I. EFFLUENT LIMITATIONS

WWTP

A. During the effective period of this permit, the Permittee is authorized to discharge an average monthly flow of 7.6 mgd in accordance to the restrictions set forth herein. This permit does not authorize the discharge of any waste streams, including spills and other unintentional or non-routine discharges of pollutants, that the Permittee did not apply to discharge and that are not part of the normal operation of the facility as disclosed in the permit application, or any pollutants that are not ordinarily present in such waste streams, unless the Permittee receives prior authorization from EPA.

B. The Permittee must limit and monitor discharges as specified in Section C below. All figures represent maximum effluent limits unless otherwise indicated. The Permittee must comply with the following effluent limits at all times unless otherwise indicated regardless of the frequency of monitoring or reporting required by other provisions of this permit.

C. Effluent Limitations

1. Fort Lewis Water Pollution Control Plant (Discharge 001) During the period beginning on the effective date of this permit and lasting through the expiration date, discharges from the Fort Lewis Water Pollution Control Plant shall be limited and monitored by the permittee as specified below.

   a. The pH shall not be less than 6.0 nor greater than 8.5 standard units
   b. There shall be no discharge of floating solids, visible foam in other than trace amounts, or oily wastes which produce a sheen on the surface of the receiving water.
   c. The following limitations shall apply:

Effluent Characteristic	Units of Measure	Average Monthly	Average Weekly	Daily Maximum
5-day Biochemical Oxygen Demand* (BOD_5)	mg/L	30	45	---
BOD_5	lbs/day	1902	2852	---
Total Suspended Solids* (TSS)	mg/L	30	45	---
TSS	lbs/day	1902	2852	---
Fecal Coliform Bacteria**	(b)(6) ml	200	400	---

Total Residual Chlorine	mg/l	--	--	0.5

* Monthly average BOD_5 and TSS effluent concentrations shall not exceed 30 mg/l or 20% of the influent concentrations, whichever is more stringent.

** Report as the geometric mean of all samples collected during the weekly and monthly reporting periods. The average monthly fecal coliform count must not exceed a geometric mean of 200 /h\/6 ml. The average weekly fecal coliform count must not exceed a geometric mean of 400 /h\/6 ml.

II. MONITORING, RECORDING AND REPORTING REQUIREMENTS

A. Monitoring Requirements

Done by operators/LAB monitoring (not Environmental interference except for enforcing compliance which is done per DMR + monthly Report)

1. The Permittee shall monitor the final effluent as specified below, subject to the other monitoring and reporting requirements set forth in this permit.

Effluent Characteristics	Units of Measure	Sample Frequency	Sample Type
Total Flow	MGD	Continuous	Recording
Biochemical Oxygen Demand (5 day)*	mg/l	Daily Composite	24-Hour
Total Suspended Solids	mg/l	Daily Composite	24-Hour
Fecal Coliform Bacteria	Number/100 ml	Daily	Grab
Total Residual Chlorine	mg/l	Daily	Grab
pH	Standard Units	Daily	Grab
Total Copper	mg/l	Semi-Annual	Grab
Total Nickel	mg/l	Semi-Annual	Grab
Total Chromium	mg/l	Semi-Annual	Grab
Total Lead	mg/l	Semi-Annual	Grab
Total Mercury	mg/l	Semi-Annual	Grab
Total Molybdenum	mg/l	Semi-Annual	Grab
Total Selenium	mg/l	Semi-Annual	Grab
Total Zinc	mg/l	Semi-Annual	Grab

Total Nitrogen **	mg/l	Semi-Annual	Grab
Total Petroleum Hydrocarbon ***	mg/l	Semi-Annual	Grab

* Representative daily influent and effluent monitoring for BOD, and TSS is required to demonstrate % removal efficiencies. Monthly average percent removal for BOD, and SS shall be reported on monthly discharge monitoring reports.

** Nitrogen analyses shall determine and report total Kjeldahl nitrogen, ammonia as N, nitrate and nitrite nitrogen.

*** Two samples for total petroleum hydrocarbon (TPH) analyses are to be collected during the wet season (October - March) and analyzed using the Hydrocarbon Identification Method for Soil and Water. This analysis is required to determine if TPH is present in the effluent at levels of concern and only required during the first year of the permit. Results of this monitoring is to be submitted to EPA with the annual Inflow and Infiltration report (condition S.I.D.3.c.)

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B. Dilution Zone

1. The boundaries of the dilution zone are defined as follows:

- The limits in depth are one foot below the surface to one foot above the bottom.
- The length, on either side of the diffuser, is 300 feet.
- The width shall be 230 feet.
- The zone of acute criteria exceedence shall be one tenth (1/10) the distance to the boundaries of the overall dilution zone.

2. Outfall evaluation

Within two years of permit issuance the permittee shall conduct an underwater evaluation of the submerged portion of the outfall pipe and diffusers to verify the structural integrity and functioning of this equipment. The permittee will provide a written report of the results of this evaluation to EPA with the next application for permit renewal. Immediate notification will be provided to EPA if the evaluation determines the outfall or diffuser structure is broken, leaking or not functioning properly.

C. Toxicity Testing Requirements

1. Acute Toxicity Testing Requirements

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. The two species listed below shall be used on each sample and the results submitted to the Department as a part of the permit renewal application process. The Permittee shall conduct acute toxicity testing on a series of five concentrations of effluent and a control in order to be able to determine appropriate point estimates and an NOEC. The percent survival in 100% effluent shall also be reported.

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

a. Fathead minnow, *Pimephales promelas* (96 hour static-renewal test, method: EPA/600/4-90/027F)

b. Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48 hour static test, method: EPA/600/4-90/027F).

why not? permit violation

2. Acute Toxicity Testing Procedures and Reporting Requirements

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

(Compliance Environmental Dept)

b. Testing shall be conducted on 24-hour composite effluent samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

Samples are collected and sent by WWTP-TC Watex Laboratory not by Environmental

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

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

Reports are received by WWTP Supervisor and copies sent to Environmental Review

e. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.

f. Effluent samples for whole effluent toxicity testing shall be collected just prior to the chlorination step in the treatment process.

g. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.

h. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

3. Chronic Toxicity Testing Requirements

The Permittee shall test final effluent once in the last summer and once in the last winter prior to submission of the application for permit renewal. All of the chronic toxicity tests listed below shall be conducted on each sample. The results of this chronic toxicity testing shall be submitted to the Department as a part of the permit renewal application process.

The Permittee shall conduct chronic toxicity testing on a series of at least five concentrations of effluent and a control in order to be able to determine appropriate point estimates and an NOEC. This series of dilutions shall include the acute critical effluent concentration (ACEC). The ACEC equals 0.57 % effluent. The Permittee shall compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.

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

Saltwater Chronic Toxicity Test Species		Method
Topsmelt or Silverside minnow	*Atherinops affinis* or *Menidia beryllina*	EPA/600/R-95/136 or EPA/600/4-91/003
Mysid shrimp	*Holmesimysis costata* or *Mysidopsis bahia*	EPA/600/R-95/136 or EPA/600/4-91/003

The Permittee shall use the West Coast fish (topsmelt, *Atherinops affinis*) and mysid (*Holmesimysis costata*) for toxicity testing unless the lab cannot obtain a sufficient quantity of a West Coast species in good condition in which case the East Coast fish (silverside minnow, *Menidia beryllina*) or mysid (*Mysidopsis bahia*) may be substituted.

4. Chronic Toxicity Testing Procedures and Reporting Requirements

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

b. Testing shall be conducted on 24-hour composite effluent samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.

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

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

e. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.

f. Effluent samples for whole effluent toxicity testing shall be collected just prior to the chlorination step in the treatment process.

g. The Permittee may choose to conduct a full dilution series test in order to determine dose response. In this case, the series must have a minimum of

five effluent concentrations and a control. The series of concentrations must include the ACEC and the CCEC. The ACEC and CCEC may either substitute for the effluent concentration that is closest to it in the dilution series or be an extra effluent concentration.

h. All whole effluent toxicity tests that involve hypothesis testing and do not comply with the chronic statistical power standard of 39% as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

D. Infiltration and Inflow

1. Infiltration and Inflow Evaluation

a. The Permittee shall conduct an infiltration and inflow evaluation. Plant monitoring records may be used to assess measurable infiltration and inflow.

b. A report shall be prepared which summarizes any measurable infiltration and inflow. If infiltration and inflow have increased by more than 15 percent from baseline flows (established from average influent flow observed during equivalent rainfall events during the previous five years), the report shall contain a plan and a schedule for: (1) locating the sources of infiltration and inflow; and (2) correcting the problem.

c. The report shall be submitted by June 15 annually for the I/I related control activities conducted since the previous annual report.

E. Representative Sampling (Routine and Non-routine Discharges)

The Permittee shall collect all effluent samples from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

The Permittee shall collect additional samples at the appropriate sampling points and analyze them for the parameters limited in Part I. Table 1 of this permit, whenever any discharge occurs that may reasonably be expected to cause or contribute to a violation that is unlikely to be detected by a routine sample. The Permittee shall also conduct monitoring sufficient to characterize the nature and quantity of the pollutants discharged.

The Permittee shall collect such additional samples as soon as possible after the spill or discharge. The samples shall be analyzed in accordance with paragraph G., below. In the event of an anticipated bypass, as defined in Part V. of this permit, the Permittee shall

collect and analyze additional samples as soon as the bypassed effluent reaches the outfall. The Permittee shall report all additional monitoring in accordance with paragraph H., below.

F. **Reporting of Monitoring Results.** The Permittee shall summarize monitoring results each month on the Discharge Monitoring Report (DMR) form (EPA No. 3320-1). The Permittee shall submit reports monthly, postmarked by the 10th day of the following month. The Permittee shall sign and certify all DMRs, and all other reports, in accordance with the requirements of Part IV. of this permit ("Signatory Requirements"). The Permittee shall submit the legible originals of these documents to the Director, Office of Water at:

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue, OW-133
Seattle, Washington 98101
Attn: PCS Data Entry Team

G. **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.

H. **Additional Monitoring by Permittee** If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the Permittee shall include the results of this monitoring in the calculation and reporting of the data submitted in the DMR. The Permittee shall indicate on the DMR whenever it has performed additional monitoring, and shall explain why it performed such monitoring.

Upon request by the Regional Administrator, the Permittee shall submit results of any other sampling, regardless of the test method used.

I. **Records Contents** All effluent monitoring records shall bear the hand-written signature of the person who prepared them. In addition, all records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;

2. the names of the individual(s) who performed the sampling or measurements;

3. the date(s) analyses were performed;

(b)(6)

(b)(6)

(b)(6)

(b)(6)

4. the names of the individual(s) who performed the analyses;

5. the analytical techniques or methods used; and

6. the results of such analyses.

J. **Retention of Records** The Permittee shall retain the a copy of this NPDES permit, and records of all monitoring information, including, but not limited to, 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 five years from the date of the sample, measurement, report or application, or for the term of this permit, whichever is longer. This period may be extended by request of the Regional Administrator.

K. **Twenty-four Hour Notice of Noncompliance Reporting**

1. The Permittee shall report the following occurrences of noncompliance by telephone within 24 hours from the time the Permittee becomes aware of the circumstances:

   a. any noncompliance that may endanger health or the environment;

   b. any unanticipated bypass that results in or contributes to an exceedence of any effluent limitation in the permit (See Part III.G., "Bypass of Treatment Facilities");

   c. any upset that results in or contributes to an exceedence of any effluent limitation in the permit (See Part III.H., "Upset Conditions"); or

   d. any violation of a maximum daily discharge limitation for any of the pollutants listed in the permit.

   e. any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limitation in the permit.

2. The Permittee shall also provide a written submission within five days of the time that the Permittee becomes aware of any event required to be reported under subpart 1, above. 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. if the non compliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.

3. The Regional Administrator may, at his or (b) sole discretion, waive the written report on a case-by-case basis if the oral report has been received within 24 hours within 24 hours by the NPDES Compliance Hotline in Seattle, Washington, by telephone, (206) 553-1846.

4. Reports shall be submitted to the addresses in Part II.F. ("Reporting of Monitoring Results").

5. Unauthorized discharges such as collection system overflows, plant bypasses, or failure of the disinfection system, shall be reported immediately to the Department of Health, Shellfish Protection Program. The 24-hour number for the Department of Health is (b)(6)

L. Other Noncompliance Reporting The Permittee shall report all instances of noncompliance, not required to be reported within 24 hours, at the time that monitoring reports for Part II.H. are submitted. The reports shall contain the information listed in Part II.K. of this permit.

M. Changes in Discharge of Pollutants The Permittee shall notify the Regional Administrator as soon as it knows of, or has reason to believe:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any pollutant that is not limited in the permit, if that discharge may reasonably be expected to exceed any of the following "notification levels":

a. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

b. The level established by the Regional Administrator in accordance with 40 CFR §122.44(f).

III. COMPLIANCE RESPONSIBILITIES

A. Duty to Comply

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The Permittee shall give reasonable advance notice to the Regional Administrator of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

B. Penalties for Violations of Permit Conditions

1. Civil and Administrative Penalties. Pursuant to 40 CFR 19 and the Act, any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently $27,500 per day for each violation).

2. Administrative Penalties. 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. Pursuant to 40 CFR 19 and the Act, administrative penalties for Class I violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(A) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. §2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. §3701 note) (currently $11,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $27,500). Pursuant to 40 CFR 19 and the Act, penalties for Class II violations are not to exceed the maximum amounts authorized by Section 309(g)(2)(B) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. § 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. § 3701 note) (currently $11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $137,500).

3. Criminal Penalties

a. Negligent Violations. The Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued

under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both.

b. Knowing Violations. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

All responsible persons

c. Knowing Endangerment. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that ☐ thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Act, shall, upon conviction of violating the imminent 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.

