UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
Water Division
Atlanta Federal Center
61 Forsyth Street SW
Atlanta, Georgia 30303-8960

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT NUMBER MS0058645

Under the authority of the Clean Water Act (CWA) of 1977 (33 USC § 1251 et seq.) and in accordance with the effluent limitations, monitoring requirements, and other conditions set forth herein

Permittee:	**Mississippi Band of Choctaw Indians** **Post Office Box 6366** **Choctaw, Mississippi 39350**
is authorized to discharge:	**Municipal Wastewater**
from the facility located:	**New Harmony Wastewater Treatment Facility** **11352 County Road 149** **Philadelphia, Mississippi 39350**
from the outfall:	**001 (Latitude 32° 46' 2" North; Longitude 89° 16' 26.9" West)**
into the receiving water body:	**Unnamed Tributary of Beasha Creek**

This permit shall become effective on:	July 1, 2019
This permit shall expire on:	June 30, 2024
Issuance Date:	June 28, 2019

The permittee shall reapply for NPDES coverage to discharge before January 2, 2024, 180 days before the expiration of this permit, if the permittee intends to continue to discharge at the facility beyond the term of this permit.

Jeaneanne M. Gettle, Director
Water Division

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SCHEDULE OF SUBMISSIONS

The following is a summary of some of the items which the permittee must complete and/or submit to the U.S. Environmental Protection Agency (EPA) during the term of this permit:

Item	Due Date
1. Discharge Monitoring Reports (DMRs)	Unless an exception is granted, the DMRs (EPA Form No.3320-1) are due quarterly and must be entered into NetDMR (see Part II.B.1).
2. Submittal of NPDES Application	A complete application (Forms 1, 2A, and 2S) for the next permit cycle must be submitted to the EPA no later than 180 days before the permit expires (see 40 CFR § 122.21).

Submittal Addresses:

For DMRs
Targeting, Data & Measures Office Chief
U.S. Environmental Protection Agency, Region 4
Enforcement and Compliance Assurance Division | Targeting, Data & Measures Office
61 Forsyth Street SW | Atlanta GA 30303-8960

For NPDES Application Forms
Permitting and Grants Branch Chief
U.S. Environmental Protection Agency, Region 4
Water Division | Permitting and Grants Branch
61 Forsyth Street SW | Atlanta GA 30303-8960
R4NPDESPermits@epa.gov

PART I – LIMITATIONS AND MONITORING REQUIREMENTS

A. Effluent Limitations and Other Monitoring Requirements

1. During the period beginning on the effective date and lasting through the term of this permit, the permittee is authorized to discharge from Outfall 001 from a treatment facility with a **design capacity of 0.13 MGD** to the receiving water body. Such discharges shall be limited and monitored by the permittee as specified in Table 1.

Table 1: Limitations and Monitoring Requirements for Outfall 001

PARAMETERS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS		
	Daily Min	Monthly Avg	Weekly Avg	Daily Max	Sampling Location	Measurement Frequency	Sample Type
Flow, MGD	---	Report	Report	---	Effluent	1/Week	Instantaneous
Dissolved Oxygen (DO), mg/l	6.0	---	---	---	Effluent	1/Week	Grab
Carbonaceous Biochemical Oxygen Demand 5-Day ($CBOD_5$), mg/l (lbs/day)	--- --- ---	Report 10.0 (10.84)	--- 15.0 (16.26)	--- --- ---	Influent Effluent	1/Week	Grab
Carbonaceous Biochemical Oxygen Demand 5-Day ($CBOD_5$) Percent Removal, %	85%[a]				Influent/ Effluent	1/Week	Calculated
Total Suspended Solids (TSS), mg/l (lbs/day)	--- --- ---	Report 30.0 (32.53)	--- 45.0 (48.79)	--- --- ---	Influent Effluent	1/Week	Grab
Total Suspended Solids (TSS) Percent Removal, %	85%[a]				Influent/ Effluent	1/Week	Calculated
pH, standard units (SU)	6.0	---	---	9.0	Effluent	1/Week	Instantaneous
E. coli, #/100 mL	---	126[b]	---	410	Effluent	1/Week	Grab
Total Residual Chlorine (TRC), mg/l	---	---	---	0.011	Effluent	1/Week	Grab
Total Nitrogen (TN) as Nitrogen, mg/l	---	Report	Report	---	Effluent	Quarterly	Grab

PARAMETERS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS		
	Daily Min	Monthly Avg	Weekly Avg	Daily Max	Sampling Location	Measurement Frequency	Sample Type
Total Phosphorus, (TP) as Phosphorous, mg/l	---	Report	Report	---	Effluent	Quarterly	Grab
Ammonia Nitrogen, (NH3-N), mg/l	---	2.0 (2.17)	3.0 (3.25)	---	Effluent	1/Week	Grab
Chronic Whole Effluent Toxicity, IC25	---	---	---	---	Effluent	See Item 8 on page 6 and Part IV	
In-stream Monitoring	---	---		---	Upstream / Downstream	See Item 5 & 6	Grab

[a] Each month, the monthly average effluent $CBOD_5$ and TSS concentrations shall not exceed 15% of the average of their respective influent concentration values (85% removal). The percent removal shall be reported on the Discharge Monitoring Report (DMR) submitted electronically using NetDMR.

[b] The geometric mean of the E. coli values collected during any monthly period shall not exceed 126 colonies per 100 ml of effluent sample and shall be reported as the monthly average value on the DMR form.

2. Samples taken in compliance with the influent monitoring requirements specified in this permit shall be taken at the nearest accessible point prior to treatment. Samples taken in compliance with the effluent monitoring requirements specified in this permit shall be taken at the nearest accessible point to the outfall, after final treatment but prior to the actual discharge or mixing with the receiving waters (unless otherwise specified).

3. Any bypass of the treatment facility, which is not included in the effluent monitored above, is to be monitored for flow and all other parameters. For parameters other than flow, at least one grab sample per day shall be monitored. Daily flow shall be monitored or, if monitoring is not feasible, estimated to obtain reportable data. All monitoring results shall be reported on the DMR and submitted electronically using NetDMR.

4. There shall be no discharge of floating debris, oil, scum, and other floating materials in amounts sufficient to be unsightly or deleterious.

