

RESPONSE TO COMMENTS

Naval Air Station Whidbey Island Seaplane Base Lagoon Wastewater Treatment Plant NPDES Permit WA0026767 May 31, 2018

On March 24, 2018, the U.S. Environmental Protection Agency (EPA) issued a public notice for the reissuance of the Naval Air Station Whidbey Island, Seaplane Base Lagoon Wastewater Treatment Plant (Seaplane Base) National Pollutant Discharge Elimination System (NPDES) Permit No. ID0026767.

This Response to Comments document provides a summary of significant comments received and corresponding EPA responses.

The EPA received comments from:

- Matt Jabloner, Environmental Engineer, Dave Goodchild, Civil Engineer and Jaime Jensen, Environmental Scientist, Seaplane Base.

The following changes to the Final Permit have been made as a result of the comment period:

- The minimum level (ML) in Condition I.B.6. are replaced with DL (detection level) and QL (quantitation level). The ML in Condition I.B.7. are also replaced with DL and QL.
- The determination of the impacts of any leaks from the lagoon on the restored salt water marsh will be combined requiring an evaluation and seepage test of the lagoon
- Corrected the reference document citing information that must be reported with the toxicity tests.

1. Comment: Page 6, I.B. Table 1, For CBOD, TSS, and Fecal Coliform the table specifies a monitoring frequency of twice a week. The Navy requests a frequency of once a week due to low flow of Navy-only wastewater, long detention times and likelihood of seasonal discharge. The Ault Field wastewater treatment plant has a weekly monitoring requirement for these parameters and would be more efficient to run all samples concurrently having contracted operators.

Response: Once per week sampling is less than Washington State's Permit Writers Manual for facilities discharging greater than 0.5 million gallons per day (MGD); the existing permit requires a sampling frequency of twice per week; and the Washington State Department of Ecology (Ecology) 401 Certification requires twice per week sampling. Samples for one of the weekly samples for the Seaplane Base can be run concurrently with the weekly Ault Field sampling.

The comment did not result in a change to the permit.

2. Comment: Total Suspended Solids.

The proposed TSS limits are lower than are currently in-effect. The Navy requests a compliance schedule during the first year of the permit to achieve the TSS limits of 45 and 65 mg/l. The Navy requests interim limits of 75 and 110 mg/l (the existing limits) for the following reasons: (1) The proposed limits are equivalent to the 95th percentile value. As a percentile, this value will occasionally be exceeded. The Navy will need to repair the existing effluent treatment system to achieve the proposed limits. Unfortunately, this system has not been used in years and will require contract action to overhaul or replace. (2) During the first year of the permit the Navy and City of

Oak Harbor will be removing lagoon sludge. The removal process will upset the treatment process and could lead to elevated TSS levels.

Response: The TSS effluent limits are not set at the 95th percentile level. The TSS effluent limits are based on equivalent to secondary treatment standards. The 95th percentile level was calculated as part of the analysis to see if the Seaplane Base qualified for equivalent to secondary TSS limits.

As the fact sheet states the Seaplane Base can qualify for equivalent to secondary limits if it meets all three of the criteria in (40 CFR 133.101(g) and 40 CFR 133.105(d)):

One criterion that must be satisfied is whether TSS effluent concentrations consistently achievable through proper operation and maintenance (§ 133.101(f)) of the treatment works exceed the minimum level of the effluent quality set forth in §§ 133.102(a) and (b).

The regulation at 133.101(f) defines effluent concentrations consistently achievable through proper operation and maintenance as the 95th percentile value for a given pollutant for the 30-day average effluent quality achieved by a treatment works in a period of at least two years and a 7-day average value equal to 1.5 times the value derived from that value.

An analysis of the monitoring data reported from 2011 to 2016 found the 95th percentile 30-day average effluent quality achieved by the treatment works for TSS was 43 mg/L.

The 7-day average TSS value is equal to:

$$1.5 \times 43 \text{ mg/L} = 65 \text{ mg/L}$$

Therefore, the Seaplane Base WWTP does exceed the effluent quality for the 30-day and 7-day average of 30 mg/L and 45 mg/L for TSS, thus meets the first criterion for TSS.