All responsible persons

d. False Statements. The 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. The Act further 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

DMR Reporting + Monthly Report Environmental persons + WWTP Personnel + Upper Management

of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

C. **Need to Halt or Reduce Activity not a Defense** It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with 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 that 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) that 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 the Permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

F. **Removed Substances** Solids, biosolids, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in a manner such as to prevent any pollutant from such materials from entering navigable waters.

G. **Bypass of Treatment Facilities**

1. Bypass not exceeding limitations. The Permittee may allow any bypass to occur that does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this Part.

2. Notice.

   a. Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.

   b. Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required under Part II.K. ("Twenty-four Hour Notice of Noncompliance Reporting").

3. Prohibition of bypass.

a. Bypass is prohibited, and the Regional Administrator may take enforcement action against the Permittee for a bypass, unless:

1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

2) 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 back-up equipment shall have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance; and

3) The Permittee submitted notices as required under paragraph 2 of this Part.

b. The Regional Administrator may approve an anticipated bypass, after considering its adverse effects, if the Regional Administrator determines that it will meet the three conditions listed above in paragraph 3.a. of this Part.

H. Upset Conditions

1. 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 Permittee meets the requirements of paragraph 2 of this Part. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

Note

2. Conditions necessary for a demonstration of upset. To establish the affirmative defense of upset the Permittee must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An upset occurred and that the Permittee can identify the cause(s) of the upset;

b. The permitted facility was at the time being properly operated; 24 hrs/day - at all times

c. The Permittee submitted notice of the upset as required under Part II.K, Twenty-four Hour Notice of Noncompliance Reporting; and

d. The Permittee complied with any remedial measures required under Part III.D, Duty to Mitigate.

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

I. **Toxic Pollutants** The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Act 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.

J. **Planned Changes** The Permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility whenever:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as determined in 40 CFR §122.29(b); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements under Part II.K.

K. **Anticipated Noncompliance** The Permittee shall also give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity that may result in noncompliance with this permit.

L. **Compliance Schedules** Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any Compliance Schedule of the permit shall be submitted no later than 10 days following each schedule date.

IV. GENERAL PROVISIONS

A. **Permit Actions** This permit may be modified, revoked and reissued, or terminated for cause as ~~specified in~~ 40 CFR 122.62, 122.64, or 122.5. 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.

B. **Duty to Reapply** If the Permittee intends 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. The application shall be submitted at least 180 days before the expiration date of this permit.

C. **Duty to Provide Information** The Permittee shall furnish to the Regional Administrator, within the time specified in the request, any information that the Regional Administrator 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 Regional Administrator, upon request, copies of records required to be kept by this permit.

D. **Other Information** When the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or that it submitted incorrect information in a permit application or any report to the Regional Administrator, it shall promptly submit the omitted facts or corrected information.

E. **Signatory Requirements** All applications, reports or information submitted to the Regional Administrator shall be signed and certified.

1. All permit applications shall be signed as follows:

   a. For a municipality, state, federal, Indian tribe or other public agency: by either a principal executive officer or ranking elected official.

2. All reports required by the permit and other information requested by the Regional Administrator shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described above and submitted to the Regional Administrator, and

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the facility.

3. Changes to authorization. If an authorization under paragraph 2., above, is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph 2 must be submitted to the Regional Administrator prior to or together with any reports, information, or applications to be signed by an authorized

representative.

4. Certification. Any person signing a document under this Part shall make the following certification:

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

Note Signed by (b)(6) (b)(6)

F. Availability of Reports In accordance with 40 CFR 2, information submitted to EPA pursuant to this permit may be claimed as confidential by the permittee. In accordance with the Act, permit applications, permits and effluent data are not considered confidential. Any confidentiality claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice to the permittee. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR 2, Subpart B (Public Information) and 41 Fed. Reg. 36902 through 36924 (September 1, 1976), as amended.

G. Inspection and Entry The Permittee shall allow EPA or their authorized representatives (including an authorized contractor acting as a representative of the Administrator), upon the 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;

Note records kept

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

When was the last PA sampling done?

4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

H. Oil and Hazardous Substance Liability Nothing in this permit shall be construed to

Note

preclude any legal action, or relieve the Permittee from any responsibilities, liabilities, or penalties to that the Permittee is or may be subject, under Section 311 of the Act.

I. **Property Rights** The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

J. **Severability** The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

K. **Transfers** The Permittee may request that this permit be automatically transferred to a new Permittee if:

1. The current Permittee notifies the Regional Administrator at least 30 days in advance of the proposed transfer date;

2. The notice includes a written agreement between the existing and new Permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them; and

3. The Regional Administrator does not notify the existing Permittee and the proposed new Permittee of his or [b] intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2 above.

L. **State Laws** Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Act.

M. **Reopener Clause**

1. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Act, as amended, if the effluent standard, limitation, or requirement so issued or approved:

   a. Contains different conditions or is otherwise more stringent than any condition in the permit; or

b. Controls any pollutant or disposal method not addressed in the permit. The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

2. This permit may be reopened to add or adjust any effluent limitations if future water quality studies, waste load allocation determinations, or changes in water quality standards show the need for different requirements, subject to the provisions of sections 303(d)(4) and 402(o) of the Act.

V. DEFINITIONS

1. "Average monthly discharge limitation" means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

2. "Average weekly discharge limitation" means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

3. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.

4. "CWA" means the Clean Water Act (formerly referred to as either the Federal Water Pollution Control Act or the Federal Water Pollution Control Act Amendments of 1972), Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117, and Pub. L. 100-4.

5. "Daily Discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

6. "Daily Maximum" ("Daily Max.") is the maximum value allowable in any single sample or instantaneous measurement.

7. "Daily maximum discharge limitation" means the highest allowable "daily discharge."

8. "Director" means Director of the Office of Water, United States Environmental

Protection Agency, Region 10.

9. "EPA" means the United States Environmental Protection Agency.

10. A "grab" sample, for monitoring requirements, is a single "dip and take" sample or measurement taken at a specific time or over as short a period of time at a representative point anywhere in wastewater treatment or biosolids land application processes, as is feasible.

11. "Monthly Average" is the arithmetic mean of all measurements taken during the month except that a geometric mean will be used for fecal coliform analyses.

12. "Not Permitted" means not approved under this permit. It usually refers to either a practice for which the permittee did not apply to utilize, or has not prepared procedures complying with the federal standards or requirements of others.

13. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes themto 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.

14. "Treatment Works" are either Federally owned, publicly owned, or privately owned devices or systems used to treat (including recycling and reclamation) either cosmetic sewage or a combination of cosmetic sewage and industrial waste of a liquid nature.

15. A "24-hour composite" sample shall mean a flow-proportioned mixture of not less than eight discrete aliquots. Each aliquot shall be a grab sample of not less than 100 ml and shall be collected and stored in accordance with procedures prescribed in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*.

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

AFZH-PWU 15 Jan 2003

MEMORANDUM FOR Utilities Division Personnel

SUBJECT: Utilities Division Chief's Open Door Policy

1. My policy is to be available to all Utilities Division personnel to discuss their issues and concerns after the normal chain of command has been followed. If an individual and their supervisor cannot settle the issue, the individual may then request a meeting with me. The supervisor will make the appointment for the individual to meet with me, with or without the supervisor, as the individual desires. The supervisor will provide the proposed date, time and issue or concern. This will be done to ensure any required bargaining unit obligations are met.

2. The procedure above is not to be used for union grievances nor commercial activities (CA) study issues. The procedures in the published agreements between Fort Lewis and the unions will be used for union grievances. For CA issues, individuals may make an appointment with me without first discussing the issue with their supervisor. However, the issue must be a CA issue only and the supervisor must be notified ahead of time that the individual is going to meet with me.

3. Supervisors will distribute this policy to all Utilities Division personnel.

(b)(6)
Chief, Utilities Division

Prior to Division Chief to be able to discuss difference before it gets put to bed, as it does stand today

WWTP

Public Works – Utilities Division		
Procedure: WWTP Laboratory QA/QC Manual **Document ID:** PWU- 103		
Document Owner: (b)(6)	**Approval:** (b)(6)	**Revision:** 2 **Revision Date:** 5/7/02 **Review Date:** 10/4/02
Utility Systems Repairer-Operator Supervisor	Utilities Division Chief	**Original Date:** 11/94

Post

Please Note Review Highlighted Parts

Fort Lewis

Wastewater Laboratory

Quality Assurance

&

Quality Control

Manual

Fort Lewis Wastewater Treatment Plant
Quality Assurance Manual

1. ORGANIZATIONAL RESPONSIBILITIES

A plant supervisor, lead operator, 7 operators, and laboratory analyst operate the Fort Lewis Wastewater Treatment Facility. The plant supervisor is responsible for establishing quality assurance and quality control (QA/QC) policies and ensuring those policies are followed. The Laboratory analyst is responsible for performing analysis on wastewater and quality control samples and recording the results. In the absence of or under the direct supervision of the Laboratory analyst the operators will also perform analyses on wastewater and QC samples and record results. The Laboratory analyst will verify such results. The Laboratory analyst will function as the sample custodian.

2. POLICY FOR QUALITY ASSURANCE/QUALITY CONTROL

a. The principal objective for operating the Fort Lewis Wastewater Laboratory is to consistently produce complete analytical data that accurately represents the waste stream from which the samples are taken.

b. All analytical procedures will be completed according to approved methods (specified in paragraph 5 of this manual) to include all QA/QC measures required by those methods. The initial data quality objective (DQO, which is a target for precision and accuracy) for each method is to achieve better precision and accuracy levels than those cited for each method in **Standard Methods for the Examination of Water and Wastewater, 20th Edition** (hereafter call "Standard Methods"). Once control charts have been established for a given method, (see paragraph 5h (5) below), the statistics used for the chart (i.e., the mean and standard deviation) become the DQOs for the specific test, provided they are better than the initial DQOs.

c. While general QA/QC principles will be applied to all analyses performed in the Laboratory, special QA/QC analyses (see paragraph 5g) will be performed on those samples taken to verify plant performance (as opposed to process control). Those analyses, as identified in Table 1, are BOD, TSS, pH, chlorine residual, and fecal coliform.

d. No sample data will be recorded without including results for any analysis of samples associated with the data.

e. Data will be entered on printed bench sheets and kept in binders. All data will be reviewed and validated prior to release of the data from the laboratory by the laboratory analyst or plant supervisor.

f. Initial training for new operators on analytical methods and QA/QC requirements and procedures will be conducted on a priority basis. It is the intention of the plant supervisor that all operators perform the laboratory analyses at least twice per month, if possible.

g. Located in Building 7500 will be copies of the NPDES Permit, Standard Methods, applicable EPA methods, HACH Analysis Handbook (Current Edition), this QA Manual, and in a readily available binder, material safety data sheets (MSDS) for all potentially hazardous chemicals used in the Laboratory.

3. **SAMPLE MANAGEMENT**

a. Samples will be taken in accordance with Standard Methods, which includes preservation techniques and maximum holding times.

b. Daily samples, including collection of composite samples, will be taken as indicated in the **Laboratory Standard Operating Procedure,** WWTP SOP # Lab - 01.

c. The Laboratory analyst (or operator) as sample custodian assures:

(1) Samples are stored properly and handled by a minimum number of people.

(2) The Laboratory is secured at all times when not in use.

(3) Only authorized personnel are allowed in the Laboratory.

(4) Samples are logged in a sample collection record as a permanent Laboratory record. In the absence of the Laboratory analyst, the operator assigned laboratory duties serves as the sample custodian.

4. METHODS

Methods used in this Laboratory are those approved by the EPA and prescribed in **Standard Methods for the Examination of Water and Wastewater (Current Edition)** or the **HACH Analysis Handbook (Current Edition)**. Method numbers are noted on procedure and bench sheets. Appendix D is a brief description of the methods used in the Laboratory.

5. CALIBRATION AND QUALITY CONTROL PROCEDURES

a. **Laboratory:** The laboratory is kept clean and orderly at all times. ***Specific issues related to the facility are addressed at Appendix C.***

b. **Instrument Calibration:** Instruments are calibrated on a daily basis just before use and every two hours during use over prolonged periods during a given day. Those requiring calibration are the pH meter and probe, the scale, and the DO meter. Records of calibration are maintained on the bench sheets for each analytical procedure. Equipment calibration requirements are indicated in Table 1.

c. **Equipment Maintenance:** All Laboratory equipment is maintained so as to keep it in working order at all times. Laboratory personnel may make simple repairs; qualified equipment service representatives will perform more extensive repairs. Breakdowns and repair procedures will be noted in the log on each

piece of equipment. Daily checks of the drying oven, water bath, sample reefers and incubator temperatures are performed and recorded. The analytical balance is checked daily or more often using standard weights and serviced by professional service representatives as required or, as a minimum, annually. The dissolved oxygen membrane is replaced every two weeks or more often if readings become erratic. A backup probe is kept on hand in case of probe failure. Records of all routine maintenance and repairs are kept in equipment logs. The sample refrigerator(s) are maintained at a temperature between 1 and 4.4 C.

d. **Analytical Reagents:** Only analytical grade reagents are used. Labels on all chemical reagents are marked with date received, date opened, and when known, date of expiration. Chemicals are stored out of direct sunlight. Those requiring cold storage are kept in the refrigerator(s). Acids and bases are stored separately in specially designated areas. Care is taken to prevent cross contamination of reagents and samples. Contaminated reagents and outdated chemical solutions are disposed of in accordance with the assistance of the Hazardous Materials/Waste Section of ENRD. For reagents mixed in the laboratory, shelf life recommendations provided in the analytical method are followed and bottles are marked with date prepared and the initials of the analyst. Type I reagent grade water is produced in the laboratory using a Barnstead E-pure water purification unit. The purified water is then stored in a glass carboy for rinse/washing use and in polypropylene carboys in the BOD Incubator for analytical use (water may be purchased if necessary). Care is taken not to contaminate purified water, and any purified water suspected of being contaminated is discarded. Standard solutions are stored separately and safeguarded to preclude inadvertent contamination.

e. Laboratory Ware Cleaning. After each use, glassware is washed with detergent, rinsed with tap water, rinsed with distilled water, allowed to dry, and stored in a cabinet. When siphon tubes are used for BOD dilution water, they are cleaned weekly with a bleach solution (25 ml of household bleach per liter of water) and rinsed thoroughly (additionally, they are flushed just prior to use with dilution water). Sample bottles and equipment for microbiological evaluations are sterilized in accordance with Standard Methods.

f. Quality Control Analysis. Quality control measurements are made for all analyses related to reporting requirements. It is very important that these tests be performed exactly as written in published methods. Routine analyses of blanks, duplicates, and standard solutions are performed according to the frequency shown in Table 1. Results of blank analyses are treated in the manner specified by the method. Data from results of duplicate analyses and spike analyses (if spikes are ever required in the WWTP Laboratory) are treated in the manner specified in the following sections on evaluating accuracy.