5. Downstream Monitoring Requirements: During the months of June through September, a grab sample shall be taken from Beasha Creek at a location 1.5 to 2.5 miles downstream of the confluence of the unnamed tributary which receives the discharge and Beasha Creek. The sample shall be taken between the hours of 6:00 p.m. and 6:00 a.m. at the frequency of 1 day/2 weeks. Dissolved Oxygen (DO), pH, temperature and conductivity shall be measured from each sample. Monitoring results from this location shall be reported on the DMR.

6. Upstream Monitoring Requirements: During the months of June through September, a grab sample shall be taken from Beasha Creek at the nearest accessible point upstream from the

outside of the influence of the confluence of the unnamed tributary receiving the discharge from the facility and Beasha Creek. The sample shall be taken between the hours of 6:00 a.m. and 12:00 p.m. at the frequency of 1 day/ 2 weeks. Dissolved Oxygen (DO), pH, temperature and conductivity shall be measured from each sample. All monitoring results from this location shall be reported on the DMR.

7. If the results for a given sample analysis are such that any parameter (other than E. coli) is not detected at or above the minimum level for the test method used, a value of zero will be used for that sample in calculating an arithmetic mean value for the parameter. If the resulting calculated arithmetic mean value for that reporting period is zero, the permittee shall report "NODI=B" on the DMR. For E. coli, a value of 1.0 shall be used in calculating the geometric mean. If the resulting E. coli mean value is 1.0, the permittee shall report "NODI=B" on the DMR. For each quantitative sample value that is not detectable, the test method used and the minimum level for that method for that parameter shall be attached to and submitted with the DMR. The permittee shall then be considered in compliance with the appropriate effluent limitation and/or reporting requirement.

8. The permittee shall conduct chronic whole effluent toxicity monitoring as specified in Part IV. The effluent shall be monitored for chronic whole effluent toxicity once every year for the duration of this permit.

9. Overflow identification: The permittee shall identify all wastewater discharges at locations not authorized as permitted outfalls that occur prior to the headworks of the wastewater treatment plant covered by this permit. The permittee shall submit, with the scheduled DMR, the following information for each discharge event at each source that occurs during the reporting period covered by the DMR:

    a. the cause of the discharge;

    b. duration and volume (estimate if unknown);

    c. description of the source, e.g., manhole cover, pump station;

    d. type of collection system that overflowed, i.e., combined or separate;

    e. location by street address, or any other appropriate method;

    f. date of event;

    g. the ultimate destination of the flow, e.g., surface water body, land use location, via municipal separate storm sewer system to a surface water body, (show location on a USGS map or copy thereof); and

    h. corrective actions or plans to eliminate future discharges.

    The permittee shall refer to Part III.D.8 of this permit which contains information about reporting unpermitted discharge events. Submittal or reporting of any of this information does not provide relief from any subsequent enforcement actions for unpermitted discharges to waters of the United States.

B. Sludge Management Practices

1. Annually, the permittee shall sample and analyze the sludge for arsenic, chromium, and nickel.

2. The permittee shall submit within 30 days of the effective date of this permit the sludge production volume (specify if daily or annual; if actual volume is not known, estimate the quantity of sludge being handled and so indicate) and the sludge disposal practice.

3. The permittee shall provide sludge inventory data to EPA as part of EPA's inventory updates as requested. The data should include, but not be limited to, sludge quantity and characteristics.

4. Reopener. If an applicable "acceptable management practice" or numerical limitation for pollutants in sewage sludge promulgated under Clean Water Act (CWA) § 405(d)(2), as amended by the Water Quality Act of 1987, is more stringent than the sludge pollutant limit or acceptable management practice in this permit or controls a pollutant not limited in this permit, this permit shall be promptly modified or revoked and reissued to conform to the requirements promulgated under CWA § 405(d)(2). The permittee shall comply with the limitations by no later than the compliance deadline specified in the applicable regulations as required by CWA § 405(d)(2)(D).

5. Notice of change in sludge disposal practice. The permittee shall give prior notice to the Director of any change planned in the permittee's sludge disposal practice.

6. Cause for modification. 40 CFR § 122.62(a)(1) provides the alterations are a cause for modification but not revocation and reissuance of permits except when the permittee requests or agrees. Alterations are defined as follows: There are material and substantial changes or additions to the permitted facility or activity (including a change or changes in the permittee's sludge use or disposal practice) which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.

7. Upon review of information provided by the permittee as required by the above items, or results from an on-site inspection, the permit shall be subject to modification to incorporate appropriate requirements.

8. Should the permittee's sewage sludge be disposed of in a solid-waste landfill, the permittee shall demonstrate the absence of free liquids in its sewage sludge through the utilization of Test Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Publication No. SW-846). These tests shall be conducted on representative samples of all sewage sludge prior to each disposal at solid-waste landfills. A successful demonstration shall be performed before the permittee's sewage sludge is allowed to be disposed of at a solid-waste landfill. The permittee shall: 1) report on the DMR only the number of tests that failed during the quarter and 2) in any quarter where one or more tests failed, submit a separate report attached to the DMR which shows the date of each failed and subsequent passing test along with their respective results. Prior notice shall be given to the EPA of any changes in disposal practice resulting from test failures.

9. The permittee shall ensure that the sludge generated by its facility will be disposed of in accordance with the requirements of 40 CFR Part 503.

C. Schedule of Compliance

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

   Operational Level Attained……. Effective Date of Permit

PART II – OTHER PERMIT REQUIREMENTS

A. Reporting, Monitoring, and Recording Requirements

1. Electronic Reporting Requirements

   a. Monitoring data required by this permit shall be submitted on EPA Form 3320-1 Discharge Monitoring Report (DMR) forms using the electronic DMR (NetDMR) internet application. NetDMR is a web-based application that allows National Pollutant Discharge Elimination System (NPDES) Permittee Users to enter and electronically submit DMR data through the Central Data Exchange (CDX) to the Integrated Compliance Information System (ICIS). EPA's NetDMR webpage can be found at: https://cdxnodengn.epa.gov/net-netdmr/.

   b. The DMRs shall be signed by a facility's Responsible Official or a Delegated Responsible Official (i.e. a person delegated by the Responsible Official). The Responsible Official of a facility is defined in Part V. For NetDMR, the person(s) viewing, editing, signing and submitting the DMRs will need to register for a new account managed by EPA Region 4. A request for signatory privilege requires submission of a Subscriber Agreement to EPA Region 4. Additionally, Delegated Responsible Officials must be delegated by the Responsible Official, either on-line using NetDMR, or on a paper delegation form provided by EPA. For more information and guidance on NetDMR, please view the following web page: https://netdmr.zendesk.com/home

   c. DMRs submitted using NetDMR shall be submitted to EPA Region 4 by the 21st day of the month (April, July, October, January) following the quarter for which the monitoring was completed.