The Seaplane Base also meets the other two criteria for equivalent to secondary treatment standards for TSS. As a result, the EPA established an average monthly limit of 45 mg/L and an average weekly limit of 65 mg/L.

The existing TSS limits in the current permit are as follows: 75 mg/l average monthly limit and 110 mg/L average weekly limit. These limits were established under WAC 173-221-050(2) as alternative state requirements (ASRs). This is allowed as alternative discharge standards for waste stabilization ponds which are the principal treatment process and have less than a two million gallon per day design capacity. During the permit term, these alternative state requirements were removed from WAC 173-221-050(2). As a result, there is no longer a basis for these limits and the EPA calculated alternative technology-based effluent limits pursuant to 40 CFR § 133.103(c).

Over the last five years the maximum average weekly discharge was 58 mg/l and the maximum monthly average was 43 mg/l demonstrating the Navy can achieve these effluent limitations without a compliance schedule. Further, because this is a technology-based requirement, the facility is not eligible for a compliance schedule. As explained in the EPA NPDES Permit Writers' Manual, 2010:

“The final statutory deadline for meeting BPT requirements was July 1, 1977, and the final statutory deadline for meeting BCT and BAT requirements was March 31, 1989. When applying applicable effluent guidelines, permit writers should note that they do not have the authority to extend the statutory deadlines in an NPDES permit; thus, all applicable technology-based requirements (i.e., effluent guidelines and case-by-case limitations based on BPJ) must be applied in NPDES permits without the benefit of a compliance schedule.”

The permit is not changed.

3. Comment: Whole Effluent Toxicity.

Instead of the proposed monitoring the Navy requests quarterly sampling in the fourth year of the permit only. This would support the permit renewal application. The table in the Fact Sheet (page 22) shows acute testing results in 100% effluent. While the trigger to monitor is based on 100% effluent the proposed permit limit is much lower (1.8% effluent). Due to this difference and history of passing the proposed 1.8% limit the requested decreased monitoring frequency is representative of the discharge and protective.

Response: The effluent has demonstrated reasonable potential to violate Washington State's criteria for acute toxicity. As the fact sheet states per WAC 173-205, if the median survival in 100% effluent is less than 80%, or if any individual test result shows less than 65% survival in 100% effluent, then a reasonable potential for acute conditions in the receiving water has been demonstrated. As shown in the fact sheet the Seaplane Base violated the acute toxicity standard between August 2011 and April 2017.

Oak Harbor WWTP Acute WET Test Results as % Survival in 100% Effluent						
Test #	Sample Date	Start Date	Lab	Organisms	Endpoint	% Survival
OH August 2011	8/23/2011	8/24/2011	Nautilus Environmental, LLC	Fathead Minnow	96-hour Survival	0%
OH December 2011	12/6/2011	12/7/2011	Nautilus Environmental, LLC	Ceriodaphnia dubia	48-hour Survival	75%
OH February 2012	2/14/2012	2/15/2012	Nautilus Environmental, LLC	Fathead Minnow	96-hour Survival	38%
OH May 2012	5/1/2012	5/1/2012	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	80%
OH August 2012	8/28/2012	8/28/2012	Ranier Environmental Laboratory	Fathead Minnow	96-hour Survival	0%
OH October 2012	10/16/2012	10/16/2012	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	5%
OH February 2013	2/28/2013	2/28/2013	Ranier Environmental Laboratory	Fathead Minnow	96-hour Survival	17.50%
OH May 2013	5/23/2013	5/24/2013	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	30%
OH August 2013	8/22/2013	8/23/2013	Ranier Environmental Laboratory	Fathead Minnow	96-hour Survival	0%
OH December 2013	12/12/2013	12/13/2013	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	75%
OH February 2014	2/27/2014	2/28/2014	Ranier Environmental Laboratory	Fathead Minnow	96-hour Survival	65%
OH May 2014	5/29/2014	5/30/2014	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	85%
OH August 2014	8/28/2014	8/29/2014	Ranier Environmental Laboratory	Fathead Minnow	96-hour Survival	20%
OH November 2014	11/20/2014	11/21/2014	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	55%
OH March 2015	3/5/2015	3/8/2015	Ranier Environmental Laboratory	Fathead Minnow	96-hour Survival	42.50%
OH June 2015	6/4/2015	6/5/2015	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	20%
OH August 2015	8/3/2015	8/4/2015	Ranier Environmental Laboratory	Fathead Minnow	96-hour Survival	0%
OH October 2015	10/15/2015	10/16/2015	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	25%
RMAR3928	3/17/2016	3/18/2016	Ranier Environmental Laboratory	Fathead Minnow	96-hour Survival	0%
RMAR3929	5/17/2016	5/18/2016	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	0.05%
OH September 2016	9/7/2016	9/8/2016	Ranier Environmental Laboratory	Fathead Minnow	96-hour Survival	0%
JAMM0086	11/1/2016	11/2/2016	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	0%
OH January 2017	1/18/2017	1/19/2017	Ranier Environmental Laboratory	Fathead Minnow	96-hour Survival	7.50%
OH April 2017	4/6/2017	4/7/2017	Ranier Environmental Laboratory	Ceriodaphnia dubia	48-hour Survival	20%
Median						20%