Records of all quality control analyses are kept on daily bench sheets. QC considerations for specific tests follow.

(1) BOD - The normal method of determination of dissolved oxygen for BOD determination is the use of a DO probe and meter. The probe is air calibrated each day during which analyses are normally run or once every two hours during prolonged runs. Samples are incubated at 20 (+/-)^{0}C as measured by a certified thermometer (i.e., one which has been checked against a National Institute of Standards and Technology (NIST) thermometer). A check standard using North Central Laboratories BOD Standard is run daily along side of the required BOD samples. If the BOD of the check standard is outside of +/- 42 mg/L of known value (198 mg/L), the source of the problem is sought, and corrected (control charting may be substituted at the supervisor's direction). Duplicates are run daily on the effluent samples. A blank is run on unseeded dilution water with each set of samples. DO Depletion on the blank should not exceed 0.2 mg/L. DO drop for samples should be at least 2 mg/L with a residual DO of at least 1 mg/L. If these targets are not met, corrective action is taken (i.e., calibration, dilution water, and the nutrient solution are checked, and problems corrected). A performance evaluation (PE) sample is analyzed once every six months (or more frequently at the supervisor's direction). If results are not within acceptable limits, a QC sample is obtained from a commercial source and analyzed after identifying and correcting probable causes of error.

(2) Total Suspended Solids (TSS). The principle calibration in the TSS determination is on the analytical balance. The balance is checked daily with a 1 gram 'S' class weight, with a tolerance limit of 1 gram +/- .0010 grams. A service representative will calibrate the scale annually. A blank is run on de-ionized water each day, pre and post filtration. If TSS value for the blank varies more than +/- .5 mg, the cause is sought and, if necessary, corrective action is initiated. Duplicates are run daily on the effluent and influent samples and should agree within 5% of their average, if this is exceeded the cause is sought and corrective action taken.

(3) pH. The manufacturer's instructions are followed for storage and preparation for use of the pH meter. Three buffer solutions (pH 4, 7, and 10) are used to calibrate the meter. Calibration is checked just prior to use and once every two hours during prolonged runs, with all three of the buffer solutions. A check standard will be evaluated for this analysis at the direction of the supervisor. All pH analyses will be run in process for water and from a grab sample for sludge. Performance evaluation samples are performed every six months (or more frequently at the supervisor's direction).

(4) Chlorine Residual. The HACH Pocket Colorimeter used for total chlorine residual analysis is calibrated monthly to the HACH DPD-Chlorine Color Standard. A performance evaluation sample is analyzed every six months (or more frequently as directed by the supervisor).

(5) Fecal Coliforms. The multiple tube incubators are monitored for temperature with NISH certified thermometers. HACH A-1 Medium MPN Tubes are used for determination of fecal coliform concentrations using the Multiple Tube Test. Sterile pipettes are used. A performance evaluation sample is analyzed every six months (or more frequently as directed by the supervisor).

Table 1
Quality Control Procedures Frequency Chart

Parameter	Calibration	Check Standards	Blanks	Duplicates	PE Samples
DO (For BOD Procedure)	Air calibrate DO probe each day	Daily[1]	Daily[1]	Daily[1]	Semi-Annually
TSS	Balance Check Daily[1], Annually by Service Representative	Evaluating[2]	Daily[1]	Daily[1]	Semi-Annually
pH	Daily[1]	Evaluating[2]	N/A	N/A	Semi-Annually
Chlorine Residual	Monthly	Monthly	Daily[1]	N/A	Semi-Annually
Fecal Coliform	Temperature Daily[1]	N/A	Daily[1]	N/A	Evaluating[2]

Note 1: Each day that analyses are normally performed.
Note 2: Under investigation for feasibility.

g. Evaluating Accuracy. The ability of the Laboratory to perform accurate analyses is evaluated by analyzing quality control samples and by participating in performance evaluations.

(1) Check standards (samples of concentration known to the analyst) are used primarily to check on bias and precision. The supervisor is currently evaluating a check standard for pH, TSS and Fecal Coliform. BOD measurements on a glucose/glutamic acid solution are performed to assess bias in the BOD analytical procedure daily. A check standard for total residual chlorine is analyzed once per month in conjunction with calibration.

(2) PE samples (samples of concentration unknown to anyone in the Laboratory, but known to the supplier of the sample) are also used as a check on overall accuracy. PE samples for all plant

performance parameters listed in Table 1 except fecal coliforms are analyzed twice per year as part of the ERA's WP studies and an annual PE study currently provided free of charge by EPA.

(3) Spiked samples are not used for any plant performance analyses performed in the Laboratory. If plant performance analyses which require spiked samples are conducted in the future, this part of the QA manual will be expanded to include instructions for statistical treatment of spiked sample analysis results and construction of appropriate control charts.

NOTE: Control charts, as described in the next subsection, are not required by EPA, but they are a very practical mechanism for assuring that an analytical procedure is in control. The charts used as examples in this QA manual are based on standard deviations. There are other charts such as those based on range, which are explained in Standard Methods.

(4) To evaluate precision of analysis for BOD and TSS, control charts will be maintained for appropriate determinations at the direction of the plant supervisor. If problems are encountered in pH tests or Chlorine residual test, control charts may also be used. The control charts may be based on analysis of the standard solution for BOD and on pairs of duplicates for BOD (final effluent), TSS, and total chlorine residual. No charts are used for pH (unless problems are encountered) or fecal coliforms.

(5) Control Charts Based on Standard Solutions. After a minimum of ten (but preferably 20) replicates of the standard solution for a given parameter have been completed, the standard deviation of the analysis will be calculated using the worksheet at Appendix A. Appendix A also includes a sample completed worksheet. ***Using the calculated standard deviation(s), a control chart is constructed as shown below***. Concentration of the standard solution is indicated on the chart below as X.0 mg/L, where the chart below indicates +3s, for example the actual control chart would indicate a value of the standard solution concentration (or mean of 10-20 replicate results) plus three times the calculated standard deviation. Likewise, -35 indicates the standard solution concentration minus three standard deviations. ***Page A-3 shows a control chart based on the data presented on Page A-2***. Once the control chart has been constructed, all subsequent determinations of the same standard will be plotted on the control chart. As (b) as the values are within the action limits, values for samples analyzed in conjunction with the standard may be reported. If values exceed either action limit, if more than three consecutive values exceed one warning limit, or if more than seven consecutive values are on one side of the other of the central line, the laboratory is considered out of control for that analytical procedure. The situation will be investigated, the cause found and corrective actions taken. When control charting is being used, new control charts will be constructed semi-annually based on standard analyses for the past six-month period. The points on

the sample control chart on Page A-3 represent analyses of the standard solution taken after constructing the basic chart.

(6) Control Charts Based on Pairs of Duplicates. As an additional check on quality, control charts based on duplicate analyses of effluent for BOD and TSS may be used. From the results of duplicate analyses performed on 10 percent of the samples or at the rate of one duplicate per day, whichever is more frequent, standard deviations are calculated for each type of analysis using the worksheet at Appendix B. Control charts are constructed and used exactly as above except that the central line is zero rather than a mean or actual concentration (see Page B-3 for an example).

6. DATA MANAGEMENT. All records mentioned in the preceding and subsequent paragraphs, those required by the NPDES Permit and Standard Methods are retained in this office in the supervisor's filing cabinets for a period of at least five years. Before any result is reported, all raw data and calculations are reviewed for accuracy and initialed by the plant supervisor acting as the quality assurance officer. If data contained on any record is transcribed to facilitate brevity or neatness, the original record is also kept. All data is recorded in ink and corrections are initialed. A list of initials identifying the person to whom they belong is maintained as a permanent Laboratory record.
7. AUDITS. Two types of audits are used to determine status of the Laboratory operations. A system audit is used to assess personnel, equipment, facilities, and analytical procedures. A system audit is conducted periodically by the EPA and by the plant supervisor. Performance evaluations are conducted at least once every six months for each plant performance parameter, including fecal coliforms, as part of a Water Pollution Study. Blind samples may be injected into the flow of analysis periodically, as an audit of individual analyst performance.
8. REPORTS. Beginning in 2003 a QA/QC report will be prepared by the Laboratory analyst semi-annually (January and July) and given to the plant supervisor. Annually (January), the plant supervisor will provide a written report/summary to the Division Chief summarizing QA/QC activities in the Laboratory. The checklist at Appendix C is used to assist in drafting these reports and otherwise in assessing Laboratory capabilities and performance.

Appendices:

A – Bench Sheet for Replicates of Standard Solutions

B – Bench Sheet for Duplicate Analyses

C – Laboratory Quality Assurance Checklist

D – Summary of Analytical Methods

Appendix A - Bench Sheet for Replicates or Standard Solutions

- BOD Bench Sheets

Appe=ndx B - Bench Sheet for Duplicate Analysis

- BOD Bench Sheets
- TSS Bench Sheets

Appendix C – Laboratory Quality Assurance Checklist

1. Consult the current analysis manual if any questions concerning QA/QC arise.
2. Keep the laboratory clean and orderly.
3. Follow procedures and ask questions.
4. Review control charts as a performance indicator.
5. Product use: first in, first out.
6. Do not use expired products for analysis.
7. Keep supervisor and laboratory technician informed of any unusual readings or tests results.
8. Lend your co-workers a helping hand, review, review, review. If errors are discovered, note them, and inform.

Appendix D - Summary of Analytical Methods

NOTE: This appendix may be used to record comments and special instructions on methods used in the Laboratory. The actual written methods, however, (e.g., Standard Methods, EPA Methods, HACH Methods) are posted in the laboratory and are used as written in the reference. These comments may also be part of the QA manual, in SOPs, or otherwise documented.

1. **pH (Standard Methods #4500-H using prepared buffers).** pH is the numerical value in Standard Units of the acidity or basicity of the tested solution. A value of 7.0 indicates the solution is neutral. Values less than 7.0 are acidic; greater than 7.0 are basic. Sudden changes in pH values may be the result of illegal discharges of acid or base into the wastewater system. Extreme shifts in pH may cause damage to the treatment facility and/or the biological treatment process. Typically this facility receives and discharges slightly basic or slightly acidic water. Permit limits, Low: 6.0 Standard Units, High: 8.5 Standard Units. This Laboratory uses the electrometric method for pH measurements. The manufacturer's instructions are followed closely on use of the pH meter and on storage and preparation for the use of the electrodes. Electrodes are kept wet by returning them to the storage solution whenever the pH meter is not being used (electrodes are never stored in distilled water). To prepare the electrodes for use, remove them from the storage solution, rinse with distilled water, and gently blot them dry with soft tissue. Calibrate the pH meter by immersing the electrodes in a buffer solutions. Remove the electrodes, rinse and blot dry, and immerse in a second buffer, repeat for third buffer. If the meter reads more than 0.1 pH units from the value expected for the buffers, look for trouble with the electrodes or potentiometer. Repeat this calibration procedure for every batch of pH analyses. When reading pH of the sample, establish equilibrium between the electrodes and the sample by stirring the sample to ensure homogeneity (pH for process waters is performed in process). Values are reported to the nearest 0.1 pH units. Typical intra-laboratory tests result in standard deviations of +1- 0.1 to +1-0.2 pH units over the pH range.
2. **Total Chlorine Residual (Standard Methods #4500-Cl G using HACH kit).** Chlorine is added to water to destroy or deactivate disease-producing microorganisms. Residual chlorine may be present in waters reaching the wastewater treatment plant. Since chlorine is not stable in water solutions, its concentration in samples decreases rapidly. Exposure to sunlight or other strong light, or agitation reduces the quantity of chlorine in solutions. Samples to be analyzed for chlorine residual must be analyzed immediately after sampling. Total Chlorine Residual using DPD Method with a HACH Pocket Colorimeter - Fill 10 mL cell with sample. Add contents of one DPD total chlorine powder pillow. Cap cell and gently shake for 20 seconds. Wait 3 minutes. During this 3-minute wait, fill 10-ml cell with sample and cap. This is the blank.

Remove colorimeter cap, place blank in cell holder, cover cell with instrument cap, press zero, and when zeroed remove blank from cell holder. After 3-minute waiting period place sample in cell holder and cover cell with instrument cap, press read. In a single analysis, single Laboratory test of domestic sewage, for a mean residual chlorine concentration of 1.11 mg/L, the standard deviation was determined to be +/- 0.06 mg/L (percent relative standard deviation of 5.9%).

3. **Total Suspended Solids (TSS) (Standard Methods #2540D).** The measurement of suspended solids, or suspended matter, in wastewater at various stages in the treatment gives a good indication of the efficiency of treatment. Total suspended solids may be determined by filtering a sample through a glass fiber filter and drying the residual to constant weight at 103 – 105° C. This Laboratory uses a Gooch filter apparatus attached to a vacuum pump. Other apparatus used in the determination include a drying oven, an analytical balance and a desiccator. The funnel and glass fiber disks are first dried at 103 to 105° C for an hour, cooled in a desiccator to room temperature, and weighed. The sample (1000, 500, or 250 milliliters, depending on expected suspended matter content, which should be at least one mg, but preferably between 2.5 and 200, mgs) is filtered through the glass fiber disk, which is then dried, desiccated, and weighed. From the standpoint of quality control, the analytical balance is the most important instrument although care must ☐ taken to assure the drying oven is actually operating at 103 to 105° C, and that the desiccator is free from moisture (i.e., desiccant get is replaced as required). This is a relatively imprecise procedure with the percent relative standard deviation reaching 33% for some concentrations.

