122	18.0	6.5	5.4	3.5	98.3	9	3.0	97.6	7	2	2	4 00
02-Jul	0 508	0 224	7.2	195	226	192	18.0	6.5	5.2	3.2	98.4	6	6.0	97.3	11		2	5 29
03-Jul	0 726	0 385																
04-Jul	0 506	0 250																
05-Jul	0 485	0 215																
06-Jul	0 466	0 237	7 2	180	110	104	18 0	6 6	5 0	2 8	98.4	6	3 0	97 3	6	7	2	5 00
07-Jul	0 685	0 348	7 5	150	134	124	18.0	6.6	5.5	3.0	98.0	9	5.0	96.3	15		2	3 40
08-Jul	0 527	0 229	7.3	180	204	180	18 0	6.6	5.2	2.0	98 9	4	2 0	99 0	4	2	2	5 17
09-Jul	0 681	0 353	7 4	200	122	110	18 0	6.9	4.8	3.4	98 3	10	5.0	95.9	15		2	3 16
10-Jul	0 542	0 242	7 2	344	104	100	19 0	6.9	4.5	3.5	99 0	7	5.0	95 2	10	10	2	4 90
11-Jul	0 637	0 321																
12-Jul	0.739	0 331																
13-Jul	0 394	0 231	7.4	175	152	112	19.0	6.8	4.8	3.8	97.8	7	6 0	96.1	12		2	5.13
14-Jul	0.578	0.266	7 5	270	118	116	18.0	7.0	3.9	4.0	98.5	9	5.0	95.8	11	5	2	4 45
15-Jul	0.692	0.360	7 4	230	198	182	19.0	7.0	4.9	3.1	98.7	9	4.0	98.0	12		2	3 29
16-Jul	0.574	0 262	7.3	275	194	188	20.0	7.0	5.2	2.6	99.1	6	3.0	98.5	7		2	4 52
17-Jul	0.785	0.405	7.3	200	116	102	20.0	6.9	5.0	6.5	96.8	22	2.0	98.3	7		2	2.93
18-Jul	0.658	0.395																
19-Jul	0 610	0.250																
20-Jul	0.536	0 279	7 4	275	282	184	20.0	6.8	4.8	2.1	99.2	5	7.0	97.5	16	20	2	4.25
21-Jul	0 587	0.258	7.3	175	196	188	20.0	6.7	4.5	3.2	98.2	7	4 0	98.0	9		2	4.59
22-Jul	0 684	0.321	7 3	170	130	120	20.0	6.8	4.0	3.6	97.9	10	3 0	97.7	8	2	2	3 69
23-Jul	0 750	0 260	7.2	250	136	124	20 0	6.5	4.8	4.5	98.2	10	3.0	97 8	7		2	4.56
24-Jul	0 682	0 340	7 3	180	128	118	20.0	6 9	4.5	4.7	97.4	13	2 0	98.4	6	3	2	3 48
25-Jul	0 700	0 317																
26-Jul	0 708	0 370																
27-Jul	0.593	0 272	7.2	320	138	132	20.0	7.1	4.6	5.5	98.3	12	3.0	97.8	7		2	4.36
28-Jul	0 833	0.447	7 0	330	194	114	20.0	7.0	4.8	4.0	98.8	15	5.0	97.4	19	10	2	2 65
29-Jul	0 758	0 341	7.2	175	182	134	20.0	7.1	5.0	2.5	98.6	7	6.0	96.7	17		2	3.47
30-Jul	0 685	0.427	6 6	450	110	82	20.0	7.0	4.4	4.8	98.9	17	4.0	96.4	14	8	2	2.77
31-Jul	0 754	0.441	6 6	439	124	104	20 0	7.1	4.6	16.9	96.2	62	6.0	95.2	22		2	2 69
PERMIT	2 000	2.000	6 0/9 0	400	300			6.0/9.0		32.0			25.0			200		
STD DEV.	0 104	0 068	0 2	84	46	34	0.9	0.2	0.4	3.0			1.5			5		
AVERAGE	0.634	0.312		244	156	133	19.2		4.8	4.2	98.3	12	4.2	97.2	11	7	2	2 84
MINIMUM	0.394	0.215	6.6	150	104	82	18.0	6.5	3.9	2.0			2.0			2	2	
MAXIMUM	0 833	0 447	7.5	450	282	192	20.0	7.1	5.5	16.9	99.2	62	7.0	99.0	22	20	2	5 29
TOTAL	19 664	9 673																
DESIGN AVG	1 000	1 000		400	300	225	19.2	6.0	1.0	2.0	90.0	17	1.5	90.0	13		1	
DESIGN MAX	2 000	2 000		500	375	281	20.0	9.0	2.0	11.2	85.0	188	2.8	85.0	47		2	
7 Day Average																		
Week 1	0 568	0.279	7.3	184	149	136	18.0	6.6	5.3	3.1	98.3	4	4.3	97.1	6	5	2	2 53
Week 2	0 585	0 282	7 4	234	140	124	18 4	6.8	4.6	3.3	98 5	5	4 6	96 4	7	6	2	3 29
Week 3	0 635	0 316	7 3	231	197	169	19 8	6 9	4.9	3.5	98.4	7	4 0	98 0	7	20	2	2 80
Week 4	0 707	0 332	7 2	250	145	122	20 0	6 9	4.5	4.5	98.1	9	3 2	97 8	7	5	2	2 68

FECAL COLIFORM 9222 D

FROM 40CFR 136

TABLE IA.—LIST OF APPROVED BIOLOGICAL METHODS

1992

Parameter and units	Method [1]	EPA	Standard methods, 18th Ed.	ASTM	USGS
Bacteria:					
1. Coliform (fecal), number per 100 mL.	Most Probable Number (MPN), 5 tube	p. 132 [3]	9221C E [4]		
	3 dilution, or Membrane filter (MF) [2], single step	p. 124 [3]	9222D [4]		B-0050-85 [5]
2. Coliform (fecal) in presence of chlorine, number per 100 mL.	MPN, 5 tube, 3 dilution, or	p. 132 [3]	9221C E [4]		
	MF, single step [6]	p. 124 [3]	9222D [4]		
3. Coliform (total), number per 100 mL.	MPN, 5 tube, 3 dilution, or	p. 114 [3]	9221B [4]		
	MF [2] single step or two step	p. 108 [3]	9222B [4]		B-0025-85 [5]
4. Coliform (total), in presence of chlorine, number per 100 mL.	MPN, 5 tube, 3 dilution, or	p. 114 [3]	9221B [4]		
	MF [2] with enrichment	p. 111 [3]	9222(B+B.5c) [4]		
5. Fecal streptococci, number per 100 mL.	MPN, 5 tube, 3 dilution	p. 139 [3]	9230B [4]		
	MF [2], or	p. 136 [3]	9230C [4]		B-0055-85 [5]
	Plate count	p. 143 [3]			
Aquatic Toxicity:					
6. Toxicity, acute, fresh water organisms, LC50, percent effluent.	Daphnia, Ceriodaphnia, Fathead Minnow, Rainbow Trout, Brook Trout, or Bannerfish Shiner mortality.	Sec. 9 [7]			
7. Toxicity, acute, estuarine and marine organisms, LC50, percent effluent.	Mysid, Sheepshead Minnow, or Menidia spp. mortality	Sec. 9 [7]			
8. Toxicity, chronic, fresh water organisms, NOEC or IC25, percent effluent.	Fathead minnow larval survival and growth	1000.0 [8]			
	Fathead minnow embryo-larval survival and teratogenicity	1001.0 [8]			
	Ceriodaphnia survival and reproduction	1002.0 [8]			
	Selenastrum growth	1003.0 [8]			
9. Toxicity, chronic, estuarine and marine organisms, NOEC or IC25, percent effluent.	Sheepshead minnow larval survival and growth	1004.0 [9]			
	Sheepshead minnow embryo-larval survival and teratogenicity	1005.0 [9]			
	Menidia beryllina larval and growth	1006.0 [9]			
	Mysidopsis bahia survival, growth, and fecundity	1007.0 [9]			
	Arbacia punctulata fertilization	1008.0 [9]			
	Champia parvula reproduction	1009.0 [9]			

Notes to Table IA:

[1] The method must be specified when results are reported.

[2] A 0.45 um membrane filter (MF) or other pore size certified by the manufacturer to fully retain organisms to be cultivated and to be free of extractables which could interfere with their growth.

[3] USEPA. 1978. Microbiological Methods for Monitoring the Environment, Water, and Wastes. Environmental Monitoring and Support Laboratory, U.S. Environmental Protection Agency, Cincinnati, Ohio. EPA/600/8-78/017.

[4] APHA. 1992. Standard Methods for the Examination of Water and Wastewater. American Public Health Association. 18th Edition. Amer. Publ. Hlth. Assoc., Washington, DC.

[5] USGS. 1989. U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Laboratory Analysis, Chapter A4, Methods for Collection and Analysis of Aquatic Biological and Microbiological Samples, U.S. Geological Survey, U.S. Department of Interior, Reston, Virginia.

[6] Because the MF technique usually yields low and variable recovery from chlorinated wastewaters, the Most Probable Number method will be required to resolve any controversies.

[7] USEPA. 1993. Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms. Fourth Edition. Environmental Monitoring Systems Laboratory, U.S. Environmental Protection Agency, Cincinnati, Ohio. August 1993, EPA/600/4-90/027F.

20TH ED. STD METHODS

FECAL COLIFORM

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d. Alternative enrichment technique: Place a sterile absorbent pad in the lid of a sterile culture dish and pipet at least 2.0 mL lauryl tryptose broth, prepared as directed in 9221B.1.*a*1), to saturate pad. Carefully remove any excess liquid from absorbent pad by decanting plate. Aseptically place filter through which the sample has been passed on pad. Incubate filter, without inverting dish, for 1.5 to 2 h at 35 ± 0.5°C in an atmosphere of at least 60% relative humidity.

If the agar-based Endo-type medium is used, remove enrichment culture from incubator, lift filter from enrichment pad, and roll it onto the agar surface, which has been allowed to equilibrate to room temperature. Incorrect filter placement is at once obvious, because patches of unstained membrane indicate entrapment of air. Where such patches occur, carefully reseat filter on agar surface. If the liquid medium is used, prepare final culture by removing enrichment culture from incubator and separating the dish halves. Place a fresh sterile pad in bottom half of dish and saturate with at least 2.0 mL of M-Endo medium and carefully remove excess liquid from absorbent pad by decanting plate. Transfer filter, with same precautions as above, to new pad. Discard used enrichment pad.

With either the agar or the liquid medium, invert dish and incubate for 20 to 22 h at 35 ± 0.5°C. Proceed to ¶ *e* below.

e. Counting: To determine colony counts on membrane filters, use a low-power (10 to 15 magnifications) binocular wide-field dissecting microscope or other optical device, with a cool white fluorescent light source directed to provide optimal viewing of sheen. The typical coliform colony has a pink to dark-red color with a metallic surface sheen. Count both typical and atypical coliform colonies. The sheen area may vary in size from a small pinhead to complete coverage of the colony surface. Atypical coliform colonies can be dark red, mucoid, or nucleated without sheen. Generally pink, blue, white, or colorless colonies lacking sheen are considered noncoliforms. The total count of colonies (coliform and noncoliform) on Endo-type medium has no consistent relationship to the total number of bacteria present in the original sample. A high count of noncoliform colonies may interfere with the maximum development of coliforms. Refrigerating cultures (after 22 h incubation) with high densities of noncoliform colonies for 0.5 to 1 h before counting may deter spread of confluence while aiding sheen discernment.

Samples of disinfected water or wastewater effluent may include stressed organisms that grow relatively slowly and produce maximum sheen in 22 to 24 h. Organisms from undisinfected sources may produce sheen at 16 to 18 h, and the sheen subsequently may fade after 24 to 30 h.

f. Coliform verification: Occasionally, typical sheen colonies may be produced by noncoliform organisms and atypical colonies (dark red or nucleated colonies without sheen) may be coliforms. Preferably verify all typical and atypical colony types. For drinking water, verify all suspect colonies by swabbing the entire membrane or pick at least five typical colonies and five atypical colonies from a given membrane filter culture. For waters other than drinking water, at a minimum, verify at least 10 sheen colonies (and representative atypical colonies of different morphological types) from a positive water sample monthly. See Section 9020B.8. Based on need and sample type, laboratories may incorporate more stringent quality control measures (e.g., verify at least one colony from each typical or atypical colony type from a given membrane filter culture, verify 10% of the positive samples). Adjust counts on the basis of verification results. Verification tests are listed below.

1) Lactose fermentation—Transfer growth from each colony or swab the entire membrane with a sterile cotton swab (for presence-absence results in drinking water samples) and place in lauryl tryptose broth; incubate the lauryl tryptose broth at 35 ± 0.5°C for 48 h. Gas formed in lauryl tryptose broth and confirmed in brilliant green lactose broth (Section 9221B.2 for medium preparation) within 48 h verifies the colony as a coliform. Simultaneous inoculation of both media for gas production is acceptable. Inclusion of EC broth inoculation for 44.5 ± 0.2°C incubation will provide information on the presence of fecal coliforms. Use of EC-MUG with incubation at 44.5 ± 0.2°C for 24 h will provide information on presence of *E. coli*. See Section 9222G for MF partition procedures.

2) Alternative coliform verifications—Apply this alternative coliform verification procedure to isolated colonies on the membrane filter culture. If a mixed culture is suspected or if colony separation is less than 2 mm, streak the growth to M-Endo medium or MacConkey agar to assure culture purity or submit the mixed growth to the fermentation tube method.

a) Rapid test—A rapid verification of colonies utilizes test reactions for cytochrome oxidase (CO) and β-galactosidase. Coliform reactions are CO negative and β-galactosidase positive within 4 h incubation of tube culture or micro (spot) test procedure.

b) Commercial multi-test systems—Verify the colony by streaking it for purification, selecting a well-isolated colony, and inoculating into a multi-test identification system for Enterobacteriaceae that includes lactose fermentation and/or β-galactosidase and CO test reactions.

6. Calculation of Coliform Density

Compute the count, using membrane filters with 20 to 80 coliform colonies and not more than 200 colonies of all types per membrane, by the following equation:

$$\text{(Total) coliforms/100 mL} = \frac{\text{coliform colonies counted} \times 100}{\text{mL sample filtered}}$$

If no coliform colonies are observed, report the coliform colonies counted as "<1 coliform/100 mL."

For verified coliform counts, adjust the initial count based upon the positive verification percentage and report as "verified coliform count/100 mL."

$$\text{Percentage verified coliforms} = \frac{\text{number of verified colonies}}{\text{total number of coliform colonies subjected to verification}} \times 100$$

g. Water of drinking water quality: While the EPA Total Coliform Rule for public water supply samples requires only a record of coliform presence or absence in 100-mL samples, it may be advisable to determine coliform densities in repeat sampling situations. This is of particular importance when a coliform biofilm problem is suspected in the distribution system. Quantitative information may provide an indication of the magnitude of a contaminating event.

With water of good quality, the occurrence of coliforms generally will be minimal. Therefore, count all coliform colonies (dis-

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regarding the lower limit of 20 cited above) and use the formula given above to obtain coliform density.

If confluent growth occurs, covering either the entire filtration area of the membrane or a portion thereof, and colonies are not discrete, report results as "confluent growth with (or without) coliforms." If the total number of bacterial colonies, coliforms plus noncoliforms, exceeds 200 per membrane, or if the colonies are not distinct enough for accurate counting, report results as "too numerous to count" (TNTC) or "confluent," respectively. For drinking water, the presence of coliforms in such cultures showing no sheen may be confirmed by either transferring a few colonies or placing the entire membrane filter culture into a sterile tube of brilliant green lactose bile broth. As an alternative, brush the entire filter surface with a sterile loop, applicator stick, or cotton swab and inoculate this growth to the tube of brilliant green lactose bile broth. If gas is produced from the brilliant green bile broth tube within 48 h at 35 ± 0.5°C, coliforms are present. For compliance with the EPA Total Coliform Rule, report confluent growth or TNTC with at least one detectable coliform colony (which is verified) as a total coliform positive sample. Report confluent growth or TNTC without detectable coliforms as invalid. For invalid samples, request a new sample from the same location within 24 h and select more appropriate volumes to be filtered per membrane, observing the requirement that the standard drinking water portion is 100 mL, or choose another coliform method that is less subject to heterotrophic bacterial interferences. Thus, to reduce interference from overcrowding, instead of filtering 100 mL per membrane, filter 50-mL portions through two separate membranes, 25-mL portions through each of four membranes, etc. Total the coliform counts observed on all membranes and report as number per 100 mL.

b. Water of other than drinking water quality: As with potable water samples, if no filter has a coliform count falling in the ideal range, total the coliform counts on all filters and report as number per 100 mL. For example, if duplicate 50-mL portions were examined and the two membranes had five and three coliform colonies, respectively, report the count as eight coliform colonies per 100 mL, i.e.,

$$\frac{[(5 + 3) \times 100]}{(50 + 50)} = 8 \text{ coliforms/100 mL}$$

Similarly, if 50-, 25-, and 10-mL portions were examined and the counts were 15, 6, and <1 coliform colonies, respectively, report the count as 25/100 mL, i.e.,

$$\frac{[(15 + 6 + 0) \times 100]}{(50 + 25 + 10)} = 25 \text{ coliforms/100 mL}$$

On the other hand, if 10-, 1.0-, and 0.1-mL portions were examined with counts of 40, 9, and <1 coliform colonies, respectively, select the 10-mL portion only for calculating the coliform density because this filter had a coliform count falling in the ideal range. The result is 400/100 mL, i.e.,

$$\frac{(40 \times 100)}{10} = 400 \text{ coliforms/100 mL}$$

In this last example, if the membrane with 40 coliform colonies also had a total bacterial colony count greater than 200, report the coliform count as ≥400/100 mL.

TABLE 9222:II. CONFIDENCE LIMITS FOR MEMBRANE FILTER COLIFORM RESULTS USING 100-mL SAMPLE

Number of Coliform Colonies Counted	95% Confidence Limits	
	Lower	Upper
0	0.0	3.7
1	0.1	5.6
2	0.2	7.2
3	0.6	8.8
4	1.0	10.2
5	1.6	11.7
6	2.2	13.1
7	2.8	14.4
8	3.4	15.8
9	4.0	17.1
10	4.7	18.4
11	5.4	19.7
12	6.2	21.0
13	6.9	22.3
14	7.7	23.5
15	8.4	24.8
16	9.2	26.0
17	9.9	27.2
18	10.7	28.4
19	11.5	29.6
20	12.2	30.8

Report confluent growth or membranes with colonies too numerous to count as described in *a* above. Request a new sample and select more appropriate volumes for filtration or utilize the multiple-tube fermentation technique.

c. Statistical reliability of membrane filter results: Although the precision of the MF technique is greater than that of the MPN procedure, membrane counts may underestimate the number of viable coliform bacteria. Table 9222:II illustrates some 95% confidence limits. These values are based on the assumption that bacteria are distributed randomly and follow a Poisson distribution. For results with counts, c, greater than 20 organisms, calculate the approximate 95% confidence limits using the following normal distribution equations:

$$\text{Upper limit} = c + 2\sqrt{c} \quad \text{Lower limit} = c - 2\sqrt{c}$$

7. Bibliography

FIFIELD, C.W. & C.P. SCHAUFUS. 1958. Improved membrane filter medium for the detection of coliform organisms. *J. Amer. Water Works Assoc.* 50:193.

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GELDREICH, E.E., H.L. JETER & J.A. WINTER. 1967. Technical considerations in applying the membrane filter procedure. *Health Lab. Sci.* 4:113.

WATLING, H.R. & R.J. WATLING. 1975. Note on the trace metal content of membrane filters. *Water SA* 1:28.

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water through filter. If controls indicate contamination, reject all data from affected samples and request resample.

b. Culture dishes: Tight-fitting plastic dishes are preferred because the membrane filter cultures are submerged in a water bath during incubation. Place fecal coliform cultures in plastic bags or seal individual dishes with waterproof (freezer) tape to prevent leakage during submersion. Specifications for plastic culture dishes are given in Section 9222B.1*e*.

c. Incubator: The specificity of the fecal coliform test is related directly to the incubation temperature. Static air incubation may be a problem in some types of incubators because of potential heat layering within the chamber, slower heat transfer from air to the medium, and the slow recovery of temperature each time the incubator is opened during daily operations. To meet the need for greater temperature control use a water bath, a heat-sink incubator, or a properly designed and constructed incubator shown to give equivalent results. A temperature tolerance of 44.5 ± 0.2°C can be obtained with most types of water baths that also are equipped with a gable top for the reduction of water and heat losses.

2. Procedure

a. Selection of sample size: Select volume of water sample to be examined in accordance with the information in Table 9222: III. Use sample volumes that will yield counts between 20 and 60 fecal coliform colonies per membrane.

When the bacterial density of the sample is unknown, filter several volumes or dilutions to achieve a countable density. Estimate volume and/or dilution expected to yield a countable membrane and select two additional quantities representing one-tenth and ten times this volume, respectively.

b. Filtration of sample: Follow the same procedure and precautions as prescribed under Section 9222B.5*b* above.

c. Preparation of culture dish: Place a sterile absorbent pad in each culture dish and pipet at least 2.0 mL M-FC medium, prepared as directed above, to saturate pad. Carefully remove any excess liquid from culture dish by decanting the plate. Aseptically, place prepared filter on medium-impregnated pad as described in Section 9222B above.

As a substrate substitution for the nutrient-saturated absorbent pad, add 1.5% agar to M-FC broth as described in Section 9222B above.

d. Incubation: Place prepared dishes in waterproof plastic bags or seal, invert, and submerge petri dishes in water bath, and incubate for 24 ± 2 h at 44.5 ± 0.2°C. Anchor dishes below water surface to maintain critical temperature requirements. Place all prepared cultures in the water bath within 30 min after filtration. Alternatively, use an appropriate, accurate solid heat sink or equivalent incubator.

e. Counting: Colonies produced by fecal coliform bacteria on M-FC medium are various shades of blue. Nonfecal coliform colonies are gray to cream-colored. Normally, few nonfecal coliform colonies will be observed on M-FC medium because of selective action of the elevated temperature and addition of rosolic acid salt reagent. Count colonies with a low-power (10 to 15 magnifications) binocular wide-field dissecting microscope or other optical device.

f. Verification: Verify typical blue colonies and any atypical grey to green colonies as described in Section 9020 for fecal coliform analysis. Simultaneous inoculation at both temperatures is acceptable.

3. Calculation of Fecal Coliform Density

a. General: Compute the density from the sample quantities that produced MF counts within the desired range of 20 to 60 fecal coliform colonies. This colony density range is more restrictive than the 20 to 80 total coliform range because of larger colony size on M-FC medium. Calculate fecal coliform density as directed in Section 9222B.6 above. Record densities as fecal coliforms per 100 mL.

b. Sediment and biosolid samples: For total solid (dry weight basis) see Section 2540G.

Calculate fecal coliforms per gram dry weight for biosolid analysis as follows:

$$\text{Fecal coliforms per gram dry weight} = \frac{\text{colonies counted}}{(\text{dilution chosen}) \times (\%\ \text{dry solids})}$$

where dilution and % dry solids are expressed in decimal form.

Example 1: There were 22 colonies observed on the 1:10 000 dilution plate of a biosolid with 4% dry solids.

$$\frac{22}{(0.0001)(0.04)} = 5.5 \times 10^6 \text{ fecal coliform/g dry weight}$$

If no filter has a coliform count falling in the ideal range (20

Table 9222:III. Suggested Samples Volumes for Membrane Filter Fecal Coliform Test

	Volume (*V*) To Be Filtered, *mL*							
Water Source	100	50	10	1	0.1	0.01	0.001	0.0001
Lakes, reservoirs	X	X						
Wells, springs	X	X						
Water supply intake		X	X	X				
Natural bathing waters		X	X	X				
Sewage treatment plant			X	X	X			
Farm ponds, rivers				X	X	X		
Stormwater runoff				X	X	X		
Raw municipal sewage					X	X	X	
Feedlot runoff					X	X	X	
Sewage sludge						X	X	X

Appendix D – Analysis of BOD Test Procedures

5210 BIOCHEMICAL OXYGEN DEMAND (BOD)*

5210 A. Introduction

1. General Discussion

The biochemical oxygen demand (BOD) determination is an empirical test in which standardized laboratory procedures are used to determine the relative oxygen requirements of wastewaters, effluents, and polluted waters. The test has its widest application in measuring waste loadings to treatment plants and in evaluating the BOD-removal efficiency of such treatment systems. The test measures the molecular oxygen utilized during a specified incubation period for the biochemical degradation of organic material (carbonaceous demand) and the oxygen used to oxidize inorganic material such as sulfides and ferrous iron. It also may measure the amount of oxygen used to oxidize reduced forms of nitrogen (nitrogenous demand) unless their oxidation is prevented by an inhibitor. The seeding and dilution procedures provide an estimate of the BOD at pH 6.5 to 7.5.

Measurements of oxygen consumed in a 5-d test period (5-d BOD or BOD_5, 5210B), oxygen consumed after 60 to 90 d of incubation (ultimate BOD or UBOD, 5210C), and continuous oxygen uptake (respirometric method, 5210D) are described here. Many other variations of oxygen demand measurements exist, including using shorter and longer incubation periods and tests to determine rates of oxygen uptake. Alternative seeding, dilution, and incubation conditions can be chosen to mimic receiving-water conditions, thereby providing an estimate of the environmental effects of wastewaters and effluents.

The UBOD measures the oxygen required for the total degradation of organic material (ultimate carbonaceous demand) and/or the oxygen to oxidize reduced nitrogen compounds (ultimate nitrogenous demand). UBOD values and appropriate kinetic descriptions are needed in water quality modeling studies such as UBOD: BOD_5 ratios for relating stream assimilative capacity to regulatory requirements; definition of river, estuary, or lake deoxygenation kinetics; and instream ultimate carbonaceous BOD (UCBOD) values for model calibration.

2. Carbonaceous Versus Nitrogenous BOD

A number of factors, for example, soluble versus particulate organics, settleable and floatable solids, oxidation of reduced iron and sulfur compounds, or lack of mixing may affect the accuracy and precision of BOD measurements. Presently, there is no way to include adjustments or corrections to account for the effect of these factors.

Oxidation of reduced forms of nitrogen, such as ammonia and organic nitrogen, can be mediated by microorganisms and exert nitrogenous demand. Nitrogenous demand historically has been considered an interference in the determination of BOD, as clearly evidenced by the inclusion of ammonia in the dilution water. The interference from nitrogenous demand can now be prevented by an inhibitory chemical.[1] If an inhibiting chemical is not used, the oxygen demand measured is the sum of carbonaceous and nitrogenous demands.

Measurements that include nitrogenous demand generally are not useful for assessing the oxygen demand associated with organic material. Nitrogenous demand can be estimated directly from ammonia nitrogen (Section 4500-NH_3); and carbonaceous demand can be estimated by subtracting the theoretical equivalent of the reduced nitrogen oxidation from uninhibited test results. However, this method is cumbersome and is subject to considerable error. Chemical inhibition of nitrogenous demand provides a more direct and more reliable measure of carbonaceous demand.

The extent of oxidation of nitrogenous compounds during the 5-d incubation period depends on the concentration and type of microorganisms capable of carrying out this oxidation. Such organisms usually are not present in raw or settled primary sewage in sufficient numbers to oxidize sufficient quantities of reduced nitrogen forms in the 5-d BOD test. Many biological treatment plant effluents contain sufficient numbers of nitrifying organisms to cause nitrification in BOD tests. Because oxidation of nitrogenous compounds can occur in such samples, inhibition of nitrification as directed in 5210B.4e6) is recommended for samples of secondary effluent, for samples seeded with secondary effluent, and for samples of polluted waters.

Report results as carbonaceous biochemical oxygen demand ($CBOD_5$) when inhibiting the nitrogenous oxygen demand. When nitrification is not inhibited, report results as BOD_5.

3. Dilution Requirements

The BOD concentration in most wastewaters exceeds the concentration of dissolved oxygen (DO) available in an air-saturated sample. Therefore, it is necessary to dilute the sample before incubation to bring the oxygen demand and supply into appropriate balance. Because bacterial growth requires nutrients such as nitrogen, phosphorus, and trace metals, these are added to the dilution water, which is buffered to ensure that the pH of the incubated sample remains in a range suitable for bacterial growth. Complete stabilization of a sample may require a period of incubation too long for practical purposes; therefore, 5 d has been accepted as the standard incubation period.

If the dilution water is of poor quality, the BOD of the dilution water will appear as sample BOD. This effect will be amplified by the dilution factor. A positive bias will result. The methods included below (5210B and 5210C) contain both a dilution-water check and a dilution-water blank. Seeded dilution waters are checked further for acceptable quality by measuring their consumption of oxygen from a known organic mixture, usually glucose and glutamic acid.

The source of dilution water is not restricted and may be distilled, tap, or receiving-stream water free of biodegradable organics and bioinhibitory substances such as chlorine or heavy metals. Distilled water may contain ammonia or volatile organics; deionized waters often are contaminated with soluble organics leached from the resin bed. Use of copper-lined stills or copper fittings

* Approved by Standard Methods Committee, 1997.

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Colorimetric (aluminon)		3500-Be D			
9. Biochemical oxygen demand (BOD_5), mg/L:					
Dissolved Oxygen Depletion	405.1	5210 B		I-1578-78[8]	973.44,[3] p. 17.[9]
10. Boron[37]—Total, mg/L:					
Colorimetric (curcumin)	212.3	4500-B B		I-3112-85	
ICP/AES, or	[6]200.7	3120 B			
DCP			D4190-82(88)		Note 34
11. Bromide, mg/L:					
Titrimetric	320.1		D1246-82(88)(C)	I-1125-85	p. S44.[10]
12. Cadmium—Total,[4] mg/L; Digestion[4] followed by:					
AA direct aspiration[36]	213.1	3111 B or C	D3557-90(A or B)	I-3135-85 or I-3136-85	974.27,[3] p. 37.[9]
AA furnace	213.2	3113 B	D3557-90(D)		
ICP/AES[36]	[6]200.7	3120 B		I-1472-85	
DCP[36]			D4190-82(88)		Note 34.
Voltametry,[11] or			D3557-90(C)		
Colorimetric (Dithizone)		3500-Cd D			
13. Calcium—Total,[4] mg/L; Digestion[4] followed by:					
AA direct aspiration	215.1	3111 B	D511-93(B)	I-3152-85	
ICP/AES	[6]200.7	3120 B			
DCP, or					Note 34.
Titrimetric (EDTA)	215.2	3500-Ca D	D511-93(A)		
14. Carbonaceous biochemical oxygen demand ($CBOD_5$), mg/L[12]:					
Dissolved Oxygen Depletion with nitrification inhibitor		5210 B			
15. Chemical oxygen demand (COD), mg/L; Titrimetric, or.	410.1	5220 C	D1252-88(A)	I-3560-85	973.46,[3] p. 17.[9]
	410.2			I-3562-85	
	410.3				
Spectrophotometric, manual or automated	410.4	5220 D	D1252-88(B)	I-3561-85	Notes 13 or 14.
16. Chloride, mg/L:					
Titrimetric (silver nitrate) or		4500-Cl^- B	D512-89(B)	I-1183-85	
(Mercuric nitrate)	325.3	4500-Cl^- C	D512-89(A)	I-1184-85	973.51.[3]
Colorimetric, manual or				I-1187-85	
Automated (Ferricyanide)	325.1 or 325.2	4500-Cl E		I-2187-85	
17. Chlorine—Total residual, mg/L; Titrimetric:					
Amperometric direct	330.1	4500-Cl D	D1253-86(92)		
Iodometric direct	330.3	4500-Cl B			
Back titration ether end- point[15] or	330.2	4500-Cl C			
DPD-FAS	330.4	4500-Cl F			
Spectrophotometric, DPD	330.5	4500-Cl G			
Or Electrode					Note 16.
18. Chromium VI dissolved, mg/L; 0.45 micron filtration followed by:					
AA chelation-extraction or	218.4	3111 C		I-1232-85	
Colorimetric (Diphenylcarbazide)		3500-Cr D	D1687-92(A)	I-1230-85	
19. Chromium—Total,[4] mg/L; Digestion[4] followed by:					
AA direct aspiration[36]	218.1	3111 B	D1687-92(B)	I-3236-85	974.27.[3]
AA chelation-extraction	218.3	3111 C			
AA furnace	218.2	3113 B	D1687-92(C)		
ICP/AES[36]	[6]200.7	3120 B			

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attached to distilled water lines may produce water containing excessive amounts of copper (see Section 3500-Cu).

4. Reference

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5210 B. 5-Day BOD Test

1. General Discussion

a. Principle: The method consists of filling with sample, to overflowing, an airtight bottle of the specified size and incubating it at the specified temperature for 5 d. Dissolved oxygen is measured initially and after incubation, and the BOD is computed from the difference between initial and final DO. Because the initial DO is determined shortly after the dilution is made, all oxygen uptake occurring after this measurement is included in the BOD measurement.

b. Sampling and storage: Samples for BOD analysis may degrade significantly during storage between collection and analysis, resulting in low BOD values. Minimize reduction of BOD by analyzing sample promptly or by cooling it to near-freezing temperature during storage. However, even at low temperature, keep holding time to a minimum. Warm chilled samples to 20 ± 3°C before analysis.

1) Grab samples—If analysis is begun within 2 h of collection, cold storage is unnecessary. If analysis is not started within 2 h of sample collection, keep sample at or below 4°C from the time of collection. Begin analysis within 6 h of collection; when this is not possible because the sampling site is distant from the laboratory, store at or below 4°C and report length and temperature of storage with the results. In no case start analysis more than 24 h after grab sample collection. When samples are to be used for regulatory purposes make every effort to deliver samples for analysis within 6 h of collection.

2) Composite samples—Keep samples at or below 4°C during compositing. Limit compositing period to 24 h. Use the same criteria as for storage of grab samples, starting the measurement of holding time from end of compositing period. State storage time and conditions as part of the results.

2. Apparatus

a. Incubation bottles: Use glass bottles having 60 mL or greater capacity (300-mL bottles having a ground-glass stopper and a flared mouth are preferred). Clean bottles with a detergent, rinse thoroughly, and drain before use. As a precaution against drawing air into the dilution bottle during incubation, use a water seal. Obtain satisfactory water seals by inverting bottles in a water bath or by adding water to the flared mouth of special BOD bottles. Place a paper or plastic cup or foil cap over flared mouth of bottle to reduce evaporation of the water seal during incubation.

b. Air incubator or water bath, thermostatically controlled at 20 ± 1°C. Exclude all light to prevent possibility of photosynthetic production of DO.

3. Reagents

Prepare reagents in advance but discard if there is any sign of precipitation or biological growth in the stock bottles. Commercial equivalents of these reagents are acceptable and different stock concentrations may be used if doses are adjusted proportionally.

a. Phosphate buffer solution: Dissolve 8.5 g KH_2PO_4, 21.75 g K_2HPO_4, 33.4 g $Na_2HPO_4 \cdot 7H_2O$, and 1.7 g NH_4Cl in about 500 mL distilled water and dilute to 1 L. The pH should be 7.2 without further adjustment. Alternatively, dissolve 42.5 g KH_2PO_4 or 54.3 g K_2HPO_4 in about 700 mL distilled water. Adjust pH to 7.2 with 30% NaOH and dilute to 1 L.

b. Magnesium sulfate solution: Dissolve 22.5 g $MgSO_4 \cdot 7H_2O$ in distilled water and dilute to 1 L.

c. Calcium chloride solution: Dissolve 27.5 g $CaCl_2$ in distilled water and dilute to 1 L.

d. Ferric chloride solution: Dissolve 0.25 g $FeCl_3 \cdot 6H_2O$ in distilled water and dilute to 1 L.

e. Acid and alkali solutions, 1N, for neutralization of caustic or acidic waste samples.

1) Acid—Slowly and while stirring, add 28 mL conc sulfuric acid to distilled water. Dilute to 1 L.

2) Alkali—Dissolve 40 g sodium hydroxide in distilled water. Dilute to 1 L.

f. Sodium sulfite solution: Dissolve 1.575 g Na_2SO_3 in 1000 mL distilled water. This solution is not stable; prepare daily.

g. Nitrification inhibitor, 2-chloro-6-(trichloromethyl) pyridine.*

h. Glucose-glutamic acid solution: Dry reagent-grade glucose and reagent-grade glutamic acid at 103°C for 1 h. Add 150 mg glucose and 150 mg glutamic acid to distilled water and dilute to 1 L. Prepare fresh immediately before use.

* Nitrification Inhibitor, Formula 2533, Hach Co., Loveland, CO, or equivalent.

i. Ammonium chloride solution: Dissolve 1.15 g NH_4Cl in about 500 mL distilled water, adjust pH to 7.2 with NaOH solution, and dilute to 1 L. Solution contains 0.3 mg N/mL.

j. Dilution water: Use demineralized, distilled, tap, or natural water for making sample dilutions.

4. Procedure

a. Preparation of dilution water: Place desired volume of water (¶ 3*j*) in a suitable bottle and add 1 mL each of phosphate buffer, $MgSO_4$, $CaCl_2$, and $FeCl_3$ solutions/L of water. Seed dilution water, if desired, as described in ¶ 4*d*. Test dilution water as described in ¶ 4*h* so that water of assured quality always is on hand.

Before use bring dilution water temperature to 20 ± 3°C. Saturate with DO by shaking in a partially filled bottle or by aerating with organic-free filtered air. Alternatively, store in cotton-plugged bottles long enough for water to become saturated with DO. Protect water quality by using clean glassware, tubing, and bottles.

b. Dilution water storage: Source water (¶ 3*f*) may be stored before use as long as the prepared dilution water meets quality control criteria in the dilution water blank (¶ 4*h*). Such storage may improve the quality of some source waters but may allow biological growth to cause deterioration in others. Preferably do not store prepared dilution water for more than 24 h after adding nutrients, minerals, and buffer unless dilution water blanks consistently meet quality control limits. Discard stored source water if dilution water blank shows more than 0.2 mg/L DO depletion in 5 d.

c. Glucose-glutamic acid check: Because the BOD test is a bioassay its results can be influenced greatly by the presence of toxicants or by use of a poor seeding material. Distilled waters frequently are contaminated with copper; some sewage seeds are relatively inactive. Low results always are obtained with such seeds and waters. Periodically check dilution water quality, seed effectiveness, and analytical technique by making BOD measurements on a mixture of 150 mg glucose/L and 150 mg glutamic acid/L as a "standard" check solution. Glucose has an exceptionally high and variable oxidation rate but when it is used with glutamic acid, the oxidation rate is stabilized and is similar to that obtained with many municipal wastes. Alternatively, if a particular wastewater contains an identifiable major constituent that contributes to the BOD, use this compound in place of the glucose-glutamic acid.

Determine the 5-d 20°C BOD of a 2% dilution of the glucose-glutamic acid standard check solution using the techniques outlined in ¶s 4*d-j*. Adjust concentrations of commercial mixtures to give 3 mg/L glucose and 3 mg/L glutamic acid in each GGA test bottle. Evaluate data as described in ¶ 6, Precision and Bias.

d. Seeding:

1) Seed source—It is necessary to have present a population of microorganisms capable of oxidizing the biodegradable organic matter in the sample. Domestic wastewater, unchlorinated or otherwise-undisinfected effluents from biological waste treatment plants, and surface waters receiving wastewater discharges contain satisfactory microbial populations. Some samples do not contain a sufficient microbial population (for example, some untreated industrial wastes, disinfected wastes, high-temperature wastes, or wastes with extreme pH values). For such wastes seed the dilution water or sample by adding a population of microorganisms. The preferred seed is effluent or mixed liquor from a biological treatment system processing the waste. Where such seed is not available, use supernatant from domestic wastewater after settling at room temperature for at least 1 h but no longer than 36 h. When effluent or mixed liquor from a biological treatment process is used, inhibition of nitrification is recommended.

Some samples may contain materials not degraded at normal rates by the microorganisms in settled domestic wastewater. Seed such samples with an adapted microbial population obtained from the undisinfected effluent or mixed liquor of a biological process treating the waste. In the absence of such a facility, obtain seed from the receiving water below (preferably 3 to 8 km) the point of discharge. When such seed sources also are not available, develop an adapted seed in the laboratory by continuously aerating a sample of settled domestic wastewater and adding small daily increments of waste. Optionally use a soil suspension or activated sludge, or a commercial seed preparation to obtain the initial microbial population. Determine the existence of a satisfactory population by testing the performance of the seed in BOD tests on the sample. BOD values that increase with time of adaptation to a steady high value indicate successful seed adaptation.