40 CFR § 122.44(d)(1) requires that NPDES permits contain limits on whole effluent toxicity when a discharge causes, has the reasonable potential to cause, or contributes to an excursion above a State’s numeric or narrative water quality criteria for toxicity. Therefore, since there is reasonable potential, an effluent limit was established in the permit.

The effluent limit for acute toxicity is “no acute toxicity detected in a test concentration of 1.8%.” The quarterly toxicity monitoring is required to determine compliance with the effluent limit for acute toxicity. In addition, the 401 Certification requires quarterly compliance monitoring. This is consistent with the existing Seaplane Base NPDES permit.

The permit is not changed.

- 4. Comment:** Permit Application Effluent Testing. Please include in note 5 that the testing is only required in the first four years from the effective date of the permit.

Response: At a minimum, effluent testing data must be based on at least three pollutant scans and must be no more than four and one-half years old [from the date of the application].

The permit is not changed.

5. **Comment:** Page 8, I.B.6, Recommend changing this paragraph to: “For the purposes of reporting on the DMR for a single sample, if a value is less than the DL or QL, the permittee must report “less than {numeric value of the DL or QL}.” “This is more accurate since an estimated value (the MDL) on the DMR would not be used.

Response: The EPA agrees to substitute DLs and QLs for MLs in Condition I.B.6. This is to be consistent with Appendix A which has specifications for allowable analytical methods set as DLs and QLs. The DLs and QLs are consistent with the existing permit and were required by the Department of Ecology during the 401 Certification process and in the 401 Certification.

MDLs will be used on the DMR for single sample reporting as stated in Condition I.B.6.

“For purposes of reporting on the DMR for a single sample, if a value is less than the MDL, the permittee must report ‘less than {numeric value of the MDL}’ and if a value is less than the DL or QL, the permittee must report ‘less than {numeric value of the DL or QL}.’”

For the same reason, in Condition I.B.7. for reporting monthly averages, MLs will be replaced with DLs and QLs.

Detection limit (DL) means the minimum concentration of analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40CFR Part 136, Appendix B

Quantitation Level (QL) also known as Minimum Level of Quantitation (ML) is the lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standards assuming that the lab has used all method-specific sample weights, volume and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounded the result to the number nearest to $(1, 2 \text{ or } 5) \times 10^n$ where n is an integer. (64 FR 30417)

Method Detection Limit (MDL) means the minimum concentration of a substance (analyte) that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte.

The substitutions are justified by the 79 FR 49003 dated August 19, 2014 that states: “EPA is considering the following terms related to analytical method sensitivity to be synonymous: “quantitation limit,’ ‘report limit’ ‘level of quantitation’ and ‘minimum level.’”

6. **Comment:** Page 9, I.C.3.a) states:

“If acute toxicity is detected above the acute toxicity limit described above then the permittee must conduct six more bi-weekly (every two weeks) acute toxicity tests, over a twelve-week period. This accelerated testing shall be initiated within 10-calendar days of receipt of the test results indicating the initial exceedance.”