4. **Biochemical Oxygen Demand (Standard Methods #5210B using HACH Buffer Kit and Manufactured seed).** BOD testing measures the molecular oxygen utilized during a specified incubation period for the biochemical degradation of organic material and the oxygen used to oxidize inorganic material such as sulfides and ferrous iron. BOD is an important measure of the quality of discharged water as high BOD can result in undesirable effects on receiving waters. The test is part biological and part chemical. The biological part cannot be calibrated, but the chemical part which consists of measuring dissolved oxygen (DO) before and after an incubation period, can. DO is measured using a DO meter. Samples analyzed in this Laboratory generally are in the 6.5 to 7.5 pH range, normally have not been oxidized by ozone, are not extremely hot or cold, do not contain toxins, and do not contain supersaturated dissolved oxygen. Therefore, the samples normally do not require any special pretreatment as described in Standard Methods. When residual chlorine is present, as it sometimes is, the dechlorination procedure in Standard Method 5210B (4) e. 2) is followed prior to BOD analysis. Past experience has shown that samples often contain materials which are not degraded at normal rates by the microorganisms in settled sewage at the treatment facility. It is therefore necessary to seed BOD samples taken in the final settling tank effluent (as in paragraph Standard Methods 5210B 4. d. To standardize BOD procedures in the Laboratory, effluent BOD samples are seeded. This

laboratory uses a manufactured seed designed specifically for BOD_5 analysis. If oxygen demand is expected to be greater than 5 mg/L (and it generally is in the wastewater treatment plant served by this Laboratory), the sample must be diluted. Amount of sample added to a 300-mL bottle that is determined from charts in the written method. Care must be taken in adding dilution water to avoid air bubbles, which would contribute to the DO determination. Tests are done in duplicate, and each test includes a DO determination on a bottle containing only dilution water and only distilled water. DO is measured at the beginning of the test and after a 5-day incubation period. Incubation is in the dark at 20 +/- 1°C (as measured with a certified NISH thermometer). To assure there will ☑ some DO to measure, at least two different dilution streigths are prepared for each sample. In typical intra-laboratory tests of natural water samples plus an extract increment of biodegradable organic compounds, mean values of 2.1 and 175 mg/L BOD with respective standard deviations were +/- 0.7 and +/- 26 mg/L (coefficients of variation of 33% and 15%) were obtained.

5. **Fecal Coliform, Multiple-Tube Fermentation (MTT) (Standard Methods, 9221E.2. using HACH prepared A-1 Medium Broth).** Fecal Coliform testing using MTT measures the fecal coliform density of the water being tested. This is information, in conjunction with other data, is very useful in determining the quality of water and treatment effectiveness. This facility's NPDES Permit limits coliform density to 200 colonies per 100 ml, calculated on a monthly geometric mean. The incubators are critical to success and accuracy of this method. Incubator temperature is monitored using NISH certified thermometers. The procedure consist of inoculating 3 rows of 5 tubes each with 3 dilutions used in a decimal series (e.g. 10 ml, 1 ml, and .1 ml dilutions) based on total chlorine residual of sample. It is not necessary to de-chlorinate samples if they are run immediately after collection, but as a good practice this laboratory does de-chlorinate samples. The inoculated tubes are then incubated at 35° +/- 0.5° C for three hours and then incubated at 44.5° +/- 0.2° C for 21 hours +/- 2 hours. If any tube indicates gas production it is considered positive for fecal coliforms. Density is calculated using the Most Probable Number using the number of positive tubes and the chart & procedures in Standard Methods #9221C. Confidence level using this procedure is 95%.

- Prior Sep WWTP / Division Chiefs Responsibilities

AFZH-PWU 9 Apr 03

MEMORANDUM FOR RECORD

SUBJECT: Waste Water Acceptance Authority

1. This Memorandum For Record serves as approval and acceptance of process wastewater generated by the Fort Lewis Sediment De-watering Facility (9638). The de-water facility is protected by an oil water separator system and will be operated in accordance with an approved operations plan.

2. The Fort Lewis Wastewater Treatment Plant operates in compliance with NPDES Permit WA-002195-4. Questions regarding this approval should be addressed to (b)(6) at (253) 967-7453.

(b)(6)

Chief, Utilities Division

April 10, 2003

(b)(6)
Fort Lewis WWTP
PW, AFZH-PWO-R
Box 339500, Bldg. 2012
Ft. Lewis, WA 98433-9500

Dear (b)(6)

We appreciate you getting back to us with your sampling plan. We realize the Army is involved in much more important things at present. We have only a few suggested revisions which we would like you to incorporate, or else call us to discuss.

In Appendix C—Biosolids Sampling, under Sampling for Total Metals, the first sentence should read: "The samples collected for Total Metals shall be two composite samples, covering at least 75% of the beds poured during the year." At the end of the second sentence you should add "with the exception that the August sampling will not include the most recently poured beds not scheduled to be consolidated before the September removal." The third sentence should begin "At each sampling event." Another sentence should be added which reads "Analysis of samples will be done according to WAC 173-308-140(2)(d)." These suggested changes are not to suggest a more rigorous schedule, but to be more specific about what you propose to do in the first place.

Under Sampling for Fecal Coliform, at the end of the first sentence add "according to WAC 173-308-140(2)(b), the 18th edition of Standard Methods." The second sentence should read "within 30 days prior to biosolids removal..." At the end of the paragraph add this sentence: The results will be used to come up with a number using a geometric mean calculation.

These changes to your proposed sampling plan are really only changes in how you describe what you will do, for the benefit of outsiders or future operators. If you are in agreement could you email a revised document to us? Or please call me to discuss at (360) 407-6060.

Sincerely,

(b)(6)
Solid Waste and Financial Assistance Program

MEMORANDUM 28 August 2002

To: All Wastewater Plant Section Personnel

Subj: SECTION LEAVE POLICY

ANNUAL LEAVE

1. Annual Leave will be requested on an OPM Form 71 form at least 2 weeks in advance of a planned absence. One day of Annual Leave may be used per 80-hour shift-week without prior supervisor approval if it does not require overtime for shift coverage. One day of Annual Leave that will create an overtime requirement may be requested by contacting the supervisor at work or at home, if the supervisor cannot be contacted, the request is **not** approved. A request for more than 80 consecutive hours will be submitted at least 5 weeks in advance. All use or lose annual leave will be requested no later than 30 September of the leave year.
2. Emergency Annual Leave must be called in at least one hour prior to shift start and will require documentation of the need for unscheduled annual leave be presented to the supervisor upon return to work.
3. Annual Leave taken without the supervisor's permission will be charged as Leave Without Pay (LWOP). Subsequent use of Annual Leave without prior approval will be charged as Absent Without Leave (AWOL), and disciplinary action will be taken.
4. During absences of the supervisor, personnel need to contact the Division Chief for leave approval.

SICK LEAVE

1. Doctor's appointments will be scheduled in advance on an OPM Form 71, either for you or a family member.
2. If you intend to take a day of sick leave (or family leave) **you must call in at least one hour** prior to your shift starting time. If you are gone for more than three days in a row you must provide documentation supporting your illness.
3. After you have used 50 hours of undocumented sick leave (in the leave year) you will be notified. After you have used 70 hours of undocumented sick leave (in the leave year) you may be placed on leave restriction, which will require as a minimum, documentation for all sick leave usage for a specified period of time (usually a year).

SCHEDULED OVERTIME and LEAVE IN CONJUNCTION WITH OVERTIME

1. If an employee is scheduled to work overtime, the employee is responsible to be present at work at the appointed time. If an emergency prevents the working of scheduled overtime, the employee must notify the operator on duty at the WWTP at least one hour prior to the OT shift start time. Failure to show for scheduled overtime may result in a disciplinary action.
2. It is my policy that no annual leave will be approved in conjunction with scheduled or unscheduled overtime, and the use of sick leave is discouraged. Circumstances may occasionally dictate exceptions to this portion of the policy.
3. Use of sick leave in conjunction with overtime may indicate abuse of sick leave and may be investigated as such. It is my recommendation that if this situation occurs that the employee get documentation of the need for sick leave.

(b)(6)

Supervisor, WWTP Section

(b)(6) (b)(6)

SICK & ANNUAL

(b)(6)

An employee who is absent due to sickness shall notify the supervisor at least two hours before the start of their shift, to allow for sufficient time to call a replacement in. Except in emergency situations, approval for sick leave for medical, dental, or optical examination or treatment shall be obtained from the supervisor prior to the beginning of the requested leave. Employees shall request Doctor and dental appointments to cause the least work disruption. A medical certificate for absences of three (3) workdays or less will not be required except where there is reason (in the opinion of the supervisor) to believe the employee is abusing sick leave privileges.

Approval of annual leave will be granted, subject to the needs of management, when the request is submitted with reasonable advance notice. Approval of requests for annual leave for unforeseen reasons will be considered as the circumstances warrant.

Every attempt consistent with the workload will be made to satisfy the desires of the employees with respect to the approving of extended annual leave for vacations.

The following times and numbers where the supervisor can normally be reached are:

0700 – 1730 Monday thru Thursday work cell 1st #377-5964, 2nd # 967-7453/2527

1800 – 0700 Monday thru Thursday Home # (360) 456-8289

0700 – 2400 Friday thru Sunday 1st Home # and 2nd cell #

All numbers are attached to an auto answering machine that records the time and message received, and I will respond ASAP. It is each employee's responsibility to contact the supervisor to request leave.

(b)(6)

Supervisor Water Utilities Section

Sunday
May 28, 2006

a one (1) year period and made available to the Union upon request. Where employees have once volunteered to work overtime, or have been directed to report for overtime duty, they will be expected to report as specified and failure to report will subject them to disciplinary action unless it can be shown the absence or failure to report was beyond their control.

SECTION 4. Night rates and premium pay shall be added to an employee's basic scheduled rate of pay in accordance with applicable pay practices and regulations.

5-30-06

(b)(6)

ARTICLE 11
HOLIDAY WORK

Employees shall normally be excused for all holidays now prescribed by law and any that may be later added by law and all holidays designated by executive order shall be observed as regular holidays, within the normal Monday through Friday workweek. For employees who work Monday through Friday, if a holiday falls on Saturday, the preceding Friday shall be treated as the holiday for leave and pay purposes and if the holiday falls on Sunday, the following Monday shall be treated as the holiday for leave and pay purposes. All nonovertime hours worked on a holiday shall be paid at twice the regular basic compensation. Eligible employees excused from duty on a holiday shall receive pay at the basic rate of compensation for the day.

SHOW ME WHERE YOU CAN OVERRIDE THE 1 HR.

(b)(6)

ARTICLE 12
SICK LEAVE

SECTION 1. Sick leave will be granted employees when Management has satisfied itself they are incapacitated from the performance of their duties by sickness, injury, or pregnancy and confinement, or for medical, dental, or optical examination or treatment.

SECTION 2. An employee who is absent due to sickness shall notify his supervisor, or other appropriate persons designated by Management, prior to 0800 hours on the first workday of his absence, or as soon thereafter as possible. Second and third shift employees shall notify their department or shop prior to the start of their shift or as soon thereafter as possible. Utility plant operators on 24 hour operations will notify their supervisor, or other appropriate personnel designated by Management, of their absence 1 hour prior to the start of their shift. Except in emergency situations, approval for sick leave for medical, dental, or optical examination or treatment shall be obtained from the supervisor prior to the beginning of the leave. Employees shall request doctor and dental appointments to cause the least work disruption.

WasteH2O
From: (b)(6)
Sent: Wednesday, March 31, 1999 8:59 AM
To: WasteH2O
Subject: FW: Lunch Break

From: (b)(6)
Sent: Wednesday, March 31, 1999 8:59:01 AM
To: *PW Water Treatment
Cc: (b)(6)
Subject: Lunch Break
Auto forwarded by a Rule

CPO policy requires that workers take a 30 minute unpaid break for lunch each day, unless they are in an operating utility plant that they cannot leave. Due to this policy, management should have provided a 30 minute lunch break 3 years ago, when we started unmanning the water plant for part of the night. Even before we started unmanning the water plant at night, it was questionable to say that the water plant operators could not leave the water plant for lunch since they have been going to the golf course or other locations on a regular basis. The water plant does not qualify as a utility plant that has to be constantly manned. Therefore, starting within 2 weeks, all water plant operators are to take an unpaid 30 minute lunch break at a time specified by (b)(6)

lunch leaves

Public Works – Utilities Division		
Procedure: WWTP Daily Operating Procedure **Document ID:** PWU-105		
Document Owner: (b)(6)	**Approval:** (b)(6)	**Revision:** 4 **Revision Date:** 3/25/00
Utility Systems Repairer-Operator Supervisor	Utilities Division Chief	**Original Date:** August 1995

WWTP Daily Operating Procedure

1. A plant tour will be completed at least 2 times per shift. The WWTP Section O&M Manual or the specific equipment/system O&M Manual will be used for start-up and shutdown of systems and equipment. The following equipment will be checked during each tour for proper operation, shift PM, and cleanliness:

a. **Headworks** - Barscreens, grit cyclone separator, grit pumps, seal water pumps, grit collector and chamber. Check all motors for excessive heat and that there is an appropriate amount of sample in the Raw sampler reefer once per shift. If the screenings cans are full contact the landfill for removal and dumping (967-3803). Washdown screenings pad each shift. Hose out flow meter stilling well each shift.

b. **Thickener** - Marlow pumps, oilers, seal water, thickener drive, scum concentrator. Check all motors for excessive heat once per shift. Run off grease into waste can during first tour of shift and washdown with hot water. Check and record thickener sludge level 3 hours into the shift and 1 hour before the end of shift and log results in the operations logbook. Adjust Marlow run time according to sludge level and update information on operations board.

c. **Primary's** - Primary sludge pumps, seal water pump, sump pump, auger and collector drives, T-valves, flights, scum pump, Peerless pumps, oilers, recirc valve. Check all motors for excessive heat and that there is an appropriate amount of sample in the PE sampler reefer once per shift. Skim scum from primary clarifiers during last tour of shift and washdown scum trough & scum pit.

d. **Secondary's** - Clarifier drives, secondary pumps, seal water pump, dilution pump, sump pump, polymer pump, de-emulsifier pump. Check all motors for excessive heat once per shift. Pump scum pit during last tour of shift and washdown pit and collector troughs.

e. **Disinfection & De-chlorination** – Hypochlorite feed pumps, De-chlorination pumps, Non-pot pumps, distribution header water flow, and storage tanks. Check all motors for excessive heat and that there is an appropriate amount of sample in the Effluent sampler reefer once per shift. Read and log chlorine analyzer readings during mid-shift tour in the operations logbook. Skim scum from chlorine contact chambers during last tour of shift and washdown scum trough & scum pit.

f. **Solids Handling** - Gas compressors, sludge recirc pumps, hot water recirc pumps, seal water pumps, boilers, oilers, water traps, flare, supernatant. Maintain primary digesters between 93 - 95 degrees F. Check all motors for excessive heat once per shift. Water traps will be drained every tour.

g. **Drying Beds** - Operations by assignment.
h. **Laboratory Duties** – Each shift has daily laboratory duties. Follow the Laboratory Operations SOP posted in the Lab.