2) Seed control—Determine BOD of the seeding material as for any other sample. This is the *seed control.* From the value of the seed control and a knowledge of the seeding material dilution (in the dilution water) determine seed DO uptake. Ideally, make dilutions of seed such that the largest quantity results in at least 50% DO depletion. A plot of DO depletion, in milligrams per liter, versus milliliters of seed for all bottles having a 2-mg/L depletion and a 1.0-mg/L minimum residual DO should present a straight line for which the slope indicates DO depletion per milliliter of seed. The DO-axis intercept is oxygen depletion caused by the dilution water and should be less than 0.1 mg/L (¶ 4*h*). Alternatively, divide DO depletion by volume of seed in milliliters for each seed control bottle having a 2-mg/L depletion and a 1.0-mg/L residual DO. Average the results for all bottles meeting minimum depletion and residual DO criteria. The DO uptake attributable to the seed added to each bottle should be between 0.6 and 1.0 mg/L, but the amount of seed added should be adjusted from this range to that required to provide glucose-glutamic acid check results in the range of 198 ± 30.5 mg/L. To determine DO uptake for a test bottle, subtract DO uptake attributable to the seed from total DO uptake (see ¶ 5).

Techniques for adding seeding material to dilution water are described for two sample dilution methods (¶ 4*f*).

e. Sample pretreatment: Check pH of all samples before testing unless previous experience indicates that pH is within the acceptable range.

1) Samples containing caustic alkalinity (pH >8.5) or acidity (pH <6.0)—Neutralize samples to pH 6.5 to 7.5 with a solution of sulfuric acid (H_2SO_4) or sodium hydroxide (NaOH) of such strength that the quantity of reagent does not dilute the sample by more than 0.5%. The pH of dilution water should not be affected by the lowest sample dilution. Always seed samples that have been pH-adjusted.

2) Samples containing residual chlorine compounds—If possible, avoid samples containing residual chlorine by sampling ahead of chlorination processes. If the sample has been chlorinated but no detectable chlorine residual is present, seed the dilution water. If residual chlorine is present, dechlorinate sample and seed the dilution water (¶ 4*f*). Do not test chlorinated/dechlorinated samples without seeding the dilution water. In some

samples chlorine will dissipate within 1 to 2 h of standing in the light. This often occurs during sample transport and handling. For samples in which chlorine residual does not dissipate in a reasonably short time, destroy chlorine residual by adding Na_2SO_3 solution. Determine required volume of Na_2SO_3 solution on a 100- to 1000-mL portion of neutralized sample by adding 10 mL of 1 + 1 acetic acid or 1 + 50 H_2SO_4, 10 mL potassium iodide (KI) solution (10 g/100 mL) per 1000 mL portion, and titrating with Na_2SO_3 solution to the starch-iodine end point for residual. Add to neutralized sample the relative volume of Na_2SO_3 solution determined by the above test, mix, and after 10 to 20 min check sample for residual chlorine. (NOTE: Excess Na_2SO_3 exerts an oxygen demand and reacts slowly with certain organic chloramine compounds that may be present in chlorinated samples.)

3) Samples containing other toxic substances—Certain industrial wastes, for example, plating wastes, contain toxic metals. Such samples often require special study and treatment.

4) Samples supersaturated with DO—Samples containing more than 9 mg DO/ L at 20°C may be encountered in cold waters or in water where photosynthesis occurs. To prevent loss of oxygen during incubation of such samples, reduce DO to saturation at 20°C by bringing sample to about 20°C in partially filled bottle while agitating by vigorous shaking or by aerating with clean, filtered compressed air.

5) Sample temperature adjustment—Bring samples to 20 ± 1°C before making dilutions.

6) Nitrification inhibition—If nitrification inhibition is desired add 3 mg 2-chloro-6-(trichloro methyl) pyridine (TCMP) to each 300-mL bottle before capping or add sufficient amounts to the dilution water to make a final concentration of 10 mg/L. (NOTE: Pure TCMP may dissolve slowly and can float on top of the sample. Some commercial formulations dissolve more readily but are not 100% TCMP; adjust dosage accordingly.) Samples that may require nitrification inhibition include, but are not limited to, biologically treated effluents, samples seeded with biologically treated effluents, and river waters. Note the use of nitrogen inhibition in reporting results.

f. Dilution technique: Make several dilutions of sample that will result in a residual DO of at least 1 mg/L and a DO uptake of at least 2 mg/L after a 5-d incubation. Five dilutions are recommended unless experience with a particular sample shows that use of a smaller number of dilutions produces at least two bottles giving acceptable minimum DO depletion and residual limits. A more rapid analysis, such as COD, may be correlated approximately with BOD and serve as a guide in selecting dilutions. In the absence of prior knowledge, use the following dilutions: 0.0 to 1.0% for strong industrial wastes, 1 to 5% for raw and settled wastewater, 5 to 25% for biologically treated effluent, and 25 to 100% for polluted river waters.

Prepare dilutions either in graduated cylinders or volumetric glassware, and then transfer to BOD bottles or prepare directly in BOD bottles. Either dilution method can be combined with any DO measurement technique. The number of bottles to be prepared for each dilution depends on the DO technique and the number of replicates desired.

When using graduated cylinders or volumetric flasks to prepare dilutions, and when seeding is necessary, add seed either directly to dilution water or to individual cylinders or flasks before dilution. Seeding of individual cylinders or flasks avoids a declining ratio of seed to sample as increasing dilutions are made. When dilutions are prepared directly in BOD bottles and when seeding is necessary, add seed directly to dilution water or directly to the BOD bottles. When a bottle contains more than 67% of the sample after dilution, nutrients may be limited in the diluted sample and subsequently reduce biological activity. In such samples, add the nutrient, mineral, and buffer solutions (¶ 3*a* through *e*) directly to individual BOD bottles at a rate of 1 mL/L (0.33 mL/ 300-mL bottle) or use commercially prepared solutions designed to dose the appropriate bottle size.

1) Dilutions prepared in graduated cylinders or volumetric flasks—If the azide modification of the titrimetric iodometric method (Section 4500-O.C) is used, carefully siphon dilution water, seeded if necessary, into a 1- to 2-L-capacity flask or cylinder. Fill half full without entraining air. Add desired quantity of carefully mixed sample and dilute to appropriate level with dilution water. Mix well with a plunger-type mixing rod; avoid entraining air. Siphon mixed dilution into two BOD bottles. Determine initial DO on one of these bottles. Stopper the second bottle tightly, water-seal, and incubate for 5 d at 20°C. If the membrane electrode method is used for DO measurement, siphon dilution mixture into one BOD bottle. Determine initial DO on this bottle and replace any displaced contents with sample dilution to fill the bottle. Stopper tightly, water-seal, and incubate for 5 d at 20°C.

2) Dilutions prepared directly in BOD bottles—Using a wide-tip volumetric pipet, add the desired sample volume to individual BOD bottles of known capacity. Add appropriate amounts of seed material either to the individual BOD bottles or to the dilution water. Fill bottles with enough dilution water, seeded if necessary, so that insertion of stopper will displace all air, leaving no bubbles. For dilutions greater than 1:100 make a primary dilution in a graduated cylinder before making final dilution in the bottle. When using titrimetric iodometric methods for DO measurement, prepare two bottles at each dilution. Determine initial DO on one bottle. Stopper second bottle tightly, water-seal, and incubate for 5 d at 20°C. If the membrane electrode method is used for DO measurement, prepare only one BOD bottle for each dilution. Determine initial DO on this bottle and replace any displaced contents with dilution water to fill the bottle. Stopper tightly, water-seal, and incubate for 5 d at 20°C. Rinse DO electrode between determinations to prevent cross-contamination of samples.

Use the azide modification of the iodometric method (Section 4500-O.C) or the membrane electrode method (Section 4500-O.G) to determine initial DO on all sample dilutions, dilution water blanks, and where appropriate, seed controls.

If the membrane electrode method is used, the azide modification of the iodometric method (Method 4500-O.C) is recommended for calibrating the DO probe.

g. Determination of initial DO: If the sample contains materials that react rapidly with DO, determine initial DO immediately after filling BOD bottle with diluted sample. If rapid initial DO uptake is insignificant, the time period between preparing dilution and measuring initial DO is not critical but should not exceed 30 min.

h. Dilution water blank: Use a dilution water blank as a rough check on quality of unseeded dilution water and cleanliness of incubation bottles. Together with each batch of samples incubate a bottle of unseeded dilution water. Determine initial and final DO as in ¶s 4*g* and *j*. The DO uptake should not be more than 0.2 mg/L and preferably not more than 0.1 mg/L. Discard all dilution water having a DO uptake greater than 0.2 mg/L and either

eliminate source of contamination or select an alternate dilution water source..

i. Incubation: Incubate at 20°C ± 1°C BOD bottles containing desired dilutions, seed controls, dilution water blanks, and glucose-glutamic acid checks. Water-seal bottles as described in ¶ 4*f*.

j. Determination of final DO: After 5 d incubation determine DO in sample dilutions, blanks, and checks as in ¶ 4*g*.

5. Calculation

For each test bottle meeting the 2.0-mg/L minimum DO depletion and the 1.0-mg/L residual DO, calculate BOD_5 as follows:

When dilution water is not seeded:

$$BOD_5,\ mg/L = \frac{D_1 - D_2}{P}$$

When dilution water is seeded:

$$BOD_5,\ mg/L = \frac{(D_1 - D_2) - (B_1 - B_2)f}{P}$$

where:

D_1 = DO of diluted sample immediately after preparation, mg/L,
D_2 = DO of diluted sample after 5 d incubation at 20°C, mg/L,
P = decimal volumetric fraction of sample used,
B_1 = DO of seed control before incubation, mg/L (¶ 4*d*),
B_2 = DO of seed control after incubation mg/L (¶ 4*d*), and
f = ratio of seed in diluted sample to seed in seed control = (% seed in diluted sample)/(% seed in seed control).

If seed material is added directly to sample or to seed control bottles:

f = (volume of seed in diluted sample)/(volume of seed in seed control)

Report results as $CBOD_5$ if nitrification is inhibited.

If more than one sample dilution meets the criteria of a residual DO of at least 1 mg/L and a DO depletion of at least 2 mg/L and there is no evidence of toxicity at higher sample concentrations or the existence of an obvious anomaly, average results in the acceptable range.

In these calculations, do not make corrections for DO uptake by the dilution water blank during incubation. This correction is unnecessary if dilution water meets the blank criteria stipulated above. If the dilution water does not meet these criteria, proper corrections are difficult ; do not record results or, as a minimum, mark them as not meeting quality control criteria.

6. Precision and Bias

There is no measurement for establishing bias of the BOD procedure. The glucose-glutamic acid check prescribed in ¶ 4*c* is intended to be a reference point for evaluation of dilution water quality, seed effectiveness, and analytical technique. Single-laboratory tests using a 300-mg/L mixed glucose-glutamic acid solution provided the following results:

Number of months: 14
Number of triplicates: 421
Average monthly recovery: 204 mg/L
Average monthly standard deviation: 10.4 mg/L

In a series of interlaboratory studies,[1] each involving 2 to 112 laboratories (and as many analysts and seed sources), 5-d BOD measurements were made on synthetic water samples containing a 1:1 mixture of glucose and glutamic acid in the total concentration range of 3.3 to 231 mg/L. The regression equations for mean value, $\bar{X}$, and standard deviation, S, from these studies were:

$\bar{X}$ = 0.658 (added level, mg/L) + 0.280 mg/L
S = 0.100 (added level, mg/L) + 0.547 mg/L

For the 300-mg/L mixed primary standard, the average 5-d BOD would be 198 mg/L with a standard deviation of 30.5 mg/L. When nitrification inhibitors are used, GGA test results falling outside the 198 ± 30.5 control limit quite often indicate use of incorrect amounts of seed. Adjust amount of seed added to the GGA test to achieve results falling within this range.

a. Control limits: Because of many factors affecting BOD tests in multilaboratory studies and the resulting extreme variability in test results, one standard deviation, as determined by interlaboratory tests, is recommended as a control limit for individual laboratories. Alternatively, for each laboratory, establish its control limits by performing a minimum of 25 glucose-glutamic acid checks (¶ 4*c*) over a period of several weeks or months and calculating the mean and standard deviation. Use the mean ±3 standard deviations as the control limit for future glucose-glutamic acid checks. Compare calculated control limits to the single-laboratory tests presented above and to interlaboratory results. If control limits are outside the range of 198 ± 30.5, re-evaluate the control limits and investigate source of the problem. If measured BOD for a glucose-glutamic acid check is outside the accepted control limit range, reject tests made with that seed and dilution water.

b. Working range and detection limit: The working range is equal to the difference between the maximum initial DO (7 to 9 mg/L) and minimum DO residual of 1 mg/L multiplied by the dilution factor. A lower detection limit of 2 mg/L is established by the requirement for a minimum DO depletion of 2 mg/L.

7. Reference

1. U.S. Environmental Protection Agency, Office of Research and Development. 1986. Method-by-Method Statistics from Water Pollution (WP) Laboratory Performance Evaluation Studies. Quality Assurance Branch, Environmental Monitoring and Support Lab., Cincinnati, Ohio.

8. Bibliography

Young, J.C., G.N. McDermott & D. Jenkins . 1981. Alterations in the BOD procedure for the 15th edition of Standard Methods for the Examination of Water and Wastewater. *J. Water Pollut. Control Fed.* 53:1253.

danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

(3) Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

(b) *Duty to reapply.* If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

(c) *Need to halt or reduce activity not a defense.* It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(d) *Duty to mitigate.* The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(e) *Proper operation and maintenance.* The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. 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 the permit.

(f) *Permit actions.* This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

(g) *Property rights.* This permit does not convey any property rights of any sort, or any exclusive privilege.

(h) *Duty to provide information.* The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

(i) *Inspection and entry.* The permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Administrator), upon presentation of credentials and other documents as may be required by law, to:

(1) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

(j) *Monitoring and records.* (1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(2) Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five

years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

(3) Records of monitoring information shall include:

(i) The date, exact place, and time of sampling or measurements;

(ii) The individual(s) who performed the sampling or measurements;

(iii) The date(s) analyses were performed;

(iv) The individual(s) who performed the analyses;

(v) The analytical techniques or methods used; and

(vi) The results of such analyses.

(4) Monitoring results must be conducted according to test procedures approved under 40 CFR part 136 or, in the case of sludge use or disposal, approved under 40 CFR part 136 unless otherwise specified in 40 CFR part 503, unless other test procedures have been specified in the permit.

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

(k) *Signatory requirement.* (1) All applications, reports, or information submitted to the Director shall be signed and certified. (See § 122.22)

(2) The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

(l) *Reporting requirements.* (1) *Planned changes.* The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(i) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in § 122.29(b); or

(ii) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under § 122.42(a)(1).

(iii) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;

(2) *Anticipated noncompliance.* The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(3) *Transfers.* This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Clean Water Act. (See § 122.61; in some cases, modification or revocation and reissuance is mandatory.)

(4) *Monitoring reports.* Monitoring results shall be reported at the intervals specified elsewhere in this permit.

COLUMBIA CO.

78982
100677

JLS

CITY OF SCAPPOOSE

Operational Data Submittal

DECEMBER 1998

DEPT OF ENVIRONMENTAL QUALITY
RECEIVED

JAN 11 1999

NORTHWEST REGION

Facility Name: *Columbia Ave. Plant*

Adress: *34485 Columbia Ave.*

Scappoose, OR 97056

Telephone No. *(503) 543-7184*

Date : *08-Jan-99*

Plant Manager: *Steve Wabschall*

POPULATION EQUIVALENT: *3,384*

DESIGN POPULATION: *19,624*

D.E.Q. # *100677*

E.P.A. #

DISCHARGE TO: *Multnomah Channel*

INFLUENT	Avg.	Min.	Max.	Permit Limit	Design Avg.	Design Max.	No. of Times Exceeded	% of Loading
FLOW MGD	0.886	0.443	1.570	2.000	1.000	2.000		44.29%
pH		6.40	7.00	6.50				
BOD	78	50	180	400	400	500		6.90%
TSS	90	46	188	300	300	375		10.66%
EFFLUENT								
FLOW	0.561	0.203	1.200	2.000	1.000	2.000		
PH		6.10	7.30	6.00	7.50	9.00		
BOD	3	1	7	21	1	2		
TSS	7	1	18	32	2	3		
FECAL	11	2	25	200				
D.O.	5	3		1.0	1.0	2.0		

COMMENTS: I certify under the penalty if law that I have personal examines and am familiar with information submitted herein: and based on my inquire of those individuals immediately responsible for obtaining the information. I believe the submitted information is true accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Signature: Steve Wabschall

BOD mg/L TSS mg/L

BOD mg/L TSS mg/L

DATE	FLOW MGD		PLANT INFLUENT					PLANT EFFLUENT									
DECEMBER 1998	INFL.	EFF	PH	BOD MG/L	TSS SOLIDS	VOL SOLIDS	TEMP	PH	DO MG/L	BOD MG/L	% BOD REM	LBS BOD DISC.	S.S. MG/L	% S.S. REM	LBS S.S. DISC.	FECAL COUNT	No. UV ON	UV DETN
											****	****		****	****			****
01-Dec	0.942	0.572	6.8	50	78	70	18.0	6.6	5.4	1.8	96.4	9	8.0	89.7	38		2	2.07
02-Dec	1.570	1.200	6.6	50	76	52	18.0	6.4	5.6	1.4	97.2	14	9.0	88.2	90	2	2	0.99
03-Dec	1.100	0.720	6.8	180	188	152	18.0	6.4	4.0	3.5	98.1	21	7.0	96.3	42		2	1.65
04-Dec	0.980	0.607	6.8	80	104	98	18.0	6.5	4.6	1.0	98.8	5	4.0	96.2	20	20	2	1.95
05-Dec	0.835	0.464																
06-Dec	0.769	0.466																
07-Dec	0.661	0.381	6.8	70	115	84	18.0	6.5	3.2	3.0	95.7	10	11.0	90.4	35	10	2	3.11
08-Dec	1.010	0.742	6.8	80	120	118	18.0	6.5	4.0	3.4	95.8	21	9.0	92.5	56		2	1.60
09-Dec	0.779	0.443	6.9	80	115	96	18.0	6.6	4.5	2.5	96.9	9	7.0	93.9	26		2	2.67
10-Dec	0.893	0.550	6.8	100	94	88	18.0	6.4	5.0	5.8	94.2	27	10.0	89.4	46	15	2	2.15
11-Dec	0.784	0.459	6.9	70	98	94	17.0	6.5	3.6	2.8	96.0	11	18.0	81.6	69		2	2.58
12-Dec	1.178	0.724																
13-Dec	1.278	0.835																
14-Dec	0.781	0.505	6.6	100	56	50	15.0	6.4	3.8	4.5	95.5	19	9.0	83.9	38		2	2.35
15-Dec	0.957	0.594	6.8	60	94	82	15.0	6.5	4.0	6.6	89.0	33	7.0	92.6	35	10	2	1.99
16-Dec	0.956	0.586	6.4	100	86	48	13.0	6.3	5.6	3.0	97.0	15	5.0	94.2	24		2	2.02
17-Dec	0.799	0.460	6.7	75	82	80	13.0	6.3	5.4	2.5	96.7	10	10.0	87.8	38		2	2.58
18-Dec	0.691	0.385	6.8	60	84	72	13.0	6.5	4.8	2.0	96.7	6	5.0	94.0	16	2	2	3.08
19-Dec	0.818	0.461																
20-Dec	0.509	0.350																
21-Dec	0.443	0.203	7.0	50	80	52	12.0	6.9	6.2	2.2	95.6	4	2.0	97.5	3		2	5.84
22-Dec	0.477	0.257	7.0	80	95	80	12.0	7.3	5.5	2.8	96.5	6	3.0	96.8	6	2	2	4.61
23-Dec	0.527	0.323	6.8	60	68	56	12.0	6.6	5.2	1.5	97.5	4	3.0	95.6	8		2	3.67
24-Dec	0.580	0.335																
25-Dec	0.750	0.540																
26-Dec	0.903	0.554																
27-Dec	0.725	0.454																
28-Dec	1.358	0.987	7.0	100	80	76	12.0	6.8	5.0	3.0	97.0	25	11.0	86.3	91		2	1.20
29-Dec	1.227	0.847	6.5	80	54	52	12.0	6.2	4.5	3.0	96.3	21	7.0	87.0	49	25	2	1.40
30-Dec	1.012	0.615	6.6	60	82	75	12.0	6.1	4.8	1.8	97.0	9	1.0	98.8	5		2	1.93
31-Dec	1.170	0.769	6.7	50	46	36	12.0	6.2	4.6	2.0	96.0	13	2.0	95.7	13		2	1.54
PERMIT	2.000	2.000	6.0/9.0	400	300			6.0/9.0		32.0			25.0			200		
STD DEV.	0.263	0.212	0.2	28	29	26	2.7	0.3	0.7	1.3			3.9			8		
AVERAGE	0.886	0.561		78	90	77	15.0		4.7	2.9	96.2	14	7.0	91.8	36	11	2	1.64
MINIMUM	0.443	0.203	6.4	50	46	36	12.0	6.1	3.2	1.0			1.0			2	2	
MAXIMUM	1.570	1.200	7.0	180	188	152	18.0	7.3	6.2	6.6	98.8	33	18.0	98.8	91	25	2	5.84
TOTAL	27.462	17.388																
DESIGN AVG	1.000	1.000		400	300	225	15.0	6.0	1.0	2.0	90.0	17	1.5	90.0	13		1	
DESIGN MAX	2.000	2.000		500	375	281	18.0	9.0	2.0	11.2	85.0	188	2.8	85.0	47		2	
7 Day Average																		
Week 1	0.980	0.630	6.8	86	112	91	18.0	6.5	4.6	2.1	97.2	10	7.8	92.2	38	11	2	1.40
Week 2	0.958	0.608	6.8	86	97	89	17.2	6.5	4.2	3.8	95.7	12	10.6	88.3	33	15	2	1.62
Week 3	0.739	0.434	6.7	69	85	67	13.2	6.5	5.2	3.3	95.0	10	5.8	93.2	17	6	2	2.22
Week 4	0.760	0.493	6.9	80	81	71	12.0	6.9	5.2	2.4	97.0	5	5.7	92.9	15	2	2	1.35

BOD TSS 12/9

BOD TSS 12/17

CITY OF SCAPPOOSE WAST[illegible]VATER FACILITY

/wgzy

BOD BENCH SHEET

START DATE: 12-17-98

TIME:

Set Up By: DWS

STOP DATE: 12-22-98

TIME:

Taken off By: DWS

	BOTTLE NO.	SAMPLE VOLUME ML	DILLUTION RATIO (a)	INITIAL DO	FINAL DO	DO DEPLETION	BOD (b)	AVERAGE BOD
Influent								
Dillution No. 1	24	3	101	8.62	8.3	6.0		
Dillution No. 2	46	6	50.5	8.61	7.7			
Final Effluent								
Dillution No. 1	13	60	5.05	8.67	8.3	2.0		
Dillution No. 2	17	80	3.7875	8.68	8.2			
Dillution No. 3								
Dillution No. 1								
Dillution No. 2								
Stlonflds								
Dillution No. 1	NO SAMPLE	0.1	3030					
Dillution No. 2		0.2	1515					
Digester Supernatant								
Dillution No. 1								
Dillution No. 2								
Blank								
Blank No. 1	7			8.70	8.7			
Blank No. 2								

JRS NOTES

DO DEPL.	BOD mg/L
0.32 x 100 =	32
0.91 x 50 =	45.5
AVG =	38.8
0.37 x 5 =	1.9
0.48 x 3.75 =	1.8
AVG =	1.9

Notes: (a) Dillution Ratio = $\frac{303}{\text{Sample Vol. ml}}$ ⇒ 300 mL

(b) BOD = Dillution Ratio x DO Depletion

C:\123R3\PW\FORMS\WW\BOD

Location: Columbia Ave. WWTP
time start: _____

Reported by: SMS
time end: _____

Base Data

sampling	12-17-98 date
inf. flow	_____ m.g.d.
eff. flow	_____ m.g.d.
inf. p.h.	_____ unit's
inf. b.o.d.	_____ mg/l
inf. t.s.s.	_____ mg/l
inf. v.s.s.	_____ mg/l
inf. temp	_____ deg. c.
eff. p.h.	_____ unit's
eff. d.o.	_____ mg/l
eff. b.o.d.	_____ mg/l
eff. t.s.s.	_____ mg/l
eff. fecal	_____ #/100ml.
eff. turbidity	_____ ntu's

Aeration System

# of bay's	1
r.a.s. conc.	_____
r.a.s. v.s.s.	_____
r.a.s. flow	_____
m.l.s.s.	_____
m.l.v.s.s.	_____
m.l.s.s. sett.	430
basin temp.	_____
basin d.o.	_____
o.u.r.	_____
r.a.s. d.o.	_____

Secondary System

# of Clarif	_____ on line
sec. clarif. b.o.d.	_____ mg/l
sec. clarif.t.s	_____ mg/l
sludge blanket	_____ inches

Solid's Handling

actual wasting	_____ m.g.d.
# of p.s.d.t.	_____ on line
p.s.d.t. temp.	_____ deg. c.
p.s.d.t. p.h.	_____ unit's
p.s.d.t. t.s.s.	_____ %
p.s.d.t. v.s.s.	_____ %
supernate	_____ m.g.d.
wasting	32815336 32803954
	_____
digester d.o.	_____
bank	1
intensity	7.3
hour	47367
bank	2
intensity	3.3
hour	46864
stein. t.s.s.	_____
stein. v.s.s.	_____

datatrsfwp

CITY OF SCAPPOOSE WAS[illegible] WATER FACILITY

/wgzy

BOD BENCH SHEET

START DATE: 12-9-98 STOP DATE: 12-14-98

TIME: TIME:

Set Up By: DWS Taken off By:

	BOTTLE NO.	SAMPLE VOLUME ML	DILLUTION RATIO (a)	INITIAL DO	FINAL DO	DO DEPLETION	BOD (b)	AVERAGE BOD
Influent								
Dillution No 1	32	3	101	8.49	8.20	100	⟹	
Dillution No. 2	33	6	50.5	8.46	8.03			
Final Effluent								
Dillution No. 1	29	60	5.05	8.34	6.50	6.5	5.8	
Dillution No 2	31	80	3.7875	8.25	7.85	5.0		
Dillution No 3								
Dillution No. 1								
Dillution No 2								
Stienflds								
Dillution No. 1	34	0.1	3030	8.49	5.01	10,500		9675
Dillution No 2	48	0 2	1515	8.50	2.61	9850		
Digester Supernatant								
Dillution No. 1								
Dillution No. 2								
Blank								
Blank No 1	28			8.55	8.53			
Blank No 2								

JRS NOTES

DO DEPL	BOD mg/L
0.29	x100 = 29
0.43	x50 = 21.5
	AVG = 25.3
1.84	x 5 = 9.2
0.4	x 3.75 = 1.5
	AVG = 5.4

3.48 x 3000 = 10,440

5.89 x 1500 = 8835

AVG 9637

OK < 0.2 mg/L

Notes: (a) Dillution Ratio = 303 / Sample Vol. ml ⟹ SHOULD BE 300 mL

(b) BOD = Dillution Ratio x DO Depletion

C:\123R3\PW\FO[illegible]\WW\BOD

City of Scappoose

Wastwater Treatnemt Plant

Laboratory Analysis

Date: 12/17/98 Duty Op. SMS

	INFLUENT	EFFLUENT	W A S SETTING	TIME
FINAL	207018161	53493671	Min. ON 3	
INITIAL	19903283	53033348	Min. OFF 57	
TOTAL MGD	.799	.460		

AERATION BASIN MLSS

	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.				
SETT.	430			
DRY WT.	45030	45030	45640	
TARE WT.	41500	42400	41610	
MLSS	3530	2630	4030	

SUSPENDED SOLIDS

	INFLUENT		EFFLUENT	
	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.				
DRY WT.	42080	42080	41570	
TARE WT.	41670	41680	41560	
SUSPENDED	82	80	10.0	

SUSPENDED SOLIDS

	STDENFELD		EFFLUENT	
	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.				
DRY WT.	NA			
TARE WT.	41930			
SUSPENDED				

DRYING OVEN	FECAL/BATH	BOD INCU.	OTHER
TEMP.	TEMP.	TEMP.	

METTLER BAL.	INF.	EFF.	OTHER
TEMP.	TEMP.	TEMP.	
	6.69	6.32	

Fecal TAP 6.67

City of Scappoose

Wastwater Treatnemt Plant

Laboratory Analysis

Date: 12 / 9 / 98''

Duty Op. SMS

	INFLUENT	EFFLUENT	W A S SETTING	TIME
FINAL	13079693	48780986	Min. ON 1	
INITIAL	12300254	48337568	Min. OFF 59	
TOTAL MGD	.779	.443		

AERATION BASIN MLSS (RAS) JRS

JRS

	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.	10mL		10 mL	
SETT.	260			
DRY WT.	44180 x10-5g	44180	45940	
TARE WT.	41470	42230	41350	
MLSS	0.02710 g =		1590	

27.10 mg x 100 = 2710mg/L SUSPENDED SOLIDS

	INFLUENT TOTAL	INFLUENT VOLATILE	EFFLUENT TOTAL	EFFLUENT VOLATILE
JRS			JRS	
VOL.	50 mL		100 mL	
DRY WT.	42060	42060	41920 x10-5g	
TARE WT.	41580	41600	41850	
SUSPENDED	96		70	

0.0048 g. = 4.8mg x 20 = 96 mg/L SUSPENDED SOLIDS 0.0007g = 0.7mg x 10 = 7 mg/L

	STIENFELD TOTAL	STIENFELD VOLATILE	EFFLUENT TOTAL	EFFLUENT VOLATILE
VOL.				
DRY WT.	43630			
TARE WT.	41440			
SUSPENDED	438			

DRYING OVEN TEMP.	FECAL/BATH TEMP.	BOD INCU. TEMP.	OTHER

METTLER BAL. TEMP.	INF. TEMP.	EFF. TEMP.	OTHER
	6.91	6.55	

Fecal

TAP 6.64

S.E.W. 4.95

Location: Columbia Ave. WWTP
time start: _____

Reported by: SMS/_____
time end: _____

Base Data

sampling	12-9-94	date
inf. flow	_____	m.g.d.
eff. flow	_____	m.g.d.
inf. p.h.	_____	unit's
inf. b.o.d.	_____	mg/l
inf. t.s.s.	_____	mg/l
inf. v.s.s.	_____	mg/l
inf. temp	_____	deg. c.
eff. p.h.	_____	unit's
eff. d.o.	_____	mg/l
eff. b.o.d.	_____	mg/l
eff. t.s.s.	_____	mg/l
eff. fecal	_____	#/100ml.
eff. turbidity	_____	ntu's

Aeration System

# of bay's	1
r.a.s. conc.	_____
r.a.s. v.s.s.	_____
r.a.s. flow	_____
m.l.s.s.	_____
m.l.v.s.s.	_____
m.l.s.s. sett.	_____
basin temp.	_____
basin d.o.	_____
o.u.r.	_____
r.a.s. d.o.	_____

Secondary System

# of Clarif	2	on line
sec. clarif. b.o.d.	_____	mg/l
sec. clarif.t.s	_____	mg/l
sludge blanket	15/24	inches

Solid's Handling

actual wasting	_____ m.g.d.
# of p.s.d.t.	_____ on line
p.s.d.t. temp.	_____ deg. c.
p.s.d.t. p.h.	_____ unit's
p.s.d.t. t.s.s.	_____ %
p.s.d.t. v.s.s.	_____ %
supernate	_____ m.g.d.
wasting	327662223 327623649 3859
digester d.o.	_____
bank	1
intensity	6.7
hour	47175
bank	2
intensity	3.2
hour	46672
stein. t.s.s.	_____
stein. v.s.s.	_____

datatrsfwp

CITY OF SCAPPOOSE WASTEWATER FACILITY

lwgzy

BOD BENCH SHEET

START DATE: 9-24-99
TIME: 9:00 AM
Set Up By: DWS

(INCORRECT PROCEDURE)

STOP DATE: 9-25-99
TIME: 9:15 AM
Taken off By: DWS

NEED GLUTAMIC ACID CHECK

	BOTTLE NO.	SAMPLE VOLUME ML	DILLUTION RATIO (a)	INITIAL DO	FINAL DO	DO DEPLETION	BOD (b)	AVERAGE BOD
Final Effluent								
Dilution No 1	11	60	5	8.0	5.2+1.4	= 6.6	= 7.0	
Dilution No 2	14	80	3 75	7.8	4.7+1.4	= 6.4	= 6.4	AVG = 7.3
Dilution No 3	18	100	3	7.6	3.4+1.4	= 4.8	= 8.4	
Influent								
Dilution No 1	21	3	100	8.4	6.0	= 240	AVG =	265
Dilution No 2	25	6	50	8.4	2.6	= 290		
Dilution No 3	41	10	30	8.3	0			
Seed								
2 mL Dilution No 1	45	2	150	8.5	7.1	1.4		
Dilution No 2								
Stienflds								
Dilution No 1	51	0.1	3000	8.5	5.5	9000		
Dilution No 3	70	0 2	1500	8.6	2.6	9000		
Digester Supernatant								
Dilution No 1								
Dilution No 3								
Blank								
Blank No 1	7			8.5	8.6	+.1	-0.1	
Blank No 2								

SEED CONTROL SHOULD BE 0.6 TO 1 mg/L NEED MULTIPLE DILUTIONS

< 0.2 ok BUT SHOULD NOT BE NEGATIVE 8.5 - 8.6 = -0.1

Notes (a) Dilution Ratio = 300 / *Sample Vol ml*

(b) BOD = *Dilution Ratio x DO Depletion*

Fecal > ml / colonies

ml	colonies
25	10
50	9
100	28
200	52
300	64

AVG 24/100 ml

C:\123R3\PWT\FORMS\WW\BOD

WQ - Columbia Co
City of Scappoose

October 18, 1999

DEPT OF ENVIRONMENTAL QUALITY
RECEIVED

NOV 01 1999

NORTHWEST REGION

To: Jim Sheets
Environmental Specialist
Oregon D.E.Q.

RE: Site inspection of Wastewater plant City of Scappoose.

Your site inspection of September 17, 1999 at the City's wastewater plant noted areas of concern. The operations staff are now making efforts to comply with all conditions of the Wastewater permit. A summary of the actions taken to resolve these issues are as follows.

1. Effluent Flow Meter Calibration: The effluent flow meter has now been calibrated and the totalizator checked. The calibration was done by measuring the distance from the bottom of the V to the top of the channel, this was done while the channel was empty. The level of water in the channel from the top was measured and subtracted from the total distance. This measurement gave the exact amount of water in the channel in inches. The measurement was then converted from inches to feet, the meter was calibrated. See attached pages for calculations. The totalizator on the meter was calibrated next. This calibration was done by emptying the effluent pump wet well then measuring the volume of the tank in gallons which was 17,952 gal. and the effluent totalizer reading 17,593 gals.

2. B.O.D. Testing : Larger sample sizes along with seed controls will help to insure the proper oxygen depletion in B.O.D. test. See attached B.O.D. lab work sheet. Also the lab will start doing the Glucose-glutamic acid check on a routine bases.

3. Fecal Coliform Testing: Larger sample sizes are now being used to insure the proper colony count, also for colony averaging the colony count multiplied by 100 then divided by the sample volume is being used.

The treatment plant now has a current copy of Standard Methods for reference. The treatment lab personal are scheduled to attend additional lab training at Linn Benton Community College in December.

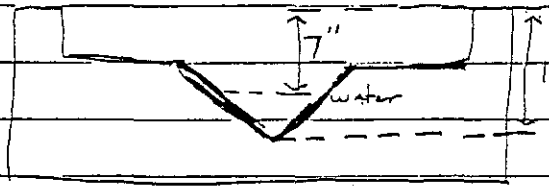
We hope these changes will help to ensure that non-compliance violation will not occur. It is the goal of the treatment plant staff to meet all permit requirements.

Should you have any questions, please feel free to contact me at (503) 543-7183

Regards,

Steve Wabschall
Wastewater Plant Supervisor

Effluent Meter Calibration



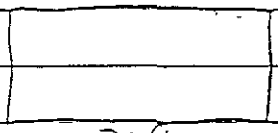
= 9.25"

meter Reading 9.3" ✓

.78ft = 602 gpm

meter Reading 612 gpm ✓

old Cl2 Tank



30 x 20 x 4 = 17,952 gal ✓

Totalizer reading End. 71477224

Beg. 71459631

17,593 gal ✓

Memorandum

State of Oregon
Department of Environmental Quality

Date: September 22, 1999

To: File

From: Jim Sheetz, Sr. Environmental Engineer
NWR, Source Control Section, 229-5740

Subject: WQ-Columbia County
City of Scappoose, Telecon with Steve Wabschall

On Wednesday, September 22, 1999, I called Steve Wabschall about questions concerning the December 1998 Discharge Monitoring Report (DMR) and the bench sheets I copied during my inspection on September 16, 1999, as noted below.

Regarding laboratory analysis worksheet for December 9, 1998, I asked for the volume of sample used for suspended solids analyses. He reported the following:

aeration basin MLSS = 10 mL for Total and Volatile
RAS = 10 mL
Influent total and volatile = 50 mL
Effluent total = 100 mL

I asked what units apply to the dry weight and tare weight numbers. He said the numbers represent 10^{-5} g.

Regarding BOD bench sheet for December 9, 1998, I asked for clarification on how the Influent BOD of 100 mg/L recorded on the bench sheet was calculated because it does not check with the values for DO depletion and dilutions recorded. He said the true value should be about 25 mg/L but he knew that was too low so just wrote in 100 mg/L.

I also asked why he uses 303 mL for the volume of the BOD bottle while the commonly accepted value is 300 mL. He said he measured the bottle. I said he must have read the meniscus incorrectly because the bottles are 300 mL.

Regarding BOD bench sheet for December 17, 1998, I asked why the recorded value of 60 mg/L was used for the influent BOD when the DO depletions and dilutions indicate a calculated average of 38.8 mg/L. He said he knew the BOD should be higher so just wrote in 60 mg/L.

Regarding the BOD and TSS bench records for December 9 and December 17, 1998, I asked why the bench data does not agree with the DMR, as follows:

Date	Station	Parameter	Bench	DMR
12/9/98	Influent	BOD	100 mg/L	80 mg/L
12/9/98	Influent	TSS	96 mg/L	115 mg/L
12/9/98	Effluent	BOD	5.8 mg/L	2.5 mg/L
12/9/98	Effluent	TSS	7 mg/L	7.0 mg/L

He noted that the data appear to be off by a day and that he might have transcribed in incorrectly from "the book." I stated that similar problems exist for December 17, 1998.