The “10 calendar days of receipt” timeframe is difficult to achieve due to the complexities of government contracting. Request a 30-day timeframe.

Response: See WAC 173-05-090. To capture the nature of the toxicity, the permittee must resample as soon as possible. A 30-day timeframe is not compliant with the state regulation.

The 1989 “Whole Effluent Toxicity Basic Permitting Principles and Enforcement Strategy” states any violation of a WET limit should be addressed promptly. The EPA considers a prompt period to address any detection of toxicity above the acute toxicity limit to be 10 days to begin accelerated

testing. This is an NPDES permit requirement. As such, the Navy must secure funding, procurement and contracting actions to perform accelerated WET testing within 10 days of acute limit violations.

The 10-day resample requirement is also required by the Ecology 401 Certification.

In addition, the permit allows the EPA the discretion to approve additional time for initiating the six accelerated acute toxicity tests. Requests for additional time to initiate the accelerated testing shall include justification for why additional time is required and that justification includes contracting with a lab.

The permit is not changed.

7. **Comment:** Page 9, I.C.3.b) (iv). Please change “chronic” to “acute.”

Response: The condition states “and none of the six accelerate chronic toxicity tests required under Part I.C.3. are above the ACEC...” The word chronic was mistakenly used and should have been acute tests. The word chronic is changed to acute.

8. **Comment:** Page 11, I.C.5.c)(ii) states: “If either of the reference toxicant tests or the effluent tests do not meet all test acceptability criteria as specified in the test methods manual, the permittee must re-sample and re-test within 14 days of receipt of the test results.”

The “14 calendar days of receipt” timeframe is difficult to achieve due to the complexities of government contracting. Request a 30-day timeframe or allowance of asking EPA for a time extension if needed.

Response: As with any condition in the NPDES permit the Navy must secure funding, procurement and contracting actions for resampling within 14 days as it may be required.

The permit is not changed.

9. **Comment:** Page 11, I.C.6.b). The report of toxicity test results must include all relevant information outlined in Section 10, Report Preparation, of Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition, EPA/821-R-02-014, October 2002.

Verify that the noted document is applicable? It states it is for chronic toxicity testing.

Response: This was a typographical error. The report of toxicity test results must include all relevant information outlined in Section 12 of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, EPA-821-R-02-012, October 2002.

Page 11, I.C.6.b). has been revised to reflect this change.

10. **Comment:** Page 11, I.D.1. The Navy requests removing the requirement to monitor from well 2 (APN870). Existing data shows the well water is highly saline indicating that it is not representative of groundwater. It is likely representative of ambient surface water rather than groundwater possibly influenced by the lagoons.

Response: The high salinity of well 2 (APN870) is likely due to tidal influent. This data characterizes the subsurface, including concentrations for creating isopleths of salinity and demonstrating tidal influence on groundwater. It is not reasonable to remove that well on the basis that it’s not representative of groundwater. It is representative of groundwater highly influenced by other sources. The purpose of the monitoring is to aid in determining the influence of the lagoons that may be discharging through liner leaks, comingling with groundwater and discharged to Puget Sound and possibly to the restored salt water marsh. Further, monitoring of well 2 is required by the Ecology 401 Certification.

The permit is not changed.

11. Comment: The Navy would like to combine I.D.7. and II.D.3 into a single effort within two years and six months of the effective date of the permit. The two requirements are integrally related and combining them would result in a more cohesive and scientifically advance product. The Navy proposes an assessment of the condition of the liners reliant on a seepage test and leak detection of the active lagoons concluding with an impact study of the active lagoons. Please also update Schedule of Submission to reflect this change.

Response: The EPA agrees. Condition I.D.7., for the determination of the impacts of any leaks from the lagoon on the surrounding restored salt water marsh will be combined with Condition II.D.3., requiring an evaluation and seepage test of the lagoon liner and with the groundwater monitoring a submission to the EPA an assessment of the conditions of the liners.

This has the effect of extending the compliance schedule for I.D.7. from one year and six months to two years six months.

Condition I.D.4 requiring monthly and yearly reporting of groundwater monitoring is not changed.