2. **All Shifts** - Shift turnovers will be conducted by the on-coming and off-going duty operators, I would recommend a joint walk-around of each area of the plant. Any work not completed during the previous checks/tours will be completed jointly at this time.

3. **All Shifts** – Shift turnovers will start one hour before off going shift leaves. The time before turnover will be used for training or by the on-coming operator to review logs, accomplish dual activities and to perform minor maintenance as assigned.

4. This procedure will be reviewed and renewed annually.

(b)(6)

Supervisor, WWTP Section

Copy of how spills on the outside need to be reported to EPA - which is not being done - because of interference of Environmental Dept into how operation of Water Plant + WS + Wastewater Treatment Plant is to be operated by qualified personnel NOT by Compliance Dept.

Anthony Lyle

From: (b)(6)
To: (b)(6)
Subject: Release to Water 11/30/95-03/31/96
Date: Tuesday, April 16, 1996 8:38AM

Water Quality Spill Report

Spill Date: 11/26/95 Substance Spilled: DIESEL FUEL

Time of Occurrence 9:30:00 AM

Quantity: <3 GALLONS

Organization Name: 44TH CSB

Bldg Number: PA 1504 Unit POC: (b)(6)

Phone: 967-2712 Street: "A" STREET

Spill Date: 2/5/96 Substance Spilled: Diesel Fuel

Time of Occurrence 11:45:00 AM

Quantity: <5 gallons

Organization Name: 14th MI Bn

Bldg Number: Near Bldg 6A41 Unit POC: (b)(6)

Phone: 967-2272 Street: Between 11 & 12 St.

Spill Date: 2/8/96 Substance Spilled: DF-2

Time of Occurrence 4:30:00 AM

Quantity: <3,000 gallons

Organization Name:

Bldg Number: Puget Sound, N of Solo Unit POC: (b)(6)

Phone: Street:

Spill Date: 3/7/96 Substance Spilled: JP-8

Time Of Occurrence 11:15:00 AM

Quantity: 5-10 GALLONS

Organization Name: HHC 1-23 INF

Bldg Number: 3915 Unit POC: (b)(6)

Phone: 967-8346 Street:

Water Quality Spill Report

Spill Date: 3/7/96 Substance Spilled: 10 WT. OIL

Time of Occurrence 8:47:00 AM

Quantity: < 3 GALLONS

Organization Name: 1-37 FA

Bldg Number: 3945 Unit POC: (b)(6)

Phone: 967-6653 Street:

To my knowledge, there we no releases to the sanitary system

Tom

R[redacted]PAIRS AND UTILITIES OPERATING LOG
(Sewage-Supplementary)
F[redacted] use of this form, see AR 420-52; the proponent
[redacted]ncy is Office of the Chief of Engineers.

INSTALLATION: Fort Lewis

PLANT: Wastewater

DATE	DAY OF WEEK	R[redacted] SLUDGE [redacted] (1)	PERCT VOLATILE (2)	BOD (5-Day), ppm: RAW SEWAGE (3)	BOD: PRIMARY EFFLUENT (4)	(5)	(6)	BOD: FINAL EFFLUENT (7)	SUSPENDED SOLIDS, ppm: RAW SEWAGE (8)	SS: PRIMARY EFFLUENT (9)	(10)	(11)	SS: FINAL EFFLUENT (12)	Fuel Oil USED GAL (13)	Cl2 residual ppm (14)	Coliform/100 ml (15)	Cl2 USED #'s (16)	(17)	(18)	(19)	(20)
1	S			143	105			18	224	106			13	0	.31	<4	80				
2	M			233	102			16	240	64			15	0	.57	20	40				
3	T			175	87			14	188	72			17	108	.59	<4	100				
4	W	2.[redacted] 2	77.7	94	69			12	207	85			15	0	.57	<4	(b)				
5	Th			158	108			15	394	96			17	0	.49	10	(6)				
6	F			199	102			13	294	84			17	0	.64	9	100				
7	Sa			94	81			12	295	81			13	327	.58	<4	20				
8	S			109	90			11	193	85			14	54	.15	22	80				
9	M			unusable results →				→	209	100			15	0	.53	<4	40				
10	T			102	75			19	230	105			20	0	.51	20	10				
11	W	3.0 — 2	75.9	178	108			14	187	99			14	0	.52	<4	60				
12	Th			176	121			16	243	75			18	0	.29	7	80				
13	F			135	84			14	236	95			17	0	.32	<4	60				
14	Sa			161	135			18	199	83			17	0	.25	<4	40				
15	S			274	179			10	253	148			19	0	.14	<4	80				
16	M			159	147			35	62	80			14	108	.29		40				
17	T			79	69			13	207	92			18	108	.24	11	80				
18	W			251	180			19	160	281			16	266	.31	<4	53				
19	Th			90	87			17	234	96			18	52	.29	9	53				
20	F			86	93			17	165	47			21	0	.59	21	53				
21	Sa			101	90			18	232	58			20	0	.27	38	60				
22	S			98	69			13	283	82			16	102	.6	13	72				
23	M			106	87			12	144	88			15	0	.25	510	72				
24	T			109				12	286	25			47	0	.36	<4	72				
25	W	3.25	71.3	98	81			18	249	105			18	105	.32	<4	72				
26	Th			116	204			21	160	52			33	100	.25	23	~~72~~				
27	F			124	93			15	244	86			14	53	.27	<4	152				
28	Sa			244	64			12	247	85			14	108	.24	14	152				
29	S			207	125			9	224	92			17	54	.19	<4	152				
30	M			135	128			17	157	85			18	108	.17	74	152				
31	T			unusable results →				→	134	51			15	54	.38	1080	152				
TOTAL														1713			2340				
MAXIMUM				274	204			35	394	281			47	327			152				
MINIMUM				79	69			9.0	62	25			13	0			20				
AVERAGE				149	107			15	219	90			18	55	.40	16.23	75.5				

SEE REVERSE FOR INSTRU[redacted]IONS

PREPARED BY: (b)(6)

DATE: 11/15/95

APPROVED BY: (b)(6)

DATE: 22 Nov

DA FORM 1 JUN 58 5 — 61 PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

REPAIRS AND UTILITIES OPERATING LOG
(Sewage-Supplementary)
For use of this form, see AR 420-52; the proponent agency is Office of the Chief of Engineers.

INSTALLATION: Fort Lewis IA
PLANT: Waste

DATE	DAY OF WEEK	RAW SLUDGE: PERCENT SOLIDS (1)	RAW SLUDGE: PERCT VOLATILE (2)	BOD (5-Day), ppm: RAW SEWAGE (3)	BOD: PRIMARY EFFLUENT (4)	(5)	(6)	BOD: FINAL EFFLUENT (7)	SUSPENDED SOLIDS, ppm: RAW SEWAGE (8)	SS: PRIMARY EFFLUENT (9)	(10)	(11)	SS: FINAL EFFLUENT (12)	Coliform ___/100 (13)	Cl2 Residual mg/L (14)	Cl2 used #'s (15)	Temp Eff C° (16)	Fire ___ used (17)	(18)	(19)	(20)	(21)	(22)
1	Sa								119	71			20	24	.47	100	19	0					
2	S			182	140			27	127	105			21	7	.55	100							
3	M			190	102			15	166	114			26	24	.56	100							
4	T			181	99			13	275	85			18	1000	.31	100							
5	W	3.15	79.2	184	111			19	385	87			19	800	.66	100	19						
6	Th			248	63			19	205	76			17	80	.57	100	19						
7	F			259	75			13	235	81			24	24	.64	100	19						
8	Sa			90	75			12	164	31			15	50	.64	60	19						
9	S			152	84			15	388	81			18	4	.56	50	19						
10	M			244	75			9	166	73			21	4	.6	100	19						
11	T			279	84			9	543	85			15	4	.66	90	19						
12	W	3.05	84.3	231	105			15	724	81			14	1400	.58	40	20						
13	Th			201	108			15	196	105			19	11	.58	60	20						
14	F			269	129			22	187	101			22	22	.51	100	20						
15	Sa			86	66			18	186	100			22	24	.51	40	20						
16	S			94	72			15	144	69			12	6	.42	60	20						
17	M			150	210			20	237	81			20	10	.38	100	20						
18	T			225	108			15	243	96			14	24	.47	40	21						
19	W	4.26	76.9	263	132			27	326	102			26	1470	.42	40	20						
20	Th								171	122			37	24	.43	160	20						
21	F			143	123			38	254	51			33	7	.51	90	21						
22	Sa			156	119			34	185	73			18	24	.45	40	20						
23	S			198	122			30	387	85			16	24	.57	80	20						
24	M			284	144			36	243	88			21	20	.45	60	19						
25	T			235	130			35	263	77			20	7200	.32	60	19						
26	W	4.27	76.9	214	120			32	387	120			21	13	.66	100	19						
27	Th			113	105			32						52	.43	100	19						
28	F			79	69			10	185	109			24	24	.33	60	19						
29	Sa			223	108			21	147	35			8	19	.39	0	19						
30	S			128	108			13	260	77			20	24	.32	40	19						
31	M			246	152			28	591	84			17	9	.57	0	14	0					
TOTAL																2340		0					
MAXIMUM		4.29	84.3	284	210			(b)(6)		122			37		.69	160	21	0					
MINIMUM		3.05	76.9	79	63			9	119	31			8		.31	0	19	0					
AVERAGE		3.77	79.3	188	109			21	264	85			20	36	.5	75	20	0					

SEE REVERSE SIDE FOR INSTRUCTIONS

PREPARED BY: (b)(6)
DATE: 8/5/95
APPROVED BY: (b)(6)
DATE:
POST E

DA FORM 5-61
PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

3. AIR TEMPERATURE, °F.—Enter the mean air temperature, as reported by the local Weather Bureau observer.

4. STREAM FLOW.—Report stage of receiving stream immediately above outfall as H (*High*), N (*Normal*), L (*Low*), or D (*Dry*).

5. TEMP. PLANT INFLUENT, °F.—Enter the average temperature of the plant influent, in degrees Fahrenheit.

6. pH PLANT INFLUENT.—Enter the pH of the plant influent.

7. pH PRIMARY EFFLUENT.—Enter the pH of the primary clarifier effluent.

8. RATE PER DAY, MAXIMUM.—Enter the maximum rate of sewage flow expressed in units of 1,000 gallons per day, obtained from flow meter or observation of an indicating gage.

9. RATE PER DAY, MINIMUM.—Enter the minimum rate of sewage flow, expressed in 1,000 gallon per day units. Where sewage is pumped to the plant and pumps operate intermittently, enter the average rate of flow during the minimum-flow period.

10. TOTAL TREATED.—Enter the total flow treated in the 24-hour period, expressed in 1,000-gallon units, as obtained from recording meters, gages, or estimate. If estimated, state method under "Remarks."

11. TOTAL BYPASSED.—Enter the total flow bypassed, without any treatment, in 1,000-gallon units, as metered or estimated. Under "Remarks," indicate reason for bypassing, and also indicate amount and reason for bypassing any individual treatment units.

12. TOTAL RECIRCULATED.—Enter the metered or estimated volume of sewage recirculated within the plant, such as recirculation from filters or final clarifier to primary clarifier or filter. Enter at top of column the points of intake and discharge.

13–15. SETTLING SOLIDS, ml/liter.—Record the settable solids tests, results expressed in milliliters per liter for:

succeeding monthly report, noting dates in "Remarks" column adjacent to column 18. The average stability is to be based on entries made, regardless of month.

17. RAW SLUDGE PUMPED, GALLONS.—Enter the total daily amount of sludge pumped from settling tanks to digestion tanks in gallons as obtained from measurement or length of pumping time and actual pump output.

18. DIGESTED SLUDGE DRAWN TO BEDS, GALLONS.—Enter the amount of sludge drawn from digestion tank to sludge drying beds in gallons on the day drawn.

Item

19. SEWAGE RECEIVED FROM OTHERS, 1,000 GAL.—Enter the total amount of sewage treated during the month in the plant which originated off the installation. If meters are not available, estimate the amount.

20. POPULATION.—Enter the average installation population (*residents plus ½ nonresidents*) served by the plant.

21. SCREENINGS AND GRIT REMOVAL.—Enter the total volume, in cubic feet of screenings and grit removed during the month in appropriate spaces.