Appendix E – Split Sample Results

Split History

Scappoose STP

Total Suspended Solids

Station	Collected	Source result	DEQ result	diff	RPD
Effluent	11/17/92	25.8	23	3	11 %
Influent	11/17/92	156	170	-14	-9 %
Effluent	9/16/99	5.0	1	4	133 %
Influent	9/16/99	316	310	6	2 %

Biochemical Oxygen Demand 5 day

Station	Collected	Source result	DEQ result	diff	RPD
Effluent	11/17/92	17.5	23	-6	-27 %
Influent	11/17/92	160	250	-90	-44 %
Effluent	9/16/99	8	3	5	92 %
Influent	9/16/99	300	E 1100	-800	-114 %

pH (Laboratory)

Station	Collected	Source result	DEQ result	diff	RPD
Effluent	11/17/92	7.2	7.1	0.1	1 %
Influent	11/17/92	7.7	7.5	0.2	3 %

Fecal Coliform

Station	Collected	Source result	DEQ result	diff	RPD
Effluent.	11/17/92	<2	<5	NA	NA
Effluent	9/16/99	41	>600	-1.1654	NA

This report summarizes the data I have in my database. Only the records in which I compute the difference appear in this report. Other data does exists. Data is sorted by the sample collection data. If you prefer more information, different report formats, or sorting please let me know.
- Chris Redman DEQ/Lab -

clr

Oregon Department of Environmental Quality

Split Sampling Event Comparison Summary

12-Nov-99 CLB RHY

DEQ case: 990837 Source: Scappoose STP

Fund code: 3365 Submitter: J. Sheetz

Item: 1 Collected: 16-Sep-99 15:00

Influent Grab: Municipal waste

	Source result	DEQ result	Difference	RPD
Total Suspended Solids (mg/L)	316	310	6	2 %
Biochemical Oxygen Demand 5 day (mg/L)	300	E 1100	-800	-114 %
pH (Laboratory) (S.U.)	NA	6.5	NA	NA

Item: 2 Collected: 16-Sep-99 15:01

Effluent Grab: Municipal waste

	Source result	DEQ result	Difference	RPD
Total Recoverable Hardness as Calcium Carbonate (Calculated) (mg/L)	NA	63.3	NA	NA
Total Suspended Solids (mg/L)	5.0	1	4	133 %
Biochemical Oxygen Demand 5 day (mg/L)	8.1	3	5	92 %
pH (Laboratory) (S.U.)	NA	7.6	NA	NA
Total Organic Carbon (mg/L)	NA	6	NA	NA
Chemical Oxygen Demand (mg/L)	NA	17	NA	NA
Escherichia Coli (CFU/100 ml)	NA	420	NA	NA
Fecal Coliform (CFU/100 ml)	41	>600	-1.1654	NA
Total Recoverable Aluminum (mg/L)	NA	0.095	NA	NA
Total Recoverable Barium (mg/L)	NA	0.00336	NA	NA
Total Recoverable Cadmium (mg/L)	NA	0.00010	NA	NA
Total Recoverable Calcium (mg/L)	NA	17.0	NA	NA
Total Recoverable Chromium (mg/L)	NA	0.00854	NA	NA
Total Recoverable Cobalt (mg/L)	NA	0.00024	NA	NA
Total Recoverable Copper (mg/L)	NA	0.00213	NA	NA
Total Recoverable Iron (mg/L)	NA	0.0472	NA	NA
Total Recoverable Lithium (mg/L)	NA	0.0207	NA	NA
Total Recoverable Magnesium (mg/L)	NA	50.6	NA	NA
Total Recoverable Manganese (mg/L)	NA	0.0105	NA	NA
Total Recoverable Molybdenum (mg/L)	NA	0.00158	NA	NA
Total Recoverable Nickel (mg/L)	NA	0.00236	NA	NA
Total Recoverable Potassium (mg/L)	NA	30.7	NA	NA
Total Recoverable Sodium (mg/L)	NA	161	NA	NA
Total Recoverable Thallium (mg/L)	NA	0.0020	NA	NA
Total Recoverable Vanadium (mg/L)	NA	0.00334	NA	NA
Total Recoverable Zinc (mg/L)	NA	0.0803	NA	NA

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Inter-Laboratory Split Comparison

DEQ Case Number: 990837

Source Name: CITY OF GRANTS PASS
Contact Person: STEVE WARSCHALL
Address:
Collected By: JIM SHEETZ/DEQ & STEVE WARSCHALL

Sample Date: 9-16-99
Phone: 229-5748 JIM SHEETZ
Region/Division: NWR

Analysis ↟	FIELD MEASUREMENTS ✣ Sample A	Sample B	Sample C	SOURCE SAMPLE RESULTS Sample INFL A	Sample EFFL B	Sample C	Sample D	Date/Time Analysis set up	DEQ LAB RESULTS Sample A	Sample B	Sample C	Sample D	Date/Time Analysis set up
BOD				300	8.1								
TSS				316	5.0								
FC					41/100								
TM													
NUTRIENTS													

Sample	Sample point description ↟ (ie. Effluent comp.).	Container number SOURCE	DEQ ↟
A	INFLUENT		STP 354
B	EFFLUENT		STP 304
C	EFFLUENT		R889
D	EFFLUENT		TM983

EFFLUENT FECAL

Fill in your split sample results and mail to:

DEQ Lab
1712 SW 11th Ave.
Portland, OR 97201
Attn: QA Chemist

RECEIVED
SEP 20 1999
STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY
LABORATORY DIVISION

Shaded area for DEQ use.
✣ DEQ sampler enter your field measurements, if taken; indicate whether they are estimates.
↟ DEQ sampler is responsible for completing this column.

Need assistance with this form? Contact the QA chemist at (503) 229-5983.

MEMBRANE FILTRATION Done

OREGON HEALTH DIVISION
CENTER FOR PUBLIC HEALTH LABORATORIES
MICROBIOLOGICAL EXAMINATION OF WASTEWATERS

DATE/TIME RECEIVED AT PHL

Requesting Agency: __DEQ (Case # 990937) __County __Other

Tests requested ___ Total coliforms ✓ Fecal coliforms ✓ E. coli ___ Other _____

Survey CITY OF SCAPPOOSE

Collection Date 9/16/99 Time 15:00 am pm By JS

Analysis date 9/17/99 Time 11 (am) pm

Completion Date 9/20/99 Time 8 35 (am) pm

Reported by SG Date 9/20/99

Reviewed by [illegible] Date 9/20/99

****

SEP 17 AM 10:15

PHL #	Bottle #	Item #	Treated (Y/N)	Sample Point	RESULTS: CFU\100ml			
					Total coliforms	Fecal coliforms	E. coli	Other
1942	51247	3	Y	EFFLUENT GRAB		~~[illegible]~~ >1600	~~[illegible]~~ 420	50

MF-WW

DEPARTMENT OF ENVIRONMENTAL QUALITY

LABORATORY DIVISION / INORGANIC SECTION

BIOCHEMICAL OXYGEN DEMAND

QA/QC REPORT

CASE No.: 990837
CASE NAME: Scappoose STP
SAMPLES / CASE–MATRIX: 1- water

ANALYSIS DATE: 9/17/99
ANALYST(s): KRA

TYPE: 1 CALIBRATION VERIFICATIONS

ANALYTE	True Value –	mg/L	Measured Value –	mg/L	Percent Recovery (75-125%)
I. QC REFERENCE SAMPLE(s)					
Glucose glutamic acid		200.00		215	108 %
II. CALIBRATION CHECK SAMPLE(s)					
Sodium Thiosulfate titrant 0.025N		12.409 g/2L		12.409 g/2L	100 %

TYPE: 2 LAB REAGENT BLANKS

MATRIX	ANALYTE	Expected Value –	mg/L	Measured Value –	mg/L	Nondetectable (< MRL)
Water	BOD		<0.3		0.2	Acceptable

TYPE: 3 LAB REPLICATES

ITEM #	ANALYTE	SAMPLE # (A)	mg/L	Matrix	DUPLICATE # (B)	mg/L	Percent Difference (RPD 0+/-10%)
	BOD			Water			

NA - Not Applicable
Method conforms to method 5210 B "Standard Methods for the Examination of Water and Wastewater," 19th Edition,1995.

DEPARTMENT OF ENVIRONMENTAL QUALITY
LABORATORIES AND APPLIED RESEARCH
INORGANIC/METALS SECTION
QUANTITATIVE ANALYSIS FOR 25 ELEMENTS
by
Inductively Coupled Plasma (ICP)

SUMMARY QA/ QC REPORT

990837 SCAPPOOSE STP
SAMPLE # 1 WATER

DATE: 27 OCT 1999
ANALYST: RAD/RJU

ELEMENT	MDL (mg/L)	QC REFERENCE % RECOVERY (95-105%) SPEX 1563	CALIBRATION CHECK % RECOVERY (95-105%)	ZERO CHECK (<MDL)	LAB REAGENT BLANK (<MDL)	LAB REPLICATES %DIFFERENCE (0+/- 20%) ITEM 1 - TM983	LAB SPIKED SAMPLE % RECOVERY (80-120%) ITEM 1 - TM983	LAB SPIKED BLANK % RECOVERY (90-110%)
Iron	0.0020	99	93	Acceptable		30.1	97	97
Manganese	0.00020	103	95	Acceptable	Acceptable	-0.5	100	100
Potassium	0.0100	104	100	Acceptable		5.3	102	102
Aluminum	0.0100	103	97	Acceptable		6.3	102	102
Lithium	0.0004	105	101			14.9	116	106
Calcium	0.0100	105	95	Acceptable	Acceptable	6.7	96	99
Sodium	0.1000	101	100	Acceptable		5.6	[illegible]	99
Magnesium	0.0100	102	95	Acceptable	Acceptable	7.2	98	99
Lanthanum	0.0010	104	96	Acceptable	Acceptable	0.0	100	101
Silver	0.00020	98	101	Acceptable	Acceptable	37.5	106	109
Molybdenum	0.00040	101	103	Acceptable	Acceptable	33.2	102	108
Cadmium	0.00010	101	101	Acceptable	Acceptable	180.0	101	104
Barium	0.00010	96	97	Acceptable	Acceptable	10.1	97	101
Beryllium	0.000010	103	97	Acceptable	Acceptable	200.0	104	109
Nickel	0.00020	99	95	Acceptable	Acceptable	47.1	94	98
Cobalt	0.00020	99	96	Acceptable	Acceptable	4.1	96	99
Chromium	0.00020	102	98	Acceptable	Acceptable	115.2	90	103
Vanadium	0.00010	100	97		Acceptable	4.2	101	104
Copper	0.00030	101	98	Acceptable	Acceptable	15.0	108	107
Zinc	0.00050	99	100	Acceptable		12.0	104	104
Antimony	0.0030	101	106	Acceptable	Acceptable	-142.9	115	115
Arsenic	0.0020	113	112	Acceptable	Acceptable	-76.9	113	115
Lead	0.0030	100	104	Acceptable	Acceptable	-12.1	101	101
Thallium	0.0020	101	108	Acceptable		141.5	100	101
Selenium	0.0030	106	111	Acceptable	Acceptable	63.2	112	111

Below or near MD [illegible]

Method conforms to methods 6010 & 3050 in SW846 EPA-RCRA Manual.
Method also conforms to methods 200.7 in EPA Water & Waste water Manual.

Department of Environmental Quality

Request for Analysis

Case No. 990031

Location/Site: City of Scappoose

Date Sampled: 9/16/99

Date Received in Lab:

Collected by: Jim Sheetz

Fund Code: 3365

Date Reported: NOV 16 1999

Purpose: Compliance inspection

Report Data to:

Comments: Split samples with city for BOD, TSS & FC only

Item #	Sampling Point Description (include time)	Sample container according to test(s) requested: Nutrients / Basic	DO / BOD	Metals / Organic	Misc. / Misc.	Test(s) Required
1	Influent 1500 HR Grab		STP 304			BOD_5, TSS
2	1500 HR Effluent Grab R889 @ End of UV Channel		04A STP	TM983	FC 8T267	BOD_5, TSS, COD, TOC, Total Metals, Fecal Coliform
3						
4						
5						
6						

Laboratory Comments: R Poly 12 drops Sulfuric TM Poly 25 drops Nitric
BOD should be < 50 on effluent
INF = 100-200

Contact Sample Tracker for proper sampling containers and preservation procedure. (503) 229-5983

DEPARTMENT OF ENVIRONMENTAL QUALITY LABORATORY

Analytical Records Report

MONDAY NOVEMBER 1st, 1999

CASE NAME: 990837 SCAPPOOSE STP
SUBMITTER: Sheetz, Jim COLLECTOR: Sheetz, Jim
FUND CODE: 3365 Municipal Permits and compliance

ITEM #	RESULT	UNITS	TEST
001	INFLUENT GRAB		
	09/16/99 @ 15:00		
	1100 Est	mg/L	Biochemical Oxygen Demand-5 day (diluted)
	6.5	SU	pH
	310	mg/L	Total Suspended Solids
	BOD5 : First three dilutions all greater than. Two reported exeeded holding time.		
002	EFFLUENT GRAB		
	09/16/99 @ 15:01		
			Microbiological data performed by OSHD.
	420	CFU/0.1L	E. coli by membrane filtration.
	>600	CFU/0.1L	Fecal Coliform by membrane filtration.
			Indicator Metals by Inductively Coupled Plasma #1
	0.095	mg/L	Aluminum, Total Recoverable
	17.0	mg/L	Calcium, Total Recoverable
	63.3	mg/L	Hardness as Ca(CO3)2, calculated, Total Recoverable
	0.0472	mg/L	Iron, Total Recoverable
	<0.0010	mg/L	Lanthanum, Total Recoverable
	0.0207	mg/L	Lithium, Total Recoverable
	5.06	mg/L	Magnesium, Total Recoverable
	0.0105	mg/L	Manganese, Total Recoverable
	30.7	mg/L	Potassium, Total Recoverable
	191	mg/L	Sodium, Total Recoverable
			Primary Pollutant Metals by ICP #1
	0.00336	mg/L	Barium, Total Recoverable
	<0.000010	mg/L	Beryllium, Total Recoverable
	0.00010	mg/L	Cadmium, Total Recoverable
	0.00854	mg/L	Chromium, Total Recoverable
	0.00024	mg/L	Cobalt, Total Recoverable
	0.00213	mg/L	Copper, Total Recoverable
	0.00158	mg/L	Molybdenum, Total Recoverable
	0.00236	mg/L	Nickel, Total Recoverable
	<0.00020	mg/L	Silver, Total Recoverable
	0.00334	mg/L	Vanadium, Total Recoverable
	0.0803	mg/L	Zinc, Total Recoverable
			Primary Pollutant Metals by ICP #2
	<0.0030	mg/L	Antimony, Total Recoverable
	<0.0020	mg/L	Arsenic, Total Recoverable
	<0.0030	mg/L	Lead, Total Recoverable
	<0.0030	mg/L	Selenium, Total Recoverable
	0.0020	mg/L	Thallium, Total Recoverable
	3	mg/L	Biochemical Oxygen Demand-5 day (diluted)
	7.6	SU	pH
	17	mg/L	Chemical Oxygen Demand (mg/l)
	6	mg/L	Total Organic Carbon
	1	mg/L	Total Suspended Solids
	Attached		Inter-Laboratory split results report.

********** COMMENT TEST REFERENCE **********

BOD5 : Biochemical Oxygen Demand-5 day (diluted)

Appendix F - Compliance Determination Calculations

Inspection Conclusions

The facility was not in compliance with its NPDES permit. The following corrective actions are needed:

1. Calibrate the effluent flow meter for both instantaneous and totalizer flow measurements. Submit a report to the Department demonstrating accurate calibration of the effluent flow meter and a description of the procedures to be followed for periodic re-

---

calibration. The procedures should be inserted in the operation and maintenance manual.

2. Perform a thorough evaluation of quality control procedures for BOD_5 and fecal coliform, as well as other regulated parameters, and ensure that the analytical and quality control procedures of Standard Methods are followed. Submit a report describing improved laboratory quality assurance/quality control procedures needed or implemented. Submit QA/QC procedures for insertion in the operation and maintenance manual.
3. Submit for Department review a draft of the operation and maintenance manual for the Smith Road Pump Station.
4. Establish an executive level policy or guidance applicable to wastewater plant personnel that all analytical results will be reported accurately and honestly even if the data appear unusual. Such data should be flagged (noted) as questionable but still reported accurately. QA/QC corrective procedures should then be implemented.

Permittee Response to Inspection

Subsequent to the inspection covered by this report, the Department received on 1999-11-01 a response to some of the items discussed during the inspection. The response is given in Appendix H, Permittee Response. Comments on this response are given below.

Effluent Flow Meter Calibration

The effluent flow meter calibration described in the report is a beginning. However, a formal procedure for calibration of flow meters should be prepared. The calibration procedure should include a physical check as described but should also include procedures for calibration of the associated instruments. The calibration should be performed annually and documentation of the results should be retained in the facility files and available for inspection.

BOD and Fecal Coliform Tests

calibration. The procedures should be inserted in the operation and maintenance manual.

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Subsequent to the inspection covered by this report, the Department received on 1999-11-01 a response to some of the items discussed during the inspection. The response is given in Appendix H, Permittee Response. Comments on this response are given below.

Effluent Flow Meter Calibration

The effluent flow meter calibration described in the report is a beginning. However, a formal procedure for calibration of flow meters should be prepared. The calibration procedure should include a physical check as described but should also include procedures for calibration of the associated instruments. The calibration should be performed annually and documentation of the results should be retained in the facility files and available for inspection.

Oregon Department of Environmental Quality 2020 S.W. Fourth Avenue Portland, Oregon 97201 503-229-5263 FAX 503-229-6945	Calculations By: James R. Sheetz, P.E. Water Quality Source Control Section 503-229-5740

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Compliance Determination:

Permit Effl. Limits – May 1 – Oct 1

Parameter	Avg Effl. Conc. Mo. mg/L	Wk. mg/L	Mo Avg kg/d	Wk Avg kg/d	Daily Max kg/d
BOD_5	21	29	118	166	215
TSS	20	30	115	172	230
FC/100 mL	200	400			

Parameter	Year-Around
pH	6.0–9.0
BOD and TSS Removal Eff.	Not < 85%
Total Residual Chlorine	(NA – UV in use)

Daily Max for 1999-09-16 (Date of Inspection):

$Q_{(TRUE\ ACTUAL)} = 45.94$ L/s (See previous calculations in this report.)

$BOD_5 = 3$ mg/L (DEQ data)

Mass = m

$$m_{BOD_5} = (45.94\ L/s)\left(3\ \frac{mg}{L}\right)\left(\frac{g}{10^3\ mg}\right)\left(\frac{kg}{10^3\ g}\right)\left(\frac{86400\ s}{d}\right)$$

$m_{BOD_5} = 11.9$ kg/d << 215 kg/d

BOD_5 in compliance with Daily Max

Oregon Department of Environmental Quality 2020 S.W. Fourth Avenue Portland, Oregon 97201 503-229-5263 FAX 503-229-6945	Calculations By: James R. Sheetz, P.E. Water Quality Source Control Section 503-229-5740

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COMPLIANCE DETERMINATION (CONT.)

TSS = 1 mg/L (DEQ DATA)

$$m_{TSS} = (45.94\ L/s)\left(1\ \frac{mg}{L}\right)\left(\frac{g}{10^3 mg}\right)\left(\frac{kg}{10^3 g}\right)\left(\frac{86400\ s}{d}\right)$$

m_{TSS} = 3.96 kg/d TSS << 230 kg/d LIMIT

TSS IN COMPLIANCE WITH DAILY MAX

MO AND WEEKLY AVG COMPLIANCE EVALUATION:

- DATA WERE NOT COLLECTED TO INDEPENDENTLY CHECK MONTHLY AND WEEKLY AVERAGE.

CHECK PERCENT REMOVAL FOR BOD & TSS:

INFLUENT

BOD_5 = 1100 mg/L (DEQ DATA)

TSS = 310 mg/L (DEQ DATA)

EFFLUENT

BOD_5 = 3 mg/L DEQ DATA

TSS = 1 mg/L DEQ DATA

BOD % REMOVE = $\frac{1100-3}{1100} = \frac{1097}{1100} = 99.7\%$

TSS % REMOVE = $\frac{310-1}{310} = \frac{309}{310} = 99.7\%$

REMOVAL % > 85% OK

DMR - SEP 1999

CITY OF SCAPPOOSE

Operational Data Submittal

SEPTEMBER 1999

Facility Name: *Columbia Ave. Plant*

Adress: *34485 Columbia Ave.*

Scappoose, OR 97056

Telephone No. *(503) 543-7184*

Date : *14-Oct-99*

Plant Manager: *Steve Wabschall*

DEPT OF ENVIRONMENTAL QUALITY
RECEIVED

OCT 18 1999

NORTHWEST REGION

POPULATION EQUIVALENT: *9,037*

DESIGN POPULATION: *19,624*

D.E.Q. # *100677*

E.P.A. #

DISCHARGE TO: *Multnomah Channel*

INFLUENT	Avg.	Min.	Max.	Permit Limit	Design Avg.	Design Max.	No. of Times Exceeded	% of Loading
FLOW MGD	0.590	0.321	0.801	2.000	1.000	2.000		29.52%
pH		6.60	8.60	6.50				
BOD	312	118	562	400	400	500		18.42%
TSS	300	132	570	300	300	375		23.65%
EFFLUENT								
FLOW	0.334	0.172	0.554	2.000	1.000	2.000		
PH		7.10	8.00	6.00	7.50	9.00		
BOD	6	2	15	21	1	2		
TSS	9	3	17	32	2	3		
FECAL	30	2	87	200				
D.O.	5	3		1.0	1.0	2.0		

COMMENTS: I certify under the penalty if law that I have personal examines and am familiar with information submitted herein; and based on my inquire of those individuals immediately responsible for obtaining the information. I believe the submitted information is true accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Signature: Steve Wabschall

1/5

DATE	FLOW MGD		PLANT INFLUENT					PLANT EFFLUENT									
SEPTEMBER 1999	INFL	EFF	PH	BOD MG/L	TSS SOLIDS	VOL SOLIDS	TEMP	PH	DO MG/L	BOD MG/L	% BOD REM	LBS BOD DISC.	S.S. MG/L	% S.S. REM	LBS S.S. DISC.	FECAL COUNT	No UV ON	UV DETN
											****	****		****	****			****
01-Sep	0.503	0.249	7.3	230	132	116	21.0	7.4	5.0	2.0	99.1	4	7.0	94.7	15		2	4.76
02-Sep	0.674	0.380	7.4	200	238	210	21.0	7.4	4.8	2.0	99.0	6	7.0	97.1	22	5	2	3.12
03-Sep	0.619	0.308																
04-Sep	0.321	0.351																
05-Sep	0.582	0.284																
06-Sep	0.593	0.296	6.6		352		21.0	7.4	4.6				8.0				2	4.00
07-Sep	0.498	0.317	7.8	348	214	196	21.0	7.5	5.6	2.5	99.3	7	10.0	95.3	26	2	2	3.74
08-Sep	0.544	0.248	7.5	170	262	246	21.0	7.5	5.6	6.8	96.0	14	10.0	96.2	21		2	4.78
09-Sep	0.801	0.464	8.0	240	362	312	20.0	7.5	5.8	14.7	93.9	57	4.0	98.9	15	11	2	2.55
10-Sep	0.510	0.249	7.6	445	418	204	20.0	7.4	4.2	7.8	98.2	16	3.0	99.3	6		2	4.76
11-Sep	0.726	0.394																
12-Sep	0.736	0.396																
13-Sep	0.359	0.172	7.4		376	290	20.0	7.5	4.6				4.0	98.9	6		2	6.89
14-Sep	0.574	0.280	7.6	315	220	198	20.0	7.5	4.2	5.0	98.4	12	12.0	94.5	28	7	2	4.23
15-Sep	0.682	0.375	7.4	325	458	364	20.0	7.6	4.0	5.6	98.3	18	9.0	98.0	28		2	3.16
16-Sep	0.650	0.380	6.7	432	306	266	20.0	7.7	4.2	3.0	99.3	10	13.0	95.8	41	41	2	3.12
17-Sep	0.658	0.366	6.8	300	266	220	20.0	8.0	5.1	10.2	96.6	31	8.0	97.0	24		2	3.24
18-Sep	0.603	0.289																
19-Sep	0.693	0.355																
20-Sep	0.635	0.332	7.1	562	214	200	20.0	7.4	4.0	11.9	97.9	33	10.0	95.3			2	3.57
21-Sep	0.637	0.335	6.9	372	446	358	20.0	7.1	3.1	9.2	97.5	26	13.0	97.1	36		2	3.54
22-Sep	0.624	0.303	6.7		246	220	20.0	7.4	4.0				14.0	94.3	35		2	3.91
23-Sep	0.696	0.365	7.2		570	522	20.0	7.5	4.2				11.0	98.1	33	10	2	3.25
24-Sep	0.562	0.287	7.2	260	240	232	20.0	7.5	4.4	7.3	97.2	17	17.0	92.9	41		2	4.13
25-Sep	0.748	0.393																
26-Sep	0.413	0.284																
27-Sep	0.525	0.298	8.0	440	186	168	20.0	7.5	4.6	2.0	99.5	5	4.0	97.8	10		2	3.98
28-Sep	0.348	0.275	8.6		372	332	20.0	7.5	5.5				3.0	99.2	7	87	2	4.31
29-Sep	0.667	0.554	7.2	235	188	188	20.0	7.5	5.0	2.8	98.8	13	7.0	96.3	32	80	2	2.14
30-Sep	0.532	0.430	7.2	118	242	228	20.0	7.5	5.0	3.0	97.5	11	12.0	95.0	43		2	2.76
PERMIT	2.000	2.000	6.0/9.0	400	300			6.0/9.0		32.0			25.0			200		
STD DEV.	0.118	0.074	0.5	114	107	88	0.4	0.2	0.7	3.8			3.8			33		
AVERAGE	0.590	0.334		312	300	254	20.2		4.6	6.0	97.9	17	8.9	92.0	22	30	2	2.66
MINIMUM	0.321	0.172	6.6	118	132	116	20.0	7.1	3.1	2.0			3.0			2	2	
MAXIMUM	0.801	0.554	8.6	562	570	522	21.0	8.0	5.8	14.7	99.5	57	17.0	99.3	43	87	2	6.89
TOTAL	17.713	10.009																
DESIGN AVG	1.000	1.000		400	300	225	20.2	6.0	1.0	2.0	90.0	17	1.5	90.0	13		1	
DESIGN MAX	2.000	2.000		500	375	281	21.0	9.0	2.0	11.2	85.0	188	2.8	85.0	47		2	
7 Day Average																		
Week 1	0.541	0.312	7.3	259	234	174	21.0	7.4	5.0	2.2	99.1	3	8.0	71.8	11	4	2	2.23
Week 2	0.607	0.315	7.6	393	328	250	20.2	7.5	4.9	8.6	96.6	14	6.6	97.6	11	9	2	3.32
Week 3	0.651	0.347	7.0	398	338	282	20.0	7.6	4.1	8.0	97.9	17	10.6	96.6	19	41	2	2.37
Week 4	0.559	0.315	7.5	350	323	295	20.0	7.5	4.5	4.7	98.4	3	9.8	96.5	18	49	2	2.80

INSPECTION

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CITY OF SCAPPOOSE

DATE	#	RAS	RAS	MLSS	MLVSS	MLVSS	DET.	AERATION SYSTEM LBS	LBS	TARGET	TARGET	F/M	LBS	MLSS	SVI	TARGET	SLUDGE AGE		REACT
SEPTEMBER 1999	OF DAYS	CONC MG/L	FLOW MGD	MG/L	MG/L	%	TIME HRS.	BOD APPLIED	VSS SYS	VSS SYS	MLVSS MG/L	RATIO ACTUAL	BOD /K-FT3/D	SETT 30 MIN		RAS GPM	KNETIC MCRT	STD. MCRT	TEMP C
		****				****	****	****	****	****	****	****	****		****	****	****	****	
01-Sep	1	2,890	0.500	2,060	1,820	88%	90.66	965	28,840	24,121	1,522	0.03		240	117			119.7	20
02-Sep	1	2,760	0.500	2,690	2,470	92%	67.66	1,124	39,140	28,106	1,774	0.03		260	97		33.2	170.0	20
03-Sep							73.67												
04-Sep							142.06												
05-Sep							78.35												
06-Sep	1	2,900	0.500	2,380			76.90							250	105				20
07-Sep	1	2,950	0.500	1,520	1,070	70%	91.57	1,445	16,955	36,134	2,280	0.09		150	99		20.8	68.9	20
08-Sep	1	2,360	0.500	2,280	1,680	74%	83.82	771	26,621	19,282	1,217	0.03		250	110		23.9	135.3	19
09-Sep	1	2,760	0.500	2,530	1,780	70%	56.93	1,603	28,206	40,082	2,529	0.06		280	111		13.5	122.5	19
10-Sep	1	1,980	0.500	1,980	1,300	66%	89.41	1,893	20,600	47,319	2,986	0.09		270	136		23.7	124.7	20
11-Sep							62.81												
12-Sep							61.96												
13-Sep	1	1,970	0.500	1,740	1,260	72%	127.02		19,966					200	115		23.0	121.5	20
14-Sep	1	2,090	0.500	2,160	1,580	73%	79.44	1,508	25,037	37,699	2,379	0.06		230	106		26.4	143.6	20
15-Sep	1	2,650	0.500	2,430	1,780	73%	66.86	1,849	28,206	46,214	2,916	0.07		250	103		13.6	127.6	20
16-Sep	1	3,350	0.500	2,700	1,980	73%	70.15	2,342	31,375	58,547	3,695	0.07		330	122		21.8	112.3	20
17-Sep	1	3,010	0.500	2,790	2,010	72%	69.30	1,646	31,850	41,158	2,597	0.05		340	122		26.4	126.9	20
18-Sep							75.62												
19-Sep							65.80												
20-Sep	1	2,900	0.500	2,060	1,810	88%	71.81	2,976	28,681	74,407	4,696	0.10		310	150		27.1	118.6	20
21-Sep	1	3,120	0.500	2,840	2,090	74%	71.59	1,976	33,118	49,407	3,118	0.06		330	116		17.4	63.6	20
22-Sep	1	3,380	0.500	3,010	2,230	74%	73.08		35,337					310	103		30.9	125.4	20
23-Sep	1	3,300	0.500	2,890	2,080	72%	65.52		32,960					390	135		10.9	119.8	20
24-Sep	1	3,490	0.500	3,100	2,720	88%	81.14	1,219	43,101	30,466	1,923	0.03		400	129		39.6	148.1	20
25-Sep							60.96												
26-Sep							110.41												
27-Sep	1	3,410	0.500	2,850	2,060	72%	86.86	1,927	32,643	48,164	3,039	0.06		380	133		44.4	114.8	20
28-Sep	1	3,470	0.500	2,980	2,300	77%	131.03		36,446					450	151		37.8	125.9	17
29-Sep	1	3,610	0.500	2,910	2,340	80%	68.37	1,307	37,080	32,681	2,062	0.04		430	148		35.5	123.2	18
30-Sep	1	3,750	0.500	3,260	2,610	80%	85.71	524	41,358	13,089	826	0.01		420	129		40.9	132.2	18
PERMIT																			
STD DEV.		512		463	429									79					1
AVERAGE	1	2,957	0.500	2,531	1,949	76%	121.8	1,254	30,876	31,344	1,978	0.04		308	121		25.5	122.2	20
MINIMUM	1	1,970	0.500	1,520	1,070								ERR	150		ERR			17
MAXIMUM	1	3,750	0.500	3,260	2,720	92%	142.1	2,976	43,101	74,407	4,696	0.10	ERR	450	151	ERR	44.4	170.0	20
TOTAL																			
DESIGN AVG						65%	8.0	400		2,334		ERR	42.0	250	100		10.0	10.0	21
DESIGN MAX						65%	4.0	500		2,334		ERR	70.0	420	200		15.0		30
7 Day Average																			
Week 1	1	2,875	0.500	2,163	1,787	36%	88.7	505	12,134	12,623	797			225	60		9.0	51.2	20
Week 2	1	2,232	0.500	2,138	1,520	51%	80.2	825	17,204	20,626	1,302			246	83		15.8	92.5	20
Week 3	1	3,006	0.500	2,564	1,934	54%	70.2	1,541	21,890	38,533	2,432			312	88		15.2	78.4	20
Week 4	1	3,410	0.500	2,066	2,278	55%	87.0	449	25,784	11,233	709			386	93		23.1	90.6	19

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CITY OF SCAPPOOSE

DATE	AERATION SYSTEM								SECONDARY CLARIFIERS										
SEPTEMBER 1999	RAS D.O. MG/L	MLSS DO MG/L	TARGET AIR SCFM	TARGET LBS TO WASTE	TARGET WAS MGD	ACTUAL WAS MGD	ACTUAL WAS MG/L	ACTUAL WAS LBS/D	# OF CLARIFIER	LBS VSS CLARIF	HDLC LOAD GPD/FT2	SOLIDS LOAD #/SF/D	WIER LOAD GPD/LF	DET TIME HRS.	BOD MG/L	% BOD REM	S S MG/L	% S S REM
	****		****	****	****			****	****		****	****	****	****		****		****
01-Sep	0.8	1.5		241		0.010	2,890	241	2									
02-Sep	0.6	1.2		281		0.010	2,760	230	2									
03-Sep																		
04-Sep																		
05-Sep																		
06-Sep	0.8	2.0				0.010	2,900	242	2									
07-Sep	0.5	1.4		361		0.010	2,950	246	2									
08-Sep	0.4	1.1		193		0.010	2,360	197	2									
09-Sep	0.3	3.7		401		0.010	2,760	230	2									
10-Sep	0.4	0.9		473		0.010	1,980	165	2									
11-Sep																		
12-Sep																		
13-Sep	0.4	1.2				0.010	1,970	164	2									
14-Sep	0.7	1.2		377		0.010	2,090	174	2									
15-Sep	0.5	0.7		462		0.010	2,650	221	2									
16-Sep	1.7	3.1		585		0.010	3,350	279	2									
17-Sep	2.1	3.4		412		0.010	3,010	251	2									
18-Sep																		
19-Sep																		
20-Sep	0.8	1.0		744		0.010	2,900	242	2									
21-Sep	0.6	0.8		494		0.020	3,120	520	2									
22-Sep	0.8	2.0				0.010	3,380	282	2									
23-Sep	0.5	1.0				0.010	3,300	275	2									
24-Sep	0.8	1.5		305		0.010	3,490	291	2									
25-Sep																		
26-Sep																		
27-Sep	0.8	2.0		482		0.010	3,410	284	2									
28-Sep	1.0	2.4				0.010	3,470	289	2									
29-Sep	1.0	2.6		327		0.010	3,610	301	2									
30-Sep	1.6	2.2		131		0.010	3,750	313	2									
PERMIT																		
STD DEV.	0.45	0.85				0.00	512	135										
AVERAGE	0.57	1.23		313		0.01	2957	259	2									
MINIMUM	0.30	0.70	ERR		ERR	0.01	1970		2	ERR	ERR	ERR	ERR	ERR				
MAXIMUM	2.10	3.70	ERR	744	ERR	0.02	3750	520	2	ERR	ERR	ERR	ERR	ERR				
TOTAL																		
DESIGN AVG					ERR				2		196	13.2	10,065	4.0	20.0	95.0	15	95.0%
DESIGN MAX									2		785	6.6	20,130	6.0	75.0	85.0	19	95.0%
7 Day Average																		
Week 1	0.68	1.53		126		0.010	2,875	137	2									
Week 2	0.44	1.62		206		0.010	2,232	133	2									
Week 3	1.14	1.80		385		0.012	3,006	216	2									
Week 4	0.78	1.78		112		0.010	3,410	203	2									

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CITY OF SCAPPOOSE

PRIMARY SLUDGE DIGETION TANKS

DATE SEPTEMBER 1999	# OF PSDT	PSTD TEMP DEG. C	FEED MGD	FEED PH	FEED % SOLIDS	TOTAL SOLIDS LBS/D	% VSS	TOTAL VSS LBS/D	SUPER. MGD	PSDT % SOLIDS	PSDT TOTAL VSS	PSDT % REDUC.	DET TIME DAYS	TONS DRY SOLIDS	SUPER TSS MG/L	TOTAL LBS SUPER.	% SOLIDS SUB.	TOTAL LBS SUB.	SUB MGD
			****		****	****		****				****	****	****		****	****	****	
01-Sep																			
02-Sep																			
03-Sep																			
04-Sep																			
05-Sep																			
06-Sep																			
07-Sep																			
08-Sep																			
09-Sep																			
10-Sep																			
11-Sep																			
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24-Sep																			
25-Sep																			
26-Sep																			
27-Sep																			
28-Sep																			
29-Sep																			
30-Sep																			
PERMIT																			
STD-DEV.																			
AVERAGE																			
MINIMUM			ERR		ERR	ERR		ERR					ERR	ERR		ERR			
MAXIMUM			ERR		ERR	ERR		ERR					ERR	ERR		ERR			
TOTAL																			
DESIGN AVG		30 0		6 00	3 00							28.50	14 0						
DESIGN MAX		38 0		8 00									18 0						
7 Day Average																			
Week 1																			
Week 2																			
Week 3																			
Week 4																			

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Appendix G -- Table 20 Instream Toxics

TABLE 20

WATER QUALITY CRITERIA SUMMARY
(Applicable to all Basins)[1]

The concentration for each compound listed in this chart is a criteria or guidance value* not to be exceeded in waters of the state for the protection of aquatic life and human health. Specific descriptions of each compound and an explanation of values are included in Quality Criteria for Water (1986). Selecting values for regulatory purposes will depend on the most sensitive beneficial use to be protected, and what level of protection is necessary for aquatic life and human health.

Compound Name (or Class)	Priority Pollutant	Carcinogen	Concentration in Micrograms Per Liter for Protection of Aquatic Life				Concentration in Units Per Liter for Protection of Human Health		
			Fresh Acute Criteria	Fresh Chronic Criteria	Marine Acute Criteria	Marine Chronic Criteria	Water and Fish Ingestion	Fish Consumption Only	Drinking Water M.C.L.
ACENAPTHENE	Y	N	*1,700.	*520.	*970.	*710.			
ACROLEIN	Y	N	*68.	*21.	*55.		320.ug	780.ug	
ACRYLONITRILE	Y	Y	*7,550.	*2,600.			0.058ug**	0.65ug**	
ALDRIN	Y	Y	3.0		1.3		0.074ng**	0.079ng**	
ALKALINITY	N	N		20,000					
AMMONIA	N	N	CRITERIA ARE pH AND TEMPERATURE DEPENDENT — SEE DOCUMENT USEPA JANUARY 1985 (Fresh Water) CRITERIA ARE pH AND TEMPERATURE DEPENDENT — SEE DOCUMENT USEPA APRIL 1989 (Marine Water)						
ANTIMONY	Y	N	*9,000.	*1,600.			146.ug	45,000.ug	
ARSENIC	Y	Y					2.2ng**	17.5ng**	0.05mg
ARSENIC (PENT)	Y	Y	*850.	*48.	*2,319.	*13.			
ARSENIC (TRI)	Y	Y	360.	190.	69.	36.			
ASBESTOS	Y	Y					30K f/L**		
BARIUM	N	N					1.mg		1.0mg
BENZENE	Y	Y	*5,300.		*5,100.	*700.	0.66ug**	40.ug**	
BENZIDINE	Y	Y	*2,500.				0.12ng	0.53ng**	
BERYLLIUM	Y	Y	*130.	*5.3			6.8ng**	117.ng**	
BHC	Y	N	*100.		*0.34				
CADMIUM	Y	N	3.9+	1.1+	43.	9.3	10.ug		0.010mg
CARBON TETRACHLORIDE	Y	Y	*35,200.		*50,000.		0.4ug**	6.94ug**	
CHLORDANE	Y	Y	2.4	0.0043	0.09	0.004	0.46ng**	0.48ng**	
CHLORIDE	N	N	860 mg/L	230 mg/L					
CHLORINATED BENZENES	Y	Y	*250	*50.	*160.	*129.	488.ug		
CHLORINATED NAPHTHALENES	Y	N	*1,600.		*7.5				
CHLORINE	N	N	19.	11.	13.	7.5			
CHLOROALKYL ETHERS	Y	N	*238,000.						
CHLOROETHYL ETHER (BIS-2)	Y	Y					0.03ug	1.36ug**	
CHLOROFORM	Y	Y	*28,900.	*1,240.			0.19ug**	15.7ug**	
CHLOROISOPROPYL ETHER (BIS-2)	Y	N					34.7ug	4.36mg	

FRESH CHRONIC CRITERIA

TABLE 20

WATER QUALITY CRITERIA SUMMARY (Continued)

Compound Name (or Class)	Priority Pollutant	Carcinogen	Concentration in Micrograms Per Liter for Protection of Aquatic Life				Concentration in Units Per Liter for Protection of Human Health		
			Fresh Acute Criteria	Fresh Chronic Criteria	Marine Acute Criteria	Marine Chronic Criteria	Water and Fish Ingestion	Fish Consumption Only	Drinking Water M.C.L.
CHLOROMETHYL ETHER (BIS)	N	Y					0.00000376ng**	0.00184ug**	
CHLOROPHENOL 2	Y	N	*4,380.	*2,000.					
CHLOROPHENOL 4	N	N			*29,700.				
CHLOROPHENOXY HERBICIDES (2,4,5,-TP)	N	N					10.ug		
CHLOROPHENOXY HERBICIDES (2,4-D)	N	N					100.ug		
CHLORPYRIFOS	N	N	0.083	0.041	0.011	0.0056			
CHLORO-4 METHYL-3 PHENOL	N	N	*30.						
CHROMIUM (HEX)	Y	N	16.	11.	1,100	50.	50.ug		0.05mg
CHROMIUM (TRI)	N	N	1,700.+	210.+	*10,300		170.mg	3,433.mg	0.05mg
COPPER	Y	N	18.+	12.+	2.9	2.9			
CYANIDE	Y	N	22.	5.2	1.	1.	200.ug		
DDT	Y	Y	1.1	0.001	0.13	0.001	0.024ng**	0.024ng**	
DDT METABOLITE (DDE)	Y	Y	*1,050.		*14.				
DDT METABOLITE (TDE)	Y	Y	*0.06		*3.6				
DEMETON	Y	N		0.1		0.1			
DIBUTYLPHTHALATE	Y	N					35.mg	154.mg	
DICHLOROBENZENES	Y	N	*1,120.	*763.	*1,970.		400.ug	2.6mg	
DICHLOROBENZIDINE	Y	Y					0.01ug**	0.020ug**	
DICHLOROETHANE 1,2	Y	Y	*118,000.	*20,000.	*113,000.		0.94ug**	243.ug**	
DICHLOROETHYLENES	Y	Y	*11,600.		*224.000.		0.033ug**	1.85ug**	
DICHLOROPHENOL 2,4	N	N	*2,020.	*365.			3.09mg		
DICHLOROPROPANE	Y	N	*23,000.	*5,700.	*10,300.	*3,040.			
DICHLOROPROPENE	Y	N	*6,060.	*244.	*790.		87.ug	14.1mg	
DIELDRIN	Y	Y	2.5	0.0019	0.71	.0019	0.071ng**	0.076ng**	
DIETHYLPHTHALATE	Y	N					350.mg	1.8g	
DIMETHYL PHENOL 2,4	Y	N	*2,120.						
DIMETHYL PHTHALATE	Y	N					313.mg	2.9g	
DINITROTOLUENE 2,4	N	Y					0.11ug**	9.1ug**	
DINITROTOLUENE	Y	N					70.ug	14.3mg	
DINITROTOLUENE	N	Y	*330.	*230.	*590.	*370.			
DINITRO-O-CRESOL 2,4	Y	N					13.4g	765.ug	
DIOXIN (2,3,7,8-TCDD)	Y	Y	*0.01	*38 pg/L			0.000013ng**	0.000014ng**	
DIPHENYLHYDRAZINE	Y	N					42.ng**	0.56ug**	

TABLE 20

WATER QUALITY CRITERIA SUMMARY (Continued)

Compound Name (or Class)	Priority Pollutant	Carcinogen	Concentration in Micrograms Per Liter for Protection of Aquatic Life				Concentration in Units Per Liter for Protection of Human Health		
			Fresh Acute Criteria	Fresh Chronic Criteria	Marine Acute Criteria	Marine Chronic Criteria	Water and Fish Ingestion	Fish Consumption Only	Drinking Water M.C.L.
DIPHENYLHYDRAZINE1,2	Y	N	*270.						
DI-2-ETHYLHEXYL PHTHALATE	Y	N					15.mg	50.mg	
ENDOSULFAN	Y	N	0.22	0.056	0.034	0.0087	74.ug	159.ug	
ENDRIN	Y	N	0.18	0.0023	0.037	0.0023	1.ug		0.0002mg
ETHYLBENZENE	Y	N	*32,000.		*430.		1.4mg	3.28mg	
FLUORANTHENE	Y	N	*3,980.		*40.	*16.	42.ug	54.ug	
GUTHION	N	N		0.01		0.01			
HALOETHERS	Y	N	*360.	*122.					
HALOMETHANES	Y	Y	*11,000.		*12,000.	*6,400.	0.19ug**	15.7ug**	
HEPTACHLOR	Y	Y	0.52	0.0038	0.053	0.0036	0.28ng**	0.29ng**	
HEXACHLOROETHANE	N	Y	*980.	*540.	*940.		1.9ug	8.74ug	
HEXACHLOROBENZENE	Y	N					0.72ng**	0.74ng**	
HEXACHLOROBUTADIENE	Y	Y	*90.	*9.3	*32.		0.45ug**	50.ug**	
HEXACHLOROCYCLOHEXANE (LINDANE)	Y	Y	2.0	0.08	0.16				0.004mg
HEXACHLOROCYCLOHEXANE-ALPHA	Y	Y					9.2ng**	31.ng**	
HEXACHLOROCYCLOHEXANE-BETA	Y	Y					16.3ng**	54.7ng**	
HEXACHLOROCYCLOHEXANE-GAMA	Y	Y					18.6ng**	62.5ng**	
HEXACHLOROCYCLOHEXANE-TECHNICAL	Y	Y					12.3ng**	41.4ng**	
HEXACHLOROCYCLOPENTADIENE	Y	N	*7.	*5.2	*7.		206.ug		
IRON	N	N		1,000.			0.3mg		
ISOPHORONE	Y	N	*117,000.		*12,900.		5.2mg	520.mg	
LEAD	Y	N	82.+	3.2+	140.	5.6	50.ug		0.05mg
MALATHION	N	N		0.1		0.1			
MANGANESE	N	N					50.ug	100.ug	
MERCURY	Y	N	2.4	0.012	2.1	0.025	144.ng	146.ng	0.002mg
METHOXYCHLOR	N	N		0.03		0.03	100.ug		0.1mg
MIREX	N	N		0.001		0.001			
MONOCHLOROBENZENE	Y	N					488.ug		
NAPHTHALENE	Y	N	*2,300.	*620.	*2,350.				
NICKEL	Y	N	1,400.+	160+	75	8.3	13.4ug	100.ug	
NITRATES	N	N					10.mg		10.mg
NITROBENZENE	Y	N	*27,000.		*6,680.		19.8mg		
NITROPHENOLS	Y	N	*230.	*150.	*4,850.				