      A paper copy of the submitted EPA 3320-1 DMR shall be maintained onsite for records retention purposes. For NetDMR users, view and print the DMR from the Submission Report Information page after each original or revised DMR is submitted.

   d. DMRs must be reported using EPA's electronic NetDMR tool unless a waiver from electronic reporting has been granted from EPA Region 4.

2. Monitoring procedures

   Monitoring and sampling must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by EPA as an alternate test procedure under 40 CFR § 136.5.

3. Additional monitoring by the Permittee

   If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the permittee must include the results of this monitoring in the calculation and reporting of the data submitted in the DMR. Upon request by EPA, the permittee must submit results of any other sampling, regardless of the test method used.

   In order to ensure that the effluent limits set forth in this permit are not violated at times other than when routine samples are taken, the permittee must collect additional samples at the outfall

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 must analyze the additional samples for those parameters limited in Table 1: Effluent Limitations and Monitoring Requirements.

B. Reopener Clause

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

1. Contains different conditions or is otherwise more stringent than any condition in the permit; or
2. Controls any pollutant not addressed in the permit.

The permit as modified or reissued under this paragraph shall contain any other requirements of the CWA then applicable.

PART III – STANDARD CONDITIONS FOR NPDES PERMITS

A. General Conditions

1. Duty to Comply [40 CFR §§ 122.41(a) and 122.41(a)(1)]

   The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act (CWA or Act) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

2. Penalties for Violations of Permit Conditions [40 CFR § 122.41(a)(2) and 40 CFR § 122.41(a)(3)]

   (Note: Civil and administrative penalty amounts described in this subsection are based on adjustments to the original statutory amounts based on inflation, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 note; Pub. L. 101- 410, enacted October 5, 1990; 104 Stat. 890), as amended by the Debt Collection Improvement Act of 1996 (31 U.S.C. § 3701 note; Public Law 104-134, enacted April 26, 1996; 110 Stat. 1321) and as set forth at 40 CFR § 19.4.)

   The CWA provides that 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 $51,570 per day for each violation. The CWA 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 one 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 two years, or both. 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 three 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 six years, or both. 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 he 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 CWA, 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.

Any person may be assessed an administrative penalty by the Administrator for violating Section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of this Act. Administrative penalties for Class I violations are not to exceed $20,628 per violation, with the maximum amount of any Class I penalty assessed not to exceed $51,570. Penalties for Class II violations are not to exceed $20,628 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $257,848. The specific penalty amounts described above for violations reflect those in effect at the time of permit issuance and are subject to change.

3. Civil and Criminal Liability [40 CFR § 122.41(m) and (n)]

   Except as provided in permit conditions on "Bypassing" Section B, Paragraph 3, and "Upset" Section B, Paragraph 4, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

4. Duty to Mitigate [40 CFR § 122.41(d)]

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

5. Permit Actions [40 CFR § 122.41(f)]

   This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

6. Toxic Pollutants [40 CFR § 122.44(b)(1)]

   If any applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in the permit, the Director shall institute proceedings under these regulations to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition.

7. Oil and Hazardous Substance Liability

   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 to which the permittee is or may be subject under Section 311 of the CWA.

8. 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 CWA.

9. Effect of a Permit [40 CFR § 122.5(a)(l) and (2)]

   Except for any toxic effluent standards and prohibitions imposed under Section 307 of the CWA and "standards for sewage sludge use or disposal" under Section 405(d) of the CWA, compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301, 302, 306, 307, 318, 403, and 405 (a)-(b) of the CWA. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in 40 CFR §§ 122.62 and 122.64.

   Compliance with a permit condition which implements a particular "standard for sewage sludge use or disposal" shall be an affirmative defense in any enforcement action brought for a violation of that "standard for sewage sludge use or disposal" pursuant to Sections 405(e) and 309 of the CWA.

10. Property Rights [40 CFR § 122.5(b), 40 CFR § 122.41(g), and 40 CFR § 122.5(c)]

    This permit does not convey any property rights of any sort, or any exclusive privilege. The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

11. Onshore or Offshore Construction

    This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any waters of the United States.

12. Severability

    The provisions of this permit are severable, and 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.

13. Duty to Provide Information [40 CFR § 122.41(h)]

    The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Director upon request, copies of records required to be kept by this permit.

B. Operation and Maintenance of Pollution Controls

1. Proper Operation and Maintenance [40 CFR § 122.41(e)]

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

2. Need to Halt or Reduce Activity Not a Defense [40 CFR § 122.41(c)]

   It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities [40 CFR § 122.41(m)(1)-(4)]

   a. Definitions

      (1) "**Bypass**" means the intentional diversion of waste streams from any portion of a treatment facility.

      (2) "**Severe property damage**" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

   b. Bypass not exceeding limitations.

      The permittee may allow any bypass to occur which 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 c. and d. of this subsection.

   c. Notice

      (1) **Anticipated bypass.** If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Director, if possible at least ten days before the date of the bypass.

      (2) **Unanticipated bypass.** The permittee shall submit notice of an unanticipated bypass as required in Section D, Subsection 8 (24-hour notice).

   d. Prohibition of bypass

      (1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

         (a) Bypass was unavoidable to prevent loss of life and person injury, or severe property damage; and

         (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

         (c) The permittee submitted notices as required under Paragraph c. of this subsection.

(2) The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in Paragraph d.(1) of this subsection.