22. SLUDGE DRAWN TO BEDS.—Enter average analytical results of sludge drawn to beds during the month in appropriate spaces. Where solids determinations are not made enter observed description such as heavy, thin, etc.

23. DRIED SLUDGE REMOVED.—Enter the total volume of sludge as removed from the drying beds during the month in cubic yards and also the average time in days on the beds cleaned.

24. DIGESTER NO. ... SURVEY.—Report for each separate digestion tank the result of the monthly measurement in feet referred to the overflow elevation.

25. IMHOFF AND CLARIGESTER SURVEY.—Enter the weekly sounding of sludge level in the digestion compartment of Imhoff and Clarigester tanks referred to the slot elevation. Only one reading is possible in Clarigester tanks.

*U.S. GPO: 1993-300-616/89040

Job specifications for each job at Plant

US Army Corps
of Engineers

OPERATIONS AND MAINTENANCE MANUAL

OPERATOR ASSISTANCE PROGRAM

Wastewater Treatment Plant

Fort Lewis, Washington

CONTRACT NO. DACA31-87-D-0042
DELIVERY ORDER 0001

ES ENVIRONMENTAL SERVICES
1301 MARINA VILLAGE PKWY, #205, ALAMEDA, CALIFORNIA 94501
(b)(6)

ES$_2$

OPERATIONS AND MAINTENANCE MANUAL

FORT LEWIS

WASTEWATER TREATMENT PLANT

Prepared for

U.S. ARMY CORPS OF ENGINEERS
Center for Public Works
Directorate of Engineering
7701 Telegraph Road
Alexandria, Virginia 22315-3862

JANUARY 1995

Prepared by

ES ENVIRONMENTAL SERVICES
1301 Marina Village Parkway, #205
Alameda, California 94501

CHAPTER 9

MANPOWER REQUIREMENTS

The wastewater treatment plant at Fort Lewis is staffed 24 hours a day, 7 days a week. Plant operators work on overlapping 10-hour shifts. The plant staff, comprised of a wage leader, lab technician, and seven (7) operators, is responsible for operating both the wastewater treatment facility and influent pump stations.

Operators at the wastewater treatment plant are responsible for the following duties:

1. Process monitoring and control.
2. Performing and recording routine preventive maintenance.
3. Reporting mechanical and process problems to the Utilities Chief.
4. General housekeeping functions.
5. Recording all normal and abnormal conditions in the plant Daily Log.
6. Collecting samples and performing some laboratory analyses.

CERTIFICATION PROGRAM

The primary purpose of the Wastewater Treatment Plant Certification and Operator Certification program is to provide for the effective operation of wastewater treatment plants which are governmentally owned or operated.

QUALIFICATIONS

Listed below are job descriptions for a variety of operator categories and a job description for a Physical Sciences Technician.

I. Utility Systems Operator Foreman (WSO8)

a. Supervisory Controls. Works under the direction of Chief, Sanitation Branch, who provides general instructions, standard procedures, overall priorities and policies and relies upon the incumbent to control work operations and

accomplish an adequate quantity and quality of work. Work is reviewed for efficient and economical accomplishment within priorities and controls received.

b. Major Duties. Serves as Foreman over the Sewage and Water Plant Section (organization, function, shop), exercising full supervisory responsibility for control over work operations involving all subordinate workers. The occupation and nonsupervisory grade level which best reflects the nature of the overall work operation supervised is Sewage Disposal & Water Treatment Plant (title, code, and grade), Operators, WG-5408/5409-09.

(1) Planning. Plans weekly or monthly work schedules and sequence of operations for subordinates. Establishes deadlines and priorities on the basis of general work schedules and methods and policies established by higher levels of supervision. Determines how many assignments can be done concurrently, how many must be delayed, and the number and types of employees needed, considering skills, personnel, materials, and equipment available and required.

(2) Work Direction. Selects workers and assigns tasks to be performed. Explains work requirements, methods and procedures, instructs subordinates in new procedures, and provides advice when problems arise. Reviews work in progress or on completion. Adjusts plans, assignments, and methods as necessary to accomplish the work as effectively and economically as feasible. Determines equipment, supplies, and equipment at work site as needed. Coordinates work of unit with other units that may be involved.

(3) Administration. Schedules and approves leave of subordinates. Sets performance requirements and makes formal and informal performance appraisals. Counsels employee problems; adjusts informal complaints through discussion with employees and union representatives. Takes informal corrective action on conduct or performance problems. Initiates proposals for disciplinary action where needed. Promotes the participation of subordinates in programs such as the suggestion program and cost reduction program. Maintains production reports and records. Periodically reviews subordinates' Job Descriptions for currency and accuracy; reports detailing of employees to jobs other than their own; initiates or participates in review of positions to eliminate unnecessary ones and achieve optimum content in those remaining. Complies with the requirements of the Equal Employment Opportunity program by providing managerial support, leadership, and positive involvement in the program.

(4) Vehicle Operation. Must be able to operate a Government vehicle up to 3/4 ton and possess a valid license for the operation of such vehicles.

(5) Contracts. Performs inspection of Utilities Service contract work including open-end and lump sum type which are related to the functional area.

The contractor's work is inspected for compliance with specifications and time schedules; for use of acceptable workmanship methods and practices; and for use of specified or acceptable materials. Verifies that the contractor and contractor's work forces follow the safety procedures prescribed either directly by the contract or by other applicable regulations. Prepares and maintains necessary reports on contracts assigned to him including work performed and quality of performance. Makes oral or written reports to supervisor regarding unacceptable practices or methods identified during inspection.

c. Performs Other Duties as Assigned. Assignment of duties for more than 30 days other than those permanently assigned constitutes a misassignment and should be referred through supervisory channels to the Civilian Personnel Office.

l. Utility Systems Operator Leader (WL09)

a. Supervisory Controls. Works under the supervision of a foreman who issues instructions on work sequence, procedures, methods, and deadlines and relies upon the incumbent to assure that work assignments are carried out by other members of the group. Supervisor is available to provide information or decisions regarding problems that may arise during work. Overall work operations are reviewed for status and progress, cause of delays and other problems.

b. Major Duties. Serves as working leader of 3 or more employees in accomplishing trades and labor work. The highest level of nonsupervisory work led is Sewage Disposal Plant Operator, WG-5408-09; Utility Systems Operator, WG-5406-90. Primary areas of responsibility are operation and maintenance of wastewater treatment and disposal facilities, operation and maintenance of water treatment, storage and distribution control facilities including wells, pumping stations, storage reservoirs, and pressure regulation stations, and operation of swimming pools, ensuring adequate water treatment is provided. Performs duties on shifts.

(1) Leads personnel in accomplishment of work assignments. Provides work instructions to fellow workers as received from supervisors or work documents. Demonstrates proper work methods and procedures as defined by technical manuals, regulations, SOP's, and accepted trade practices for efficient accomplishment of work tasks. Initiates work assignments. Works along with other employees and sets pace. Answers workers' questions regarding procedures, policies, written instructions, and other directives (e.f., technical orders).

(2) Oversees the accomplishment of work assignments. Ensures that there is enough work to keep everyone in work crew gainfully busy. Checks

work in progress and when finished for compliance with supervisor's instructions on work sequence, procedures, methods and deadlines, and urges or advises other employees to follow supervisor's instructions and to meet deadlines. Provides information to supervisor on status and progress of work, causes of delays, and overall work operations and problems (e.g., additional on-the-job training requirements for individual employees).

(3) Coordinates the plans, materials and tools required to accomplish work assignments. Ensures other employees have all materials and equipment required to effectively perform tasks. Ensures that required stock is obtained from supply locations.

(4) Assures that established safety regulations, procedures, and policies are complied with in performing work assignments. Observes work performance by fellow workers to ensure safety standards are followed. Identifies hazardous or unsafe conditions and takes corrective action through coordination with supervisor to eliminate or minimize the hazards. Makes recommendations on safety policies and procedures to be utilized by the shop.

(5) Must be able to operate a Government vehicle up to 1-ton and possess a valid license for the operation of such vehicles.

(6) Performs inspection of Utilities Service contract work including open-end and lump sum type which are related to the functional area. The contractor's work is inspected for compliance with specifications, codes, and time schedules; for use of acceptable workmanship methods and practices; and for use of specified or acceptable materials. Verifies that the contractor and contractor's work force follow the safety procedures prescribed directly by the contract or by other applicable regulations. Prepares and maintains necessary reports on contracts assigned to him including work performed and quality of work performance. Makes oral or written reports to supervisor regarding unacceptable practices or methods identified during inspection.

c. Performs Other Duties as Assigned. Assignment of duties for more than 30 days other than those permanently assigned constitutes a misassignment and should be referred through supervisory channels to the Civilian Personnel Office.

III. Utility Systems Operator (WG09)

a. Supervisory Controls. Works under general supervision of a foreman who assigns work on a shift basis and furnishes instructions and guidance in writing or through the previous shift operator on non-routine procedures and operating problems. Follows standard plant operating procedures working independently

in the absence of supervisor. Work is reviewed for accomplishment of assigned shift operations.

b. Major Duties

(1) Serves as operator of a sewage treatment plant with responsibility as operator in charge on a regular recurring basis for all operations and maintenance on one shift when foreman is not present (usually at night or on weekends). Performs all necessary operations, maintenance, and repairs to sewage treatment plant to achieve and maintain maximum treatment efficiency. Determines seriousness of problems (i.e., equipment and process failures and malfunctions) which may occur and independently takes appropriate action to correct problems and maintain treatment efficiency by shutdown of plant processes, removing equipment and processes from operation, making repairs, and converting processes from automatic mode to manual mode. Exercises responsibility for relaying instructions to next shift operator regarding plant operations, problems encountered, action taken, and similar matters. Plant provides for complete sewage treatment consisting of pretreatment, primary treatment, secondary treatment, tertiary treatment, and sludge treatment and disposal. Operates valves, pumps, gates, comminutors, time clocks, and other controls and equipment to route sewage through the various location in the treatment cycle and performs simple physical and chemical analysis of sewage characteristics (i.e., temperature, ph, dissolved oxygen, chlorine, etc.); adjusts equipment and processes to control physical, chemical, and bacteriological characteristics of sewage. Performs operator maintenance and lubrication on pumps, motors, filters, clarifiers, sludge collectors, comminutors, screens, valves, gates, and other facilities; maintains basic records and/or logs of operation and maintenance data. Trains lower grade personnel in plant operation; and observes all safety rules, regulations, and procedures.

(2) Serves as operator of water treatment facilities, wells, pressure regulation stations, and pumping stations relative to potable water plants, systems and facilities with responsibility as operator in charge on a regular and recurring basis for all operations and maintenance on a shift when the foreman is not present (usually at night or on weekends). Performs all necessary operations, maintenance, and repairs to potable water plants, systems, and facilities to achieve and maintain maximum operational and treatment efficiency. Determines seriousness of problems which occur and independently takes appropriate action. Operates a number of water plants, systems and facilities including wells with independent treatment facilities, pressure regulation valve stations, water storage reservoirs, potable water distribution systems, and chlorination facilities. Tours water systems, reservoirs, and control stations observing and recording readings from pressure and flow gauges, water meters, reservoir depth gauges; maintaining required pressure and chlorination by opening or closing valves and adjusting hypochlorinators. Performs preventive

maintenance of equipment, lubricates motors, maintains and adjusts pressure regulators, and maintains building and grounds in orderly condition. Replaces/repairs pumps, worn pump parts, air volume controls, valves, gauges, meters, chlorinators and hypochlorinators including diaphragms, injector tubes, impellers, and related parts. Replaces original equipment to include minor interior and exterior plumbing and assists plumbers in the installation, replacement, and repair of pipes and tubing. Orders materials and spare parts necessary for the proper maintenance of equipment. Calculates and mixes chlorine solution to maintain specified chlorine residual. Performs water analysis to determine physical and chemical characteristics of water including pH, chlorine residual, and hardness. Completes monthly water reports as required. Adjusts chlorinators as necessary based on results of water analysis.

(3) Serves as operator of water treatment facilities at two swimming pools with responsibility as operator in charge on a regular and recurring basis for all operations and maintenance on a shift when the foreman is not present (usually at night or weekends). Performs all necessary operations, maintenance, and repairs to swimming pool water treatment systems to achieve and maintain operational and treatment efficiency. Determines seriousness of problems which occur and independently takes appropriate action. Treats swimming pool water by operation of pressure filters, addition of pH control chemicals, and addition of chlorine. One of the pools is an outdoor pool while the second is located indoors. Treatment equipment consists of pumps, pressure filters, gauges, regulators, and chlorinators. Checks and maintains pumps and associated equipment. Checks quality of water by visual observation and quality analysis including testing for turbidity, pH, and chlorine. Adjusts treatment facilities to maintain water quality within prescribed limits. Delivers chlorine gas in 150 lb. cylinders and makes proper connections to chlorinators.

c. Performs Other Duties as Assigned.

d. Skills and Knowledge. Must be familiar with and have an understanding of the theory and the principles of water and wastewater treatment. Must be familiar with and skilled in the operation/maintenance of pumps, valves, gauges, meters, and other equipment normally utilized in water and wastewater treatment systems. Must be able to operate and maintain water and wastewater treatment facilities to provide the treatment necessary to comply with applicable standards and to make adjustments to correct upsets in treatment processes. Must be skilled in reading meters, gauges, and charts, recording the readings and consolidating into reports. Must have knowledge and be skilled in handling of chemicals. Must be familiar with the potential hazards inherent to water and wastewater treatment facilities and possess the knowledge of safety measures and precautions that are required at these facilities. Must be able to operate Government vehicles up to one ton and possess a valid license for the operation of such vehicles.

e. Responsibility. Works under general supervision. Makes independent judgements and decisions within the framework of established practices, processes, and procedures. Checks equipment to detect and correct malfunction. When acting as shift operator in charge, is responsible for following instructions from supervisor or relayed by the previous shift operator; and for making judgements and determinations concerning plant operations without technical assistance and advice. Complies with, observes, and enforces all safety policies and programs.

f. Physical Effort. Work requires considerable walking, standing, and some climbing. Light-to-moderate effort is used to turn valves and controls. Unloads, stacks, and empties chemicals. Lifts up to 150-lb. chlorine gas cylinders. Occasionally opens and closes heavy valves and lifts heavy equipment and tools. Sometimes works on heavy equipment in strained positions. Walks continuously around plant while checking equipment.

g. Working Conditions. Works inside and outside in all kinds of weather. Is exposed to infections and diseases such as typhoid, paratyphoid, and dysentery, while cleaning equipment or shoveling sludge. Presence of gases and fumes such as methane, chlorine, and carbon monoxide requires the use of safety equipment such as gas masks or respirators. Is exposed to danger of falling into open tanks, manholes, and scum chambers. Is exposed to cuts, bruises, and broken bones resulting from accidents. Works with running motors, pumps, machinery, noises, and poor ventilation. Is subject to cuts, bruises and broken bones while working around machinery. Involves traveling to pumping stations in all types of weather. Is exposed to poisonous chemicals and compounds. Protective clothing is worn when handling caustic and dangerous chemicals. There is prolonged walking and standing.