TABLE 20

WATER QUALITY CRITERIA SUMMARY (Continued)

Compound Name (or Class)	Priority Pollutant	Carcinogen	Concentration in Micrograms Per Liter for Protection of Aquatic Life				Concentration in Units Per Liter for Protection of Human Health		
			Fresh Acute Criteria	Fresh Chronic Criteria	Marine Acute Criteria	Marine Chronic Criteria	Water, and Fish Ingestion	Fish Consumption Only	Drinking Water M.C.L.
NITROSAMINES	Y	Y	*5,850.		*3,300,000		0.8ng**	1,240.ng**	
NITROSODIBUTYLAMINE N	Y	Y					6.4ng**	587.ng**	
NITROSODIETHYLAMINE N	Y	Y					0.8ng**	1,240.ng**	
NITROSODIMETHYLAMINE N	Y	Y					1.4ng**	16,000.ng**	
NITROSODIPHENYLAMINE N	Y	Y					4,900.ng**	16,100.ng**	
NITROSOPYRROLIDINE N	Y	Y					16.ng**	91,900.ng**	
PARATHION	N	N	0.065	0.013					
PCB's	Y	Y	2.0	0.014	10.	0.03	0.079ng**	0.079ng**	
PENTACHLORINATED ETHANES	N	N	*7,240.	*1,100.	*390.	*281.			
PENTACHLOROBENZENE	N	N					74.ug	85.ug	
PENTACHLOROPHENOL	Y	N	***20.	***13.	13.	*7.9	1.01mg		
PHENOL	Y	N	*10,200.	*2,560.	*5,800.		3.5mg		
PHOSPHORUS ELEMENTAL	N	N				0.1			
PHTHALATE ESTERS	Y	N	*940.	*3.	*2,944.	*3.4			
POLYNUCLEAR AROMATIC HYDROCARBONS	Y	Y			*300.		2.8ng**	31.1ng**	
SELENIUM	Y	N	260.	35.	410.	54.	10.ug		0.01mg
SILVER	Y	N	4.1+	0.12	2.3		50.ug		0.05mg
SULFIDE-HYDROGEN SULFIDE	N	N		2.		2.			
TETRACHLORINATED ETHANES	Y	N	*9,320.						
TETRACHLOROBENZENE 1,2,4,5	Y	N					38.ug	48.ug	
TETRACHLOROETHANE 1,1,2,2	Y	Y		*2,400.	*9,020.		0.17ug**	10.7ug**	
TETRACHLOROETHANES	Y	N	*9,320.						
TETRACHLOROETHYLENE	Y	Y	*5,280.	*840.	*10,200.	*450.	0.8ug**	8.85ug**	
TETRACHLOROPHENOL 2,3,5,6	Y	N				*440.			
THALLIUM	Y	N	*1,400.	*40.	*2,130.		13.ug	48.ug	
TOLUENE	Y	N	*17,500.		*6,300.	*5,000.	14.3mg	424.mg	
TOXAPHENE	Y	Y	0.73	0.0002	0.21	0.0002	0.71ng**	0.73ng**	0.005mg
TRICHLORINATED ETHANES	Y	Y	*18,000.						
TRICHLOROETHANE 1,1,1	Y	N			*31,2000.		18.4mg	1.03g	
TRICHLOROETHANE 1,1,2	Y	Y		*9,400.			0.6ug**	41.8ug**	
TRICHLOROETHYLENE	Y	Y	*45,000.	*21,900.	*2,000.		2.7ug**	80.7ug**	
TRICHLOROPHENOL 2,4,5	N	N					2,600.ug		
TRICHLOROPHENOL 2,4,6	Y	Y		*970.			1.2ug**	3.6ug**	

TABLE 20

WATER QUALITY CRITERIA SUMMARY (Continued)

Compound Name (or Class)	Priority Pollutant	Carcinogen	Concentration in Micrograms Per Liter for Protection of Aquatic Life				Concentration in Units Per Liter for Protection of Human Health		
			Fresh Acute Criteria	Fresh Chronic Criteria	Marine Acute Criteria	Marine Chronic Criteria	Water and Fish Ingestion	Fish Consumption Only	Drinking Water M.C.L.
VINYL CHLORIDE	Y	Y					2.ug**	525.ug**	
ZINC	Y	N	120.+	110+	95	86			

MEANING OF SYMBOLS:

g = grams
mg = milligrams
ug = micrograms
ng = nanograms
pg = picograms
f = fibers
Y = Yes
N = No

M.C.L. = Maximum Contaminant Level.

\+ = Hardness Dependent Criteria (100 mg/L used).

* = Insufficient data to develop criteria; value presented is the L.O.E.L. — Lowest Observed Effect Level.

** = Human health criteria for carcinogens reported for three risk levels. Value presented is the 10-6 risk level, which means the probability of one concern case per one million people at the stated concentration.

*** = pH Dependent Criteria (7.8 pH used).

1 = Values in Table 20 are applicable to all basins as follows:

Basin	Rule	Basin	Rule
North Coast	340-41-205(p)	Umatilla	340-41-645(p)
Mid Coast	340-41-245(p)	Walla Walla	340-41-685(p)
Umpqua	340-41-285(p)	Grande Ronde	340-41-725(p)
South Coast	340-41-325(p)	Powder	340-41-765(p)
Rogue	340-41-365(p)	Malheur River	340-41-805(p)
Willamette	340-41-445(p)	Owyhee	340-41-845(p)
Sandy	340-41-485(p)	Malheur Lake	340-41-885(p)
Hood	340-41-525(p)	Goose & Summer Lakes	340-41-925(p)
Deschutes	340-41-565(p)	Klamath	340-41-965(p)
John Day	340-41-605(p)		

Water and Fish Ingestion

Values represent the maximum ambient water concentration for consumption of both contaminated water and fish or other aquatic organisms.

Fish Ingestion

Values represent the maximum ambient water concentration for consumption of fish or other aquatic organisms.

SAVTable\WH5307.5

Appendix H -- Permittee Response

Oregon
John A. Kitzhaber, M.D., Governor

Department of Environmental Quality
Northwest Region Portland Office
2020 SW 4th Avenue, Suite 400
Portland, OR 97201-4987
(503) 229-5263
FAX (503) 229-6957
TTY (503) 229-5471

2000-01-25

City of Scappoose
PO Box P
Scappoose, OR97056

Re: WQ-Columbia County
City of Scappoose
File No. 78980
Permit No. 100677
EPA No. OR-002242-2
NOTICE OF NONCOMPLIANCE No. WQ-NWR-2000-001

This Notice of Noncompliance (NON) is issued for the following violations of the NPDES Permit No. 100677 for your facility at 2000 Columbia Avenue:

Violation Date	Outfall	Source	Parameter	Permit Requirement	Violation
1999-09-16	001	Final Effluent	flow meter calibration	Sch. B, Cond. 1b, calibrate 2 x annually; GC, Sec. C, 2. calibrate flow meter and maintain accuracy	failure to calibrate and maintain accuracy of flowmeter; Class II
1998-07-06 1998-07-10 1998-07-20	001	Final Effluent	FC	GC, B.1. shall provide adequate laboratory controls and appropriate quality assurance procedures	failure to provide adequate laboratory controls and appropriate quality assurance procedures; Class II
1998-12-09 1998-12-17	001	Final Effluent	BOD_5	GC, B.1. shall provide adequate laboratory controls and appropriate quality assurance procedures	failure to provide adequate laboratory controls and appropriate quality assurance procedures; Class II
1998-12-09 1998-12-17	001	Final Effluent	BOD_5	GC, C.4. shall not knowingly render inaccurate data for monitoring method	knowingly submitted inaccurate BOD_5 data; Class I and federal CWA violation
1998-12-09 1998-12-17	001	Final Effluent	BOD_5	GC, D.9. shall not knowingly make false statement on monitoring report	knowingly submitted inaccurate BOD_5 data; Class I

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EXHIBIT
tabbies 103

Enclosed is a copy of the inspection report documenting the inspection on 1999-12-09 during which the violations cited above were identified. Although the violations have been consolidated into this single NON, each violation cited is a separate violation.

This NON is the first NON for the current 36-month period beginning on the date of the earliest violation cited above of 1998-07-06. A recap of the violation history for your facility is given below.

NON Date	NON No.	Violation Date(s)	Class
2000-01-25	WQ-NWR-2000-001	1998-07-6 1998-07-10 1998-07-20	II
2000-01-25	WQ-NWR-2000-001	1998-12-09 1998-12-17	II
2000-01-25	WQ-NWR-2000-001	1998-12-09 1998-12-17	I
2000-01-25	WQ-NWR-2000-001	1999-12-16	II

This Notice of Noncompliance suggests that your facility may benefit from pollution prevention activities. Using pollution prevention can save your facility money through lower costs for resources or raw materials, energy and water, waste disposal or waste management, pollution control equipment, occupational injuries, and DEQ permit costs, emission fees, and hazardous waste generation fees. Pollution prevention can also lead to improved worker health and safety, and increased efficiency or productivity through diverting investments in waste management into the manufacturing process.

Pollution prevention means preventing environmental degradation at the source. Pollution prevention can be achieved by:

1. protection of natural resources by conservation and improved management practices;
2. increased efficiency in the use of raw materials, energy, water, or other resources; or
3. source reduction and other practices that reduce or eliminate the creation of pollutants.

For your wastewater generating processes, pollution prevention can include:

1. recycling and reuse of water and chemicals;
2. process changes to reduce chemical usage;
3. process changes to substitute less toxic chemicals for more toxic chemicals;
4. process changes to eliminate the use of certain chemicals; and
5. best management practices (BMPs) to improve housekeeping and spill response through better training, and better operations and maintenance procedures.

For your storm water management program, pollution prevention activities can include:

1. minimize contact of machinery and equipment, materials or products, or waste materials with storm water discharges from the site, and cover whenever possible;
2. store all hazardous material and wastes within berms or other secondary containment devices to prevent leaks and spills from contaminating storm water;
3. identify areas onsite where a potential exists for contributing pollutants to storm water runoff and identify the potential pollutants that could be present in storm water discharges;
4. divert uncontaminated storm water away from active industrial areas;
5. treat contaminated storm water with appropriate best management practices (oil booms, debris screens, settling ponds, etc.) prior to offsite discharge; and
6. practice good housekeeping.

The violations cited above include Class I and Class II violations, which are considered to be serious violations of Oregon and federal environmental law. Therefore, we are referring these violations to the Department's enforcement section with a recommendation to initiate formal enforcement action. A formal enforcement action may include a civil penalty assessment for each day of violation.

The Department requests your cooperation in ensuring that these violations do not recur. If you have any questions, contact me at 503-229-5740.

Sincerely,

James R. Sheetz, PE, DEE
Senior Environmental Engineer
Water Quality Section
Northwest Region

4. Reference

1. YOUNG, J.C. 1973. Chemical methods for nitrification control. *J. Water Pollut. Control Fed.* 45:637.

5. Bibliography

THERIAULT, E.J., P.D. MCNAMEE & C.T. BUTTERFIELD. 1931. Selection of dilution water for use in oxygen demand tests. *Pub. Health Rep.* 46:1084.

LEA, W.L. & M.S. NICHOLS. 1937. Influence of phosphorus and nitrogen on biochemical oxygen demand. *Sewage Works J.* 9:34.

RUCHHOFT, C.C. 1941. Report on the cooperative study of dilution waters made for the Standard Methods Committee of the Federation of Sewage Works Associations. *Sewage Works J.* 13:669.

MOHLMAN, F.W., E. HURWITZ, G.R. BARNETT & H.K. RAMER. 1950. Experience with modified methods for BOD. *Sewage Ind. Wastes* 22:31.

5210 B. 5-Day BOD Test

1. General Discussion

a. Principle: The method consists of filling with sample, to overflowing, an airtight bottle of the specified size and incubating it at the specified temperature for 5 d. Dissolved oxygen is measured initially and after incubation, and the BOD is computed from the difference between initial and final DO. Because the initial DO is determined immediately after the dilution is made, all oxygen uptake, including that occurring during the first 15 min, is included in the BOD measurement.

b. Sampling and storage: Samples for BOD analysis may degrade significantly during storage between collection and analysis, resulting in low BOD values. Minimize reduction of BOD by analyzing sample promptly or by cooling it to near-freezing temperature during storage. However, even at low temperature, keep holding time to a minimum. Warm chilled samples to 20°C fore analysis.

1) Grab samples—If analysis is begun within 2 h of collection, cold storage is unnecessary. If analysis is not started within 2 h of sample collection, keep sample at or below 4°C from the time of collection. Begin analysis within 6 h of collection; when this is not possible because the sampling site is distant from the laboratory, store at or below 4°C and report length and temperature of storage with the results. In no case start analysis more than 24 h after grab sample collection. When samples are to be used for regulatory purposes make every effort to deliver samples for analysis within 6 h of collection.

2) Composite samples—Keep samples at or below 4°C during compositing. Limit compositing period to 24 h. Use the same criteria as for storage of grab samples, starting the measurement of holding time from end of compositing period. State storage time and conditions as part of the results.

2. Apparatus

a. Incubation bottles, 250- to 300-mL capacity. Clean bottles with a detergent, rinse thoroughly, and drain before use. As a precaution against drawing air into the dilution bottle during incubation, use a water-seal. Obtain satisfactory water seals by inverting bottles in a water bath or by adding water to the flared mouth of special BOD bottles. Place a paper or plastic cup or foil cap over flared mouth of bottle to reduce evaporation of the water seal during incubation.

b. Air incubator or water bath, thermostatically controlled at 20 ± 1°C. Exclude all light to prevent possibility of photosynthetic production of DO.

3. Reagents

a. Phosphate buffer solution: Dissolve 8.5 g KH_2PO_4, 21.75 g K_2HPO_4, 33.4 g $Na_2HPO_4 \cdot 7H_2O$, and 1.7 g NH_4Cl in about 500 mL distilled water and dilute to 1 L. The pH should be 7.2 without further adjustment. Discard reagent (or any of the following reagents) if there is any sign of biological growth in the stock bottle.

b. Magnesium sulfate solution: Dissolve 22.5 g $MgSO_4 \cdot 7H_2O$ in distilled water and dilute to 1 L.

c. Calcium chloride solution: Dissolve 27.5 g $CaCl_2$ in distilled water and dilute to 1 L.

d. Ferric chloride solution: Dissolve 0.25 g $FeCl_3 \cdot 6H_2O$ in distilled water and dilute to 1 L.

e. Acid and alkali solutions, 1*N*, for neutralization of caustic or acidic waste samples.

1) Acid—Slowly and while stirring, add 28 mL conc sulfuric acid to distilled water. Dilute to 1 L.

2) Alkali—Dissolve 40 g sodium hydroxide in distilled water. Dilute to 1 L.

f. Sodium sulfite solution: Dissolve 1.575 g Na_2SO_3 in 1000 mL distilled water. This solution is not stable; prepare daily.

g. Nitrification inhibitor, 2-chloro-6-(trichloromethyl) pyridine.*

h. Glucose-glutamic acid solution: Dry reagent-grade glucose and reagent-grade glutamic acid at 103°C for 1 h. Add 150 mg glucose and 150 mg glutamic acid to distilled water and dilute to 1 L. Prepare fresh immediately before use.

i. Ammonium chloride solution: Dissolve 1.15 g NH_4Cl in about 500 mL distilled water, adjust pH to 7.2 with NaOH solution, and dilute to 1 L. Solution contains 0.3 mg N/mL.

4. Procedure

a. Preparation of dilution water: Place desired volume of water in a suitable bottle and add 1 mL each of phosphate buffer, $MgSO_4$, $CaCl_2$, and $FeCl_3$ solutions/L of water. Seed dilution water, if desired, as described in ¶ 4*d*. Test and store dilution water as described in ¶s 4*b* and *c* so that water of assured quality always is on hand.

Before use bring dilution water temperature to 20°C. Saturate with DO by shaking in a partially filled bottle or by aerating with organic-free filtered air. Alternatively, store in cotton-plugged

* Nitrification Inhibitor 2579-24 (2.2% TCMP), Hach Co., or equivalent.

bottles long enough for water to become saturated with DO. Protect water quality by using clean glassware, tubing, and bottles.

Dilution water check: Use this procedure as a rough check of quality of dilution water.

If the oxygen depletion of a candidate water exceeds 0.2 mg/L obtain a satisfactory water by improving purification or from another source. Alternatively, if nitrification inhibition is used, store the dilution water, seeded as prescribed below, in a darkened room at room temperature until the oxygen uptake is sufficiently reduced to meet the dilution-water check criteria. Check quality of stored dilution water on use, but do not add seed to dilution water stored for quality improvement. Storage is not recommended when BODs are to be determined without nitrification inhibition because nitrifying organisms may develop during storage. Check stored dilution water to determine whether sufficient ammonia remains after storage. If not, add ammonium chloride solution to provide a total of 0.45 mg ammonia/L as nitrogen. If dilution water has not been stored for quality improvement, add sufficient seeding material to produce a DO uptake of 0.05 to 0.1 mg/L in 5 d at 20°C. Incubate a BOD bottle full of dilution water for 5 d at 20°C. Determine initial and final DO as in ¶s 4*g* and *j*. The DO uptake in 5 d at 20°C should not be more than 0.2 mg/L and preferably not more than 0.1 mg/L.

c. Glucose-glutamic acid check: Because the BOD test is a bioassay its results can be influenced greatly by the presence of toxicants or by use of a poor seeding material. Distilled waters frequently are contaminated with copper; some sewage seeds are relatively inactive. Low results always are obtained with such seeds and waters. Periodically check dilution water quality, seed effectiveness, and analytical technique by making BOD measurements on pure organic compounds and samples with known BOD. In general, for BOD determinations not requiring an adapted seed, use a mixture of 150 mg glucose/L and 150 mg glutamic acid/L as a "standard" check solution. Glucose has an exceptionally high and variable oxidation rate but when it is used with glutamic acid, the oxidation rate is stabilized and is similar to that obtained with many municipal wastes. Alternatively, if a particular wastewater contains an identifiable major constituent that contributes to the BOD, use this compound in place of the glucose-glutamic acid.

Determine the 5-d 20°C BOD of a 2% dilution of the glucose-glutamic acid standard check solution using the techniques outlined in ¶s 4*d-j*. Evaluate data as described in ¶ 6, Precision and Bias.

d. Seeding:

1) Seed source—It is necessary to have present a population of microorganisms capable of oxidizing the biodegradable organic matter in the sample. Domestic wastewater, unchlorinated or otherwise-undisinfected effluents from biological waste treatment plants, and surface waters receiving wastewater discharges contain satisfactory microbial populations. Some samples do not contain a sufficient microbial population (for example, some untreated industrial wastes, disinfected wastes, high-temperature wastes, or wastes with extreme pH values). For such wastes seed the dilution water by adding a population of microorganisms. The preferred seed is effluent from a biological treatment system processing the waste. Where this is not available, use supernatant from domestic wastewater after settling at room temperature for at least 1 h but no longer than 36 h. When effluent from a biological treatment process is used, inhibition of nitrification is recommended.

Some samples may contain materials not degraded at normal rates by the microorganisms in settled domestic wastewater. Seed such samples with an adapted microbial population obtained from the undisinfected effluent of a biological process treating the waste. In the absence of such a facility, obtain seed from the receiving water below (preferably 3 to 8 km) the point of discharge. When such seed sources also are not available, develop an adapted seed in the laboratory by continuously aerating a sample of settled domestic wastewater and adding small daily increments of waste. Optionally use a soil suspension or activated sludge, or a commercial seed preparation to obtain the initial microbial population. Determine the existence of a satisfactory population by testing the performance of the seed in BOD tests on the sample. BOD values that increase with time of adaptation to a steady high value indicate successful seed adaptation.

2) Seed control—Determine BOD of the seeding material as for any other sample. This is the *seed control*. From the value of the seed control and a knowledge of the seeding material dilution (in the dilution water) determine seed DO uptake. Ideally, make dilutions of seed such that the largest quantity results in at least 50% DO depletion. A plot of DO depletion, in milligrams per liter, versus milliliters seed should present a straight line for which the slope indicates DO depletion per milliliter of seed. The DO-axis intercept is oxygen depletion caused by the dilution water and should be less than 0.1 mg/L (¶ 4*h*). To determine a sample DO uptake subtract seed DO uptake from total DO uptake. The DO uptake of seeded dilution water should be between 0.6 and 1.0 mg/L.

Techniques for adding seeding material to dilution water are described for two sample dilution methods (¶ 4*f*).

e. Sample pretreatment:

1) Samples containing caustic alkalinity or acidity—Neutralize samples to pH 6.5 to 7.5 with a solution of sulfuric acid (H_2SO_4) or sodium hydroxide (NaOH) of such strength that the quantity of reagent does not dilute the sample by more than 0.5%. The pH of seeded dilution water should not be affected by the lowest sample dilution.

2) Samples containing residual chlorine compounds—If possible, avoid samples containing residual chlorine by sampling ahead of chlorination processes. If the sample has been chlorinated but no detectable chlorine residual is present, seed the dilution water. If residual chlorine is present, dechlorinate sample and seed the dilution water (¶ 4*f*). Do not test chlorinated/dechlorinated samples without seeding the dilution water. In some samples chlorine will dissipate within 1 to 2 h of standing in the light. This often occurs during sample transport and handling. For samples in which chlorine residual does not dissipate in a reasonably short time, destroy chlorine residual by adding Na_2SO_3 solution. Determine required volume of Na_2SO_3 solution on a 100- to 1000-mL portion of neutralized sample by adding 10 mL of 1 + 1 acetic acid or 1 + 50 H_2SO_4, 10 mL potassium iodide (KI) solution (10 g/100 mL) per 1000 mL portion, and titrating with Na_2SO_3 solution to the starch-iodine end point for residual. Add to neutralized sample the relative volume of Na_2SO_3 solution determined by the above test, mix, and after 10 to 20 min check sample for residual chlorine. (NOTE: Excess Na_2SO_3 exerts an oxygen demand and reacts slowly with certain organic chloramine compounds that may be present in chlorinated samples.)

3) Samples containing other toxic substances—Certain industrial wastes, for example, plating wastes, contain toxic metals. Such samples often require special study and treatment.

4) Samples supersaturated with DO—Samples containing more than 9 mg DO/ L at 20°C may be encountered in cold waters or in water where photosynthesis occurs. To prevent loss of oxygen during incubation of such samples, reduce DO to saturation at °C by bringing sample to about 20°C in partially filled bottle while agitating by vigorous shaking or by aerating with clean, filtered compressed air.

5) Sample temperature adjustment—Bring samples to 20 ± 1°C before making dilutions.

6) Nitrification inhibition—If nitrification inhibition is desired add 3 mg 2-chloro-6-(trichloro methyl) pyridine (TCMP) to each 300-mL bottle before capping or add sufficient amounts to the dilution water to make a final concentration of 10 mg/L. (NOTE: Pure TCMP may dissolve slowly and can float on top of the sample. Some commercial formulations dissolve more readily but are not 100% TCMP; adjust dosage accordingly.) Samples that may require nitrification inhibition include, but are not limited to, biologically treated effluents, samples seeded with biologically treated effluents, and river waters. Note the use of nitrogen inhibition in reporting results.

f. Dilution technique: Dilutions that result in a residual DO of at least 1 mg/L and a DO uptake of at least 2 mg/L after 5 d incubation produce the most reliable results. Make several dilutions of prepared sample to obtain DO uptake in this range. Experience with a particular sample will permit use of a smaller number of dilutions. A more rapid analysis, such as COD, may be correlated approximately with BOD and serve as a guide in selecting dilutions. In the absence of prior knowledge, use the following dilutions: 0.0 to 1.0% for strong industrial wastes, 1 to 5% for raw and settled wastewater, 5 to 25% for biologically treated effluent, and 25 to 100% for polluted river waters.

Prepare dilutions either in graduated cylinders and then transto BOD bottles or prepare directly in BOD bottles. Either dilution method can be combined with any DO measurement technique. The number of bottles to be prepared for each dilution depends on the DO technique and the number of replicates desired.

When using graduated cylinders to prepare dilutions, and when seeding is necessary, add seed either directly to dilution water or to individual cylinders before dilution. Seeding of individual cylinders avoids a declining ratio of seed to sample as increasing dilutions are made. When dilutions are prepared directly in BOD bottles and when seeding is necessary, add seed directly to dilution water or directly to the BOD bottles.

1) Dilutions prepared in graduated cylinders—If the azide modification of the titrimetric iodometric method (Section 4500-O.C) is used, carefully siphon dilution water, seeded if necessary, into a 1- to 2-L-capacity graduated cylinder. Fill cylinder half full without entraining air. Add desired quantity of carefully mixed sample and dilute to appropriate level with dilution water. Mix well with a plunger-type mixing rod; avoid entraining air. Siphon mixed dilution into two BOD bottles. Determine initial DO on one of these bottles. Stopper the second bottle tightly, water-seal, and incubate for 5 d at 20°C. If the membrane electrode method is used for DO measurement, siphon dilution mixture into one BOD bottle. Determine initial DO on this bottle and replace any displaced contents with sample dilution to fill the bottle. Stopper tightly, water-seal, and incubate for 5 d at 20°C.

2) Dilutions prepared directly in BOD bottles—Using a wide-n volumetric pipet, add the desired sample volume to individual BOD bottles of known capacity. Add appropriate amounts of seed material to the individual BOD bottles or to the dilution water. Fill bottles with enough dilution water, seeded if necessary, so that insertion of stopper will displace all air, leaving no bubbles. For dilutions greater than 1:100 make a primary dilution in a graduated cylinder before making final dilution in the bottle. When using titrimetric iodometric methods for DO measurement, prepare two bottles at each dilution. Determine initial DO on one bottle. Stopper second bottle tightly, water-seal, and incubate for 5 d at 20°C. If the membrane electrode method is used for DO measurement, prepare only one BOD bottle for each dilution. Determine initial DO on this bottle and replace any displaced contents with dilution water to fill the bottle. Stopper tightly, water-seal, and incubate for 5 d at 20°C. Rinse DO electrode between determinations to prevent cross-contamination of samples.

g. Determination of initial DO: If the sample contains materials that react rapidly with DO, determine initial DO immediately after filling BOD bottle with diluted sample. If rapid initial DO uptake is insignificant, the time period between preparing dilution and measuring initial DO is not critical.

Use the azide modification of the iodometric method (Section 4500-O.C) or the membrane electrode method (Section 4500-O.G) to determine initial DO on all sample dilutions, dilution water blanks, and where appropriate, seed controls.

h. Dilution water blank: Use a dilution water blank as a rough check on quality of unseeded dilution water and cleanliness of incubation bottles. Together with each batch of samples incubate a bottle of unseeded dilution water. Determine initial and final DO as in ¶s 4*g* and *j*. The DO uptake should not be more than 0.2 mg/L and preferably not more than 0.1 mg/L.

i. Incubation: Incubate at 20°C ± 1°C BOD bottles containing desired dilutions, seed controls, dilution water blanks, and glucose-glutamic acid checks. Water-seal bottles as described in ¶ 4*f*.

j. Determination of final DO: After 5 d incubation determine DO in sample dilutions, blanks, and checks as in ¶ 4*g*.

5. Calculation

When dilution water is not seeded:

$$\text{BOD}_5,\ \text{mg/L} = \frac{D_1 - D_2}{P}$$

When dilution water is seeded:

$$\text{BOD}_5,\ \text{mg/L} = \frac{(D_1 - D_2) - (B_1 - B_2)f}{P}$$

where:

D_1 = DO of diluted sample immediately after preparation, mg/L,
D_2 = DO of diluted sample after 5 d incubation at 20°C, mg/L,
P = decimal volumetric fraction of sample used,
B_1 = DO of seed control before incubation, mg/L (¶ 4*d*),
B_2 = DO of seed control after incubation mg/L (¶ 4*d*), and
f = ratio of seed in diluted sample to seed in seed control = (% seed in diluted sample)/(% seed in seed control).

If seed material is added directly to sample or to seed control bottles:

f = (volume of seed in diluted sample)/(volume of seed in seed control)

Report results as $CBOD_5$ if nitrification is inhibited.

If more than one sample dilution meets the criteria of a residual DO of at least 1 mg/L and a DO depletion of at least 2 mg/L and there is no evidence of toxicity at higher sample concentrations or the existence of an obvious anomaly, average results in the acceptable range.

In these calculations, do not make corrections for DO uptake by the dilution water blank during incubation. This correction is unnecessary if dilution water meets the blank criteria stipulated above. If the dilution water does not meet these criteria, proper corrections are difficult and results become questionable.

6. Precision and Bias

There is no measurement for establishing bias of the BOD procedure. The glucose-glutamic acid check prescribed in ¶ 4c is intended to be a reference point for evaluation of dilution water quality, seed effectiveness, and analytical technique. Single-laboratory tests using a 300-mg/L mixed glucose-glutamic acid solution provided the following results:

Number of months:	14
Number of triplicates:	421
Average monthly recovery:	204 mg/L
Average monthly standard deviation:	10.4 mg/L

In a series of interlaboratory studies,[1] each involving 2 to 112 laboratories (and as many analysts and seed sources), 5-d BOD measurements were made on synthetic water samples containing a 1:1 mixture of glucose and glutamic acid in the total concentration range of 3.3 to 231 mg/L. The regression equations for mean value, $\bar{X}$, and standard deviation, S, from these studies were:

$$\bar{X} = 0.658 \text{ (added level, mg/L)} + 0.280 \text{ mg/L}$$
$$S = 0.100 \text{ (added level, mg/L)} + 0.547 \text{ mg/L}$$

For the 300-mg/L mixed primary standard, the average 5-d BOD would be 198 mg/L with a standard deviation of 30.5 mg/L.

a. Control limits: Because of many factors affecting BOD tests in multilaboratory studies and the resulting extreme variability in test results, one standard deviation, as determined by inter-laboratory tests, is recommended as a control limit for individual laboratories. Alternatively, for each laboratory, establish its control limits by performing a minimum of 25 glucose-glutamic acid checks (¶ 4c) over a period of several weeks or months and calculating the mean and standard deviation. Use the mean ± 3 standard deviations as the control limit for future glucose-glutamic acid checks. Compare calculated control limits to the single-laboratory tests presented above and to interlaboratory results. If control limits are outside the range of 198 ± 30.5, re-evaluate the control limits and investigate source of the problem. If measured BOD for a glucose-glutamic acid check is outside the accepted control limit range, reject tests made with that seed and dilution water.

b. Working range and detection limit: The working range is equal to the difference between the maximum initial DO (7 to 9 mg L) and minimum DO residual of 1 mg/L multiplied by the dilution factor. A lower detection limit of 2 mg/L is established by the requirement for a minimum DO depletion of 2 mg/L.

7. References

1. U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF RESEARCH AND DEVELOPMENT. 1986. Method-by-Method Statistics from Water Pollution (WP) Laboratory Performance Evaluation Studies. Quality Assurance Branch, Environmental Monitoring and Support Lab., Cincinnati, Ohio.

8. Bibliography

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RUCHHOFT, C.C., O.R. PLACAK, J. KACHMAR & C.E. CALBERT. 1948. Variations in BOD velocity constant of sewage dilutions. *Ind. Eng. Chem.* 40:1290.

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5210 C. Ultimate BOD Test (PROPOSED)

1. General Discussion

The ultimate BOD test is an extension of the 5-d dilution BOD test as described in 5210B but with a number of specific test requirements and differences in application. The user should be familar with the 5210B procedure before conducting tests for UBOD.

a. Principle: The method consists of placing a single sample dilution in full, airtight bottles and incubating under specified conditions for an extended period depending on wastewater, effluent, river, or estuary quality.[1] Dissolved oxygen (DO) is measured (with probes) initially and intermittently during the test. From the DO versus time series, UBOD is calculated by an appropriate statistical technique. For improved accuracy, run tests in triplicate.

Bottle size and incubation time are flexible to accommodate individual sample characteristics and laboratory limitations. Incubation temperature, however, is 20°C. Most effluents and some naturally occurring surface waters contain materials with oxygen demands exceeding the DO available in air-saturated water. Therefore, it is necessary either to dilute the sample or to monitor DO frequently to ensure that low DO or anaerobic conditions do not occur. When DO concentrations approach 2 mg/L, the sample should be reaerated.