4. Upsets [40 CFR § 122.41(n)(1)-(4)]

a. Definition

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

b. Effect of an upset

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

c. Conditions necessary for a demonstration of upset

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

(1) An upset occurred and that the permittee can identify the cause(s) of the upset;

(2) The permitted facility was at the time being properly operated;

(3) The permittee submitted notice of the upset as required in Section D, Subsection 8 (24-hour notice); and

(4) The permittee complied with any remedial measures required under Section A, Subsection 4.

d. Burden of proof

In any enforcement preceding the permittee seeking to establish the occurrence of an upset has the burden of proof.

5. Removed Substances

This permit does not authorize discharge of solids, sludge, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters of the United States unless specifically limited in Part I.

C. Monitoring and Records

1. Representative Sampling [40 CFR § 122.41(j)(1)]

   Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. All samples shall be taken at the monitoring points specified in this permit (Part I.A.2). Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

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

3. Monitoring Procedures [40 CFR § 122.41(j)(4)]

   Monitoring results must be conducted according to test procedures approved under 40 CFR Part 136 or, in the case of Sewage sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, unless other test procedures have been specified in the permit.

4. Penalties for Tampering [40 CFR § 122.41(j)(5)]

   The CWA 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.

5. Retention of Records [40 CFR § 122.41(j)(2)]

   Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

6. Record Contents [40 CFR § 122.41(j)(3)(i)-(vi)]

   Records of monitoring information shall include:

   a. The date, exact place, and time of sampling or measurements;

b. The individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

7. Inspection and Entry [40 CFR § 122.41(i)(1)-(4)]

The permittee shall allow the Director or an authorized representative (including an authorized contractor acting as a representative of the Director), upon presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA, any substances or parameters at any location.

D. Reporting Requirements

1. Change in Discharge [40 CFR § 122.41(l)(1)(i)-(iii)]

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

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

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D, Subsection 11.

c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

2. Anticipated Noncompliance [40 CFR § 122.41(l)(2)]

   The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

   Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during noncritical water quality periods and carried out in a manner approved by the Director.

3. Transfer of Ownership of Control [40 CFR § 122.41(l)(3), § 122.61, and § 122.61(b)]

   a. This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the CWA.

   b. In some cases, modification or revocation and reissuance is mandatory.

   c. Automatic Transfers. As an alternative to transfers of permits by modification, any NPDES permit may be automatically transferred to a new permittee if:

      (1) The current permittee notifies the Director at least 30 days in advance of the proposed transfer date in Subparagraph c(2) of this subsection;

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

      (3) The Director does not notify the existing permittee and the proposed new permittee of his or her intent to modify or revoke and reissue the permit. A modification under this subparagraph may also be a minor modification under 40 CFR § 122.63. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in Subparagraph c(2) of this subsection.

4. Monitoring Reports [40 CFR § 122.41(l)(4) and 40 CFR § 122.41(l)(4)(i)]

   Monitoring results shall be reported at the intervals specified in Part I of the permit. Monitoring results must be reported on a DMR or forms provided or specified by the Director for reporting results of monitoring of sewage sludge use or disposal practices.

5. Additional Monitoring by the Permittee [40 CFR § 122.41(l)(4)(ii)]

   If the permittee monitors any pollutant more frequently than required by the permit using test procedures approved under 40 CFR Part 136 or, in the case of sewage sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sewage sludge reporting form specified by this permit.

6. Averaging of Measurements [40 CFR § 122.41(l)(4)(iii)]

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in this permit.

7. Compliance Schedules [40 CFR § 122.41(l)(5)]

   The permittee shall achieve compliance with the effluent limitations and monitoring requirements specified for discharges by the effective date of this permit. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

8. Twenty-Four Hour Reporting [40 CFR §§ 122.44(g), 122.41(l)(6), and 122.44(g)]

   The permittee shall report to the Director any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 calendar days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

   The following shall be included as information which must be reported within 24 hours under this paragraph. The Director may waive the written report on a case-by-case basis for reports under this subsection if the oral report has been received within 24 hours.

   a. Any unanticipated bypass which exceeds any effluent limitation in the permit.

   b. Any upset which exceeds any effluent limitation in the permit.

   c. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in the permit to be reported within 24 hours.

9. Other Noncompliance [40 CFR § 122.41(l)(7)]

   The permittee shall report all instances of noncompliance not reported under Section D at the time DMRs are submitted. The reports shall contain the information listed in Section D, Subsection 8.

10. Other Information [40 CFR § 122.41(l)(8)]

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

11. Changes in Discharge of Toxic Substances [40 CFR § 122.42(a)(1)(i-iii) and 40 CFR § 122.42(a)(2)(i-iii)]

    The following conditions apply to all NPDES permits within the categories specified below:

a. Existing manufacturing, commercial, mining, and silvicultural dischargers. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

(1) That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(a) One hundred micrograms per liter (100 µg/l);

(b) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony; or

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

(2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(a) Five hundred micrograms per liter (500 µg/l);

(b) One milligram per liter (1 mg/l) for antimony; or

(c) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7).

b. Publicly owned treatment works (POTWs). All POTWs must provide adequate notice to the Director of the following:

(1) Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to Section 301 or 306 of CWA if it were directly discharging those pollutants; and

(2) Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

(3) For purposes of this paragraph, adequate notice shall include information on the quality and quantity of effluent introduced into the POTW, and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [40 CFR § 122.42(b)].

12. Duty to Reapply [40 CFR § 122.41(b), § 122.21(d), § 122.6(a), and § 122.6(b)]

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

The application should be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application later than the 180 days in advance, but no later than the permit expiration date.

The conditions of an expired permit continue in force under 5 U.S.C. 558(c) until the effective date of a new permit if the permittee has submitted a timely application under this subsection which is a complete application for a new permit; and the Director, through no fault of the permittee, does not issue a new permit with an effective date on or before the expiration date of the previous permit.

Permits continued under this section remain fully effective and enforceable.

13. Signatory Requirements [40 CFR § 122.41(k)(1) and 40 CFR § 122.22]

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

a. Applications. All permit applications shall be signed as follows:

(1) For a corporation. By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or

(b) The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

NOTE: EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in this subparagraph. The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under this subparagraph rather than to specific individuals.

(2) For a partnership or sole proprietorship. By a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency. By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(a) the chief executive officer of the agency, or

(b) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

b. All reports required by permits, and other information requested by the Director shall be signed by a person described in Paragraph a. of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in Paragraph a. of this section;

(2) 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 company.