Assignment of duties for more than 30 days other than those permanently assigned constitutes a misassignment and should be referred through supervisory channels to the Civilian Personnel Office.

IV. Physical Science Technician (GS07)

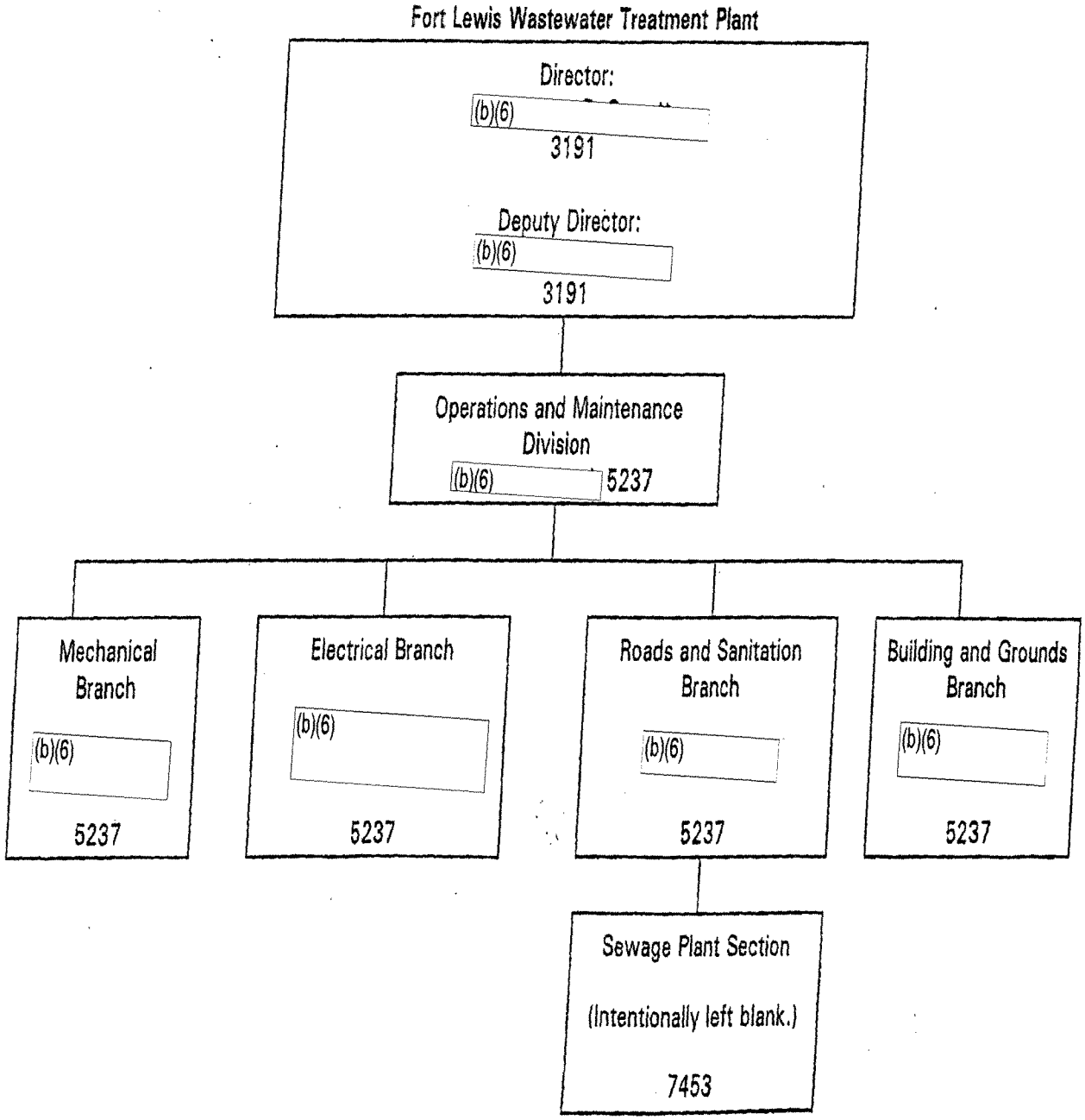
a. Supervisory Controls. Works under the direction of the Sewage Disposal and Water Treatment Plant Foreman who provides instructions, standard procedures, priorities and policies and relies upon the incumbent to control work operations and accomplish an adequate quantity and quality of work. Work is reviewed for efficient and economical accomplishment within priorities and controls received.

b. Major Duties. Responsible for the complete water and wastewater plant laboratory analysis requirements. Collects samples of water and wastewater at prescribed stages in the treatment cycle. Minimum measurement and analysis

requirements include but are not limited to ph, conductivity, turbidity, color, dissolved oxygen, alkalinity, acidity, hardness, suspended solids, dissolved solids, total solids, volatile solids, chlorine, biochemical oxygen demand, chemical oxygen demand, total phosphorous, oil and grease, cadmium and a full range of bacteriological analysis. Responsible for the preparation of standard calibration solutions and titrants from basic reagent chemicals. Responsible for ordering necessary equipment and chemicals in a timely manner to insure a continuous analysis program. Maintains all laboratory and sampling equipment and glassware. Maintains records of all laboratory analysis performed and completes all necessary reports.

c. Performs Other Duties as Assigned.

d. Working Conditions. Work is performed inside and outside; occasionally subject to damp, odorous and varied weather conditions; possible infection from contact with sewage.


Fort Lewis Wastewater Treatment Plant
Director:
(b)(6)
3191
Deputy Director:
(b)(6)
3191
Operations and Maintenance Division
(b)(6)
5237
Mechanical Branch
(b)(6)
5237
Electrical Branch
(b)(6)
5237
Roads and Sanitation Branch
(b)(6)
5237
Building and Grounds Branch
(b)(6)
5237
Sewage Plant Section
(Intentionally left blank.)
7453

Interview Data Sheet

Name:	(b)(6)	Date:	**4/26/2007**
Rank:	**GS-09**	Time:	**1300**
Organization:	**DPW**	Location:	**WWTP Conference Room**
Phone:	(b)(6)	Email:	
Union Representative:	**AFGE 1504**	Union POC Info:	(b)(6)

Sworn Statement	Privacy Act Advisement	Rights Waiver Certificate
☒ YES ☐ NO	☐ YES ☒ NO	☐ YES ☒ NO

Documents Requested:

None

(b)(6) provided a number of documents on 10 MAY 07

Interview Notes:

Refer to question/response format on Sworn Statement. Any information provided not relevant to sworn statement questions will be listed below this note for future reference/follow up.

For use of this form, see AR 190-45; the proponent agency is PMG.

PRIVACY ACT STATEMENT

AUTHORITY:	Title 10 USC Section 301; Title 5 USC Section 2951; E.O. 9397 dated November 22, 1943 (SSN).
PRINCIPAL PURPOSE:	To provide commanders and law enforcement officials with means by which information may be accurately identified.
ROUTINE USES:	Your social security number is used as an additional/alternate means of identification to facilitate filing and retrieval.
DISCLOSURE:	Disclosure of your social security number is voluntary.

1. LOCATION	2. DATE (YYYYMMDD)	3. TIME	4. FILE NUMBER
Waste Water Treatment Plant, Conference Room	2007/04/26	1300	N/A

5. LAST NAME, FIRST NAME, MIDDLE NAME	6. SSN	7. GRADE/STATUS
(b)(6) (b)(6)	(b)(6)	GS-09/DA Civilian

8. ORGANIZATION OR ADDRESS

Directorate of Public Works (DPW), Fort Lewis, WA 98433

9. (b)(6), WANT TO MAKE THE FOLLOWING STATEMENT UNDER OATH:

INTERVIEWER QUESTION: What is your official position title, series and grade?
INTERVIEWEE RESPONSE: I am a GS-09 STEP 10, Biological Science Technician (b)(6)

INTERVIEWER QUESTION: Did anyone in your management chain of command notify you that there would be a job announcement from 23 – 27 DEC 06 for a competitive temporary promotion as a Utility systems Repairer-Operator Supervisor, WS-4742-10?
INTERVIEWEE RESPONSE: No. Employees have no access to an internet connected computer in the workplace. We do have a fax and they could have faxed us. The supervisor could have posted a notice on the board. Neither one was done. (b)(6)

INTERVIEWER QUESTION: If you had been aware of the vacancy announcement for a competitive temporary promotion as a Utility system Repairer-Operator Supervisor, WS-4742-10, would you have self nominated for the position?
INTERVIEWEE RESPONSE: Yes. (b)(6)

INTERVIEWER QUESTION: Did you load a resume in the Army Resume Builder (Resumix) anytime between January 2005 and December 2006?
INTERVIEWEE RESPONSE: Yes. (b)(6)

INTERVIEWER QUESTION: Are you familiar with the USA Jobs website or the Army CPOL vacancy website?
INTERVIEWEE RESPONSE: Yes. I go (b) it every night. (b)(6)

INTERVIEWER QUESTION: Did you regularly sear☑ job vacancies on either the USA Jobs website or the Army CPOL vacancy website prior to December 2006?
INTERVIEWEE RESPONSE: No, because I had no personal computer at home and just acquired it in January 2007. (b)(6)

10. EXHIBIT	11. INITIALS OF PERSON MAKING STATEMENT	PAGE 1 OF 7 PAGES
	(b)(6)	(b)(6)

ADDITIONAL PAGES MUST CONTAIN THE HEADING "STATEMENT OF ____ TAKEN AT ____ DATED ____"

THE BOTTOM OF EACH ADDITIONAL PAGE MUST BEAR THE INITIALS OF THE PERSON MAKING THE STATEMENT, AND PAGE NUMBER MUST BE BE INDICATED.

STATEMENT OF (b)(6) TAKEN AT WWTP, Conf Rm DATED 2007/04/26

9. STATEMENT (Continued)

INTERVIEWER QUESTION: Did you establish an automatic email notification client through either the USA Jobs website or the Army CPOL vacancy website prior to December 2006?
INTERVIEWEE RESPONSE: NO. I don't know how to do it. (b)(6)

INTERVIEWER QUESTION: Did (b)(6) WCPOC to request consideration after the vacancy announcement was closed?
INTERVIEWEE RESPONSE: No.

INTERVIEWER QUESTION: Do you believe you are qualified for the position of Utility systems Repairer-Operator Supervisor, WS-4742-10?
INTERVIEWEE RESPONSE: I believe I'm qualified. I am a certified operator III, my evaluation is done on the Se Dor Civilian Rating System, I am a government purchase card holder (Service & Supply), I am a hazmat technician, and I do Scheduling, answer phones, and don't start in the absence of supervisor. (b)(6)

INTERVIEWER QUESTION: Are you aware of anyone receiving advance notification from anyone in your management chain of command that there would be a job announcement from 23 – 27 DEC 06 for a competitive temporary promotion as a Utility systems Repairer-Operator Supervisor, WS-4742-10? If yes, who received the advance notification and how did you learn this information?
INTERVIEWEE RESPONSE: After the fact, I became aware that someone had received advance notice, (b)(6) (b)(6) gave a copy of the vacancy announcement to (b)(6) and told her to call (b)(6) to let him know about the vacancy and not to let (b)(6) know about the vacancy. (b)(6)

INTERVIEWER QUESTION: Did anyone notify you that ☐ Veith A. (b) was selected for the competitive temporary promotion as a Utility systems Repairer-Operator Supervisor, WS-4742-10?
INTERVIEWEE RESPONSE: Nobody down here was notified at all. No notice whatsoever. (b)(6) notified us verbally. (b)(6)

INTERVIEWER QUESTION: Do you believe someone else was more qualified than ☐ Veith A. Long for the position of Utility systems Repairer-Operator Supervisor, WS-4742-10?
INTERVIEWEE RESPONSE: Yes, I do. I thought that (b)(6) was more qualified as well as (b)(6) and (b)(6) (b)(6)

INTERVIEWER QUESTION: Is there anything you would like to add regarding this specific competitive temporary promotion action?
INTERVIEWEE RESPONSE: My concern is why (b)(6) is occupying the temp position instead of (b)(6). While (b)(6) is a good manager who listens he does not have the technical expertise to make the decisions a Supervisor/operator needs to make to run a Waste water Treatment Plant. (b)(6)

(b)(6)

INITIALS OF PERSON MAKING STATEMENT (b)(6)

STATEMENT OF (b)(6) TAKEN AT WWTP, Conf Rm DATED 2007/04/26

9. STATEMENT (Continued)

INTERVIEWER QUESTION: Are you familiar with the maintenance requirements for the Waste Water Treatment Plant (WWTP) Compressor?
INTERVIEWEE RESPONSE: Yes. (b)(6)