Because bacterial growth requires nutrients such as nitrogen, phosphorus, and trace metals, the necessary amounts may be

City of Scappoose

Wastwater Treatnemt Plant

Laboratory Analysis

Date: 12 / 9 / 98 Duty Op. SMS

	INFLUENT	EFFLUENT	W A S SETTING	TIME
FINAL	13079693	48780986	Min. ON 1	
INITIAL	12300254	48337568	Min. OFF 59	
TOTAL MGD	.779	.443		

AERATION BASIN MLSS (RAS) JRS

JRS

	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.	10mL		10 mL	
SETT.	260			
DRY WT.	44180 x10⁻⁵g	44180	45940	
TARE WT.	41470	42230	41350	
MLSS	0.02710 g =		4590	

27.10 mg x 100 = 2710mg/L SUSPENDED SOLIDS

	INFLUENT TOTAL	INFLUENT VOLATILE	EFFLUENT TOTAL	EFFLUENT VOLATILE
JRS			JRS	
VOL.	50 mL		100 mL	
DRY WT.	42060	42060	41920 x10⁻⁵g	
TARE WT.	41580	41600	41850	
SUSPENDED	96		70	

0.0048 g = 4.8mg x 20 = 96 mg/L SUSPENDED SOLIDS 0.0007g = 0.7mg x 10 = 7 mg/L

	STIENFELD TOTAL	STIENFELD VOLATILE	EFFLUENT TOTAL	EFFLUENT VOLATILE
VOL.				
DRY WT.	43630			
TARE WT.	41440			
SUSPENDED	438			

DRYING OVEN TEMP.	FECAL/BATH TEMP.	BOD INCU. TEMP.	OTHER

METTLER BAL. TEMP.	INF. TEMP.	EFF. TEMP.	OTHER
	6.91	6.55	

Fecal 320

TAP 6.64

Stan. 4.95

EXHIBIT tabbies 106

Location: Columbia Ave. WWTP
time start: _____

Reported by: SMS/_____
time end: _____

Base Data

sampling	12-9-96	date
inf. flow	_____	m.g.d.
eff. flow	_____	m.g.d.
inf. p.h.	_____	unit's
inf. b.o.d.	_____	mg/l
inf. t.s.s.	_____	mg/l
inf. v.s.s.	_____	mg/l
inf. temp	_____	deg. c.
eff. p.h.	_____	unit's
eff. d.o.	_____	mg/l
eff. b.o.d.	_____	mg/l
eff. t.s.s.	_____	mg/l
eff. fecal	_____	#/100ml.
eff. turbidity	_____	ntu's

Secondary System

# of Clarif	2	on line
sec. clarif. b.o.d.	_____	mg/l
sec. clarif.t.s	_____	mg/l
sludge blanket	15/24	inches

Aeration System

# of bay's	1
r.a.s. conc.	_____
r.a.s. v.s.s.	_____
r.a.s. flow	_____
m.l.s.s.	_____
m.l.v.s.s.	_____
m.l.s.s. sett.	_____
basin temp.	_____
basin d.o.	_____
o.u.r.	_____
r.a.s. d.o.	_____

Solid's Handling

actual wasting	_____ m.g.d.
# of p.s.d.t.	_____ on line
p.s.d.t. temp.	_____ deg. c.
p.s.d.t. p.h.	_____ unit's
p.s.d.t. t.s.s.	_____ %
p.s.d.t. v.s.s.	_____ %
supernate	_____ m.g.d.
wasting	3276 6223 3276 2364 3859
digester d.o.	_____
bank	1
intensity	6.7
hour	47175
bank	2
intensity	3.2
hour	46672
stein. t.s.s.	_____
stein. v.s.s.	_____

datatrsfwp

CITY OF SCAPPOOSE WAS VATER FACILITY

lwgzy

BOD BENCH SHEET

START DATE: 12-9-98 STOP DATE: 12-14-98

TIME: TIME:

Set Up By: DWS Taken off By:

	BOTTLE NO.	SAMPLE VOLUME ML	DILLUTION RATIO (a)	INITIAL DO	FINAL DO	DO DEPLETION	BOD (b)	AVERAGE BOD
Influent								
Dilution No. 1	32	3	101	8.49	8.20	100 ⇒		
Dilution No. 2	33	6	50.5	8.46	8.03			
Final Effluent								
Dilution No. 1	29	60	5.05	8.34	6.50	6.5	5.8	
Dilution No. 2	31	80	3.7875	8.25	7.85	5.0 =		
Dilution No. 3								
Dilution No. 1								
Dilution No. 2								
Stentids								
Dilution No. 1	34	0.1	3030	8.49	5.01	10,500		9675
Dilution No. 2	48	0.2	1515	8.50	2.61	8,850 =	9	
Digester Supernatant								
Dilution No. 1								
Dilution No. 2								
Blank								
Blank No. 1	28			8.55	8.53			
Blank No. 2								

JRS NOTES

DO DEPL	BOD mg/L
0.29	× 100 = 29
0.43	× 50 = 21.5
	AVG = 25.3
1.84	× 5 = 9.2
0.4	× 3.75 = 1.5
	AVG = 5.4

3.48 × 3000 = 10,440

5.89 × 1500 = 8835

AVG 9637

OK < 0.2 mg/L

Notes: (a) Dillution Ratio = 303 / *Sample Vol. ml* ⇒ SHOULD BE 300 mL

(b) BOD = Dillution Ratio x DO Depletion

C:\123R3\PW\FORMS\WW\BOD

CITY OF SCAPPOOSE WAS[illegible] WATER FACILITY

/wgzy

BOD BENCH SHE

START DATE: 12-17-98 TIME: Set Up By: DWS

STOP DATE: 12-22-98 TIME: Taken off By: DWS

	BOTTLE NO.	SAMPLE VOLUME ML	DILLUTION RATIO (a)	INITIAL DO	FINAL DO	DO DEPLETION	BOD (b)	AVERAGE BOD
Influent								
Dillution No. 1	24	3	101	8.62	8.3	6.0		
Dillution No. 2	46	6	50.5	8.61	7.7			
Final Effluent								
Dillution No. 1	13	60	5.05	8.67	8.3	2.0		
Dillution No. 2	17	80	3.7875	8.68	8.2			
Dillution No. 3								
Dillution No. 1								
Dillution No. 2								
Silanlids								
Dillution No. 1	NO SAMPLE	0.1	3030					
Dillution No. 2		0.2	1515					
Digester Supernatant								
Dillution No. 1								
Dillution No. 2								
Blank								
Blank No. 1	7			8.70	8.7			
Blank No. 2								

JRS NOTES

DO DEPL.	BOD mg/L
0.32 x 100 =	32
0.91 x 50 =	45.5
AVG =	38.8
0.37 x 5 =	1.9
0.48 x 3.75 =	1.8
AVG =	1.9

Notes: (a) Dillution Ratio = 303 / Sample Vol. ml ⇒ 300 mL

(b) BOD = Dillution Ratio x DO Depletion

EXHIBIT tabbies 107

C:\123R3\PW\FORMS\WW\BOD

Location: Columbia Ave. WWTP
time start: _____

Reported by: SMS
time end: _____

Base Data

sampling	12-17-98 date
inf. flow	_____ m.g.d.
eff. flow	_____ m.g.d.
inf. p.h.	_____ unit's
inf. b.o.d.	_____ mg/l
inf. t.s.s.	_____ mg/l
inf. v.s.s.	_____ mg/l
inf. temp	_____ deg. c.
eff. p.h.	_____ unit's
eff. d.o.	_____ mg/l
eff. b.o.d.	_____ mg/l
eff. t.s.s.	_____ mg/l
eff. fecal	_____ #/100ml.
eff. turbidity	_____ ntu's

Aeration System

# of bay's	1
r.a.s. conc.	_____
r.a.s. v.s.s.	_____
r.a.s. flow	_____
m.l.s.s.	_____
m.l.v.s.s.	_____
m.l.s.s. sett.	430
basin temp.	_____
basin d.o.	_____
o.u.r.	_____
r.a.s. d.o.	_____

Secondary System

# of Clarif	_____ on line
sec. clarif. b.o.d.	_____ mg/l
sec. clarif.t.s	_____ mg/l
sludge blanket	_____ inches

Solid's Handling

actual wasting	_____ m.g.d.
# of p.s.d.t.	_____ on line
p.s.d.t. temp.	_____ deg. c.
p.s.d.t. p.h.	_____ unit's
p.s.d.t. t.s.s.	_____ %
p.s.d.t. v.s.s.	_____ %
supernate	_____ m.g.d.
wasting	32815336 32803954
	_____
digester d.o.	_____
bank	1
intensity	7.3
hour	47367
bank	2
intensity	3.3
hour	46864
stein. t.s.s.	_____
stein. v.s.s.	_____

datatrsfwp

City of Scappoose

Wastwater Treatnemt Plant

Laboratory Analysis

Date: 12/17/98 Duty Op. SMS/

	INFLUENT	EFFLUENT	W A S SETTING	TIME
FINAL	207o18161	53493671	Min. ON 3	
INITIAL	19903283	53033348	Min. OFF 57	
TOTAL MGD	.799	.460		

AERATION BASIN MLSS

	TOTAL	VOLATILE	TOTAL	VOLATILE
VOL.				
SETT.	430			
DRY WT.	45030	45030	45640	
TARE WT.	41500	42400	41610	
MLSS	3530	2630	4030	

SUSPENDED SOLIDS

	INFLUENT TOTAL	INFLUENT VOLATILE	EFFLUENT TOTAL	EFFLUENT VOLATILE
VOL.				
DRY WT.	42080	42080	41570	
TARE WT.	41670	41680	41560	
SUSPENDED	82	80	10.0	

SUSPENDED SOLIDS

	STIENFELD TOTAL	STIENFELD VOLATILE	EFFLUENT TOTAL	EFFLUENT VOLATILE
VOL.				
DRY WT.				
TARE WT.	41930			
SUSPENDED				

DRYING OVEN TEMP.	FECAL/BATH TEMP.	BOD INCU. TEMP.	OTHER

METTLER BAL. TEMP.	INF. TEMP.	EFF. TEMP.	OTHER
	6.69	6.32	

Fecal TAP 6.167

CITY OF SCAPPOOSE WASTEWATER FACILITY

lwgtr

BOD BENCH SHEET

START DATE 9-24-99
TIME 9:00 AM
Set Up By DWS

(INCORRECT PROCEDURE)

STOP DATE: 9-25-99
TIME: 9:15 AM
Taken off By: DWS

NEED GLUTAMIC ACID CHECK

	BOTTLE NO.	SAMPLE VOLUME ML	DILLUTION RATIO (a)	INITIAL DO	FINAL DO	DO DEPLETION	BOD (b)	AVERAGE BOD
Final Effluent								
Dilution No 1	11	60	5	8.0	5.2+1.4	= 6.6	= 7.0	
Dilution No 2	14	80	3.75	7.8	4.7+1.4	= 6.4	= 6.4	AVG = 7.3
Dilution No 3	18	100	3	7.6	3.4+1.4	= 4.8	= 8.4	
Influent								
Dilution No 1	21	3	100	8.4	6.0	= 240	AVG =	265
Dilution No 2	25	5	50	8.4	2.6	= 290		
Dilution No 3	41	10	30	8.3	0			
Seed 2 mL								
Dilution No 1	45	2	150	8.5	7.1	1.4		
Dilution No 2								
Slionfids								
Dilution No 1	51	0.1	3000	8.5	5.5	9000		
Dilution No 2	70	0.2	1500	8.6	2.6	9000		
Digester Supernatant								
Dilution No 1								
Dilution No 2								
Blank								
Blank No 1	7			8.5	8.6	+.1	-0.1	
Blank No 2								

← SEED CONTROL SHOULD BE 0.6 TO 1 mg/L NEED MULTIPLE DILUTIONS

< 0.2 OK BUT SHOULD NOT BE NEGATIVE
8.5 - 8.6 = -0.1

Notes (a) Dilution Ratio = 300 / Sample Vol ml

(b) BOD = Dilution Ratio x DO Depletion

Fecal > ml / colonies

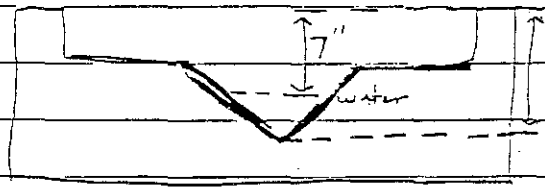
ml	colonies
25	10
50	9
100	28
200	52
300	64

AVG 24/100 ml

C:\123R3\PWFORMS\WWBOD

EXHIBIT tabbies 111

Effluent Meter Calibration



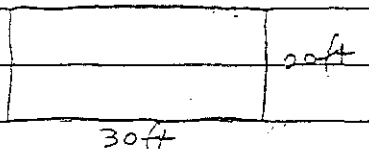
= 9.25"

meter Reading 9.3" ✓

.78 ft = 602 gpm

meter Reading 602 gpm ✓

old clz Tank



30 x 20 x 4 = 17,952 gal ✓

Totalizer reading End 71477224

Beg 71459631

17,593 gal ✓

COLUMBIA CO.

78980-
100677

CITY OF SCAPPOOSE

Operational Data Submittal

DECEMBER 1998

DEPT OF ENVIRONMENTAL QUALITY
RECEIVED

JAN 11 1999

NORTHWEST REGION

Facility Name: *Columbia Ave. Plant*

Adress: *34485 Columbia Ave*

Scappoose, OR 97056

Telephone No. *(503) 543-7184*

Date *08-Jan-99*

Plant Manager: *Steve Wabschall*

POPULATION EQUIVALENT: *3,384*

DESIGN POPULATION: *19,624*

D.E.Q. # *100677*

E P A. #

DISCHARGE TO: *Multnomah Channel*

INFLUENT	Avg.	Min.	Max.	Permit Limit	Design Avg.	Design Max.	No. of Times Exceeded	% of Loading
FLOW MGD	0.886	0.443	1.570	2.000	1.000	2.000		44.29%
pH		6.40	7.00	6.50				
BOD	78	50	180	400	400	500		6.90%
TSS	90	46	188	300	300	375		10.66%
EFFLUENT								
FLOW	0.561	0.203	1.200	2.000	1.000	2.000		
PH		6.10	7.30	6.00	7.50	9.00		
BOD	3	1	7	21	1	2		
TSS	7	1	18	32	2	3		
FECAL	11	2	25	200				
DO	5	3		1.0	1.0	2.0		

COMMENTS: I certify under the penalty if law that I have personal examines and am familiar with information submitted herein and based on my inquire of those individuals immediately responsible for obtaining the information I believe the submitted information is true accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Signature: Steven Wabschall

EXHIBIT
tabbies
112

BOD mg/L TSS mg/L BOD mg/L TSS mg/L

DATE	FLOW MGD		PLANT INFLUENT					PLANT EFFLUENT									
DECEMBER 1998	INFL	EFF	PH	BOD MG/L	TSS SOLIDS	VOL SOLIDS	TEMP	PH	DO MG/L	BOD MG/L	% BOD REM	LBS BOD DISC	S.S. MG/L	% S.S REM	LBS S.S. DISC	FECAL COUNT	No UV ON	UV DSTN
											****	****		****	****			****
01-Dec	0.942	0.572	6.8	50	78	70	18.0	6.6	5.4	1.8	96.4	9	8.0	89.7	38		2	2.07
02-Dec	1.570	1.200	6.6	50	76	52	18.0	6.4	5.6	1.4	97.2	14	9.0	88.2	90	2	2	0.99
03-Dec	1.100	0.720	6.8	180	188	152	18.0	6.4	4.0	3.5	98.1	21	7.0	96.3	42		2	1.65
04-Dec	0.980	0.607	6.8	80	104	98	18.0	6.5	4.6	1.0	98.8	5	4.0	96.2	20	20	2	1.95
05-Dec	0.835	0.464																
06-Dec	0.769	0.466																
07-Dec	0.661	0.381	6.8	70	115	84	18.0	6.5	3.2	3.0	95.7	10	11.0	90.4	35	10	2	3.11
08-Dec	1.010	0.742	6.8	80	120	118	18.0	6.5	4.0	3.4	95.8	21	9.0	92.5	56		2	1.60
09-Dec	0.779	0.443	6.9	50	115	96	18.0	6.6	4.5	2.5	96.9	9	7.0	93.9	26		2	2.67
10-Dec	0.893	0.550	6.8	100	94	88	18.0	6.4	5.0	3.8	94.2	27	10.0	89.4	46	15	2	2.15
11-Dec	0.784	0.459	6.9	70	98	94	17.0	6.5	3.6	2.8	96.0	11	18.0	81.6	69		2	2.58
12-Dec	1.178	0.724																
13-Dec	1.278	0.835																
14-Dec	0.781	0.505	6.6	100	56	50	15.0	6.4	3.8	4.5	95.5	19	9.0	83.9	38		2	2.35
15-Dec	0.957	0.594	6.8	60	94	82	15.0	6.5	4.0	6.6	89.0	33	7.0	92.6	35	10	2	1.99
16-Dec	0.956	0.586	6.4	100	86	48	13.0	6.3	5.6	3.0	97.0	15	5.0	94.2	24		2	2.02
17-Dec	0.799	0.460	6.7	75	82	80	13.0	6.3	5.4	2.5	96.7	10	10.0	87.8	38		2	2.58
18-Dec	0.691	0.385	6.8	60	84	72	13.0	6.3	4.8	2.0	96.7	6	5.0	94.0	16	2	2	3.08
19-Dec	0.818	0.461																
20-Dec	0.509	0.350																
21-Dec	0.443	0.203	7.0	50	80	52	12.0	6.9	6.2	2.2	95.6	4	2.0	97.5	3		2	5.84
22-Dec	0.477	0.257	7.0	80	95	80	12.0	7.3	5.5	2.8	96.5	6	3.0	96.8	6	2	2	4.61
23-Dec	0.527	0.323	6.8	60	68	56	12.0	6.6	5.2	1.5	97.5	4	3.0	95.6	8		2	3.67
24-Dec	0.580	0.335																
25-Dec	0.750	0.540																
26-Dec	0.903	0.554																
27-Dec	0.725	0.454																
28-Dec	1.358	0.987	7.0	100	80	76	12.0	6.8	5.0	3.0	97.0	25	11.0	86.3	91		2	1.20
29-Dec	1.227	0.847	6.5	80	54	52	12.0	6.2	4.5	3.0	96.3	21	7.0	87.0	49	25	2	1.40
30-Dec	1.012	0.615	6.6	60	82	75	12.0	6.1	4.8	1.8	97.0	9	1.0	98.8	5		2	1.93
31-Dec	1.170	0.769	6.7	50	16	36	12.0	6.2	4.6	2.0	96.0	13	2.0	95.7	13		2	1.54
PERMIT	2.000	2.000	6.0/9.0	400	300			6.0/9.0		32.0			25.0			200		
STD DEV.	0.263	0.212	0.2	28	29	26	2.7	0.3	0.7	1.3			3.9			8		
AVERAGE	0.886	0.561		78	90	77	15.0		4.7	2.9	96.2	14	7.0	91.8	36	11	2	1.64
MINIMUM	0.443	0.203	6.4	50	46	36	12.0	6.1	3.2	1.0			1.0			2	2	
MAXIMUM	1.570	1.200	7.0	180	188	152	18.0	7.3	6.2	6.6	98.8	33	18.0	98.8	91	25	2	5.84
TOTAL	27.462	17.388																
DESIGN AVG	1.000	1.000		400	300	225	15.0	6.0	1.0	2.0	90.0	17	1.5	90.0	13		1	
DESIGN MAX	2.000	2.000		500	375	281	18.0	9.0	2.0	11.2	85.0	188	2.8	85.0	47		2	
7 Day Average																		
Week 1	0.980	0.630	6.8	86	112	94	18.0	6.5	4.6	2.1	97.2	10	7.8	92.2	38	11	2	1.40
Week 2	0.958	0.608	6.8	86	97	89	17.2	6.5	4.2	3.8	95.7	12	10.6	88.3	33	15	2	1.62
Week 3	0.739	0.434	6.7	69	85	67	13.2	6.5	5.2	3.3	95.0	10	5.8	93.2	17	6	2	2.22
Week 4	0.760	0.493	6.8	80	81	71	12.0	6.9	5.2	2.4	97.0	5	5.7	93.0	15	2	2	1.35

BOD TSS 12/9

BOD TSS 12/17

CITY OF SCAPPOOSE

CONTRACT LABORATORY

ANALYSIS

Wastewater Analysis by AMTEST Laboratory

City of Scappoose lab result's

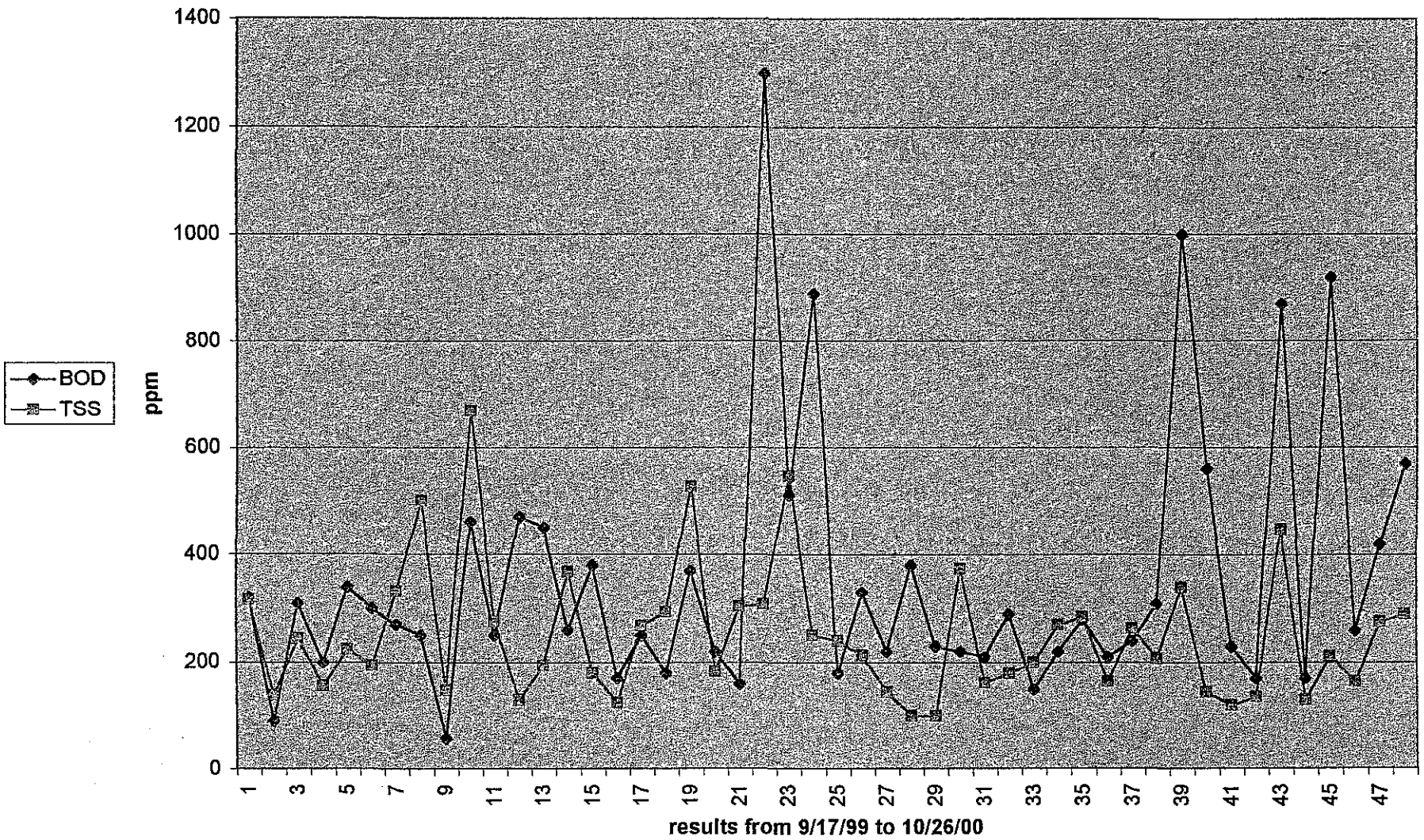
Date	B.O.D.ppm Inf.	B.O.D.ppm Eff.	Fecal	T.S.S.ppm. Inf.	T.S.S.ppm. Eff.
9/17/99	320	N/D<4		316	5
10/12/99			4	348	6
10/28/99			8	830	8
11/24/99			280	222	10
12/02/99			500	382	7
12/16/99	90	N/D<4		138	18
12/30/99			23		
01/13/00			2	410	4
01/20/00		N/D<4	2	160	4
01/24/00	310	N/D<4		244	5
01/26/00	200	N/D<4		156	2
01/27/00	340	N/D<4	2	224	2
02/03/00		3	2	128	4
02/10/00			2	170	3
02/17/00		4	2	292	4
02/24/00			2	398	4
02/29/00	300	3	2	194	3
03/02/00	270	7	2	332	4
03/09/00	250	N/D<2	2	500	4
03/16/00	57	2	2	148	3
03/23/00			2	230	6
03/29/00	460	8	2	668	2
04/06/00	250	N/D<2	2	276	6
04/13/00	470	N/D<2	2	130	2
04/20/00	450	N/D<2	2	194	5
04/27/00	260	N/D<2	4	368	4
05/04/00	380	N/D<2	2	180	4
05/11/00	170	6	2	124	3
05/13/00	470	N/D<2			
05/18/00	250	N/D<2	2	268	7
05/22/00	180	N/D<2		294	3
05/24/00	370	2	2	526	2
05/25/00	220	N/D<2	2	184	3
06/1/00	160	N/D<2	2	304	5
06/6/00	1300	2		309	4
06/8/00	510	4	2	546	3
06/15/00	890	18		250	4
06/22/00	180	N/D<2	2	240	6
06/30/00	330	2		214	2
07/3/00	220	5		144	2
07/5/00	380	8		100	2
07/6/00	230	N/A	2	100	1
7/11/00	220	N/D<2		374	7
7/13/00	210	3	2	162	5
7/20/00	290	N/D<2	2	180	4
7/27/00	150	N/D<2	2	200	6

Wastewater Analysis by AMTEST Laboratory				City of Scappoose lab result's	
Date	B.O.D.ppm Inf.	B.O.D.ppm Eff.	Fecal	T.S.S.ppm. Inf.	T.S.S.ppm. Eff.
8/3/00	220	N/D<2	4	270	4
8/7/00	280	2		284	2
8/9/00	210	3		164	5
8/10/00	240	N/D<2	2	264	4
8/15/00	310	N/D<2		208	1
8/17/00	1000	2	8	340	6
8/24/00	560	2	2	144	2
9/1/00			2		
9/3/00	230	4		120	1
9/7/00			23		
9/14/00	170	6	2	136	5
9/21/00	870	3	30	446	7
9/28/00	170	4	2	130	6
10/5/00	920	4	2	212	3
10/12/00	260	3	2	164	7
10/25/00	420	2		276	4
10/26/00	570	2	2	290	4
Total Samples	49	52	46	59	59

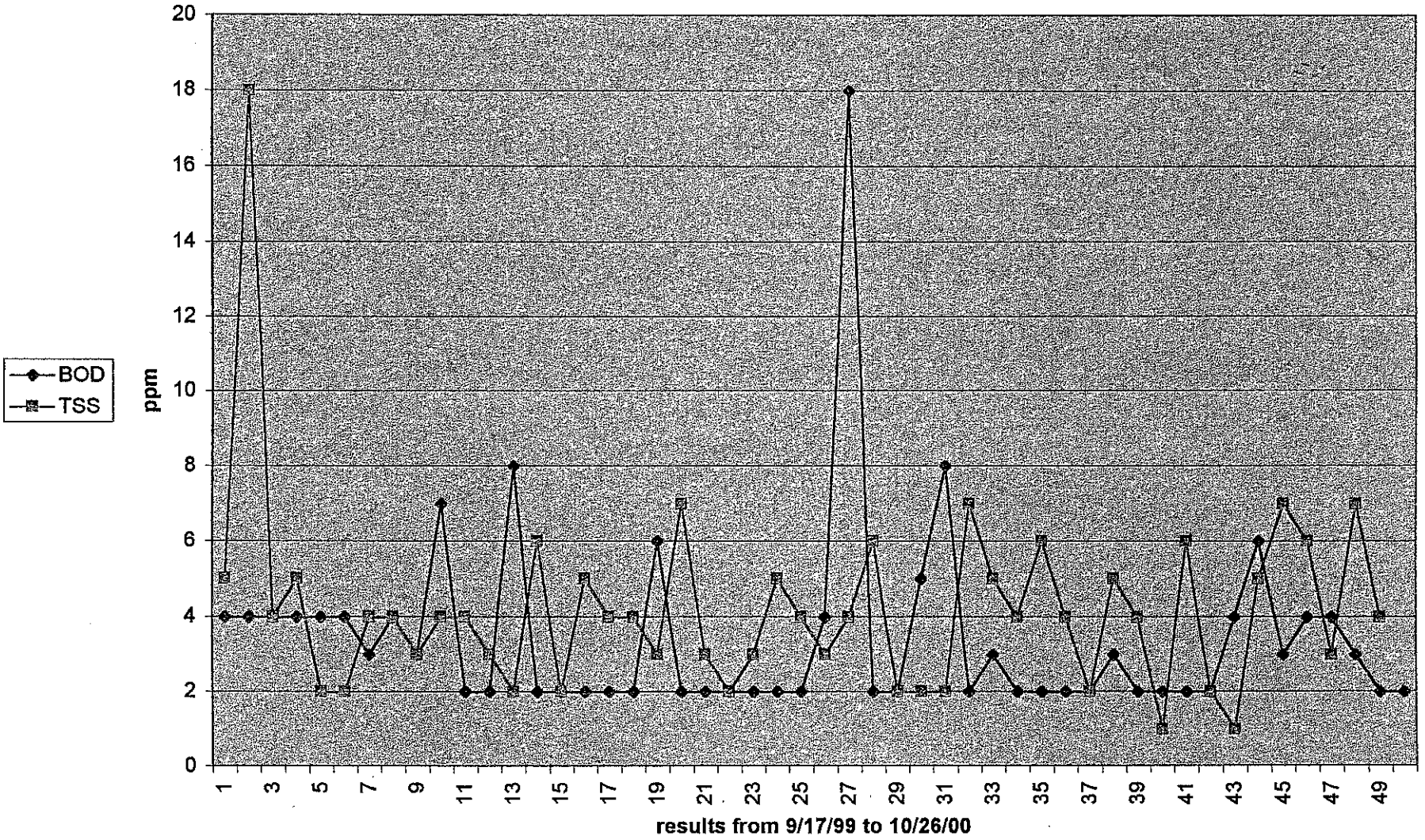
Average: Effluent B.O.D. 24 samples N/D (None Detected) Laboratory Reporting Limit 2ppm., 28 sample with reading's

4.2 ppm. average effluent B.O.D.
4.3 ppm. average effluent T.S.S
358 ppm average influent B.O.D.
264 ppm. average influent T.S.S.

Wastewater Influent Analysis



Wastewater Effluent Analysis



AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 11/1/00
Date Sampled: 10/26/00 7:30a
Date Received: 10/26/00
Job Number: **00299/17-18**

Sampled by: Steve Smith
Sample Type: Waste Water

Client Identification		**Influent**	**Effluent**	Laboratory Reporting
Lab Number		00300/33	00300/34	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	570	2	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 10/26/00
Date Sampled: 10/25/00 7:30a
Date Received: 10/25/00
Job Number: **00299/17-18**

Sampled by: Steve Smith
Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00299/17	00299/18	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	420	2	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 10/23/00
Date Sampled: 10/12/00 7:30a
Date Received: 10/12/00
Job Number: **00286/32-33**

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		**Influent**	**Effluent**	Laboratory Reporting
Lab Number		00286/32	00286/33	Limit
Analysis	Method	**Results** mg/L;ppm	**Results** mg/L;ppm	mg/L;ppm
B.O.D.	405.1	**260**	**3**	2

Reviewed By:

John Scholz

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CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 10/17/00
Date Sampled: 10/5/00 7:30a
Date Received: 10/5/00
Job Number: **00279/36-37**

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		**Influent**	**Effluent**	Laboratory Reporting
Lab Number		00279/36	00279/37	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
Biochemical Oxygen Demand	405.1	**920**	**4**	2

Reviewed By:

John Scholz

scappoosebod 10/17/00

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 10/6/00
Date Sampled: 9/28/00 7:30a
Date Received: 9/28/00
Job Number: 00272/12-13

Sampled by: Steve Wabschall
Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00272/12	00272/13	Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	170	4	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 10/3/00
Date Sampled: 9/21/00 7a
Date Received: 9/21/00
Job Number: **00265/49-50**

Sampled by: Steve Wabschall
Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00265/49	00265/50	Limit
Analysis	Method	**Results** mg/L;ppm	**Results** mg/L;ppm	mg/L;ppm
B.O.D.	405.1	**870**	**3**	2

Reviewed By:

John Scholz

scappooseabod-2 10/3/00

RECD SEP 28 2000

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Professional Laboratory Services
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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 9/21/00
Date Sampled: 9/14/00 7am
Date Received: 9/14/00
Job Number: **00258/53-54**

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification Lab Number		**Influent** 00258/53	**Effluent** 00258/54	Laboratory Reporting Limit
Analysis	Method	**Results** mg/L;ppm	**Results** mg/L;ppm	mg/L;ppm
Biochemical Oxygen Demand	405.1	170	6	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 9/14/00
Date Sampled: 9/7/00 8:30a
Date Received: 9/7/00
Job Number: 00251/36-37

Sampled by: Steve Wabschall
Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00251/36	00251/37	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	230	4	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 8/31/00
Date Sampled: 8/24/00 8a
Date Received: 8/24/00
Job Number: **00237/24-25**

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Sampler **Influent**	U.V. Channel **Effluent**	Laboratory Reporting
Lab Number		00237/24	00237/25	Limit
Analysis	Method	**Results** mg/L;ppm	**Results** mg/L;ppm	mg/L;ppm
B.O.D.	405.1	560	2	2

Reviewed By:

John Scholz

3 of 6

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
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Tel 503 639 9311
Fax 503 684 1588

ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-7183

Date Reported: 8/23/00
Date Sampled: 8/17/00 7a
Date Received: 8/17/00
Job Number: **00230/12-13**

System: Wastewater Plant
Sample Type: Waste Water

Client Identification		Influent Sampler	U.V. Channel Effluent	Laboratory Reporting
Lab Number		00230/12	00230/13	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
Biochemical Oxygen Demand	405.1	1,000	2	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 8/21/00
Date Sampled: 8/15/00
Date Received: 8/15/00
Job Number: **00228/23-24**

Sampled by: Steve Wabschall
Sampled Location: Steinfeld's Pre-Treatment
Sample Type: Waste Water

Client Identification		**Influent**	**Effluent**	Laboratory Reporting
Lab Number		00228/23	00228/24	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	310	ND	2

ND = None Detected

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 8/17/00
Date Sampled: 8/10/00 10:30A
Date Received: 8/10/00
Job Number: 00223/19-20

Sampled by: Steve Wabschall
Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00223/19	00223/20	Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	240	ND	2

ND = None Detected

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 8/15/00
Date Sampled: 8/9/00 9:30a
Date Received: 8/9/00
Job Number: **00222/11-12**

Sampled by: Steve Wabschall
Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00222/11	00222/12	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	210	3	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

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P.O. Box P
Scappoose, OR 97056

Date Reported: 8/15/00
Date Sampled: 8/7/00
Date Received: 8/7/00
Job Number: **00220/01-02**

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification Lab Number		**Influent** 00220/01	**Effluent** 00220/02	Laboratory Reporting Limit
Analysis	Method	**Results** mg/L;ppm	**Results** mg/L;ppm	mg/L;ppm
B.O.D.	405.1	**280**	**2**	2

Reviewed By:

John Scholz

2.51

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ANALYSIS REPORT

CLIENT

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P.O. Box P
Scappoose, OR 97056

Date Reported: 8/9/00
Date Sampled: 8/3/00
Date Received: 8/3/00
Job Number: **00216/46-47**

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00216/46	00216/47	Limit
Analysis	Method	**Results** mg/L;ppm	**Results** mg/L;ppm	mg/L;ppm
B.O.D.	405.1	**220**	**ND**	2

ND = None Detected

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 8/3/00
Date Sampled: 7/27/00 7a
Date Received: 7/27/00
Job Number: 00209/34,40

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00209/34	00209/40	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	**150**	**ND**	2

ND = None Detected

Reviewed By:

John Scholz

scappoose2 8/2/00

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
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Phone: 503-543-5679

Date Reported: 7/27/00
Date Sampled: 7/20/00 7a
Date Received: 7/20/00
Job Number: **00202/56-57**

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		**Influent**	**Effluent**	Laboratory Reporting
Lab Number		00202/56	00202/57	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
Biochemical Oxygen Demand	405.1	290	ND	2

ND = None Detected

Reviewed By:

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ANALYSIS REPORT

CLIENT

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P.O. Box P
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Date Reported: 7/19/00
Date Sampled: 7/13/00 7a
Date Received: 7/13/00
Job Number: **00195/17-18**

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00195/17	00195/18	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	210	3	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

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P.O. Box P
Scappoose, OR 97056

Date Reported: 7/19/00
Date Sampled: 7/11/00 7a
Date Received: 7/12/00
Job Number: **00194/01-02**

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00194/01	00194/02	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	220	ND	2

ND = None Detected

Reviewed By:

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
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Date Reported: 7/19/00
Date Sampled: 7/6/00 9a
Date Received: 7/6/00
Job Number: 00188/23-24

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Wabschall

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00188/23	00188/24	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	230	N/A	2

Not Available - lab error

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 7/10/00
Date Sampled: 7/5/00 9a
Date Received: 7/5/00
Job Number: **00187/29-30**

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Wabschall

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00187/29	00187/30	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	380	8	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

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P.O. Box P
Scappoose, OR 97056

Date Reported: 7/10/00
Date Sampled: 7/3/00 9a
Date Received: 7/3/00
Job Number: **00185/05-06**

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Wabschall

Client Identification		**Influent**	**Effluent**	Laboratory Reporting
Lab Number		00185/05	00185/06	Limit
Analysis	Method	**Results** mg/L;ppm	**Results** mg/L;ppm	mg/L;ppm
B.O.D.	405.1	220	5	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
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Date Reported: 7/7/00
Date Sampled: 6/30/00 7a
Date Received: 6/30/00
Job Number: 00182/27-28

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Darryl Sykes

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00182/27	00182/28	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	330	2	2

Reviewed By:

John Scholz

scappoose2 7/7/00

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 6/30/00
Date Sampled: 6/22/00 7a
Date Received: 6/22/00
Job Number: 00174/20-21

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00174/20	00174/21	Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	180	ND	2

ND = None Detected

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

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P.O. Box P
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Date Reported: 6/22/00
Date Sampled: 6/15/00 7a
Date Received: 6/15/00
Job Number: **00167/45-46**

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00167/45	00167/46	Limit
Analysis	Method	**Results** mg/L;ppm	**Results** mg/L;ppm	mg/L;ppm
B.O.D.	405.1	**890**	**18**	2

Reviewed By:

John Scholz

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Date Reported: 6/20/00
Date Sampled: 6/8/00 7a
Date Received: 6/8/00
Job Number: 00160/29-30

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00160/29	00160/30	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	510	4	2

Reviewed By:

John Scholz

John Scholz

scappoosr2 6/20/00

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 6/16/00
Date Sampled: 6/6/00 7a
Date Received: 6/6/00
Job Number: **00158/29-30**

Sampled by: Steve Smith
Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00158/29	00158/30	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	1,300	2	2

Reviewed By:

John Scholz

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CLIENT

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P.O. Box P
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Date Reported: 6/8/00
Date Sampled: 6/1/00 7a
Date Received: 6/1/00
Job Number: 00153/18-19

Phone: 503-543-5679

Sampled by: Steve Smith
Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00153/18	00153/19	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	160	ND	2

ND = None Detected

Reviewed By:

John Scholz

3-2

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 6/1/00
Date Sampled: 5/25/00 7A
Date Received: 5/25/00
Job Number: 00146/30-31

Phone: 503-543-5679

Sample Type: Waste Water
Sampler: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00146/30	00146/31	Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	
B.O.D.	405.1	220	ND	2
Fecal Coliform (292931)	SM9221E	-	ND	2/100mls

ND = None Detected

Reviewed By:

John Scholz

scappoosefc 5/31/00

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ANALYSIS REPORT

CLIENT

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P.O. Box P
Scappoose, OR. 97056

Date Reported: 6/1/00
Date Sampled: 5/24/00
Date Received: 5/24/00
Job Number: 00145/03-04

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00145/03	00145/04	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	370	2	2

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
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Date Reported: 6/1/00
Date Sampled: 5/22/00 7a
Date Received: 5/22/00
Job Number: 00143/03-04

Phone: 503-543-7183

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00143/03	00143/04	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	180	ND	2

ND = None Detected

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

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P.O. Box P
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Phone: 503-543-5679

Date Reported: 5/25/00
Date Sampled: 5/18/00 7a
Date Received: 5/18/00
Job Number: 00139/40-41

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00139/40	00139/41	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
Biochemical Oxygen Demand	405.1	250	ND	2

ND = None Detected

Reviewed By:

John Scholz

scappoosebod 5/25/00

3.09

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 4/19/00
Date Sampled: 4/13/00 11a
Date Received: 4/13/00
Job Number: **00104/31-32**

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00104/31	00104/32	Limit
Analysis	Method	**Results**	**Results**	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	**470**	**ND**	2

ND = None Detected

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679

Date Reported: 5/18/00
Date Sampled: 5/11/00 7:30a
Date Received: 5/11/00
Job Number: 00132/17-18

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification Lab Number		Influent 00132/17	Effluent 00132/18	Laboratory Reporting Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
Biochemical Oxygen Demand	405.1	170	6	2
Fecal Coliform (292275)	SM9221E	-	ND	2/100 mls

ND = None Detected

Reviewed By:

John Scholz

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 5/10/00
Date Sampled: 5/4/00
Date Received: 5/5/00
Job Number: 00125/30-31

Phone: 503-543-5679

Sample Type: Waste Water
Sampled by: Darryl Sykes

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00125/30	00125/31	Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	380	ND	2

ND = None Detected

Reviewed By:

John Scholz

scappoose2 5/10/00

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 4/12/00
Date Sampled: 4/6/00
Date Received: 4/6/00
Job Number: 00097/23-24

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification Lab Number		Influent 00097/23	Effluent 00097/24	Laboratory Reporting Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	250	ND	2

ND = None Detected

Reviewed By:

John Scholz

scappoose2 4/12/00

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 4/19/00
Date Sampled: 4/13/00 11a
Date Received: 4/13/00
Job Number: 00104/31-32

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00104/31	00104/32	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	470	ND	2

ND = None Detected

Reviewed By:

John Scholz

scappooseabod-2 4/19/00

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ANALYSIS REPORT

CLIENT

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P.O. Box P
Scappoose, OR 97056

Date Reported: 4/27/00
Date Sampled: 4/20/00
Date Received: 4/20/00
Job Number: 00111/13,27

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification Lab Number		Influent 00111/27	Effluent 00111/13	Laboratory Reporting Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	450	ND	2

ND = None Detected

Reviewed By:

John Scholz

scappcos2 4/27/00

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ANALYSIS REPORT

CLIENT

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P.O. Box P
Scappoose, OR 97056

Date Reported: 5/3/00
Date Sampled: 4/27/00 7a
Date Received: 4/27/00
Job Number: 00118/17-18

Phone: 503-543-5679

Sample Type: Waste Water
Sampled by: Steve Smith

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00118/17	00118/18	Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	260	3	2

Reviewed By:

John Scholz

scappoose2 5/3/00

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ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 3/10/00
Date Sampled: 3/2/00
Date Received: 3/2/00
Job Number: 00062/15-16

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00062/15	00062/16	Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	270	7	4

Reviewed By:

John Scholz

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NALYSIS REPORT

CLIENT

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P.O. Box P
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Date Reported: 3/15/00
Date Sampled: 3/9/00 11:30a
Date Received: 3/9/00
Job Number: 260/22-23

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00069/16	00069/17	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	250	ND	2

ND = None Detected

Reviewed By:

John Scholz

scappoose 3/15/00

ANALYSIS REPORT

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 8311
Fax 503 684 1588

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 3/23/00
Date Sampled: 3/16/00
Date Received: 3/16/00
Job Number: 00076/30-31

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification Lab Number		Influent 00076/30	Effluent 00076/31	Laboratory Reporting Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
Biochemical Oxygen Demand	405.1	57	2	2

Reviewed By:

John Scholz

scapposebod 3/23/00

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

ANALYSIS REPORT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Reported: 4/5/00
Date Sampled: ~~3/30/00~~ 3/29/00
Date Received: 3/30/00
Job Number: 00090/17-18

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting Limit
Lab Number		00090/17	00090/18	
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	460	8	2

Reviewed By:

John Scholz

scappoosebod-3 4/5/00

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

NALYSIS REPORT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Sampled: 2/3/00 7a
Date Received: 2/3/00
Date Reported: 2/10/00
Job Number: 00034/12

Phone: 503-543-7183

System: Wastewater Plant
Sample Type: Waste Water

Client Identification		Effluent	Laboratory Reporting
Lab Number		00034/12	Limit
Analysis	Method	Results	
		mg/L;ppm	mg/L;ppm
Biochemical Oxygen Demand	405.1	3	2

Reviewed By:

John Scholz

scappooseff2 2/10/00

ANALYSIS REPORT

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Sampled: 2/17/00 11:30a
Date Received: 2/17/00
Date Reported: 2/23/00
Job Number: 00048/21

Phone: 503-543-7183

Sample Type: Waste Water

Client Identification		Effluent	Laboratory Reporting
Lab Number		00048/21	Limit
Analysis	Method	Results	
		mg/L;ppm	mg/L;ppm
Biochemical Oxygen Demand	405.1	4	2 mg/L

Reviewed By:

John Scholz

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

NALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679
Fax: 503-543-7182

Date Sampled: 2/29/00 7a
Date Received: 2/29/00
Date Reported: 3/7/00
Job Number: 00060/08-09

Sampled Location: Wastewater Plant
Matrix: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		00060/08	00060/09	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	300	3	2

Reviewed By:

John Scholz

John Scholz

scappoose2 3/7/00

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

NALYSIS REPORT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Sampled: 1/20/00
Date Received: 1/20/00
Date Reported: 1/26/00
Job Number: 020/26

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification		Effluent	Laboratory Reporting
Lab Number		020/06	Limit
Analysis	Method	Results	
		mg/L;ppm	mg/L;ppm
Biochemical Oxygen Demand	405.1	ND	4 mg/L

ND = None Detected

Reviewed By:

John Scholz

scappooseff 1/26/00

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

IALYSIS REPORT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679
Fax: 503-543-7182

Date Sampled: 1/24/00
Date Received: 1/24/00
Date Reported: 1/31/00
Job Number: 024/03-04

Sampled Location: Wastewater Plant
Matrix: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting Limit
Lab Number		024/03	024/04	
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	310	ND 4.0	4 mg/L

ND = None Detected

Reviewed By:

John Scholz

scappoose2 1/31/00

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

ANALYSIS REPORT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679
Fax: 503-543-7182

Date Sampled: 1/24/00
Date Received: 1/24/00
Date Reported: 1/31/00
Job Number: 024/03-04

Sampled Location: Wastewater Plant
Matrix: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		024/03	024/04	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	310	ND	4 mg/L

D = None Detected

Reviewed By:

John Scholz

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

ANALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679
Fax: 503-543-7182

Date Sampled: 1/26/00
Date Received: 1/26/00
Date Reported: 1/31/00
Job Number: 026/08-09

Sampled Location: Wastewater Plant
Matrix: Waste Water

Client Identification Lab Number		Influent 026/08	Effluent 026/09	Laboratory Reporting Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	200	ND	4 mg/L

ND = None Detected

Reviewed By:

John Scholz

ANALYSIS REPORT

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1589

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Phone: 503-543-5679
Fax: 503-543-7182

Date Sampled: 1/27/00 7a
Date Received: 1/27/00
Date Reported: 1/31/00
Job Number: 027/25-26

Sampled Location: Wastewater Plant
Matrix: Waste Water

Client Identification Lab Number		Influent 027/25	Effluent 027/26	Laboratory Reporting Limit
Analysis	Method	**Results** mg/L;ppm	**Results** mg/L;ppm	mg/L;ppm
B.O.D.	405.1	**340**	**ND**	4 mg/L

ND = None Detected

Reviewed By:

John Scholz

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

ANALYSIS REPORT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Sampled: 12/16/99
Date Received: 12/16/99
Date Reported: 12/23/99
Job Number: 350/27-28

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		350/27	350/28	Limit
Analysis	Method	Results	Results	
		mg/L;ppm	mg/L;ppm	mg/L;ppm
B.O.D.	405.1	90	ND	4 mg/L

ND = None Detected

Reviewed By:

John Scholz

scappoose 12/23/99

AMTEST OREGON L.L.C.
Professional Laboratory Services
13035 S.W. Pacific Hwy.
Tigard, OR 97223
Tel 503 639 9311
Fax 503 684 1588

NALYSIS REPORT

CLIENT

City of Scappoose
P.O. Box P
Scappoose, OR 97056

Date Sampled: 9/17/99
Date Received: 9/17/99
Date Reported: 9/28/99
Job Number: 260/22-23

Phone: 503-543-5679

Sample Type: Waste Water

Client Identification		Influent	Effluent	Laboratory Reporting
Lab Number		260/22	260/23	Limit
Analysis	Method	Results mg/L;ppm	Results mg/L;ppm	mg/L;ppm
B.O.D.	405.1	320	ND	4 mg/L
T.S.S.	160.2	200	7	2 mg/L
Fecal Coliform	SM9221E	-	1,600/100 mls	2/100mls

(280627)

ND = None Detected

Reviewed By:

John Scholz

scappoose 9/28/99

3871

c Water System ID # in boxes below:

ater System:
OOSE WWTP
Box P
PPOOSE County Columbia
543 7183
ite and time: 10/12/00 7:00 a.m. p.m.
Month Day Year Hour Min
ple: ☐ Routine ☐ *Repeat ☐ Special
te of initial positive
STEVE SMITH
EFFLUENT CHANNEL
☐ Ye ☑ No Free Chlorine mg/l

Re dress for report:
Name City of Scappoose/Smitty
Address PO Box P
City, state, zip Scappoose, ORE. 97056

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 300312
Bottle #
Date & time received 10/13/00 12:22p
Received by: RC
Date & time analyzed: " "
Comments:
FECAL TEST
Fecal Coliforms = <2/100ml

Analyst: KMA Date:
Review by: Date: 10-16-00

ic Water System ID # in boxes below:

/ater System:
of Scappoose
O Box P
PPOOSE County Columbia
3-7183
iate and time: 10/05/00 7:00 a.m. p.m.
Month Day Year Hour Min
ıple: ☐ Routine ☐ *Repeat ☐ Special
ate of initial positive
STEVE SMITH
t: EFFLUENT
☐ Yes ☒ No Free Chlorine mg/l

Return address for report:
N City of Scappoose / Smitty
Address PO Box P
City, state, zip Scappoose OR. 97056

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 299931
Bottle #
Date & time received 10/6/00 12:30p
Received by: RC
Date & time analyzed: " "
Comments:
Fecal TEST
Fecal Coliforms = <2/100ml
390

Analyst: KMA Date:
Review by: KMA Date: 10-7-00

ublic Water System ID # in boxes below:

1

f Water System:

ity of Scappoose WWTP

PO Box P

Scappoose County Columbia

43 7183

n date and time: 09 / 28 / 00 7 : 00 a.m. p.m.
Month Day Year Hour Min

ample: ☐ Routine ☐ *Repeat ☐ Special

, date of initial positive

by: Steve Smith

oint: Effluent

id? Yes ☒ No Free Chlorine mg/l

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli:* ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 299441
Bottle #
Date & time received 9/28/00 10:
Received by: RC
Date & time analyzed: " "
Comments:

Fecal coliform = <2/100

Analyst: Date:
Review by: RC Date: 9/2

Return address for report:

Name City of Scappoose
Address P.O. Box P
City, state, zip Scappoose OR 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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lts to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

r Public Water System ID # in boxes below:

1

e of Water System:

ss

County

tion date and time: 10 / 26 / 00 7 : 30 a.m. p.m.
Month Day Year Hour Min

of sample: ☐ Routine ☐ *Repeat ☐ Special

eat, date of initial positive

ted by: Steve Smith

e point: effluent

nated? ☐ Yes ☐ No Free Chlorine mg/l

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli:* ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 300490
Bottle #
Date & time received 10/27/00 7:
Received by: RC
Date & time analyzed: " "
Comments:

fecal coliform = <2/100mL 391

Analyst: Date:
Review by: Date: 10/2

Return address for report:

Name Scappoose
Address
City, state, zip

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

esults to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

Enter Public Water System ID # in boxes below:

4 1

Name of Water System: Wastewater Treatment

Address _____

City _____ County _____

Phone _____

Collection date and time: 9 / 1 / 00 8 : 00 (a.m.) (p.m.)
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☒ Special

If repeat, date of initial positive _____

Collected by: Darryl Sykes / plant

Sample point: U.V. Channel / effluent

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l _____

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:
Name Wastewater
Address P.O. Box P
City, state, zip Scappoose OR 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Please Test for Fecal Only

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 298042
Bottle #
Date & time received 9/1/00
Received by: mc
Date & time analyzed:
Comments:

Fecal = 2/100ml

Analyst: KMM Date: 9/6
Review by: KMM Date:

Send results to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

Enter Public Water System ID # in boxes below:

4 1

Name of Water System: Scappoose Wastewater Treatment

Address _____

City _____ County _____

Phone _____

Collected date and time: 9 / 7 / 00 8 : 30 (a.m.) (p.m.)
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☒ Special

If repeat, date of initial positive _____

Collected by: Darryl Sykes

Sample point: U.V. CHANNEL

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l _____

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:
Name Scappoose Wastewater Treatment
Address P.O. Box P
City, state, zip SCAPPOOSE OR 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name
Please Test for Fecal Only

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 298393
Bottle #
Date & time received 9/8/00
Received by: mc
Date & time analyzed:
Comments:

Fecal = 23/100ml

Analyst: KMM Date: 9/6
Review by: KMM Date: 9/7

Send results to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

nter Public Water System ID # in boxes below:

4 | 1 | | | | | | |

ame of Water System: City of Scappoose WWTP

ress PO Box P

Scappoose County Columbia

ne 543 7183

lection date and time: 9 / 14 / 100 7 : 00 a.m. p.m.
Month Day Year Hour Min

e of sample: ☐ Routine ☐ *Repeat ☐ Special

repeat, date of initial positive _____

lected by: STEVE SMITH

mple point: EFFLUENT

orinated? ☐ Yes ☒ No Free Chlorine mg/l _____

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 298811
Bottle # _____
Date & time received 9/15/00
Received by: RC
Date & time analyzed: _____
Comments:

FECAL TEST = <2/100 mL

Return address for report:
Name City of Scappoose / Smitty
Address PO Box P
City, state, zip Scappoose OR. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Analyst: KMM Date:
Review by: _____ Date:

nd results to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

Enter Public Water System ID # in boxes below:

4 | 1 | | | | | | |

Name of Water System: City of Scappoose

dress P.O. Box P

y Scappoose County Columbia

one 543 7183

ollect ite and time: 09 / 21 / 100 7 : 00 a.m. p.m.
Month Day Year Hour Min

pe of sample: ☐ Routine ☐ *Repeat ☐ Special

f repeat, date of initial positive _____

ollected by: STEVE SMITH

ample point: EFFLUENT

hlorinated? ☐ Yes ☒ No Free Chlorine mg/l _____

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 299190
Bottle # _____
Date & time received 9/29/00
Received by: RC
Date & time analyzed: _____
Comments:

FECAL Coliform = 30/100

Return address for report:
Name City of Scappoose / Smitty
Address P.O. Box P
City, state, zip Scappoose, ORE. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Analyst: _____ Date:
Review by: RC Date:

end results to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

1b2

lic Water System ID # in boxes below:

Water System:
y of Scappoose
P.O. Box P
appoose County Col.
73-7183
date and time: 8 / 10 / 00 10 a.m. p.m.
Month Day Year Hour Min
nple: ☒ Routine ☐ *Repeat ☐ Special
ate of initial positive
: Steve
t: Wastewater Eff.
☐ Yes ☒ No Free Chlorine mg/l

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 296457
Bottle #
Date & time received 8/11/00 2:19p
Received by: JC
Date & time analyzed:
Comments:
fecal coliform = <2/100

Return address for report:
Name City of Scappoose
Address P.O. BOX P
City, state, zip SCAPPOOSE OR. 97056

Copy Distribution:
White Lab.
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

Analyst: Date:
Review by: JC Date: 8/11/00

lic Water System ID # in boxes below:

Water System:
y of SCAPPOOSE WWTP
O Box P
appoose County Columbia
3-7183
date and time: 08 / 03 / 00 11 : 30 a.m. p.m.
Month Day Year Hour Min
nple: ☐ Routine ☐ *Repeat ☐ Special
ate of initial positive
: STEVE SMITH
t: EFFLUENT
☐ Yes ☒ No Free Chlorine mg/l

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 296544
Bottle #
Date & time received 8-4-00 1248P
Received by: KIM
Date & time analyzed:
Comments:
Fecal TEST =
4/100ml

Return address for report:
Name City of SCAPPOOSE/SMITH
Address PO Box P
City, state, zip SCAPPOOSE OR. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Analyst: Date:

5 bc

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli:* ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☐ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

ılic Water System ID # in boxes below:

Water System:
ity of Scappoose
. O. Box P
ppoose County Columbia
3 7183

late and time: 08/17/00 7:00 a.m. p.m.
Month Day Year Hour Min

ıple: ☐ Routine ☐ *Repeat ☐ Special
ate of initial positive
STEVE SMITH
: EFFLUENT

☐ Yes ☒ No Free Chlorine mg/l

Return address for report:
Name City of Scappoose/SMITH
Address P.O. Box P
City, state, zip SCAPPOOSE, OR. 97056

to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

Lab Cert # 31
Sample # 297299
Bottle #
Date & time received 8/18/00 12:38 P
Received by: RC
Date & time analyzed: "
Comments:

FECAL TEST =
8/100 ml

Analyst: KLM Date:
Review by: KLM Date: 8-21-0

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli:* ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☐ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

ılic Water System ID # in boxes below:

Water System:
t of Scappoose
P.O. Box P.
ppoose County Col.
3-7183

late and time: 8/24/00 : a.m. p.m.
Month Day Year Hour Min

ıple: ☐ Routine ☐ *Repeat ☐ Special
ate of initial positive
: Steve
t: Wastewater Eff.

☐ Yes ☐ No Free Chlorine mg/l

Return address for report:
Name City of Scappoose
Address P.O. Box P
City, state, zip Scappoose, OR. 97056

Lab Cert # 31
Sample # 297651
Bottle #
Date & time received 8-25-00 1:35 P
Received by: KLM
Date & time analyzed: "
Comments:

Fecal Coliforms = 2/100r

Analyst: KLM Date:

9bE

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

lic Water System ID # in boxes below:

Water System:
APPOOSE WWTP
.O.Box P
APPOOSE County Columbia
3 7183
date and time: 07/20/00 7:00 a.m. p.m.
Month Day Year Hour Min
mple: ☐ Routine ☐ *Repeat ☐ Special
ate of initial positive
: STEVE SMITH
t: EFFLUENT
☐ Yes ☒ No Free Chlorine mg/l

LABORATORY RESULTS
Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:
Name City of Scappoose/ STEVE S.
Address P.O.Box P
City, state, zip Scappoose, OR. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 295806
Bottle #
Date & time received 7/21/00 12:05 P
Received by: KM
Date & time analyzed:
Comments:

Fecal TEST =
<2/100ml

Analyst: KM Date:
Review by: KM Date: 7-24-00

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

lic Water System ID # in boxes below:

Water System:
y of Scappoose
P.O. Box P
APPOOSE County Col.
43-7183
date and time: 7/16/00 10:00 a.m. p.m.
Month Day Year Hour Min
mple: ☒ Routine ☐ *Repeat ☐ Special
ate of initial positive
: Steve
t: Wastewater Eff.
☐ Yes ☒ No Free Chlorine mg/l

LABORATORY RESULTS
Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:
Name City of Scappoose
Address P.O. Box P
City, state, zip Scappoose OR. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name
Fecal Coliform

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 294980
Bottle #
Date & time received 7-17-00 4:12 P
Received by: KM
Date & time analyzed: 11 11
Comments:

Fecal Coliform =
<2/100ml

Analyst: KM Date:
Review by: Date:

LbC

lic Water System ID # in boxes below:

Water System:
of Scappoose
O. Box P
ppoose County Columbia
3-7183
Date and time: 06/01/00 7:00 a.m. p.m.
Month Day Year Hour Min
mple: ☐ Routine ☐ *Repeat ☐ Special
ate of initial positive
: Steve Smith
t: Effluent Channel
☐ Yes ☒ No Free Chlorine mg/l

Return address for report:
Name City of Scappoose / Steve Smith
Address P.O. Box P
City, state, zip Scappoose, ORE. 97056

to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS
Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 296193
Bottle #
Date & time received 6/1/00 4:30
Received by: R.
Date & time analyzed:
Comments:
FECAL TEST
fecal coliform = <2/100ml

Analyst: Date:
Review by: RC Date: 6/4/00

lic Water System ID # in boxes below:

Water System:
of Scappoose
O. Box P
ppoose County Columbia
3-7183
Date and time: 07/27/00 7:00 a.m. p.m.
Month Day Year Hour Min
mple: ☐ Routine ☐ *Repeat ☐ Special
ate of initial positive
: Steve Smith
t: Effluent
☐ Yes ☒ No Free Chlorine mg/l

Return address for report:
Name City of Scappoose
Address PO Box P
City, state, zip Scappoose, OR. 97056

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS
Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 296062
Bottle #
Date & time received 7/27/00 12
Received by: RC
Date & time analyzed: "
Comments:
FECAL TEST
fecal coliform = <2/100

Analyst: Date: 7/29

3 bC

Water System ID # in boxes below:

3047

er System:

Scappoose

County

e and time: 7/13/00 7:00 a.m. p.m.
Month Day Year Hour Min

e: ☐ Routine ☐ *Repeat ☒ Special

of initial positive

Steve Smith

Wastewater Lab

☐ Yes ☐ No Free Chlorine mg/l

Return address for report:

Name City of Scappoose

Address 34425 E. Columbia Blvd

Scappoose OR 97056

City, state, zip

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 295448

Bottle #

Date & time received 7/13/00 4:25 P

Received by: JC

Date & time analyzed:

Comments:

fecal coliform:
< 2/100 ml

Analyst: Date:

Review by: JC Date: 7/14/00

: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

---

lic Water System ID # in boxes below:

Vater System:

Scappoose Wastewater

County

date and time: 6/15/00 7:00 a.m. p.m.
Month Day Year Hour Min

nple: ☐ Routine ☐ *Repeat ☒ Special

ate of initial positive

Steve Smith

: below lights in U.V. channel

? ☐ Yes ☒ No Free Chlorine mg/l

Return address for report:

Name Wastewater Treatment

Address P.O. Box 'P'

City, state, zip Scappoose OR 97056

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

Please test for Fe

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 294040

Bottle #

Date & time received 6/15/00 4:25

Received by:

Date & time analyzed:

Comments:

Fecal Coliform=
<2/100ml

Analyst: Date:

nter Public Water System ID # in boxes below:

4	1					

Name of Water System: City of Scappoose WWTP

Address P.O. Box P

City Scappoose County Columbia

Phone 543 7183

Collection date and time: 05 / 25 / 00 7 : 00 a.m. (Month Day Year Hour Min)

Type of sample: ❑ Routine ❑ *Repeat ❑ Special

If repeat, date of initial positive

Collected by: Steve Smith

Sample point: Effluent Channel

Chlorinated? ❑ Yes ☒ No Free Chlorine mg/l

Return address for report:

Name City of Scappoose / Steve Smith

Address P.O. Box P

City, state, zip Scappoose OR. 97056

MICROBIOLOGICAL ANALYSIS

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ❑ Present* ❑ Absent

Fecal coliforms/*E. coli:* ❑ Present* ❑ Absent

*See back of pink copy for interpretation

Test Methods:
☒ MTF ❑ MF ❑ P-A ❑ CF
❑ EC ❑ EC+MUG ❑ Nutrient Agar + MUG

Sample invalid: resample immediately
❑ Leaked ❑ Over 30 hr old
❑ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert #

Sample #

Bottle #

Date & time received 5-25-00 4:[illegible]

Received by: [illegible]

Date & time analyzed:

Comments:
Fecal TEST
fecal coliform <2/100ml

Analyst: [illegible] Date: 5/30/00

Review by: [illegible] Date: 5/30/00

nd results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System: City of Scappoose

Address PO Box P

City Scappoose County Columbia

Phone 543 7183

Collection date and time: 05 / 11 / 00 7 : 30 a.m. (Month Day Year Hour Min)

Type of sample: ❑ Routine ❑ *Repeat ❑ Special

If repeat, date of initial positive

Collected by: Steve Smith

Sample point: Effluent Channel

Chlorinated? ❑ Yes ☒ No Free Chlorine mg/l

Return address for report:

Name City of Scappoose / Steve Smith

Address PO Box P

City, st... Scappoose OR. 97056

MICROBIOLOGICAL ANALYSIS

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ❑ Present* ❑ Absent

Fecal coliforms/*E. coli:* ❑ Present* ❑ Absent

*See back of pink copy for interpretation

Test Methods:
☒ MTF ❑ MF ❑ P-A ❑ CF
❑ EC ❑ EC+MUG ❑ Nutrient Agar + MUG

Sample invalid: resample immediately
❑ Leaked ❑ Over 30 hr old
❑ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 292275

Bottle #

Date & time received 5-11-00 4:15P

Received by: [illegible]

Date & time analyzed:

Comments:
FECAL TEST =
<2/100ml

Analyst: [illegible] Date: [illegible]

Review by: Date: [illegible]

Enter Public Water System ID # in boxes below:

4 1

Name of Water System:

Address PO Box P

City SCAPPOOSE County Columbia

Phone 543-7183

Collection date and time: 05/18/00 3:00 p.m.
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

If repeat, date of initial positive

Collected by: STEVE SMITH

Sample point: EFFLUENT CHANNEL

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

Return address for report:

Name City of SCAPPOOSE / STEVE SMITH

Address PO Box P

City, state, zip SCAPPOOSE, OR. 97056

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☒ MTF ☐ MF ☐ P-A ☐ CF

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 292584

Bottle #

Date & time received 5-18-00 4:30p

Received by: RC

Date & time analyzed: " "

Comments:

Fecal TEST=
<2/100ml

Analyst: KIM Date: 5/19/00

Review by: KIM Date: 5/19/00

Enter Public Water System ID # in boxes below:

4 1

Name of Water System:

Scappoose Wastewater

Address

City County

Phone

Collection date and time: 5/24/00 10:00 a.m.
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☒ Special

If repeat, date of initial positive

Collected by: Darrel Sykes

Sample point: Out of U.V. Channel

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

Return address for report:

Name

Addre

City , zip

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☐ MTF ☐ MF ☐ P-A ☐ CF

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (
e:\work\labslip

Laboratory Name

Please test for
F. c.

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert #

Sample # 291349

Bottle #

Date & time received

Received by:

Date & time analyzed: 5/24

Comments:

fecal coliform - <2/100ml

Enter Public Water System ID # in boxes below:

	1					

Name of Water System:

Address

City ______ County ______

Phone

Collection date and time: 1 / 27 / 00 (Month Day Year) 7 : 00 (Hour Min) a.m./p.m.

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by: SW

Sample point: Wastewater effluent

Chlorinated? ☐ Yes ☐ No Free Chlorine mg/l

MICROBIOLOGICAL ANALYSIS

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Lab Cert # 1-27-00 31
Sample # 2372?20
Bottle #
Date & time received 1/27/00 4^30 p
Received by: RL
Date & time analyzed:
Comments:

fecal coliform = <2/100ml

Return address for report:

Name Scappoose

Address

City, state, zip

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Analyst: Date:
Review by: RL Date: 1/31/00

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

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recycled paper

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ame of Water System: Scappoose

DRINKING WATER PROGRAM

Address

City _____ County _____

Phone

Collection date and time: 11 / 24 / 99 (Month / Day / Year) 7:15 (Hour / Min) a.m. p.m.

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by: SS

Sample point: Digester Sludge tap

Chlorinated? ☐ Yes ☐ No Free Chlorine mg/l

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

AM-TEST ORE[illegible], L.L.C.
13035 SW P[illegible] Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 284279

Bottle #

Date & time received 11-24-99 3:50 P

Received by: KA

Date & time analyzed:

Comments:

Fecal Coliforms=
280/100ml

Return address for report:

Name City of Scappoose

Address P.O. Box "P"

City, state, zip Scappoose, OR 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Analyst: KCA Date:

Review by: KCA Date: 12-02

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

Enter Public Water System ID # in boxes below:

4 | 1

Name of Water System:

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

Address

City _____ County _____

Phone

Collection date and time: 12 / 2 / 99 (Month / Day / Year) 7:00 (Hour / Min) a.m. p.m.

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by:

Sample point: Effluent

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 284589

Bottle #

Date & time received 12/2/99 4:59

Received by: KL

Date & time analyzed:

Comments:

fecal coliform =
500/100m

Return address for report:

Name Scappoose

Address

City, state, zip

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Analyst: KCA Date:

Review by: KCA Date: 12-3

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

204

4	1					

Name of Water System:

Address 34455 E Columbia Ave
City Scappoose County Columbia
Phone
Collection date and time: 12 / 13 / 99 11 : 15 a.m./p.m.
Month Day Year Hour Min
Type of sample: ☐ Routine ☐ *Repeat ☒ Special
* If repeat, date of initial positive
Collected by:
Sample point: Waste Water Treatment
Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

Return address for report:
Name City of Scappoose
Address Waste Water / P.O. Box P
City, state, zip Scappoose Or 97056

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

AM-TEST OREGON, L
13035 SW Pacific
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample #
Bottle #
Date & time received 12/13/99
Received by:
Date & time analyzed:
Comments:

Analyst: Date:
Review by: Date:

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System: SCAPPOOSE WWTP

Address PO Box P
City SCAPPOOSE County Columbia
Phone 543-7183
Collection date and time: 01 / 13 / 00 11 : 10 a.m./p.m.
Month Day Year Hour Min
Type of sample: ☐ Routine ☐ *Repeat ☐ Special
*If repeat, date of initial positive
Collected by: STEVE SMITH
Sample point: EFFLUENT Channel
Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

Return address for report:
Name City of Scappoose
Address PO Box P
City, state, zip Scappoose, ORE. 97056

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name
AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy,
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample #
Bottle #
Date & time received 1/13/00
Received by:
Date & time analyzed:
Comments:
Please Run Fecal on. Fecal Coliform

Analyst: Date:
Review by: Date:

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System:

Address

City _____ County _____

Phone _____

Collection date and time: 12 / 2 / 99 (Month / Day / Year) 7:00 a.m./p.m. (Hour / Min)

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive _____

Collected by: _____

Sample point: effluent

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l _____

Return address for report:

Name Scappoose

Address

City, state, zip

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation.

Test Methods:

☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 284589

Bottle #

Date & time received 12/2/99 4:5

Received by: R

Date & time analyzed:

Comments:

fecal coliform = 500/100

Analyst: KLF Date:

Review by: Date: 12-

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System:

Address 34685 E Columbia Ave

City Scappoose County Columbia

Phone _____

Collection date and time: 12 / 30 / 99 (Month / Day / Year) 11 : 15 a.m./p.m. (Hour / Min)

Type of sample: ☐ Routine ☐ *Repeat ☒ Special

* If repeat, date of initial positive _____

Collected by: Darryl Sykes

Sample point: Wastewater Treatment

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l _____

Return address for report:

Name City of Scappoose

Address Waste Waters P.O. Box P

City, state, zip Scappoose OR 97056

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Laboratory Name

Please Test for Fecal Coli
on Was

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 285826

Bottle #

Date & time received 12/30/99 2:

Received by: R

Date & time analyzed:

Comments:

fecal coliform = 23/100

Analyst: KLF Date:

Review by: KLF Date:

Nov

Enter Public Water System ID # in boxes below: 4 1

Name of Water System: SCAPPOOSE WWTP

Address PO Box P

City SCAPPOOSE County COLUMBIA

Phone 543-7183

Collection date and time: 01 / 20 / 00 7 : 30 a.m./p.m.
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive _____

Collected by: STEVEN M. SMITH

Sample point: EFFLUENT CHANNEL

Chlorinated? ☐ Yes ☐ No Free Chlorine mg/l _____

Return address for report:

Name City of SCAPPOOSE

Address PO Box P

City, state, zip SCAPPOOSE, OR. - 97056 -

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 286892

Bottle # _____

Date & time received 1-20-00 4:00 P

Received by: KLM

Date & time analyzed: _____

Comments:

PLEASE RUN FECAL=
<2/100 ML

Analyst: _____ Date: _____

Review by: KLM Date: 1-21-00

Enter Public Water System ID # in boxes below: 4 1

Name of Water System: [illegible]

Address _____

City _____ County _____

Phone _____

Collection date and time: 1 / 27 / 00 1 : 00 a.m./p.m.
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive _____

Collected by: SW

Sample point: Wastewater effluent

Chlorinated? ☐ Yes ☐ No Free Chlorine mg/l _____

Return address for report:

Name Scappoose

Address PO Box P

City, state, zip Scappoose, OR 97056

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # Lab Cert #31 31

Sample # 287220

Bottle # _____

Date & time received 1/27/00 4:30 P

Received by: RC

Date & time analyzed: _____

Comments:

fecal coliform = <2/10

Analyst: _____ Date: _____

Review by: RC Date: 1/31

4 of 5

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System: City of Scappoose

Address
City County
Phone
Collection date and time: 2/17/00 1[illegible] a.m./p.m. (Month Day Year Hour Min)
Type of sample: ☐ Routine ☐ *Repeat ☐ Special
* If repeat, date of initial positive
Collected by: Steve
Sample point: Wastewater Eff.
Chlorinated? ☐ Yes ☐ No Free Chlorine mg/l

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:
Name City of Scappoose
Address P.O. Box P
City, state, zip Scappoose OR 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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AM-TEST OREGON, L.L.C.
13035 SW Pacific H[illegible]
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 288217
Bottle #
Date & time received 2-17-00 [illegible]
Received by: [illegible]
Date & time analyzed: [illegible]
Comments:
fecal coliform <2/100ml

Analyst: Date:
Review by: [illegible] Date: 2/19/00

Send results to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System: City of Scappoose WWTP

Address PO Box P
City Scappoose County Columbia
Phone 503 543 7183
Collection date and time: 02/24/00 7:00 a.m./p.m. (Month Day Year Hour Min)
Type of sample: ☐ Routine ☐ *Repeat ☐ Special
* If repeat, date of initial positive
Collected by: Steven N. Smith
Sample point: Wastewater Effluent
Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

MICROBIOLOGICAL ANALYSIS

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☐ MTF ☐ MF ☐ P-A ☐ MMO-MUG
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:
Name City of Scappoose
Address PO Box P
City, state, zip SCAPPOOSE OR. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert #
Sample # [illegible]
Bottle #
Date & time received [illegible]
Received by: [illegible]
Date & time analyzed:
Comments:
Fecal Test = <2/100ml

Analyst: Date:
Review by: [illegible] Date: [illegible]

Send results to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

406

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System:

Address

City County

Phone

Collection date and time: 10 / 28 / 99 7:00 a.m./p.m. (Month Day Year Hour Min)

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by: Steve Smith

Sample point: wastewater effluent

Chlorinated? ☐ Yes ☐ No Free Chlorine mg/l

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli:* ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:
Name Scappoose
Address PO Box "P"
City, state, zip Scappoose OR 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

13035 SW Pacific
Tigard OR
(503) 639-9...
Lab Cert #31

Lab Cert # 31
Sample #
Bottle #
Date & time received 10-28-99
Received by:
Date & time analyzed:
Comments:
fecal coliform = 3/100ml

Analyst: Date:
Review by: Date:

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System: Scappoose WWTP

Address PO Box P

City Scappoose County Columbia

Phone 543 7183

Collection date and time: 3 / 2 / 00 9:30 a.m./p.m. (Month Day Year Hour Min)

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by: Steve Smith

Sample point: effluent channel

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

MICROBIOLOGICAL ANALYSIS

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli:* ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:
Name City of Scappoose
Address PO Box P
City, state, zip Scappoose, ORE. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 28885 S
Bottle #
Date & time received 3-2-00 5:37P
Received by:
Date & time analyzed:
Comments:
Fecal Coliforms = < 1/100ml

Analyst: Date:
Review by: Date:

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

407

Enter Public Water System ID # in boxes below:

4	1						

Name of Water System: City of Scappoose WWTP

Address PO Box P

City Scappoose County Columbia

Phone 503 543 7183

Collection date and time: 03 / 09 / 00 6 : 50 a.m. / p.m.
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by: STEVE SMITH

Sample point: EFFLUENT CHANNEL

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

Return address for report:

Name City of Scappoose

Address PO Box P

City, state, zip Scappoose OR. 97056

Send results to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
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Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 289586
Bottle #
Date & time received 3-9-00 5:07P
Received by: KLM
Date & time analyzed: 11
Comments:

FECAL TEST = <2/100ml

Analyst:
Review by: KLM
Date:
Date: 3-10-00

Enter Public Water System ID # in boxes below:

4	1						

Name of Water System:

Address PO Box P

City Scappoose County Columbia

ne 543-7183

...lection date and time: 03 / 16 / 00 7 : 00 a.m. / p.m.
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by: STEVE SMITH

Sample point: EFFLUENT CHANNEL

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

Return address for report:

Name City of Scappoose

Address P.O. Box P

City, state, zip Scappoose, ORE. 97056

Send results to: **Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381**

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 289581
Bottle #
Date & time received 3-16-00 4:40P
Received by: KLM
Date & time analyzed: 11
Comments:

Check FECAL = <2/100 ml

Analyst:
Review by: KLM
Date:
Date: 3-20-00

90 5

Enter Public Water System ID # in boxes below:

4 1

Name of Water System: CITY OF SCAPPOOSE

Address PO BOX P

City SCAPPOOSE County COLUMBIA

Phone 543-7183

Collection date and time: 03 / 23 / 00 9 : 00 a.m. p.m.
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by: STEVEN M. SMITH

Sample point: EFFLUENT CHANNEL

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

Return address for report:

Name CITY OF SCAPPOOSE

Address P.O. BOX P

City, state, zip SCAPPOOSE, OR. - 97056-

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☒ MTF ☐ MF ☐ P-A ☐ CF

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

AM-TEST OREGON,
13035 SW Pacific I
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 289831

Bottle #

Date & time received 3-23-00 1414

Received by: KIM

Date & time analyzed:

Comments:

FECAL = <2/100ml

Analyst: KIM Date:

Review by: KIM Date: 3240

Enter Public Water System ID # in boxes below:

4 1

Name of Water System:

Address PO BOX P

City SCAPPOOSE County COLUMBIA

Phone 543 7183

Collection date and time: 3 / 29 / 00 10 : 30 a.m. p.m.
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by: STEVE SMITH

Sample point: EFFLUENT CHANNEL

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

Return address for report:

Name CITY OF SCAPPOOSE

Address PO BOX P

City, state, zip SCAPPOOSE OR. 97056

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☒ MTF ☐ MF ☐ P-A ☐ CF

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 290052

Bottle #

Date & time received 3/29/00 2:04P

Received by: RC

Date & time analyzed: " "

Comments:

check FECAL

fecal coliform: <2/100ml

Analyst: Date:

Review by: RC Date: 3/30

Enter Public Water System ID # in boxes below:

4	1						

Name of Water System: City of Scappoose Wastewater

Address Please Test For Fecal Coliform

City _____ County _____

Phone _____

Collection date and time: 4 / 13 / 00 11 : 30 a.m. p.m.
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☒ Special

* If repeat, date of initial positive _____

Collected by: Darryl Sykes

Sample point: Down stream of U.V.

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l _____

Return address for report:

Name Wastewater Treatment

Address P.O. Box "P"

City, state, zip Scappoose OR 97056

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☐ MTF ☐ MF ☐ P-A ☐ CF

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 290804

Bottle # _____

Date & time received 4-13-00 4 PM

Received by: KLM

Date & time analyzed: _____

Comments:

15 MTF for FC

Fecal Coliforms = <2/100ml

Analyst: KLM Date: _____

Review by: KLM Date: 4-14-00

Enter Public Water System ID # in boxes below:

4	1						

Name of Water System: _____

Address PO Box P

City SCAPPOOSE County COLUMBIA

Phone 543 7183

Collection date and time: 04 / 06 / 00 7 : 00 a.m. p.m.
Month Day Year Hour Min

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive _____

Collected by: STEVE SMITH

Sample point: EFFLUENT CHANNEL

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l _____

Return address for report:

Name City of Scappoose WWTP

Address P O Box P

City, state, zip SCAPPOOSE OR. 97056

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:

☒ MTF ☐ MF ☐ P-A ☐ CF

☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately

☐ Leaked ☐ Over 30 hr old

☐ Heavy non-coliform growth (as defined by method)

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Send results to: Oregon Health Division, P.O. Box 14350, Portland C 3-0350 Phone (503) 731-4381

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 290413

Bottle # _____

Date & time received 4-6-00 4 PM

Received by: KLM

Date & time analyzed: _____

Comments:

Check Fecal

fecal coliform = <2/100ml

Analyst: _____ Date: _____

Review by: RC Date: 4/7

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System:

Address PO Box P
City Scappoose County Columbia
Phone 543 7183
Collection date and time: 4 / 27 / 00 7:00 a.m. p.m. (Month Day Year Hour Min)
Type of sample: ☐ Routine ☐ *Repeat ☐ Special
* If repeat, date of initial positive
Collected by: Steve Smith
Sample point: Effluent Channel
Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

MICROBIOLOGICAL ANALYSIS

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☐ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:
Name City of Scappoose
Address PO Box P
City, state, zip Scappoose OR. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 29 1537
Bottle #
Date & time received 4 27 00 4:55 PM
Received by: KLM
Date & time analyzed:
Comments:
Fecal TEST = 4/100ml

Analyst: KLM Date: 5-1-00
Review by: Date: 5-1-00

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System:

Address PO Box P
City Scappoose County Columbia
Phone 543 7183 20 SAN
Collection date and time: 4 / 21 / 00 6:45 a.m. p.m. (Month Day Year Hour Min)
Type of sample: ☐ Routine ☐ *Repeat ☐ Special
* If repeat, date of initial positive
Collected by: Steve Smith
Sample point: Effluent Channel
Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

MICROBIOLOGICAL ANALYSIS

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent
Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent
*See back of pink copy for interpretation

Test Methods:
☐ MTF ☐ MF ☐ P-A ☐ CF
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:
Name City of Scappoose
Address PO Box P
City, state, zip Scappoose, ORE. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31
Sample # 29 1184
Bottle #
Date & time received 4-20-00 4:55
Received by: KLM
Date & time analyzed:
Comments:
Fecal TEST = <2/100ml

Analyst: KLM Date: 4-24
Review by: Date: 4-24

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR -0350 Phone (503) 731-4381

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System:

Address P.O. Box P

City SCAPPOOSE County COLUMBIA

Phone 543 7183

Collection date and time: 02/03/00 7:00 a.m. (Month Day Year Hour Min)

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by: STEVEN M. SMITH

Sample point: EFFLUENT CHANNEL

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:

Name City of Scappoose

Address PO Box P

City, state, zip SCAPPOOSE OR. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

AM-TEST OREGON, L.L.C.
13035 SW Pacific
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 287539

Bottle #

Date & time received 2/3/00 4:55 p

Received by: RL

Date & time analyzed: " "

Comments:

FECAL TEST
fecal coliform = <2/100ml

Analyst: Date:

Review by: RL Date: 2/4/00

Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

Enter Public Water System ID # in boxes below:

4	1					

Name of Water System:

Address PO Box P

City SCAPPOOSE County Columbia

Phone 543 7183

Collection date and time: 02/10/00 6:55 a.m. (Month Day Year Hour Min)

Type of sample: ☐ Routine ☐ *Repeat ☐ Special

* If repeat, date of initial positive

Collected by: STEVE SMITH

Sample point: EFFLUENT CHANNEL

Chlorinated? ☐ Yes ☒ No Free Chlorine mg/l

MICROBIOLOGICAL ANALYSIS
PUBLIC WATER SUPPLIES
DRINKING WATER PROGRAM

LABORATORY RESULTS

Total coliforms: ☐ Present* ☐ Absent

Fecal coliforms/*E. coli*: ☐ Present* ☐ Absent

*See back of pink copy for interpretation

Test Methods:
☒ MTF ☐ MF ☐ P-A ☐ MMO-MUG
☐ EC ☐ EC+MUG ☐ Nutrient Agar + MUG

Sample invalid: resample immediately
☐ Leaked ☐ Over 30 hr old
☐ Heavy non-coliform growth (as defined by method)

Return address for report:

Name City of Scappoose

Address PO Box P

City, state, zip SCAPPOOSE, OR. 97056

Copy Distribution:
White Lab
Yellow Health Division
Pink Water System

Form # 50-90 (Rev. 1/98)
e:\work\labslip

Laboratory Name

AM-TEST OREGON, L.L.C.
13035 SW Pacific Hwy.
Tigard OR 97223
(503) 639-9311
Lab Cert. #31

Lab Cert # 31

Sample # 287898

Bottle #

Date & time received 2/10/00 4:34 p

Received by: RL

Date & time analyzed: " "

Comments:

Please Run FECAL
Fecal Coliforms = <2/100ml

Analyst: Date: 2-11

Review by: VLM Date: 2-11

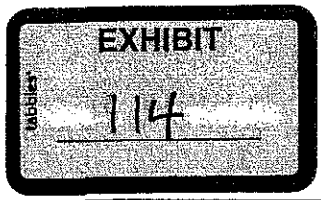
Send results to: Oregon Health Division, P.O. Box 14350, Portland OR 97293-0350 Phone (503) 731-4381

E13

CITY OF SCAPPOOSE

QUALITY CONTROL

414



April 2000

The operations manual has been revised and is more in line with this facility and has been updated to adhere to current methods. Numerous proceedures have either been implemented or revamped to bring the facility into compliance and they include:

A. staff has revised and implemented a BOD5 and Fecal Coliform procedures manual.
B. staff has changed the method of storing dilution water by removing the rubber stopper on the reagent bottle allowing the dilution water to "breath".
C. staff is now using the "glucose/glutamic acid check" to maintain QA/QC of the BOD5 test.
D. staff has started using pre-packaged nutrients to reduce the risk of contamination to the dilution water.
E. staff is now running two blank samples to reduce the risk of BOD5 probe contamination.
F. staff has adjusted BOD5 sample amounts to bring depletion values into a more consistent range.
G. staff is now using an EPA accepted BOD seed inoculum that has a stable and predictable depletion range.
H. staff has implemented a new procedure of replacing the BOD probe membrane on a regular basis.
I. staff has purchased a certified thermometer for the BOD refrigerator and is doing a daily check for temperature control.
J. staff is periodically going to send a split sample to an outside lab for comparison to ensure QA/QC in their methods.
K. staff purchased a MPN incubator and is now using the MPN method for fecal coliform detection. Due to the exceptional quality of effluent and outstanding U.V. disinfection the filter membrane method is not practical.
L. samples that do not meet the proper d.o. depletion will be reported and flagged as an estimate.