(3) The written authorization is submitted to the Director.

c. Changes to Authorization. If an authorization under Paragraph b. of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Paragraph b. of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

d. Certification. Any person signing a document under Paragraph a. or b. of this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly 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."

14. Availability of Reports and the Administrative Record [40 CFR §§ 124.18 & 122]

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the EPA. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.

15. Penalties for Falsification of Reports [40 CFR § 122.41(k)(2)]

The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.

E. Definitions

1. The EPA [40 CFR § 122.2]

   The Regional Administrator of EPA Region 4 or his/her designee is the **"The EPA**," unless at some time in the future the State or Indian Tribe receives authority to administer the NPDES program and assumes jurisdiction over the permit at which time, the Director of the State or Tribal program receiving the authorization becomes the issuing authority.

   The use of the term "Director" in this permit shall mean the EPA Region 4 Water Division Director, as the Regional Administrator's designee.

2. Act [40 CFR § 124.2]

   "**Act**" means the CWA (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, and Public Law 97-117, 33 U.S.C. 1251 et seq.

3. Discharge Monitoring Report (DMR) [40 CFR § 122.2]

   "**Discharge Monitoring Report**" means the EPA national form (Form 3320-1) or electronic reporting form required by the federal regulations including any subsequent additions, revisions, or modifications for the reporting of self-monitoring results by permittees.

4. Measurements [40 CFR § 122.2]

   The "**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 (i.e., concentration), the "daily discharge" is calculated as the average measurement of the pollutant over the day.

   The "**average annual discharge limitation**" means the highest allowable average of "daily discharges" over a period of twelve consecutive calendar months, calculated as the "arithmetic mean" of the monthly averages for the current calendar month and the eleven prior calendar months. The annual average is calculated each month. This limitation is identified as "Annual Average" in Part I of the permit.

   The "**average monthly discharge limitation**" other than for bacterial indicators, 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. For bacterial indicators, the "average monthly discharge limitation" is calculated using a "geometric mean." This limitation is identified as "Monthly Average" or "Daily Average" in Part I of the permit.

   The "**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. This limitation is identified as "Weekly Average" in Part I of the permit.

The "**maximum daily discharge limitation**" means the highest allowable "daily discharge." This limitation is identified as "Daily Maximum" in Part I of the permit.

The **"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 **"Minimum Level (ML)"** means the concentration at which the entire analytical system must give a recognizable signal and an acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes and processing steps have been followed.

5. Types of Samples

   a. Composite Sample: A "**composite sample**" is a combination of not less than eight influent or effluent portions (aliquots), of at least 100 ml, collected over the full time period specified in Part I of the permit. The composite sample must be flow proportioned by either a time interval between each aliquot, or by volume as it relates to effluent flow at the time of sampling, or by total flow since collection of the previous aliquot. Aliquots may be collected manually or automatically.

   b. Grab Sample: A "**grab sample**" is a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the total discharge.

6. Calculation of Means

   a. Arithmetic Mean: The "**arithmetic mean**" of any set of values is the sum of the individual values divided by the number of individual values.

   b. Geometric Mean: The "**geometric mean**" of any set of values is the N^{th} root of the product of the individual values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).

7. Permittee [40 CFR § 122.21(b)]

   The "**Permittee**" means the operator who has substantial control over the day-to-day operations of the facility; when a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit.

8. Hazardous Substance [40 CFR § 122.2]

A "**hazardous substance**" means any substance designated under 40 CFR Part 116 pursuant to Section 311 of the CWA.

9. Toxic Pollutants [40 CFR § 122.2]

A "**toxic pollutant**" is any pollutant listed as toxic under Section 307(a)(1) of the CWA or, in the case of "Sewage sludge use or disposal practices," any pollutant identified in regulations implementing Section 405(d) of the CWA.

PART IV – WHOLE EFFLUENT TOXICITY TESTING

As required by Part I of this permit, the permittee shall initiate the series of tests described below beginning within 12 months of the permit effective date to evaluate whole effluent toxicity of the discharge from outfall 001. All test species, procedures and quality assurance criteria used shall be in accordance with Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA-821-R-02-013 (October 2002), or the most current edition, as appropriate. The control and dilution water used will be moderately hard water as described in EPA-821-R-02-013, Section 7, or the most current edition. A chronic standard reference toxicant quality assurance test shall be conducted concurrently with each species used in the toxicity tests and the results submitted with the Discharge Monitoring Report (DMR) Form. Alternatively, if monthly QA/QC reference toxicant tests are conducted, these results must be submitted with the DMR Form.

A. Procedure

1. The permittee shall conduct multi-concentration daphnid (Ceriodaphnia dubia) Survival and Reproduction and Fathead Minnow (Pimephales promelas) Larval Survival and Growth Tests. All tests shall be conducted using a control (0% effluent) and the following dilution concentrations: 100%, 72.5%, 36.2%, 18.1%, and 9.1%. Unacceptable chronic toxicity will be demonstrated if either test results in an inhibition concentration causing 25% reduction in survival, reproduction, and/or growth (IC_{25}) of the test organisms (IC_{25}) in less than or equal to 72.5% effluent. The IC_{25} shall be determined based on a 25% reduction as compared to the controls, and as derived from linear interpolation. The average reproduction and growth responses will be determined based on the number of Ceriodaphnia dubia and Pimephales promelas larvae, as appropriate, used to initiate the test.

2. For each set of tests conducted, a minimum of three different 24 hr. composite sample of final effluent shall be collected and used per the sampling schedule discussed in EPA-821-R-02-013, Section 8.3.2, or the most current edition. All test solutions shall be renewed daily. Each chronic test must meet the test acceptability criteria for each species as defined in EPA-821-R-02-013, Section 13.11 and Section 11.11, respectively, or the most current edition, or else the test shall be repeated. Additionally, all test results must be evaluated and reported for concentration-response relationship based on "Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 C.F.R. Part 136)", EPA/821/B-00/004 (2000), or the most current edition. If the required concentration-response review fails to yield a valid relationship per EPA/821/B-00/004 (or the most current edition), that test shall be repeated. Any test initiated but terminated prior to completion must be reported with a complete explanation for the termination. A chronic test will be considered valid only if the acceptability criteria referenced above are met.