INTERVIEWER QUESTION: What oil type/weight does the WWTP Compressor require?
INTERVIEWEE RESPONSE: It requires a 30 weight, I think. However, it could be 90. It is whatever the manufacture specifications require. (b)(6)

INTERVIEWER QUESTION: Is there a document or publication which specifies the oil type/weight to be used in the WWTP Compressor?
INTERVIEWEE RESPONSE: Yes, the manufacture manual. ONM manual. (b)(6)

INTERVIEWER QUESTION: Have you ever used an oil type/weight in the WWTP Compressor that was different from the required oil type/weight?
INTERVIEWEE RESPONSE: Yes. When I fill in for operations, I have. (b)(6)

INTERVIEWER QUESTION: Have you ever observed another individual use an oil type/weight in the WWTP Compressor that was different from the required oil type/weight?
INTERVIEWEE RESPONSE: We have all used the wrong oil not knowing it was the wrong oil. (b)(6)

INTERVIEWER QUESTION: What is the purpose of the WWTP daily logs?
INTERVIEWEE RESPONSE: legal document to enter in if anything unusual happens at the plant, plus daily rounds. (b)(6)

INTERVIEWER QUESTION: Who is responsible for updating the WWTP daily logs?
INTERVIEWEE RESPONSE: Every operator, including the manager (b)(6)

INTERVIEWER QUESTION: Is there written guidance on how to properly fill out WWTP daily logs?
INTERVIEWEE RESPONSE: There used to be SOPs, but they were removed from operators board by (b)(6). Also posted in Lab Bench log. (b)(6)

(b)(6)

INITIALS OF PERSON MAKING STATEMENT (b)(6)

STATEMENT OF (b)(6) TAKEN AT WWTP, Conf Rm DATED 2007/04/26

9. STATEMENT (Continued)

INTERVIEWER QUESTION: Has anyone in your management chain of command ever trained you on how to fill out WWTP daily logs?
INTERVIEWEE RESPONSE: No. He simply gave us a paper with written directions. (b)(6)

INTERVIEWER QUESTION: Have you ever written (b)(6) in the WWTP daily logs that was not directly related to WWTP operations?
INTERVIEWEE RESPONSE: Not to my knowledge. (b)(6)

INTERVIEWER QUESTION: Have you ever observed anyone writing something the WWTP daily logs that you felt at the time was inappropriate?
INTERVIEWEE RESPONSE: yes. (b)(6), (b)(6), (b)(6), (b)(6) and probably me. wrote unnecessary information in logs. (b)(6)

INTERVIEWER QUESTION: Who has access to the WWTP daily logs?
INTERVIEWEE RESPONSE: We all do. (b)(6)

INTERVIEWER QUESTION: Where are the WWTP daily logs stored?
INTERVIEWEE RESPONSE: Current log sits on operators desk and lab tech replaces with a new log when necessary. Old logs stored on bottom of file cabinet with all plant information. (b)(6)

INTERVIEWER QUESTION: How long are the historical WWTP daily logs retained?
INTERVIEWEE RESPONSE: Indefinitely on the premises. (b)(6) (b)(6)

INTERVIEWER QUESTION: What procedures are normally followed when sludge is removed from a digester?
INTERVIEWEE RESPONSE: you build a bed, transfer through process of operation of valves, fill the bed and remove samples at three intervals: beginning, middle and end and brought to the lab for analysis (b)(6)

INTERVIEWER QUESTION: Are there written procedures for removing sludge from a digester?
INTERVIEWEE RESPONSE: yes there is an SOP that is also gone because it was removed by (b)(6) (b)(6)

(b)(6)

INITIALS OF PERSON MAKING STATEMENT (b)(6)

STATEMENT OF (b)(6) TAKEN AT WWTP, Conf Rm DATED 2007/04/26

9. STATEMENT (Continued)

INTERVIEWER QUESTION: Were you on duty on or about 14 November 2006 when Cascade personnel moved sludge from digester number one to the drying beds?
INTERVIEWEE RESPONSE: Should read Alki not Cascade. Yes, I was on duty. (b)(6)

INTERVIEWER QUESTION: Were the normal procedures for removing sludge from a digester followed on or about 14 November 2006 when Cascade personnel moved sludge from digester number one to the drying beds?
INTERVIEWEE RESPONSE: Yes, the normal procedures were followed. (b)(6)

INTERVIEWER QUESTION: Are there any circumstances under which it would be reasonable not to test sludge being moved from a digester to a drying bed?
INTERVIEWEE RESPONSE: No. (b)(6)

INTERVIEWER QUESTION: Were you on duty when repairs were made to the swing arm on the floating lid of digester number three?
INTERVIEWEE RESPONSE: Yes. (b)(6)

INTERVIEWER QUESTION: Who made the repairs?
INTERVIEWEE RESPONSE: The repairs were made by (b)(6), (b)(6), and (b)(6), (b)(6)

INTERVIEWER QUESTION: What procedures are normally followed when repairs to the swing arm are required?
INTERVIEWEE RESPONSE: Have a crane, a gas sniffer, non-spark tools, at least three people present, personnel present within plant notified, notify fire department because of methane gas. Plant personnel to be given FB-gas pass and used qualified personnel, NWTP personnel. Ensure logged in log book. (b)(6)

INTERVIEWER QUESTION: Did the individual who made the repairs to the swing arm following the normal repair procedures?
INTERVIEWEE RESPONSE: No. (b)(6)

INTERVIEWER QUESTION: Was anyone injured during the repairs to the swing arm?
INTERVIEWEE RESPONSE: No, but all come close to being blown up. One spark and we all would have been blown up. Two contractors working on boiler were asked to leave. One provided statement which was forged. (b)(6) notified (b)(6) and safety. (b)(6)

(b)(6)

INITIALS OF PERSON MAKING STATEMENT (b)(6)

STATEMENT OF (b)(6) TAKEN AT WWTP, Conf Rm DATED 2007/04/26

9. STATEMENT (Continued)

INTERVIEWER QUESTION: Do you believe the way in which the repairs of the swing arm were handled was unsafe?
INTERVIEWEE RESPONSE: Yes, unsafe. (b)(6)

INTERVIEWER QUESTION: Did you report a safety violation related to the repairs of the swing arm to anyone in your management chain of command or to anyone at the Installation Safety Office?
INTERVIEWEE RESPONSE: No. (b)(6)

INTERVIEWER QUESTION: What procedures are normally followed during a sewage back up?
INTERVIEWEE RESPONSE: Water & Sewage notifies us so we know to expect excessive flow. (b)(6)

INTERVIEWER QUESTION: Are there written procedures for a sewage back up?
INTERVIEWEE RESPONSE: Not here but at Water & Sewage. (b)(6)

INTERVIEWER QUESTION: Were you on duty on or about 3 January 2007 when there was a sewage back up?
INTERVIEWEE RESPONSE: Yes. (b)(6)

INTERVIEWER QUESTION: Were the normal procedures followed during the sewage back up?
INTERVIEWEE RESPONSE: Yes we followed the procedures. (b)(6)

INTERVIEWER QUESTION: Does ☑ WWTP ☐ a 24/7 manning requirement?
INTERVIEWEE RESPONSE: Yes and required by permit. (b)(6)

INTERVIEWER QUESTION: Are there ever occasions when the WWTP is staffed by a (b) employee?
INTERVIEWEE RESPONSE: Yes, all the time. (b)(6)

(b)(6) (b)(6)

INITIALS OF PERSON MAKING STATEMENT (b)(6)

STATEMENT OF (b)(6) TAKEN AT WWTP, Conf Rm DATED 2007/04/26

9. STATEMENT (Continued)

INTERVIEWER QUESTION: Have you ever known the WWTP to be left unattended?
INTERVIEWEE RESPONSE: Yes, by (b)(6), (b)(6), (b)(6)

INTERVIEWER QUESTION: Have you ever left the WWTP unattended?
INTERVIEWEE RESPONSE: No, I refuse to (b)(6)

INTERVIEWER QUESTION: What procedures are normally followed to treat water at Donovan Reservoir?
INTERVIEWEE RESPONSE: Don't know (b)(6)

INTERVIEWER QUESTION: Are there written procedures for treating water at Donovan Reservoir?
INTERVIEWEE RESPONSE: Don't know. (b)(6)

INTERVIEWER QUESTION: Have you ever observed an individual not follow the normal procedures for treating water at Donovan Reservoir?
INTERVIEWEE RESPONSE: Don't know. (b)(6)

INTERVIEWER QUESTION: Who in your management chain of command is responsible for making site visits to the WWTP?
INTERVIEWEE RESPONSE: No one, supervisor should visit regularly on a daily basis. Should be on-site. (b)(6)

INTERVIEWER QUESTION: How regularly are they required to make site visits?
INTERVIEWEE RESPONSE: Daily. (b)(6)

INTERVIEWER QUESTION: During the time period January 2006 to January 2007, how often did individuals from your management chain of command visit the WWTP?
INTERVIEWEE RESPONSE: Sporadically, come in, harass us and leave. (b)(6)

(b)(6) (b)(6)

INITIALS (b)(6) TEMENT

STATEMENT OF (b)(6) TAKEN AT WWTP, Conf Rm DATED 2007/04/26

9. STATEMENT (Continued)

INTERVIEWER QUESTION: Have you ever been dissatisfied with the frequency of visits by members of your management chain of command?
INTERVIEWEE RESPONSE: No. (b)(6)

INTERVIEWER QUESTION: Have you ever requested a member of your management chain of command conduct a site visit?
INTERVIEWEE RESPONSE: No. (b)(6)

INTERVIEWER QUESTION: Is there currently a shortage of repair parts or equipment for the WWTP?
INTERVIEWEE RESPONSE: Yes. (b)(6)

INTERVIEWER QUESTION: During the time period January 2006 to January 2007, was there ever a shortage of repair parts or equipment at the WWTP?
INTERVIEWEE RESPONSE: Yes. (b)(6)

INTERVIEWER QUESTION: Who is responsible for monitoring repair part and equipment inventories?
INTERVIEWEE RESPONSE: All operators and myself (b)(6)

INTERVIEWER QUESTION: Who is responsible for identifying repair parts and equipment that needs to be ordered to replenish on hand inventories at the WWP?
INTERVIEWEE RESPONSE: All operators and myself (b)(6)

INTERVIEWER QUESTION: If you need a repair part or piece of equipment that is not available in on hand inventories, what procedures do you follow to request/order the part or piece of equipment?
INTERVIEWEE RESPONSE: Fill out Exhibit 6, get signature approval from (b)(6) (b)(6) (b)(6)

INTERVIEWER QUESTION: Have you ever submitted a request for a repair part or piece of equipment and had the request denied? If yes, did management explain why the request was denied?
INTERVIEWEE RESPONSE: No. If there is no funds then can't get. Requests don't get past (b)(6) to management. (b)(6)

(b)(6) (b)(6)

INITIALS OF PERSON MAKING STATEMENT (b)(6)

STATEMENT OF (b)(6) TAKEN AT W # 12, Conf Rm. DATED 20070426

9. STATEMENT *(Continued)*

INTERVIEWER QUESTION: Are you aware of any deficiencies at the portable latrine dumping site at North Fort?
INTERVIEWEE RESPONSE: Don't Know (b)(6)

INTERVIEWER QUESTION: How did you learn of these deficiencies?
INTERVIEWEE RESPONSE: Not applicable (b)(6)

INTERVIEWER QUESTION: Did you notify anyone in your management chain of command of these deficiencies?
INTERVIEWEE RESPONSE: Not applicable (b)(6)

INTERVIEWER QUESTION: Do you have any documents you would like to provide related to these questions?
INTERVIEWEE RESPONSE: I will furnish you with documents (b) a later date. (b)(6)

AFFIDAVIT

I, (b)(6), HAVE READ OR HAVE HAD READ TO ME THIS STATEMENT WHICH BEGINS ON PAGE 1, AND ENDS ON PAGE 9. I FULLY UNDERSTAND THE CONTENTS OF THE ENTIRE STATEMENT MADE BY ME. THE STATEMENT IS TRUE. I HAVE INITIALED ALL CORRECTIONS AND HAVE INITIALED THE BOTTOM OF EACH PAGE CONTAINING THE STATEMENT. I HAVE MADE THIS STATEMENT FREELY WITHOUT HOPE OF BENEFIT OR REWARD, WITHOUT THREAT OF PUNISHMENT, AND WITHOUT COERCION, UNLAWFUL INFLUENCE, OR UNLAWFUL INDUCEMENT.

(b)(6)

(b)(6)

WITNESSES: (b)(6)

(b)(6)

(b)(6)

(b)(6)

ORGANIZATION OR ADDRESS

ORGANIZATION OR ADDRESS

Subscribed and sworn to before me, a person authorized by law to administer oaths, this 26th day of April, 2007 at WTU Conference Room, Fort Lewis, WA

(Signature of Person Administering Oath)

GRETA POWELL
Chief, Security Division

(Typed Name of Person Administering Oath)

AR 15-6 Investigating Officer

(Authority To Administer Oaths)

INITIALS OF PERSON MAKING STATEMENT

AR 15-6 Investigation
Investigating Officer: Greta M. Powell, GG-13/Chief, DPTMS Security Division
Appointing Official: COL Cynthia A. Murphy, Garrison Commander

Interview Data Sheet

Name:	(b)(6)	Date:	**4/26/2007**
Rank:	**GS-09**	Time:	**1300**
Organization:	(b)(6)	Location:	**WWTP Conference Room**
Phone:	(b)(6)	Email:	
Union Representative:	**AFGE 1504**	Union POC Info:	(b)(6)

Sworn Statement	Privacy Act Advisement	Rights Waiver Certificate
☐ YES ☐ NO	☐ YES ☐ NO	☐ YES ☐ NO

Documents Requested:

None

Interview Notes:

Refer to question/response format on Sworn Statement. Any information provided not relevant to sworn statement questions will be listed below this note for future reference/follow up.