Enclosed you will find a copy of lab results of wastewater analysis performed by our outside laboratory, Amtest Oregon. The results clearly show that the Scappoose Wastewater facility has been discharging effluent of excellent quality to the receiving stream.

In conclusion I would like to offer my sincere apologies to you for any problems that have occurred to the City Managers office or the City of Scappoose.

Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHWEST REGION

September 9, 1992

Mr. Steven Wabschall
City of Scappoose Sewage Treatment Plant
34345 Columbia Blvd.
P.O. Box "P"
Scappoose, Oregon 97056

Re: WQ - Columbia County
City of Scappoose
WQ-NWR-92-396
NOTICE OF NONCOMPLIANCE

Dear Mr. Wabschall,

A review of your Discharge Monitoring Report (DMR) for the month of July, 1992, indicates the following violation occurred:

Parameter/Violation	Report Value	Permit Limit
BOD/Weekly Average (7/26 - 7/31)	32.7 mg/l	30 mg/l

The above violation is a Class III violation. Oregon Administrative Rules provide for more formal enforcement action for repeated or continuous Class III violations. The Department requests your cooperation in ensuring that this violation does not recur.

If you have any questions about this Notice, please call me at 229-6385 (x248).

Sincerely,

Doug Jones

Doug Jones
Environmental Engineer
Northwest Region

cc: Water Quality Division, DEQ
Enforcement Division, DEQ

1500 SW First Avenue
Suite 750
Portland, OR 97201-5884
(503) 229-5263

DEQ-1

418

Scappoose Wastewater Training

A. Training by outside consultant:

Holly Ploetz with Linn-Benton Community College has made two visits to the Scappoose Wastewater plant for operator training. While at the plant a performance review of laboratory procedures was done.

Both Wastewater operators have been to the Linn-Benton Community College short school in December 1999. This short school was a NPDES Wastewater laboratory workshop.

CITY OF SCAPPOOSE

Public Works DEPARTMENT

Lab Procedures for Columbia Boulevard Wastewater Plant

June, 2000

5. **ASEPTIC HANDLING OF BACTERIOLOGIC SAMPLES**
Avoid contamination from skin, clothing, equipment, water, and adjacent surfaces.

6. **RECORD NECESSARY SAMPLING DATA.**

7. **ALWAYS MIX THE SAMPLE**
before removing a portion.

8. **SAMPLES SHOULD BE TESTED AS SOON AS POSSIBLE**
always within the permissible time interval after sampling.

TYPES OF SAMPLES

1. **GRAB SAMPLES**

A "grab" sample consists of a portion of the flow taken at one particular time. Grab samples are taken because they are required or because there is a lack of time to catch composite samples. For some tests grab samples must be used. Tests such as residual chlorine, dissolved oxygen, and pH are determined from grab samples as a portion of the flow which cannot be mixed. For some tests grab samples can be used because the quality of the component to be sampled remains uniform for a period of a day or longer. An example is a digester sample.

COMPOSITE SAMPLES

A composite sample is a series of grab samples poured together to make one sample. The simplest type of composite sample consists of grabs of equal volume and is applicable only to situations of uniform flow.

PROPORTIONAL COMPOSITE SAMPLES

In proportional composite samples, the volume of each portion is adjusted to the flow at the time the portion is collected. All portions are mixed to produce a final sample representative of the flow during that particular collection period. Composite samples are representative of the character of the flow over a period of time. Biochemical oxygen demand (BOD), settleable solids, and suspended solids tests are usually run on composite samples. The effects of intermittent changes in strength and flow are eliminated. The portion collected should be obtained with sufficient frequency to obtain average results. The rate of flow must be measured when each portion is taken and the volume of the portion adjusted to the flow at the particular time of sample. Samples may be composited either by mechanical samplers or manually.

Use the following formula to determine the volume of sample to be taken at each sampling interval to obtain a weighted composite sample.

$$\frac{\text{Total Sample Volume}}{\text{\# of Sampling Times}} \times \frac{\text{Flow Rate at Sampling}}{\text{Average Flow Rate}} = \text{ml Sample at Sampling Times}$$

TEMPERATURE

0i 7f-)

INTRODUCTION

Temperature measurements should be made with the thermometer immersed in flowing water or in well-mixed water in a beaker. Of course measurements should be made at the sampling point, not inthe laboratory since the temperature can change quickly during transport. Readings should be made to the nearest degree, or closer if desirable. A period of time sufficient to allow a constant reading on the thermometer is necessary for accurate temperature measurement.

It is a required procedure to periodically check thermometers used throughout the treatment plant. This is done by standardizing the thermometers against a Standard Thermometer. The standard thermometer must have a certificate verifying authenticity.

Another method for "checking" a thermometer follows.

EQUIPMENT

Mercury-filled centigrade thermometer
Ice bath (beaker with ice 'water)
Boiling water bath (beaker with boiling water)

PROCEDURE

1 . CHECK THE FREEZING POINT.

Immerse a thermometer in an ice bath and allow it to come to equilibrium. Equilibrium will be reached when the temperature on the thermometer does not change over a period of 3-5 minutes. Be sure that the ice bath has pieces of ice in it at all times. The thermometer should be suspended and the bulb of the thermometer should not rest on the bottom of the beaker. Record the temperature at equilibrium.

CHECK THE BOILING POINT.

Repeat as above except with boiling water bath. Again, be sure that the thermometer is suspended above the bottom of the beaker. The water must be boiling constantly. Record the temperature at equilibrium.

3. EVALUATE THE TEMPERATURE READINGS.

If the thermometer is off more than one (1) degree Celsius at either the freezing or boiling point, the thermometer should be discarded.

4. CHECK TEMPERATURE OF SAMPLE.

If thermometer checks out OK at 00 and 1 OO C it may be used to check sample temperature. Suspend thermometer in sample so that it does not touch the bottom or sides of the container. Allow it to reach equilibrium. Record temperature to the highest accuracy of the thermometer.

pH

INTRODUCTION

pH is a measure of hydrogen ion (H+) concentration and is generally used to describe a system as being acidic or basic. It is not to be confused with alkalinity or acidity, which require completely different laboratory analysis. pH measurements are taken at various points throughout a treatment plant, and any abnormal readings can be an indication of an upset system. Abnormal raw sewage pH can be a clue to imminent plant problems.

EQUIPMENT

Electronic pH meter
Color comparator device with glass cells.

(Color comparators are acceptable for in-plant control checks, pH measurements for state monitoring reports are to be made with meter **onl)**

REAGENTS

Standard pH buffers (4, 7, and 10)

PROCEDURE (Meter) *The following are generic directions and specific directions should be used for each meter. Read the Directions!*

WARM UP INSTRUMENT.

The instrument should be left in the standby position. If the instrument is not on and in the standby position, turn it on and allow it to warm up for 30 minutes.

2. **ADJUST THE TEMPERATURE.**

The temperature is usually set at room temperature. If solutions of lower or higher temperature are being checked, the standard and the sample must be at the temperature set on the meter.

ADJUST THE NEEDLE TO 7. While in the standby position.

4. **RINSE THE PROBE.**
With distilled water

IMMERSE THE PROBE IN THE 7 BUFFER.
Use about 20 mls of fresh 7.0 buffer in a clean beaker

Biochemical Oxygen Demand (BOD)
Non-Chlorinated Samples

INTRODUCTION

The biochemical oxygen demand (BOD) is defined as the quantity of oxygen used in the biochemical oxidation of organic matter in a specific time, at a specified temperature and under specific conditions. The standard BOD test performed on domestic waste is carried out for 5 days at 20 C- The BOD test is used as a measure of the organic strength of sewage. If the sewage is strong, for example, it will contain a large amount of decomposable organic material. In such a case, the oxygen requirement and BOD would be high. By the same argument, sewage containing small amounts of decomposable organic materials would have a lower BOD.

The test is performed by determining the amount of dissolved oxygen (DO) in the sample at the start of the testing period and comparing it to the amount of dissolved oxygen in the sample after five days. The dissolved oxygen depleted over this period has been used to stabilize organic material and is, therefore, the biochemical oxygen demand (BOD) of the sample.

STOCK SOLUTION PREPARATION

1. **CALCIUM CHLORIDE SOLUTION**

Dissolve 27.5 g. anhydrous calcium chlorine (CaC12) in 500 mls distilled water and make up to one liter with distilled water.

MAGNESIUM SULFATE SOLUTION
Dissolve 22.5 g. magnesium sulfate (MgS04 - 7 H20) in 500 mls distilled water and make up to one liter with distilled water.

IRON (111) CHLORIDE (FERRIC CHLORIDE) SOLUTION
Dissolve 0.25 g. iron (111) chloride (FeC13 - 6 H20) in 500 mls distilled water and make up to one liter with distilled water

PHOSPHATE BUFFER SOLUTION
Dissolve:

8.5 g. potassium dihydrogen phosphate (KH2PO4)

21.75 g. dipotassium hydrogen phosphate (K2HP04)

33.4 g. disodium hydrogen phosphate (Na2HP04)

1.7 g. ammonium chloride (NH4Cl) in 500 mls distilled water. After the salts have dissolved, make up one liter with distilled water. The pH of this buffer should be about 7.2 and should be checked. Discard solution if any sign of biological growth appears.

Glucose-Glutamic Acid
BOD Quality Check

INTRODUCTION

Because the BOD test is a bioassay, the results can be influenced greatly by the. presence of toxicants or by use of a poor seeding material. Distilled waters frequently are contaminated with copper; some sewage seeds are relatively inactive. Low results always are obtained with such seeds and waters. Periodically check dilution water quality, seed effectiveness and analytical technique by making BOD measurements on pure organic compounds.

EQUIPMENT

This test is run on the standard BOD equipment and is set up in conjunction with regular testing.

REAGENTS

2% dilution of glucose-glutamic acid standard solution.

SOLUTION PREPARATION

Dissolve 150 mg of glucose and 150 mg of glutamic acid in One liter.

PROCEDURE

Set up standard dilution.

The BOD of the above glucose-glutamic solution is 200 mg/L + 37 mg/L. A 2% dilution of this solution should be set up to achieve the criteria of a 2.0 DO depletion and a residual DO of 1.0 mg/L.

This 2% dilution is achieved by addition of 6 mls of solution to a BOD bottle.

This solution also needs to be seeded. Seed the sample the same as the dechlorinated final effluent samples.

5. **RINSE FILTER.**
   Use distilled water to wash the solids that are clinging to the sidewall of the funnel down onto the glass fiber filter and to remove any soluble solids trapped in the glass fiber filter. Rinse cylinder and empty into funnel.

6. **PLACE FILTER BACK INTO ORIGINAL ALUMINUM PAN AND PLACE IN DRYING OVEN.**
   Dry the pan and filter for 60 minutes at 103 degrees C in the drying oven. Use tongs to handle pans.

REMOVE PAN AND SAMPLE FROM DRYING OVEN.

Cool the filter and pan to room temperature in desiccator.

8. **WEIGH THE PAN AND FILTER AND SAMPLE.**
   Weigh the filter plus pan to four decimal places and record the weight as "filter plus dry sample."

SAVE THE FILTER AND PAN WITH SAMPLE

for volatile suspended solids determination. If volatile suspended solids are not to be run, discard the filter.

CALCULATION

EXAMPLE:

Pan plus filter plus sample Pan plus filter Sample

10.6501 g
10.6245 a
0.0256 g

Suspended Solids, mg/l = sample weight. g X 1,000,000 sample volume, MIS

EXAMPLE: for 100 MIS sample

Suspended Solids, mg/l

$$\frac{0.0256\ g \times 1{,}000{,}000}{100\ MIS}$$

256 mg/l

CITY OF SCAPPOOSE

EQUIPMENT

CONTROL SOLUTIONS

5265 NW Sewell Road
Hillsboro, OR 97124
(503) 648 0636
EIN # 93-1212314

SERVICE REQUEST NUMBER: CS00151
CUSTOMER'S ORDER NO. 13761
CALL DATE: 3/2/00
PERSONS CONTACTED: D. Sykes
MILES:
HRS.: 3.5
EXPENSE:

COMPANY NAME: City of Scapoose
ADDRESS: P.O.B
CITY, STATE, ZIP: Scapoose OR 97056
PHONE NO.: 543-7146

SERVICE REPRESENTATIVE: Allen Rathbun

☑ COMPLETE ☐ INCOMPLETE

REQUESTED SERVICES: Flow Measurement Calibration

① Stein Pre Treat Flow - TN Technologies Model B0907
SN B0907 0-186gpm

found Flow Range setup for 0-56gpm meaning anything over 56gpm reading out would remain 20mA or 56gpm. Upon observation of flow found it to be regularly above 56gpm 70-80gpm.

After checking customer documentation on Parshall 2" Flume and measuring Flume, found it capable of .73 Head ft of level corresponding to 186gpm.

Reranged Transmitter to 0-186gpm and after adjusting output found it to be accurate.

THE SERVICE REQUESTED BY YOUR COMPANY HAS BEEN PERFORMED BY CONTROL SOLUTIONS IN A SATISFACTORY MANNER.

CUSTOMER SIGNATURE Darryl Sykes TITLE Operator II DATE 3-2-00

CERTIFICATE of CONFORMANCE & ACCURACY

This thermometer identified by Serial No. 9066
was compared with a Standard calibrated at the National Institute of Standards and Technology (NIST), formerly the National Bureau of Standards (NBS); and was found to be within one scale division. The indications of this thermometer are traceable to N.I.S.T.

The standard Serial No. is 48511
The NIST Identification No. is 92564

TEST DATE OCT 18 1999

EVER-READY THERMOMETER CO.

Clifton Thomas, *Quality Control Supervisor*
Ever-Ready Thermometer Co., Inc.
228 Lackawanna Avenue
West Paterson, NJ 07424
Phone 973/812-7474 Fax 973/812-7475

THE VALIDITY OF THIS CERTIFICATE & INSTRUMENT IS ONE YEAR

AGENDA REPORT

September 2, 1998

To: Mayor and Council

Thru: Ben Shaw, Public Works Director

From: Steven Wabschall, Operations Superintendent

Subject: Purchase of Influent Sampler
for Wastewater Treatment Plant

Date: September 2, 1998

Summary:

Competitive quotes were received from three vendors whose names were obtained from the Public Works' engineering, construction, & maintenance catalog. The lowest bid (**$3,970.00**) was submitted by Environmental & Process Instramentation located in Issaquah, Washington. The other bids were for $4,622.00 & $4,575.00.

Previous Council Action:

The budget committee recommended and council approved for fiscal year 1998/1999 the purchase of a new refridgerated, weather resistant, composit sampler for plant influent.

Background:

The current sampling system was moved but not replaced during the last plant upgrade in 1993. The system was adequate at best and is currently non-operable. The system is old and outdated and is not worth repairing.

Problem Discussion:

Staff is currently taking grab samples of the plant influent which does not ensure a true 24 hour representation of the city's wastestream. In order to best obtain accurate data that can be used by treatment staff the equipment needs to be replaced with a unit that will take composit samples and that can protect and preserve the samples until they can be analyzed.

Financial Implications:

Staff proposes allocating funds from wastewater budget line item 300 (capital equipment). The amount of $5000.00 was budgeted and approved for this purchase.

Recommendation:

Staff recommends the purchase of the Sigma 900 All Weather Refridgerated Sampler from Environmental & Process Instrumentation.

Proposed Motion:

I move that council allow staff to make purchase of a new refridgerated sampler from EPI.

City of Scappoose

PURCHASE ORDER

et Address: 52432 S.E. 1st Street
Mailing Address: P.O. Box "P"
Scappoose, OR 97056
Phone: (503) 543-7146
(503) 223-7226

Ordered by ☐ Department ☐ Accounting

Date: 9-10-98

P.O. # 11483

To: American Sigma Inc.

Ship Via: Truck

	QUANTITY	DESCRIPTION	AMOUNT	ACCOUNT #
1.	1	All Weather Refridgerated Sampler	$3,970.00	40-410-300
2.				
3.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

Darryl Sykes
Person Requesting

J. Whitschall
Authorization by Department Head

FOR ACCOUNTS PAYABLE DEPARTMENT USE ONLY BELOW THIS LINE

Invoice _____

_____ Fund No. _____ $ _____ Fund No. _____ $ _____

_____ Fund No. _____ $ _____ Fund No. _____ $ _____

Vendor No. _____ Fund No. _____ $ _____ Fund No. _____ $ _____

Inv. Date _____ Fund No. _____ $ _____ Fund No. _____ $ _____

Description _____

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PACKING LIST

AMERICAN SIGMA, INC.
11601 MAPLE RIDGE RD
MEDINA, NY 14103
(716) 798-5580
(800) 635-4567

BILL TO: 31985 01
CITY OF SCAPPOOSE
PO BOX P

SCAPPOOSE OR 97056

PHONE: (503) 543-7183

SHIP TO: 1
CITY OF SCAPPOOSE
34485 E. COLUMBIA AVENUE

SCAPPOOSE OR 97056

ATTN: DARRYL SYKES 503-543-7183

ORDER #	RELEASED	P.O.NUMBER	SALE TERMS	SHIP VIA	SALESMAN	ORDER
96364	9/11/98	11483	NET 30	TRUCK	40 E.P.I.- N.W.	13.300

WAREHOUSE	F.O.B.	TAX CODE	REQUESTED
01 MAIN PLANT SIGMA	MEDINA F/A	NT	1/02/98

ITEM	DESCRIPTION	WHSE	QUANTITY	BOX ##	PICKED	BACKORDERED
3540	900 AWRS, NON CFC FINAL ASSY 120 V	01	1	1	1	
6494	CONTAINER, 6 GAL POLY W/LID	01	1	1	1	
8838	COMPOSITE TUBE SUPT, W/TUBE, AWS	01	1	1	1	
920	TUBING, VINYL, 25 FT. INTAKE 3/8 IN ID	01	1	1	1	
2071	STRAINER..406 DIA., SS, 316	01	1	1	1	

HA1098LAC017123*** 8900

IA1098LAN017123*** 3540

10/1/98
SWC

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QUALITY ASSURANCE GUIDELINES
NPDES AND WPCF SELF-MONITORING LABORATORIES

-by-

DEQ LABORATORIES AND APPLIED RESEARCH DIVISION
QUALITY ASSURANCE SECTION

Documentation Requirements

Each facility/laboratory should have a procedure manual which includes all the standard operating procedures (SOP's) used for their self-monitoring program. The facility's SOP's should cover sampling, equipment calibration and maintenance, analytical methods, quality control activities and laboratory data handling and reporting. Facility SOP's should include enough detail to use this document as a training manual for new employees.

1. Sampling Procedures

1.1 Sample collection and analysis schedules for parameters specified in permit and/or other tests not covered in permit, but are used to determine plant performance.

1.2 Sample collection locations.

1.3 Sample types such as grab, composite or flow proportioned composites including instructions on sampler setup.

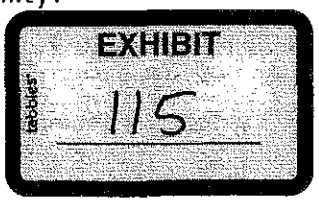
1.4 Sample handling requirements such as sampling containers, preservatives (e.g. acid, thiosulfate, refrigeration etc.), and holding time.

2. Facilities and Equipment

2.1 Operating instructions for equipment such as balances, meters, incubators, samplers etc. which outline proper calibration procedures to be followed whenever equipment is used.

2.2 Maintenance schedules on major equipment which indicate what type of maintenance is to be performed. Balances should be serviced annually by a certified repairman.

2.3 Cleaning procedures to be followed for each type of equipment and glassware used by the facility.



determine accuracy.

4.5 Control limits should be established for duplicates and standards, or spike samples for data verification. Examples of establishing control limits are outlined in Appendix A.

4.6 Routinely verify quality of reagent/pure water. The following table is an excerpt used for checking pure water in microbiology testing. It would be good laboratory practice to use these same pure water checks on reagent water used to analyze other analytes.

Test	Monitoring Frequency	Limit
Conductivity	Continuously or with each use.	< 2 μ℧/cm at 25°C or > 0.5 megohms
pH	With each use.	5.5 - 7.5 SU
Total chlorine residual	Monthly or with each use.	< detection limit
Total organic carbon	Monthly.	< 1.0 mg/L
Ammonia/organic nitrogen	Monthly.	< 0.1 mg/L
Heavy metals, single (Cd, Cr, Cu, Ni, Pb, and Zn)	Monthly.	< 0.5 mg/L
Heavy metals, total	Monthly.	< 1.0 mg/L

4.7 Routinely check and document temperature of sample refrigerators, incubator, and composite sampler's cooler.

5. Laboratory Data Handling and Reporting

5.1 Bound lab books or bench data sheets must be available for all tests performed. Data sheets should document all essential checks made to verify that test results are valid.

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[1] Standard Methods For the Examination of Water and Wastewater sixteenth edition, 1985.

EPA Methods 1979: Method 405.1

6.1.5 **Analytical Checks**

6.1.5.1 Sample Pretreatment requirements:

a.) Sample pH must be between 6.5 - 8.0 SU.

b.) Chlorinated effluent must be dechlorinated. Use sodium sulfite (Na_2SO_3).

c.) Dechlorinated effluent must be reseeded; use aged settled influent or sample from primary clarifier for this. DO depletion from seed should be between 0.6 - 1.0 mg/L.

d.) Sample temperature must be approximately 20° C for tests and DO should be approximately 9 mg/L. Samples which have DO's greater than 9 mg/L may lose oxygen during incubation which will result in an overestimation of the BOD. Samples with DO's greater than 9 mg/L at 20° C should be aerated by vigorously shaking, or using aeration device similar to that used for dilution water.

6.1.5.2 Test Set-up

a.) A dilution water blank must be analyzed with each setup. The 5 day blank DO depletion should be less than 0.2 mg/L. Should high dilution blank DO depletion be obtained, the permittee should not report corrected BOD results (subtracting blank DO depletions from the sample DO depletions in calculations). High blank DO depletions contribute a positive bias to BOD results.

b.) A seed BOD needs to be run with each setup to verify seed strength equivalent to a 0.6 to 1.0 mg/L DO depletion. Example: If 2 mls seed are used, seed BOD must be run with 2 ml to ensure depletion criteria is met. The seed DO depletion is subtracted from seeded sample DO depletion as a correction factor.

c.) A glucose/glutamic acid standard should be run with each setup to verify proper test performance. Theoretical BOD of the standard is 200 ± 37 mg/L. The standard requires seeding.

Y = volume of seed added in milliliters.
Z = volume of seed used in seed BOD.
S_I = initial DO from seed BOD.
S_F = final DO from seed BOD.

6.2 Total Suspended Solids (TSS)

6.2.1 **Sample Collection and Preservation**
As described for BOD5

6.2.2 **Holding Time**
7 days

6.2.3 **Approved Methods**
Gravimetric, residue post drying 103 - 105° C
Standard Methods 15th ed. 209D
Standard Methods 16th ed. 209C
EPA Methods 1979: Method 160.2

6.2.4 **Analytical Checks**

6.2.4.1 Balance: The analytical balance should be serviced annually by a certified repairman. The balance should be located in an area free of drafts and sources of humidity. The balance should be on a hard, stable surface.

6.2.4.2 Oven temperature logs should be maintained to document oven temps. of 103° - 105° C.

6.2.4.3 Filters should be prewashed and dried at 103° - 105° C before initial weighing.

6.2.4.4 Filters must be stored in a desiccator prior to weighings.

6.2.4.5 Choose a sample volume to yield 2.5 ~~and~~ $\overline{\text{—}}$ 200 mg of dried solids. Filtration should be complete within 2 minutes. If it takes longer than 10 minutes to filter sample, use a larger filter or reduce volume, but do not produce less than 2.5 mg residue. Clogging of filters reduces the effective filter pore size and introduces a positive bias to TSS result.

6.3.5 Analytical Checks

6.3.5.1 Electrodes should be stored in distilled water or buffer between uses, as recommended by the manufacturer.

6.3.5.2 Meter should be calibrated before each use by performing a 2 point standardization with pH 7 and either pH 4 or 10 buffer. Calibrations must be documented in the lab notebook.

6.3.5.3 The sample temperature should be recorded when pH is measured.

6.3.5.4 The time required to obtain a stable reading is dependent on the electrode and whether the sample is being stirred during measurement. A rule of thumb would be at least 1 minute to obtain a stable reading.

6.4 Total Residual Chlorine

6.4.1 Sample Collection, Preservation and Handling

Grab samples collected at discharge from chlorine contact chamber. Samples must be analyzed immediately.

6.4.2 Approved Methods

Standard Methods or EPA Methods 1979:
Iodometric Method I or II
Amperometric Titration
DPD Ferrous Titration
DPD Colorimetric
* DPD kits are approved by EPA and DEQ.

6.4.3 Analytical Checks (kits)

The color wheels must be protected from sunlight when not in use to prevent fading. The kit should provide for a blank correction. Powder reagent pillows should be dated when received.

6.5 Fecal Coliform

6.5.1 Sample Collection

Grab samples are collected in sterile polyethylene or borosilicate

convenient.

6.5.5.5 Bunsen or alcohol burner.

6.5.6 Expendable Equipment

6.5.6.1 Membrane Filters: pre-sterilized, gridded, 47mm diameter, 0.45um pore size:

	(catalog #)	Price
Millipore	Type HC (HCWG 047 S3)	$73.90/200

6.5.6.2 Broth: M-FC 100 g bottle or 2 ml ampoules. The 2 ml ampoules are recommended because they are presterilized and facilities usually run fecal coliforms weekly which makes preparation of broth less cost effective.

media reagents: (available from VWR)

mFC media	DF0677-01
rosolic acid	DF32228-09

Ampoules:	(cat. #)	price
Millipore:	M00000P2F	$40.40/50
Gelman:	4356	$19.00/20

6.5.6.3 Sterile petri dishes and pads.

Petri dish only:	(cat. #)	price
Gelman	7242	$21.00/100
Millipore	PD1004700	$18.50/100

Petri dish with Pads:		
Gelman	7245	$24.00/100
Millipore	AP10047SO	$23.00/100

For ordering information call:
Millipore 1-(800)-632-2708
Gelman 1-(800)-521-1520

6.5.7 Analytical Checks

6.5.7.1 Incubation time and temperature requirements:
44.5 ± 0.2° C for 24 ± 2 hours
An NBS or ASTM certified thermometer is necessary to

95% confidence interval for the MPN test (as published in Standard Methods).

6.5.8 Calculation & Reporting of Results

$$\text{counts/100ml} = \frac{\text{Number of colonies counted}}{\text{Volume of sample filtered (ml)}} \times 100$$

a. Only one plate count within acceptable limits (20 - 60)
Example: 5 ml sample obtained 30 counts; other dilutions did not meet criteria.

$$\text{FC } \frac{\text{cts.}}{\text{100ml}} = \frac{30}{5} \times 100 = 600 \qquad \frac{2}{100} \times 100$$

$$\text{Report as 600 FC } \frac{\text{cts.}}{\text{100ml}}$$

b. More than 1 acceptable count
Example: 5 ml sample obtained 60 counts and 1 ml sample obtained 20 counts.

$$\frac{60}{5} \times 100 = 1200 \text{ FC } \frac{\text{cts.}}{\text{100ml}}$$
$$\frac{20}{1} \times 100 = 2000 \text{ FC } \frac{\text{cts.}}{\text{100ml}}$$

Calculate the arithmetic mean:

$$\frac{2000 + 1200}{2} = 1600 \text{ FC } \frac{\text{cts}}{\text{100ml}}$$

c. If ALL MF counts are below lower limit of 20, select most nearly acceptable count.
Example: Sample volumes of 1, 0.3, and 0.01 ml produced counts of 14, 3, and 0 respectively.

Use 14, and report as "est" (estimate); most near the acceptable count.

d. If ALL MF counts are zero, calculate using count from largest

result type	result reported	use this number in calc
no colony growth	< 4	4
# colonies < 20	15 est.	15
colonies between 20-60	40	40
colony > 60	150 est.	150
colonies TNTC	> 6000	6000

Procedure 1: Calculate nth root of the product of fecal coliform results:

$$\overline{X_g} = \sqrt[n]{\prod_{i=1}^{n} X_i}$$
$$= \sqrt[n]{X_1 \times X_2 \times X_3 \times \ldots \times X_n}$$

Example: Five measurements for FC over a one month period were: 4, 15, 40, 150, and 6000 counts/100 ml. Calculate the geometric mean.

$$\overline{X_g} = \sqrt[5]{4 \times 15 \times 40 \times 150 \times 6000}$$
$$= \sqrt[5]{2{,}160{,}000{,}000}$$
$$= 74 \ \frac{\text{cts.}}{100\,\text{ml}}$$

Appendix A

Procedure for Calculating Method Precision and Accuracy

1.0 Introduction

Statistical methods provide the basis for determining the precision and accuracy of data. Once precision and accuracy performance has been established, it can be used to verify self monitoring data by establishing quality control limits. Data which does not meet set control limits for precision or accuracy indicate that some sort of error has occurred due to equipment failure, analyst error, or a calculation error. Identification and correction of errors improves the overall quality of the data generated by a laboratory.

2.0 Determining Precision

2.1 Definition: Precision is a measure of the spread in the data, or the repeatability of obtaining a given result on a sample or standard. Precision is expressed either in standard deviation, range (difference between duplicate analyses) or relative percent difference (RPD: range divided by the mean of the duplicates and multiplied by 100). Range is commonly used for samples which do not vary appreciably in concentration (such as effluent BOD) whereas RPD is used for samples which may vary in concentration several orders of magnitude (i.e. 1 - 500 mg/L) and range is dependent on concentration.

2.2 Calculation :

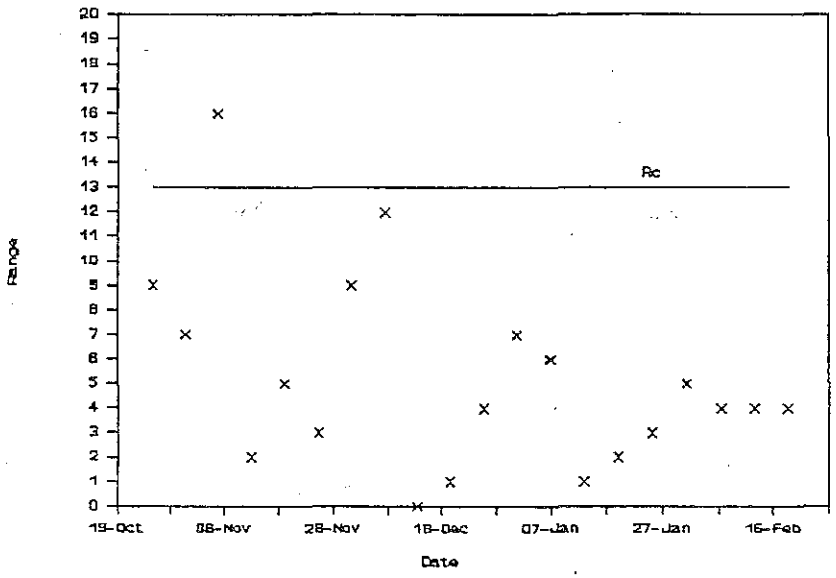
$$RPD = \frac{X_1 - X_2}{(X_1 + X_2)/2} \times 100\%$$

$$R = X_1 - X_2$$

Where : X_1 and X_2 = duplicate measurements of the same sample.

Example: Duplicate analysis for BOD on an effluent sample obtained the following results: 20 and 15 mg/L.

Graphical precision tracking: Provides a historical presentation of data for identifying trends which can help identify the deterioration of standards, or the need for equipment maintenance.



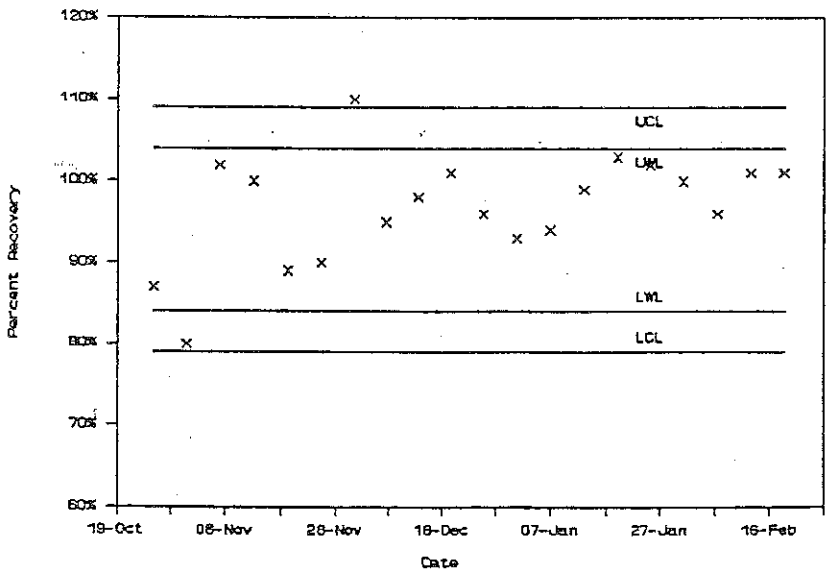
Analytical precision as a function of range.

Σ = summation sign.
ΣP_i^2 = sum of the squared percent recoveries.
$(\Sigma P_i)^2$ = square of the sum of percent recoveries.

Control limits = $P \pm 3S_p$
Warning limits = $P \pm 2S_p$

Example: A glucose/glutamic acid standard for BOD analysis obtained an average percent recovery over time of 94% with a standard deviation of 5%. The control and warning limits would be:
Warning limits = $94 \pm 2(5) = 94 \pm 10\% = 84 - 104\%$
Control limits = $94 \pm 3(5) = 94 \pm 15\% = 79 - 109\%$
Most calculators have statistical functions for calculating averages and standard deviations.

3.4 Accuracy Control Chart



Accuracy

SS. Calculation

$$\frac{\text{Dry weight (g)} \times 1{,}000{,}000}{\text{ml's sampled}}$$

QA Guidelines for Self Monitoring Laboratories
Oregon Department of Environmental Quality
October 28, 1991

Example Analysis form
DAILY PLANT COMPOSITE

DAY: _____ DATE: _____

Suspended Solids:
Oven temperature (°C): _____ 5g class S weight (g): _____

SAMPLE:	QC *			
Filter#:				
A = Volume (ml):				
B = TSS Filter + Dry Solids (g):				
C = TDS Dish + Dry Solids (g):				
D = Filter Tare (g):				
E = Dish Tare (g):				
Mass diff. TSS F = B - D (g):				
Mass diff. TDS G = C - E (g):				
TSS (mg/L) 1,000,000 * F/A:				
TDS (mg/L) 1,000,000 * G/A:				

pH:
Sample temperature (°C): _____ pH 7 buffer: _____

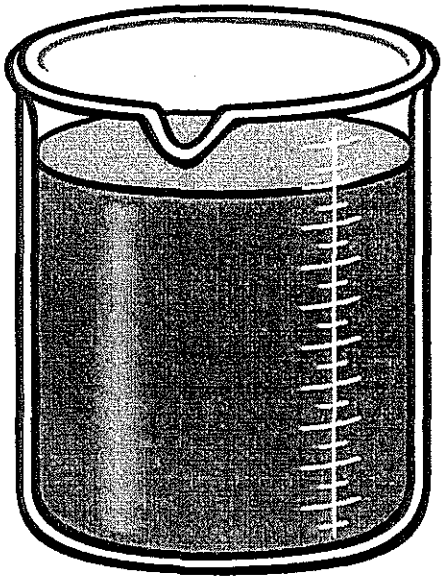
pH 4 buffer: _____ pH 10 buffer: _____

SAMPLE:				
pH:				

QC sample for TDS is a solution of KCl, and for TSS a slurry of diatomaceous earth.

Lab Procedures

for Wastewater Treatment Plants



Holly Ploetz
Linn-Benton Community College

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EXHIBIT
tabbies
116

3rd Revision, 1995

Table of Contents

Lab Procedures

5. **ASEPTIC HANDLING OF BACTERIOLOGIC SAMPLES**
   Avoid contamination from skin, clothing, equipment, water, and adjacent surfaces.

6. **RECORD NECESSARY SAMPLING DATA.**

7. **ALWAYS MIX THE SAMPLE**
   before removing a portion.

8. **SAMPLES SHOULD BE TESTED AS SOON AS POSSIBLE**
   always within the permissible time interval after sampling.

TYPES OF SAMPLES

1. **GRAB SAMPLES**
   A "grab" sample consists of a portion of the flow taken at one particular time. Grab samples are taken because they are required or because there is a lack of time to catch composite samples. For some tests grab samples must be used. Tests such as residual chlorine, dissolved oxygen, and pH are determined from grab samples as a portion of the flow which cannot be mixed. For some tests grab samples can be used because the quality of the component to be sampled remains uniform for a period of a day or longer. An example is a digester sample.

2. **COMPOSITE SAMPLES**
   A composite sample is a series of grab samples poured together to make one sample. The simplest type of composite sample consists of grabs of equal volume and is applicable only to situations of uniform flow.

3. **PROPORTIONAL COMPOSITE SAMPLES**
   In proportional composite samples, the volume of each portion is adjusted to the flow at the time the portion is collected. All portions are mixed to produce a final sample representative of the flow during that particular collection period. Composite samples are representative of the character of the flow over a period of time. Biochemical oxygen demand (BOD), settleable solids, and suspended solids tests are usually run on composite samples. The effects of intermittent changes in strength and flow are eliminated. The portion collected should be obtained with sufficient frequency to obtain average results. The rate of flow must be measured when each portion is taken and the volume of the portion adjusted to the flow at the particular time of sample. Samples may be composited either by mechanical samplers or manually.

   Use the following formula to determine the volume of sample to be taken at each sampling interval to obtain a weighted composite sample.

$$\frac{\text{Total Sample Volume}}{\text{\# of Sampling Times}} \times \frac{\text{Flow Rate at Sampling}}{\text{Average Flow Rate}} = \text{ml Sample at Sampling Times}$$

DILUTION TECHNIQUES

INTRODUCTION

In the process of dilution, the concentration of material is reduced; i.e., the solution, suspension, or mixture is made weaker. Lab technicians frequently make dilution on reagents and samples.

DILUTION OF REAGENTS

Working reagents are often prepared from concentrated solutions or stock solutions. The following formula can be used to make dilutions of molar, normal and percent solutions.

CALCULATIONS

$$A = \frac{C \times D}{B}$$

Where
- A = volume of stock
- B = concentration of stock
- C = desired volume of diluted solution
- D = desired concentration of diluted solution

Volumes A and C must be in the same unit, for example, ml and ml or liters and liters.

Concentrations B and D must be in the same units, for example, M and M, N and N, and % and %.

Example:
If you wish to dilute 10 N H_2SO_4 to 1 N and end up with a volume of 1000 ml:

B = 10 N
C = 1000 ml
D = 1 N

$$A, ml = \frac{C \times D}{B}$$

$$= \frac{1000\ ml \times 1\ N}{10\ N}$$

$$= 100\ ml$$

Dilutions are expressed as ratios. Thus, a 1:100 dilution could be 1 ml in 100 ml total, 0.1 ml in 10 ml total. 0.5 ml in 50 ml total, or 10 ml in 1000 ml total volume. In all the cases, the dilution factor would be 100.

SINGLE STEP DILUTION

Procedure

(Example: 1:10 dilution)

1. PLACE 9 ml WATER IS TEST TUBE.
   Use a pipette or graduated cylinder.

2. MIX SAMPLE WELL.

3. TRANSFER 1 ml SAMPLE TO TEST TUBE.
   Use a 1 ml pipette.

4. MIX DILUTED SAMPLE.

Note: 90 ml of water and 10 ml of sample or 900 ml of water and 100 ml sample would also give 1:10 dilution. All volume should be measured with volumetric glassware, giving greatest accuracy possible. Volumes of less than 1 ml of concentrated material should not be made because of greater chance of error.

MULTIPLE STEP DILUTION

Many times, particularly in bacteriological testing, one dilution step is not enough to reduce the concentration to a workable level. Several consecutive dilutions are necessary. This is called a multiple step dilution.

If a 1:100 dilution is followed by a 1:10 dilution, a total dilution of 1:1000 results. The overall dilution factor is 1000 and is found by multiplying the dilution factors of each step (100 x 10). The procedure is the same as for single step except the diluted sample from the first step becomes the concentrated sample for the second step.

5. CALIBRATE WITH REGISTERED THERMOMETER (QA)
   When checking thermometer it is a good idea to visually inspect thermometer periodically (monthly) for separations in mercury column. If separations are present, replace thermometer.