3. If control mortality exceeds 20% for either species in any test, the test(s) for that species (including the control) shall be repeated. A test will be considered valid only if control mortality does not exceed 20% for either species. If, in any separate test, 100% mortality occurs prior to the end of the test, and control mortality is less than 20% at that time, that test (including the control) shall be terminated with the conclusion that the sample demonstrates unacceptable chronic toxicity.

B. Monitoring

1. The toxicity tests specified above shall be conducted once every year for the duration of the permit. These tests are referred to as "routine" tests.

2. Results from routine tests shall be reported according to EPA-821-R-02-013, Section 10, or the most current edition. Each IC_{25} test result shall also be separately recorded and submitted on the Discharge Monitoring Report (DMR) in the following manner: If the monthly average IC_{25} of a test species is less than or equal to 100% effluent, "≤ 100%" shall be entered on the DMR for that species. If the monthly average IC_{25} of a test species is greater than 100% effluent, "> 100%" shall be entered. All individual test results for a given month shall be submitted as an attachment to the DMR.

C. Test Failure

1. If an IC_{25} of less than or equal to 72.5% effluent is found in a "routine" test, the permittee shall conduct two valid additional tests on each species indicating the violation and report each IC_{25} obtained.

2. The first valid additional test shall be conducted using a control (0% effluent) and a minimum of five dilutions: 100%, 72.5%, 36.2%, 18.1%, and 9.1%. The dilution series may be modified in the second valid test to more accurately identify the toxicity, such that at least two dilutions above (not to exceed 100% effluent) and two dilutions below the receiving water concentration and a control (0% effluent) are run.

3. For each additional test, the sample collection requirement and the test acceptability criteria and concentration-response relationships specified in sections A.2 and A.3 above must be met for it to be considered valid. The first additional test shall begin within one week of the end of the "routine" test and shall be conducted weekly thereafter until two additional valid tests are completed.

MUNICIPAL FACILITY FACT SHEET

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE TREATED WASTEWATER
TO WATERS OF THE UNITED STATES**

Permit No.: MS0058645 Last Updated: June 24, 2019

1. Summary of Permit Changes

A. Addresses for submittal of Discharge Monitoring Reports (DMRs) and NPDES Application Forms have been updated in the Schedule of Submissions.

B. Influent monitoring requirements have been added for $CBOD_5$. An 85% removal requirement for $CBOD_5$ has also been added. These changes are to ensure that the facility is meeting technology-based secondary treatment requirements.

C. Fecal coliform limits have been removed and replaced with E. coli limits. This change is consistent with changes to the State of Mississippi's water quality standards.

D. The daily maximum reporting requirements for total nitrogen and total phosphorus have been removed and replaced with monthly average and weekly average requirements. These changes were made to maintain consistency with other federally-issued Region 4 NPDES permits.

E. The loading limits for $CBOD_5$, TSS, NH_3-N were recalculated to reflect the design flow of 0.13 MGD. New loading limits are more stringent than the previous NPDES permit and the anti-backsliding provisions of 40 CFR § 122.44(l).

F. Language in narrative "free froms" condition (Part I.A.4 in permit) was changed to maintain consistency with other federally-issued Region 4 NPDES permits.

G. Sludge language (Part I.B in permit) was updated to maintain consistency with other federally-issued Region 4 NPDES permits.

H. E-reporting language (Part II.A in permit) has been updated to maintain consistency with other federally-issued Region 4 NPDES Permits. Note the new NetDMR webpage address in Part II.A.1.a.

2. Facility Information

A. Name and Address of Permittee:	Mississippi Band of Choctaw Indians Post Office Box 6366 Choctaw, Mississippi 39350
B. Facility Address:	New Harmony Wastewater Treatment Facility 11352 County Road 149 Philadelphia, Mississippi 39189
C. Type of Facility:	Municipal Wastewater Treatment Plant Publicly-Owned Treatment Works (POTW) Standard Industrial Classification Code: 4952

D. Location and Description of the discharge (as reported by applicant):

Outfall	**Latitude**	**Longitude**	**Receiving Waterbody**	**Watershed**
001	32°46'2" N	89°16'26.9" W	Unnamed Tributary to Beasha Creek	Upper Pearl Basin HUC 03180001

E. Permitted Capacity: 0.13 MGD

F. Description of Wastewater Treatment Facility:

Outfall	**Operation Description**	**Treatment Description**
1	Sanitary Wastewater	Treatment consists of physical treatment with influent screening, followed by biological treatment with aeration and clarification. Sludge is to pass through an aerobic digester before disposal. Before discharge, the effluent passes through a chlorine contact chamber and dechlorination and post-treatment aeration chamber. Population served is approximately 5660.

G. Type of Wastewater Discharge:

☐ Process Wastewater ☐ Stormwater
☒ Domestic Wastewater ☐ Combined (describe)
☐ Other (describe)

H. Characterization of Effluent

Outfall No. 001 (As reported on application)

Effluent Characteristic	**Minimum Daily Value**	**Average Daily Value**	**Maximum Daily Value**
Flow, MGD	---	0.08	0.38
Carbonaceous Biochemical Oxygen Demand, 5-day ($CBOD_5$), mg/L	---	2.24	4.00
Total Suspended Solids, mg/L	---	6.25	20.00
Fecal Coliform Bacteria, #/100mL	---	60.80	17,172
pH, S.U.	6.38	---	8.00

Outfall No. 001 (Summary of DMR data from reports 7/31/2014-1/31/2019; See Appendix 2)

Effluent Characteristic	**Minimum Daily Minimum**	**Average Monthly Average**	**Maximum Daily Maximum/Weekly Average**
Flow (MGD)	---	0.13	0.21
Carbonaceous Biochemical Oxygen Demand, 5-day ($CBOD_5$), mg/L	---	2.35	3.72
$CBOD_5$ Percent Removal, %	*	*	---
Total Suspended Solids (TSS), mg/L	---	10.73	15.62
TSS Percent Removal, %	54.50	91.19	---
Fecal Coliform Bacteria, Summer, #/100mL	---	70.27	7,024.03
Fecal Coliform Bacteria, Winter, #/100mL	---	20.52	1,116.12
Total Ammonia as Nitrogen, mg/L	---	0.91	2.03
Total Residual Chlorine (TRC), mg/L	---	*	*
Dissolved Oxygen (DO), mg/L	3.90	8.28	---
pH, SU	6.40	---	8.80

*Not required during the previous permit cycle.

3. Water Quality Standards & Receiving Waterbody Information

A. Receiving Waterbody Classification and Information – The Mississippi Band of Choctaw has not promulgated their own Water Quality Standards, therefore there are no Water Quality Standards applicable to the Tribal waters at this time. The discharge goes into an unnamed tributary which enters Mississippi before the confluence with Beasha Creek. The EPA used Mississippi Water Quality Standards (part 6, chapter 2, Rule 2.4) to determine reasonable potential at the State/Tribal Boundary and for state waters. Beasha Creek has a designated use of Fish and Wildlife in the State of Mississippi. This permit is protective of designated uses of state waters in the State of Mississippi.

B. Specific Water Quality Criteria for Classified Water Usage

The following are the most protective of criteria within the following applicable use classifications: Mississippi Fish and Wildlife use:

a. pH: The normal pH of the waters shall be 6.0 to 9.0. The discharge of waters or wastewaters shall not cause the pH to vary more than 1.0 unit within this range, nor be less than 6.0, nor be greater than 9.0.

b. Water Temperature: The maximum water temperature increase above natural temperatures shall not exceed 5 °F (2.8 °C) in streams, lakes, and reservoirs nor shall the maximum water temperature exceed 90 °F (32.2 °C)

c. Specific Conductance: There shall be no substances added to increase the conductivity above 1000 microhms/cm for freshwater streams.

d. Dissolved Solids: There shall be no substances added to the waters to cause the dissolved solids to exceed 750 mg/l as a monthly average value, nor exceed 1500 mg/l at any time for freshwater streams.

e. Ammonia (toxicity): Ammonia toxicity shall be evaluated according to theEPA guidelines published in *1999 Update of Ambient Water Quality Criteria for Ammonia;* the EPA document number EPA-822-R-99-014 or *Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989*; the EPA document number 440/5-88-004, and any subsequent amendments and additions.

f. Dissolved Oxygen: Dissolved oxygen concentrations shall be maintained at a daily average of no less than 5.0 mg/l with an instantaneous minimum of not less than 4.0 mg/l.

g. Bacteria: Culturable escherichia coli shall not exceed a geometric mean of 126 per 100 mL over a 30-day period, nor shall the samples examined during a 30-day period exceed 410 per 100 mL more than 10% of the time.

h. Toxicants

i. Narrative:

1. Municipal wastes, industrial wastes, or other wastes shall receive effective treatment or control in accordance with Section 301, 306, and 307 of the Federal Clean Water Act. A degree of treatment greater than defined in these sections may be required when necessary to protect legitimate water uses.

2. Aquatic Life Criteria: The concentration of toxic substances in State waters shall not result in chronic or acute toxicity or impairment of the uses of aquatic life. Toxicity concentrations in State waters in excess of these values shown in Table 2 will be assessed to determine chronic or acute toxicity, and/or the impairment of the uses of aquatic life. Chronic and/or acute toxicity will be determined in accordance with the *Water Quality Standards Handbook: Second Edition* (EPA-823-B-94-005a, August 1994) and *Technical Support Document for Water Quality-Based Toxics Control* (EPA-505/2-90-001, March 1991). Regardless of the results of chronic or acute toxicity bioassay surveys, the concentrations of toxic substances shall not exceed the chronic or acute values, except as provided for in Rules 2.2.F.5(a) and 2.2.F.5(b) for establishing alternative criteria. *Part 6: Chapter 2: Mississippi Commission on Environmental Quality Regulations for Water Quality Criteria For Intrastate, Interstate, And Coastal Waters: Table 2 (February 25, 2016)*

3. Human Health Criteria: The concentration of toxic substances shall not exceed the level necessary to protect human health through exposure routes of fish (and shellfish) tissue consumption, water consumption, or other routes identified as appropriate for the water body.

ii. Numerics: Numeric criteria for all waters are established herein for certain toxic pollutants for which the EPA has published national criteria for the protection of aquatic life and human health pursuant to Section 304(a) of the Federal Clean Water Act in addition to chlorine and ammonia. The pollutants are listed in Table 2 and are expressed as the disolved phase of the parameter. *Part 6: Chapter 2: Mississippi Commission on Environmental*

Quality Regulations for Water Quality Criteria For Intrastate, Interstate, And Coastal Waters: Table 2 (February 25, 2016)

i. "Free-Froms"

i. Waters shall be free from substances attributable to municipal, industrial, agricultural, or other discharges that will settle to form putrescent or otherwise objectionable sludge deposits.

ii. Waters shall be free from floating debris, oil, scum, and other floating materials attributable to municipal, industrial, agricultural, or other discharges in amounts sufficient to be unsightly or deleterious.

iii. Waters shall be free from materials attributable to municipal, industrial, agricultural, or other discharges producing color, odor, taste, total suspended or dissolved solids, sediment, turbidity, or other conditions in such degree as to create a nuisance, render the waters injurious to public health, recreation, or to aquatic life and wildlife, or adversely affect the palatability of fish, aesthetic quality, or impair the waters for any designated use. Except as prohibited in Rule 2.1.H. above, the turbidity outside the limits of a 750- foot mixing zone shall not exceed the background turbidity at the time of discharge by more than 50 Nephelometric Turbidity Units (NTU). Exemptions to the turbidity standard may be granted under the following circumstances

1. in cases of emergency to protect the public health and welfare

2. for environmental restoration projects which will result in reasonable and temporary deviations and which have been reviewed and approved by the Department of Environmental Quality.

iv. Waters shall be free from substances attributable to municipal, industrial, agricultural, or other discharges in concentrations or combinations that are toxic or harmful to humans, animals, or aquatic life.

C. Critical Flows – Due to lack of flow gage data in the receiving waterbody, conservative assumptions were made regarding critical flows as follows:

Beasha Creek: 7Q10 = 0.076 cfs

D. 303(d) Status – Beasha Creek has not been assessed for water quality by the Mississippi Band of Choctaw, nor does it appear on the State of Mississippi 2018 303(d) List.