Thermometers, especially those used in incubators for fecal coliform should be checked, at least annually, with a NBS or ASTM certified thermometer to ensure accuracy and document results.

QA/QC Requirement

The thermometers used throughout the plant - including samplers, incubators, ovens, etc. are to be checked "periodically" with a registered Standard thermometer.

Temperature logs need to be maintained on refrigerators, incubators, ovens and sterilizer.

6. **SWITCH TO "pH" POSITION.**

7. **ADJUST pH TO 7.0 STANDARD.**
   The needle should read the pH of the standard 7.0 buffer. Adjust calibration knob if necessary.

8. **CHECK CALIBRATION WITH 4.0 OR 10.0 BUFFER STANDARD.**
   At least **once a week,** a check must be made to determine if the meter will read lower or higher pH. If sewage samples are running 7.0 and lower, standardization with a 4.0 buffer is recommended. After calibrating to 7.0 pH:
   Switch meter to Standby
   Rinse probe with distilled water
   Immerse the probe in the 4.0 buffer
   Switch meter to "pH"
   Adjust meter to pH 4.0
   Re-calibrate meter to 7.0 and proceed with tests

9. **SWITCH TO STANDBY.**

10. **REMOVE THE PROBE FROM BUFFER AND RINSE**
    Rinse with distilled water. Discard the standard buffer. Do <u>not</u> put it back into the bottle.

11. **IMMERSE THE PROBE IN THE SAMPLE**
    Use about 20 mls sample in a clean beaker

12. **SWITCH TO "pH" POSITION**

13. **READ pH DIRECTLY OFF SCALE**
    Allow 1 - 2 minutes for stabilization prior to recording measurement.

14. **SWITCH TO STANDBY**

15. **REMOVE THE PROBE AND RINSE**

16. **LEAVE THE PROBE IMMERSED IN THE BUFFER**
    The probe should be continuously soaked in the buffer which has the pH value closest to the suspected pH of the sample to be measured.

The pH meter must be calibrated before each use.

3. **Standard ferrous ammonium sulfate (FAS) titrant.**
   Dissolve 1.106 g $Fe(NH_4)_2(SO_4)_2 \cdot 6\,H_2O$ in distilled water containing 1 mL 1+3 H_2SO_4 and make up to 1 L with freshly boiled and cooled distilled water. This standard may be used for 1 month, and the titrant checked by potassium dichromate.

PROCEDURE

The quantities given below are suitable for concentrations of total chlorine up to 5 mg/L. If total chlorine exceeds 5 mg/L, use a smaller sample and dilute to a total volume of 100 mL. Mix usual volumes of buffer reagent and DPD indicator solution, or usual amount of DPD powder, with distilled water *before* adding sufficient sample to bring total volume to 100 mL. (If sample is added before buffer, test does not work.)

To test for chlorine residual

1. **In a titration flask:**
   Place 5 mL **each** of buffer reagent and DPD indicator solution in titration flask and mix. Add a few crystals of KI and remix. Add 100 mL sample, or diluted sample, and mix.

2. **For Free chlorine residual:**
   - Titrate rapidly with standard FAS titrant until red color is discharged.
   - Buret reading is mg/L Free Chlorine Residual

3. **For total or combined chlorine residual.**
   - Titrate after 2 minutes standing.
   - Buret reading is mg/L Total or Combined Chlorine residual

CALCULATIONS

Buret readings are direct mg/L Cl_2 residual readings.

5. **DILUTION WATER**

Dilution water is prepared by adding 1 ml each of solution #1 (calcium chloride), #2 (magnesium sulfate) and #3 (iron (III) chloride) in that order to each liter of distilled water. This solution is then aerated by shaking partially filled bottles or by bubbling clean compressed air through the liquid for 24 hours. The solution should then be allowed to stand 24 hours. Just before use, add enough of solution #3 (phosphate buffer) to adjust the pH of the dilution water to a pH of 7.0, usually 1 ml/liter of water.

Alternatively, distilled water may be aerated and stored with the four solutions added just before use. This would be the case in using pre-prepared buffer solution (pillows). Be sure to check and adjust pH to neutral (7.2) with phosphate buffer if necessary.

In any case, dilution water with phosphate added should not be stored. Mix a new batch with each BOD setup. Use well-cleaned containers to avoid DO depletion in dilution water.

PROCEDURE

1. **SET UP BOD BOTTLES**

At least three different dilutions can be set up for each sample. Initial DO on each dilution and final DO on each sample must be determined. In addition, initial and final DO should be determined on the dilution water. Do not contaminate the dilution water bottles with the DO meter stir probe. Take the initial DO on an extra dilution water bottle, discard, and record this as the initial DO on the other bottles.

2. **PREPARE SAMPLE DILUTIONS**

Dilutions are made directly in the BOD bottles, sample added then dilution water added to fill the BOD bottle. Dilutions must be adjusted to meet the criteria of DO depletion of at least 2.0 mls DO dropped in 5 days with a residual DO of at least 1.0 DO after 5 days incubation.

Check sample pH prior to dilutions set up. PH must be within 6.5 - 8.5. Samples outside this range must have pH adjusted to a 7.0 using the phosphate buffer solution. Many samples must be seeded.

3. **RUN INITIAL DO**

Take the initial DO of each sample bottle (excluding dilution water mentioned earlier). Take this DO with the DO meter using the stir probe that is standardized each morning or before each test. Record bottle number and initial DO for each bottle. Be sure to allow sample and dilution water to equilibrate to 20°C prior to measurement of initial DO.

Initial DO's at 20°C should be less than 9 mg/l. Supersaturated samples must be aerated (shake sample vigorously). Failure to aerate sample will cause a loss of sample oxygen naturally during incubation and add a positive bias to test result.

Dissolved Oxygen (Winkler Azide Modification)

INTRODUCTION

Dissolved oxygen (DO) represents the amount of oxygen dissolved in a sample of water or sewage at the time of the test. The test for DO is an important part of the biochemical oxygen demand (BOD) test. It is also used to provide other information about the sewage and the treatment plant operation.

In this test, the Winkler azide modification of the iodometric method, the first three solutions added to the sample cause the oxygen in the water to be replaced by reddish-brown iodine. The starch indicator solution is added to show the presence of the iodine. The final chemical, sodium thiosulfate, is used to remove the iodine. When the blue color disappears, all the iodine has been removed. The amount of sodium thiosulfate used to remove the iodine is then proportional to the amount of DO in the sample.

EQUIPMENT

3, five-ml measuring pipets with bulbs (or 3, two-ml automatic pipets)
300 ml glass stoppered BOD bottles
200 ml graduated cylinder calibrated at 203 ml or 200 ml volumetric flask calibrated at 203 ml
500 ml wide-mouth Erlenmeyer flask
50 ml buret, with 0.1 ml graduations

REAGENTS

	Manganese (II) Sulfate tetrahydratE	$MnSO_4 \cdot 4\,H_2O$
or	Manganese (II) Sulfate dihydrate	$MnSO_4 \cdot 2\,H_2O$
or	Manganese (II) Sulfate monohydrate	$MnSO_4 \cdot H_2O$
	Sodium hydroxide	$NaOH$
	Potassium iodide	KI
	Sodium azide	NaN_3
	Sulfuric acid (conc., 36N)	H_2SO_4
	Sodium thiosulfate pentahydrate	$NaS_2O_3 \cdot 5\,H_2O$
	Starch (potato, arrowroot, or soluble)	

SOLUTION PREPARATION

1. **Manganese (II) Sulfate Solution**
   Dissolve 480 g. $MnSO_4 \cdot 4\,H_2O$, 400 g. $MnSO_4 \cdot 2\,H_2O$, or 364 g. $MnSO_4 \cdot H_2O$ in 400 to 600 ml distilled water. Filter and add enough distilled water to make one liter of solution.

PROCEDURE

1. **Collect the Sample**
   in a 300 ml (BOD) bottle. Fill the bottle completely. Avoid aerating the liquid and trapping air under the glass stopper.

2. **Add 1 ml Manganese (II) Sulfate Solution**
   below the surface of the liquid in the 300 ml BOD bottle.

3. **Add 1 ml Alkaline-Iodide-Sodium Azide Solution**
   below the surface of the liquid.

4. **Replace Stopper, Rinse, and Mix.**
   Rinse under running water and mix by inverting 15 times. Be careful to avoid trapping air in the bottle when the stopper is replaced.

5. **Allow Floc to Settle Half Way.**
   The floc may appear in a range of color from white to brown.

6. **Repeat Mixing and Settle Half Way.**

7. **Add 1 ml Concentrated Sulfuric Acid.**
   Add acid by allowing it to run down the neck of the bottle above the surface of the liquid.

8. **Replace Stopper, Rinse, and Mix.**
   Mix by inverting until precipitate has dissolved. **CAUTION:** Handle bottle careful to avoid acid burns.The solution should now appear translucent reddish-brown.

9. **Transfer 201 mls to 500 ml Flask.**
   The 201 mls must be measured exactly with either a graduated cylinder or volumetric flask. At this point, aeration is immaterial.

10. **Titrate with 0.025 N Sodium Thiosulfate to Straw Color.**
    Titrate by adding the thio dropwise from a buret while swirling the flask. Be sure to record an initial volume reading from the buret.

11. **Add Starch Indicator Solution.**
    A small amount (1 ml) of starch indicator solution is sufficient. One squirt from a plastic squirt bottle is sufficient.

12. **Continue Titrating to End Point.**
    The "end-point" of the titration is reached when the blue color barely disappears. Further addition of sodium thiosulfate to a clear solution will lead to incorrect results. After reaching a proper "end-point", the blue color should reappear upon standing. This is normal. Do not add more sodium thiosulfate.

Standardization of Sodium Thiosulfate

INTRODUCTION

Sodium thiosulfate used in the Winkler DO determination is made up as 0.025N NaS_2O3. However it is difficult to make up thiosulfate solution exactly; and, since the accuracy of the DO determination depends on the concentration of the thiosulfate, it is required to standardize it each time a new solution is prepared. Since thiosulfate decomposes rapidly, it may also be necessary to standardize the solution at least weekly.

One need not alter the concentration of the thiosulfate if it is off, but a correction factor must be applied to the volume of thiosulfate used in the DO determination.

The 0.025 N sodium thio solution should be standardized against 0.025 N potassium bi-iodate, which is a primary standard.

EQUIPMENT

20 ml volumetric pipette
10 ml transfer pipette with bulb
500 ml wide-mouth Erlenmeyer flasks
50 ml burette with 0.1 ml graduations

REAGENTS

Potassium bi-iodate	$KH(IO_3)_2$
Sulfuric acid (conc., 36N)	H_2SO_4
Starch (potato, arrowroot, or soluble powder	
Potassium iodide (reagent grade II crystals)	KI

SOLUTION PREPARATION

1. **Standard Potassium bi-iodate ($KH(IO_3)_2$) (0.025 N)**
   The $KH(IO_3)_2$ should be dried for at least 2 hours at 103° C before preparation. A volumetric flask should be used to measure the final one liter volume. Use as much accuracy as possible since this is the primary standard.

   For 0.025 N Potassium Dichromate:
   Weigh out exactly 1812.4 mg $KH(IO_3)_2$ and dissolve in distilled water. Bring to one liter final volume with distilled water.

The net thio volume used in the Winkler DO determination is then multiplied by the correction factor to adjust for the use of thiosulfate which was not the correct normality. Thio standardization data should accompany all DO and BOD data.

The actual normality of the thiosulfate can be calculated from this data although it is not used directly to correct the DO value.

$$\text{N, thio} = \frac{(\text{N, } KH(IO_3)_2)\ (\text{ml, } KH(IO_3)_2)}{\text{ml, thio}}$$

$$= \frac{(0.025)\ (20)}{\text{ml, thio}}$$

$$= \frac{0.5}{\text{ml, thio}}$$

8. **RUN FINAL DO.**
   After 5 days

CALCULATIONS

for chlorinated, seeded samples:

Adjusted Initial DO - Final DO X Dilution Factor = Final Effluent BOD

Seed Correction Factor

$$\frac{\text{mg/l DO Seed Depletion}}{\text{mls of seed to get depletion}} \times \text{mls of seed added to sample}$$

SUBTRACT SEED CORRECTION FACTOR FROM INITIAL DO'S TO ADJUST FOR SEED

Quality Control Test for BOD

Run glucose/glutamic acid standard with each set up. Theoretical BOD of standard is 200 ± 37 mg/l. The standard requires seeding.

Dechlorination for BOD

INTRODUCTION

The BOD test is based upon the fact that bacteria will consume the organic fraction of waste that is available to them. In the process of using this material, oxygen is consumed. The measurement of the amount of oxygen consumed in a five-day period at 20°C is the basis for the BOD test.

Since living organisms are necessary for completion of the test, we must remove the disinfectant from the sample to insure their survival.

SOLUTION PREPARATION

1. SODIUM SULFITE SOLUTION, 0.025 N
   Dissolve 1.575 g anhydrous sodium sulfite (Na_2SO_3) in 1000 mls distilled water.
   NOTE: THIS SOLUTION IS NOT STABLE; PREPARE DAILY.

2. **STARCH INDICATOR SOLUTION**
   Add 5 g soluble starch powder to a small amount of distilled water and stir into a slurry. With stirring, pour the slurry into 800 ml of boiling distilled water. Add enough distilled water to bring to one liter of solution. Again bring to a boil for a few minutes and let settle overnight. Use only the clear supernate solution. This solution may be preserved by adding a few drops of toluene ($C_6H_5CH_3$)

PROCEDURE

1. **MEASURE 100 ml OF CHLORINATED SAMPLE**
   into a 500 mls Erlenmeyer flask.

2. **ADD A FEW CRYSTALS OF POTASSIUM IODIDE.**

3. **ADD SULFURIC ACID.**
   Add 1 ml of concentrated sulfuric acid (H_2SO_4) and mix well.

4. **ADD STARCH.**
   Add about 1 ml starch. If no blue color is produced, chlorine is absent; the BOD of the sample may be determined following chlorinated BOD procedures without further treatment.

5. **TITRATE WITH SODIUM SULFITE**
   If a blue color is produced after adding starch, titrate the sample using 0.025 N sodium sulfite ($Na_2 SO_3$) to the colorless end-point. Make the titration very slowly, counting the drops of sodium sulfite used and record this number.

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Suspended Solids

INTRODUCTION

Suspended solids are those solids which can be trapped on a glass fiber filter. By this definition, suspended solids will also include settleable solids. The suspended solids test is one of the primary criteria used to evaluate effluent quality. A well-run wastewater plant should operate below 20 mg/l of suspended solids in the final effluent.

PRELIMINARY PROCEDURES

1. **PLACE GLASS FIBER FILTER IN FILTER.**
   Make sure the rough side of the filter is up. The smooth side generally has small grid marks visible. Use forceps to handle filter discs.

2. **WASH THE FILTER.**
   Using a plastic wash bottle with distilled water, wet the filter while applying a gentle vacuum. Use three washes of about 20 mls each.

3. **DRY FILTER.**
   Place washed filter in a clean aluminum pan and dry for 1 hour at 103°C in drying oven.

4. **PLACE FILTER AND PAN IN DESICCATOR.**
   After they have been cleaned, washed and cooled the filter may be stored in its aluminum pan in the desiccator until needed.

TESTING PROCEDURE

1. **REMOVE FILTER AND PAN FROM DESICCATOR.**
   Use crucible tongs. Filter and pan should remain in the desiccator at least 30 minutes.

2. **WEIGH FILTER AND PAN.**
   Record the weight of the pan plus the filter to four decimal places at "dry filter weight."

3. **PLACE FILTER IN FUNNEL.**
   First place filter over funnel, add distilled water and vacuum to "seat" filter. Use tongs, do not touch filter with your fingers. Make sure all the holes are covered.

4. **WITH VACUUM ON, APPLY SAMPLE TO FUNNEL.**
   See note at the end of this procedure regarding sample volumes.

SUGGESTED SAMPLE SIZE FOR SUSPENDED SOLIDS

TYPE OF SAMPLE	VOLUME
Raw Sewage	50 to 200 mls
Primary Effluent	200 mls
Final Effluent	1000 mls

QA/QC NOTE:

The analytical balance must be serviced annually by a certified repairman.

NBS Class S weights should be available for routine checks on balance to ensure instrument is in calibration between servicing.

Duplicate samples should be run periodically to check for reproducible results.

SAMPLE PREPARATION

1. COLLECTION

Use well-cleaned sample bottles which have been given a final rinse with distilled water and sterilized by autoclaving at 120°C and 15 psi for 15 minutes or 170°C for 1 hour in dry oven.

If the sample is to be taken from chlorinated water, sodium thiosulfate must be used to stop the bactericidal action of chlorine. The sodium thiosulfate should be added to the clean bottles before sterilization. Add enough to make an appropriate concentration of 100 mg per liter of sample. 0.2 ml of 10% sodium thiosulfate in a 300 mls sample bottle is sufficient.

2. SAMPLE VOLUME

The size of sample is limited by the number of bacteria present. Ideally one should use a sample which would result in 40 colonies on the filter. The acceptable range is 20 to 60 colonies per plate. If the approximate number of bacteria in the sample is known, refer to the table below to find the appropriate sample volume:

ESTIMATED COLONIES/100 MLS		SAMPLE VOLUME
FROM	TO	ML
2000	6000	1 ml
400	1200	5 mls
200	600	10 mls
100	300	20 mls
40	120	50 mls
20	60	100 mls

If the estimated number of bacteria is greater than 6000/100 ml, dilute in 100 ml dilution bottles until the table can be used. Never apply a sample to the filter of less than 1 ml. If less than 1 ml is called for, dilute and apply a larger volume. (Refer to Sample Dilution Section of Dilution Techniques.)

If the number of bacteria is not known, apply volumes of 100, 10 and 1 ml and the same volumes of 1:100 dilutions. Make all dilutions with sterile buffered water.

PROCEDURE

1. ARRANGE EQUIPMENT

In a convenient manner; clean and disinfect laboratory bench area using household bleach or equivalent.

2. PREPARE PETRI DISHES

- Place absorbent pad in each petri dish. Do not leave lid off dish between transfers.
- Add MFC media to each petri dish. Either empty vial or transfer approximately 2 mls of media onto each pad. A minimum of "extra" media is recommended; enough to provide nutrients, not too much to drown the organisms.

Filtered samples must be placed in incubator within 30 minutes of sample filtration. Diluted samples must be filtered within 30 minutes from dilution.

10. **PLACE THE PETRI DISH IN WATER BATH INCUBATOR**
at 44.5 + 0.2°C and 90 - 100% humidity. Be sure the temperature has stabilized. Incubators must be equipped with a thermometer which is graduated in 0.1°C increments and routinely checked against a NBS or ASTM certified thermometer. Dishes should be completely submerged in an inverted position. Place dishes in "Whirl Pac" bags to protect from water leakage. It may be necessary to weigh down the bags to completely submerge the dishes.

    Incubation time is 24 $\pm$ 2 hours. Document date/time that filters are placed and removed from incubator. Document incubator temperature when filters were placed in and taken out of incubator.

11. **OBSERVE COLONIES.**
After 24 hours, remove the plates from the incubator and count the fecal coliform colonies. The typical fecal coliform colony will appear as a blue colony. A binocular dissecting microscope with a daylight fluorescent light source will aid in counting. Record for each plate the number of colonies counted on the data sheet.

CALCULATIONS

The number of bacteria present in the original sample should be reported as the number of bacteria per 100 mls original sample. Remember that one colony represents one bacterium from the original sample. In general, the formula for calculation is as follows:

$$\text{Colonies/100 mls} = \frac{\text{number of colonies x 100 x dilution factor}}{\text{volume of sample, ml}}$$

QA/QC Note

Dilution water blank should be run with each analysis.

A "positive" test should be run periodically (using raw or primary sewage). A count of TNTC should be achieved.

3. **MAKE DILUTIONS.**
   Using sterile Buffered Dilution Water, prepare 3 decimal dilutions of the sample (see Table). Follow steps 4 to 8 for each of the dilutions.

4. **ADD TO VIALS.**
   Open the sealed package and remove 5 A-1 Medium Broth Tubes. Remove the cap and pipette 10 mls of sample into each tube with a sterile pipette. Do not touch the open end of the tube or the inside of the cap.

5. **MIX.**
   Replace the cap after sample addition. Invert the tube 3 to 5 times to mix and to eliminate any air bubbles trapped in the inner vial.

6. **INCUBATE.**
   Incubate at 35 $\pm$ 0.5°C for 3 hours. After 3 hours, invert the tube to remove trapped air in the inner vial; then continue to incubate at 44.5 $\pm$ 0.2°C for an additional 21 hours.

7. **READ AND RECORD**
   After 24 $\pm$ 2 hours, check each tube.

   - If the inner vial contains gas bubbles, fecal coliform bacteria are present.
   - If no gas is present, fecal coliform are not present.

8. **REPORTING**
   Report MPN according to following table:

EXHIBIT # 117

RECEIVED
JAN 26 2000
STATEWIDE ENFORCEMENT SECTION
DEPARTMENT OF ENVIRONMENTAL QUALITY

To: DEQ ENFORCEMENT SECTION
Enforcement Referral for Violations of AQ-WQ-SW Permits

Permittee: City of Scappoose, Oregon

County: Columbia Permit #: 100677

Program: WQ. Region: NWR.

Recommended Enforcement Action: CPO

If Solid Waste:	Is this a Subtitle D landfill?	☐ Yes	☐ No
If Air Quality:	Is this a Title V source?	☐ Yes	☐ No
	Is the violation a SIP requirement?	☐ Yes	☐ No

Attachments:

☒ NON	☒ DMR(s)	☒ Inspection Reports
☒ Permit	☐ Addendum's	☐ Witness Statements
☒ Letters	☐ Sample Results	☐ Smoke Certification
☒ Memos	☐ Original Photos	☐ Chain of Custody Form
☐ E-mails	☐ Complaint Forms	

CLEARANCES:

James R. Sheetz, PE, DEE — 2000-01-25
Prepared by — Date

Robert P. Baumgartner — 1-25-2000
Manager — Date

Neil Mullane — ____
Administrator — Date

ENFORCEMENT SECTION USE ONLY

Case Number: WQ/M-NWR-00-010

Review By & Date: Carlough 2/15/00

Assigned to & Date: Bachman 2/16/00

Investigation Completion Date: 12/29/00 NON Date: 1/25/00

Violation(s): falsifying data; permit violations (NPDES) for equipment calibration and lab protocols.

Location: Scappoose

Comments: penalties on both occassions of false data. Let's discuss the other, Class # violations. Order for quality assurance program.

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6. What were the impacts of the violation(s) on people, the environment, property, or wildlife? Describe the amounts of the materials involved, toxicity of the materials, duration of the violation(s), opacity, etc.

The principal impact was on the integrity of the NPDES program. The NPDES program is a self-monitoring program and is totally dependent upon honest and accurate reporting of monitoring data. The program is also totally dependent upon the permittees to have in place and to conduct adequate quality assurance of the laboratory programs and of the data generated. The lack of adequate quality control and intentional falsification of data reported on the discharge monitoring reports undermines the entire program as well as calls into question the reliability of all data from this permittee.

7. Did you interview the permittee or one of its employees? Describe your interview and the permittees statements. Did the permittee admit to the violations?

I interviewed the permittee at the time of the inspection and by telephone later. The permittee admitted that the monitoring data for biochemical oxygen demand for the two days in question (1998-12-09 and 1998-12-17) were fictious because the actual analytical results could not be correct. The inspection report includes documentation for these two days. It is not known how many other instances of fictious data exist at this facility.

8. Was the permittee cooperative in correcting or trying to correct the violation(s)? Explain.

Yes

9. Has the violation(s) been corrected?

To the best of my knowledge, an adequate quality control program has not been implemented. It is unknown how many instances of false data exist in the records of this facility.

10. Did the permittee gain an economic benefit as a result of the violation(s)? If yes, state how much and show in detail how you determined that amount.

The permittee may have gained an economic benefit by avoiding implementation of an adequate quality control program, which would have ensured that reliable and accurate data were generated and would have led to proper corrective action (instead of the plant personnel making up data).

EXHIBIT # 118

GENERAL FORMULAS, CONTINUED

33. Chlorine Demand: CD, mg/l = (Cl dose - Cl Resid.), mg/l
34. Pounds of Chlorine Used per Day: ppd Cl = (Cl demand + Cl Resid.), mg/l x 8.34 x Q,MGD
35. Degrees Celsius to Degrees Fahrenheit: Deg F = (9/5 x Degrees C) + 32
36. Degrees Fahrenheit to Degrees Celsius: Deg C = 5/9 (Degrees F - 32)

Formulas used to Analyze Power and Electricity:

37. Water Horsepower: $WHP = \frac{\text{Total Head (TH), ft x 8.34 x Flowrate (Q), GPM}}{33\,000}$
38. $WHP = \frac{\text{TH, ft x Q, CFS}}{8.8}$
39. Brake Horsepower: BHP = WHP/Ep where Ep is the pump efficiency expressed as a decimal
40. Motor Horsepower or Wire to Wire: MHP = BHP/Em where Em is the motor efficiency expressed as a decimal

Equations to Analyze Power:

41. $w = V \times A \times pf \times \sqrt{\phi}$
42. HP = kw/0.7457
43. kw = V x A/1000
44. V = A x R

w = watts, power
kw = kilowatts = 1000w, power
HP = horsepower, power
V = volts, energy-transfer capability
A = amps, electrical current
pf = power factor, a phase difference
ϕ = power phase, usually 1 or 3
R = resistance in ohms, retardance to the flow of current

Chemistry Formulas for Water and Wastewater:

45. pH = -log H^+ conc, if the conc is in M.
46. $H^+ = 10^{-pH}$
47. Weight Concentration: $C, g/l = \frac{\text{Weight of Solute, g}}{\text{Volume of Solution, l}}$
48. Molarity: $M = \frac{\text{Moles of Solute}}{\text{Volume of Solution, l}}$, where $1M = \frac{\text{1 FW, grams}}{\text{volume, 1 liter}}$
49. Normality: $N = \frac{\text{Equivalents of Solute}}{\text{Volume of Solution, l}}$, where $1N = \frac{1M}{\text{No. of Equiv}}$

M = molarity
N = normality
FW = formula weight
H = hydrogen ion concentration, Molarity
pH = negative log of the H ion conc.

FORMULAS REQUIRED FOR WASTEWATER TREATMENT

50. Concentration of BOD Standard 5-day: $C,mg/l = \frac{D1 - D2}{P}$, where D1 = DO at day 0,mg/l; D2 = DO at day 5,mg/l; $P = \frac{\text{mls of Sample}}{\text{Bottle Volume,mls}}$
51. Concentration of BOD 4-day corrected to 5-day: $C,mg/l = \frac{(D1 - D2), \text{ at 4-days}}{P} \times \frac{0.68}{0.60}$
52. Concentration of BOD 6-day corrected to 5-day: $C,mg/l = \frac{(D1 - D2), \text{ at 6-days}}{P} \times \frac{0.68}{0.75}$

It must be remembered that the BOD results obtained from a 4- or 6- day test are not valid when reporting lab results to the authorities. The stabilization factors used in these formulas represent a rate constant (k) of 0.10. This constant varies from waste to waste.

FORMULAS REQUIRED FOR WASTEWATER TREATMENT, CONTINUED

Population Equivalent (PE) is an estimate of the population:

53. By Flowrate: $PE = \frac{\text{Flowrate(Q), gallons per day}}{\text{100 gallons per person per day}}$
54. By BOD: $PE = \frac{\text{Pounds per day of BOD in the Influent}}{\text{0.20 pounds of BOD per person per day}}$
55. By TSS: $PE = \frac{\text{Pounds per day of TSS in the Influent}}{\text{0.22 pounds of TSS per person per day}}$
56. BOD Organic Loading Rate to the Lagoon, ppd BOD/Acre: $OL = \frac{\text{BOD,mg/l x 8.34 lbs/gal x Q, MGD}}{\text{Pond area, in Acres}}$
57. Raw Sludge Settling also Settleable Solids: RSS, ml/l = Volume of Sludge that Settles at the Bottom of an Imhoff Cone after 30 minutes, expressed as ml/l
58. Primary Clarifier Raw Sludge Pumping: $RSP, gpm = \frac{\text{(Sett Sols), ml/l x Q, gpm}}{\text{1 000 mls/l}}$

Trickling Filter Equations (TF) necessary to analyze the process:

59. Hydraulic Load Rate(HL): $HL, gpd/SF = \frac{\text{Flowrate Applied to the TF, gpd}}{\text{Top Area of the TF, SF}}$
60. Organic Load Rate(OL): $OL, ppd\ BOD/KCF = \frac{\text{ppd BOD in the Primary Effluent}}{\text{Volume of the TF, KCF}}$
61. Recirculation Ratio(Rr): $Rr = \frac{\text{Flow being Returned, Qr, MGD}}{\text{Flow from the Primary Clarifier, Qi, MGD}}$
62. TF Applied Flowrate(Qa): Qa = Qr + Qi

Activated Sludge Equations (AS) necessary to analyze the process:

63. Sludge Settling Volume: SSV,ml/l = Volume of Sludge that settles to the Bottom of a Settlometer at the end of 30 minutes expressed as ml/l
64. Sludge Volume Index: $SVI,ml/g = \frac{\text{SSV,ml/l x } 10^3}{\text{MLSS,mg/l}}$
65. Sludge Density Index: SDI,% = 100/SVI, where the SDI is the percent of sludge by weight that occupies a unit of volume in a clarifier

Conventional Sludge Age, SA:

66. Aerator Solids Inventory: lbs = MLSS, mg/l x 8.34 lbs/gal x Volume the Aeration Basin(s), MG
67. Aerator Loading: lbs BOD/day = C, BOD, mg/l in pe x 8.34 x Q, MGD
68. SAss: $T, days = \frac{\text{V of AB, MG x MLSS, mg/l x 8.34}}{\text{pess, mg/l x Q, MGD x 8.34}}$
69. SABOD: $T, days = \frac{\text{V of AB, MG x MLSS, mg/l x 8.34}}{\text{peBOD, mg/l x Q, MGD x 8.34}}$
70. Food to Micro-organism Ratio: $F/M = \frac{\text{peBOD, mg/l x 8.34 x Q, MGD}}{\text{MLSS, mg/l x 8.34 x V of AB, MG}} = \frac{1}{SABOD}$

NOTE: Use MLVSS instead of MLSS if available

71. Mean Cell Residence Time: MCRT, days = Pounds of Solids in the AS Process / ppd of Solids Leaving the AS Process
72. Oxygen Uptake Rate, OUR, mg/l O_2/min: = The average concentration, in mg of Oxygen consumed during one l
73. Specific Oxygen Utilization Rate, SOUR, mg/l O_2/g TVSS/hr: = $\frac{\text{OUR x 60 minutes/hour x 1 000}}{\text{Volatile Suspended Solids, mg/}}$

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4.12 POPULATION LOADING AND POPULATION EQUIVALENT

POPULATION LOADING

Population loading is a calculation associated with wastewater treatment by ponds. Population loading is an indirect measure of both water and solids loading to a system. It is calculated as the number of persons served per acre of pond:

$$\text{Population Loading} = \frac{\text{persons}}{\text{acre}}$$

Example 1: (Population Loading)

❑ A 3.5 acre wastewater pond serves a population of 1500. What is the population loading on the pond?

$$\text{Population Loading} = \frac{\text{persons}}{\text{acre}}$$

$$= \frac{1500 \text{ persons}}{3.5 \text{ acres}}$$

$$= \boxed{429 \frac{\text{persons}}{\text{acre}}}$$

Example 2: (Population Loading)

❑ A wastewater pond serves a population of 4000. If the pond is 16 acres, what is the population loading on the pond?

$$\text{Population Loading} = \frac{\text{persons}}{\text{acre}}$$

$$= \frac{4000 \text{ persons}}{16 \text{ acres}}$$

$$= \boxed{250 \frac{\text{persons}}{\text{acre}}}$$

EXHIBIT # 119

N. D.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:

JEFF BACHMAN
DEQ ENFORCEMENT SECTION
811 SW 6TH AVE
PORTLAND OR 97204-1334

4a. Article Number: 3327 7168

4b. Service Type
- ☐ Registered
- ☒ Certified
- ☐ Express Mail
- ☐ Insured
- ☐ Return Receipt for Merchandise
- ☐ COD

7. Date of Delivery: 06/04/01

5. Received By: *(Print Name)* K. Woolc

6. Signature *(Addressee or Agent)*

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-99-B-0223 Domestic Return Receipt

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U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

Jeff Bachman

Postage	$G60393
Certified Fee	Beaverton
Return Receipt Fee (Endorsement Required)	Postmark Here
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 5/31/01

Recipient's Name (Please Print Clearly) (to be completed by mailer)

Street, Apt. No.; or PO Box No.

City, State, ZIP+4

PS Form 3800, February 2000 See Reverse for Instructions

7000 0600 0024 3327 7168

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

● Print your name, address, and ZIP Code in this box ●

RECEIVED
JUN 05 2001
Employment Hearings

HEARING OFFICER PANEL
EMPLOYMENT DEPARTMENT
875 UNION ST NE ROOM 208
SALEM OR 97311

Certified Mail Provides:

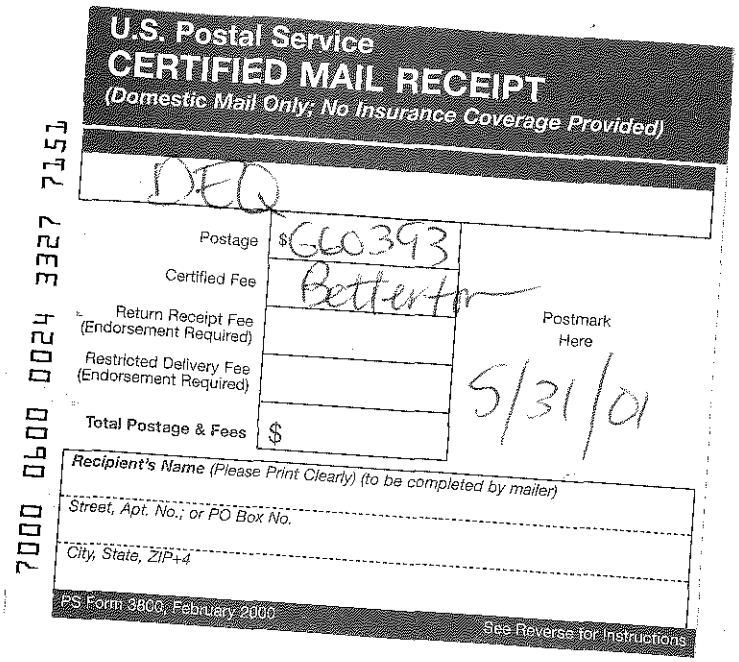
- A mailing receipt
- A unique identifier for your mailpiece
- A signature upon delivery
- A record of delivery kept by the Postal Service for two years

Important Reminders:

- Certified Mail may ONLY be combined with First-Class Mail or Priority Mail.
- Certified Mail is *not* available for any class of international mail.
- NO INSURANCE COVERAGE IS PROVIDED with Certified Mail. For valuables, please consider Insured or Registered Mail.
- For an additional fee, a *Return Receipt* may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to cover the fee. Endorse mailpiece "Return Receipt Requested". To receive a fee waiver for a duplicate return receipt, a USPS postmark on your Certified Mail receipt is required.
- For an additional fee, delivery may be restricted to the addressee or addressee's authorized agent. Advise the clerk or mark the mailpiece with the endorsement *"Restricted Delivery"*.
- If a postmark on the Certified Mail receipt is desired, please present the article at the post office for postmarking. If a postmark on the Certified Mail receipt is not needed, detach and affix label with postage and mail.

IMPORTANT: Save this receipt and present it when making an inquiry.

PS Form 3800, February 2000 *(Reverse)* 102595-99-M-2087



U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7000 0600 0024 3327 7151

DEQ

Postage	$660393
Certified Fee	Betterton
Return Receipt Fee (Endorsement Required)	Postmark Here
Restricted Delivery Fee (Endorsement Required)	5/31/01
Total Postage & Fees	$

Recipient's Name (Please Print Clearly) (to be completed by mailer)

Street, Apt. No.; or PO Box No.

City, State, ZIP+4

PS Form 3800, February 2000 See Reverse for Instructions

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:

DEPT OF ENVIRONMENTAL QUALITY
811 SW 6TH AVE
PORTLAND OR 97204-1334

4a. Article Number 3327 7151

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery 06/04/01

5. Received By: *(Print Name)* K. Cook

8. Addressee's Address *(Only if requested and fee is paid)*

6. Signature *(Addressee or Agent)*

PS Form **3811**, December 1994 102595-99-B-0223 Domestic Return Receipt

Thank you for using Return Receipt Service.

Certified Mail Provides:

- A mailing receipt
- A unique identifier for your mailpiece
- A signature upon delivery
- A record of delivery kept by the Postal Service for two years

Important Reminders:

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- Certified Mail is *not* available for any class of international mail.
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- For an additional fee, a *Return Receipt* may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to cover the fee. Endorse mailpiece "Return Receipt Requested". To receive a fee waiver for a duplicate return receipt, a USPS postmark on your Certified Mail receipt is required.
- For an additional fee, delivery may be restricted to the addressee or addressee's authorized agent. Advise the clerk or mark the mailpiece with the endorsement *"Restricted Delivery"*.
- If a postmark on the Certified Mail receipt is desired, please present the article at the post office for postmarking. If a postmark on the Certified Mail receipt is not needed, detach and affix label with postage and mail.

IMPORTANT: Save this receipt and present it when making an inquiry.

PS Form 3800, February 2000 *(Reverse)* 102595-99-M-2087

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

RECEIVED
JUN 05 2001
Employment Hearings

HEARING OFFICER PANEL
EMPLOYMENT DEPARTMENT
875 UNION ST NE ROOM 208
SALEM OR 97311

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7000 0600 0024 3327 7182

Chris Reive

Postage	$ 60393
Certified Fee	Betterton
Return Receipt Fee (Endorsement Required)	Postmark Here
Restricted Delivery Fee (Endorsement Required)	5/31/01
Total Postage & Fees	$

Recipient's Name (Please Print Clearly) (to be completed by mailer)

Street, Apt. No.; or PO Box No.

City, State, ZIP+4

PS Form 3800, February 2000 — See Reverse for Instructions

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:

CHRISTOPHER REIVE, ATTORNEY
2 CENTERPOINTE DR FL 6
LAKE OSWEGO, OR 97035-8618

4a. Article Number 3327 7182

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery 6-1-01

5. Received By: *(Print Name)*

6. Signature *(Addressee or Agent)*

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 — 102595-99-B-0223 — Domestic Return Receipt

Thank you for using Return Receipt Service.

Certified Mail Provides:

- A mailing receipt
- A unique identifier for your mailpiece
- A signature upon delivery
- A record of delivery kept by the Postal Service for two years

Important Reminders:

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- For an additional fee, a *Return Receipt* may be requested to provide proof of delivery. To obtain Return Receipt service, please complete and attach a Return Receipt (PS Form 3811) to the article and add applicable postage to cover the fee. Endorse mailpiece "Return Receipt Requested". To receive a fee waiver for a duplicate return receipt, a USPS postmark on your Certified Mail receipt is required.
- For an additional fee, delivery may be restricted to the addressee or addressee's authorized agent. Advise the clerk or mark the mailpiece with the endorsement *"Restricted Delivery"*.
- If a postmark on the Certified Mail receipt is desired, please present the article at the post office for postmarking. If a postmark on the Certified Mail receipt is not needed, detach and affix label with postage and mail.

IMPORTANT: Save this receipt and present it when making an inquiry.

102595-99-M-2087

PS Form 3800, February 2000 *(Reverse)*

UNITED STATES POSTAL SERVICE

PORTLAND OR 972
PM
2001

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

HEARING OFFICER PANEL
EMPLOYMENT DEPARTMENT
875 UNION ST NE ROOM 208
SALEM OR 97311

RECEIVED
JUN 05 2001
Employment Hearings

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

7000 0600 0024 3327 7199

City of Scappoose

Postage	$ 60393
Certified Fee	Bettertm
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$

Postmark Here

5/31/01

Recipient's Name (Please Print Clearly) (to be completed by mailer)

Street, Apt. No.; or PO Box No.

City, State, ZIP+4

PS Form 3800, February 2000 — See Reverse for Instructions

SENDER:

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
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- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered.

RECEIVED
JUN 04 2001
Employment Hearings

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:

CITY OF SCAPPOOSE
PO BOX P
SCAPPOOSE OR 97056-0677

4a. Article Number 3327 7199

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery 6-1-01

5. Received By: *(Print Name)* Susan M Pentecost

6. Signature *(Addressee or Agent)* Susan M Pentecost

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-99-B-0223 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

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PS Form 3800, February 2000 *(Reverse)* 102595-99-M-2087

UNITED STATES POSTAL SERVICE

PORTLAND OR 97 PM 01 2001

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

HEARING OFFICER PANEL
EMPLOYMENT DEPARTMENT
875 UNION ST NE ROOM 208
SALEM OR 97311

97311+0860