E. Total Maximum Daily Loads – TMDLs exist in The Pearl River for mercury, nutrients (total nitrogen and total phosphorous), pesticides, pH, and sediment. New Harmony Wastewater Treatment Facility (WWTF) is not expected to contain mercury or pesticides in its effluent nor is it expected to cause or contribute to the pH or sediment impairments. MDEQ approved the *TMDL for Total Nitrogen and Total Phosphorus for the Pearl River* in 2009. Discharges from Tribal lands, including from the New Harmony WWTF, were not included in the TMDL as a source of total nitrogen or total phosphorus, and due to the size of the facility, we presume that New Harmony WWTF is a de minimus source of nutrients at the state line.

4. Effluent Limits and Permit Conditions

A. Proposed Effluent Limitations for Outfall 001

PARAMETERS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS		
	Daily Min	Monthly Avg	Weekly Avg	Daily Max	Sampling Location	Measurement Frequency	Sample Type
Flow, MGD	---	Report	Report	---	Effluent	1/Week	Instantaneous
Dissolved Oxygen (DO), mg/l	6.0	---	---	---	Effluent	1/Week	Grab
Carbonaceous Biochemical Oxygen Demand 5-Day ($CBOD_5$), mg/l (lbs/day)	--- --- ---	Report 10.0 (10.84)	--- 15.0 (16.26)	--- --- ---	Influent Effluent	1/Week	Grab
Carbonaceous Biochemical Oxygen Demand 5-Day ($CBOD_5$) Percent Removal, %	85%[a]				Influent/ Effluent	1/Week	Calculated
Total Suspended Solids (TSS), mg/l (lbs/day)	--- --- ---	Report 30.0 (32.53)	--- 45.0 (48.79)	--- --- ---	Influent Effluent	1/Week	Grab
Total Suspended Solids (TSS) Percent Removal, %	85%[a]				Influent/ Effluent	1/Week	Calculated
pH, standard units (SU)	6.0	---	---	9.0	Effluent	1/Week	Instantaneous
E. coli, #/100 mL	---	126[b]	---	410	Effluent	1/Week	Grab
Total Residual Chlorine (TRC), mg/l	---	---	---	0.011	Effluent	1/Week	Grab
Total Nitrogen (TN) as Nitrogen, mg/l	---	Report	Report	---	Effluent	Quarterly	Grab
Total Phosphorus, (TP) as Phosphorous, mg/l	---	Report	Report	---	Effluent	Quarterly	Grab
Ammonia Nitrogen, (NH3-N), mg/l	---	2.0 (2.17)	3.0 (3.25)	---	Effluent	1/Week	Grab

PARAMETERS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS		
	Daily Min	Monthly Avg	Weekly Avg	Daily Max	Sampling Location	Measurement Frequency	Sample Type
Chronic Whole Effluent Toxicity, IC25	---	---	---	---	Effluent	See Item 8 on page 6 and Part IV	
In-stream Monitoring	---	---		---	Upstream / Downstream	See Item 5 & 6	Grab

[a] Each month, the average effluent $CBOD_5$ and TSS concentrations shall not exceed 15% of the average of their respective influent concentration values (85% removal).

[b] The geometric mean of the E. coli values collected during any monthly period shall not exceed 126 colonies per 100 ml of effluent sample and shall be reported as the monthly average value.

B. Reasonable Potential (RP)

Title 40 of the Federal Cod of Regulations, 40 CFR 122.44(d) requires NPDES permit issuing authorities to develop procedures for determining whether a discharge causes, has the reasonable potential to cause, or contributes to an instream excursion above a narrative or numeric criterion. If such reasonable potential is determined to exist, the NPDES permit must contain pollutant effluent limits and/or effluent limits for whole effluent toxicity. The EPA's reasonable potential analysis is based on guidelines provided in the "U.S. EPA NPDES Permit Writer's Manual (2010)" and its references. Reasonable Potential was performed using facility DMR data from July 1, 2014 thru February 28, 2019.

C. Whole Effluent Toxicity (WET)

The chronic WET test measures the effect of wastewater on an indicator organism's growth, reproduction and survival. The two species of indicator organisms designated in this permit are *Ceriodaphnia dubia* and *Pimephales promelas*. The effects of an effluent in chronic toxicity tests are estimated based on the statistical calculation of the effluent concentration which causes a 25% reduction in growth or reproduction of test organisms. This inhibition concentration, denoted as IC_{25}, is then compared to the instream waste concentration (IWC), which is the proportion of effluent in the receiving water, to determine if toxicity has occurred at a level of concern. If the IC_{25} is lower than the IWC, the effluent has the potential to inhibit aquatic organisms in the receiving water. WET testing also requires a measure of test sensitivity known as Percent Minimum Significant Difference (PMSD). See the table below from Section 10.2.8.3 of Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th Edition, EPA 821-R-02-013, 2002 for PMSD variability criteria.

TABLE 6. VARIABILITY CRITERIA (UPPER AND LOWER PMSD BOUNDS) FOR SUBLETHAL HYPOTHESIS TESTING ENDPOINTS SUBMITTED UNDER NPDES PERMITS.[1]

Test Method	Endpoint	Lower PMSD Bound	Upper PMSD Bound
Method 1000.0, Fathead Minnow Larval Survival and Growth Test	growth	12	30
Method 1002.0, *Ceriodaphnia dubia* Survival and Reproduction Test	reproduction	13	47
Method 1003.0, *Selenastrum capricornutum* Growth Test	growth	9.1	29

[1] Lower and upper PMSD bounds were determined from the 10th and 90th percentile, respectively, of PMSD data from EPA's WET Interlaboratory Variability Study (USEPA, 2001a; USEPA, 2001b).

The permittee submitted the results of four individual multi-species annual chronic WET tests with the permit renewal application. One of the tests was performed on October 13, 2014 showed chronic toxicity in the effluent for *Ceriodaphnia dubia* (Daphnid). The facility passed the follow-up tests. The second test submitted was performed December 31, 2016 and the facility passed the tests for both species. The third test was submitted on June 30, 2017 where the facility demonstrated toxicity in the effluent for *Ceriodaphnia dubia* (Daphnid). The fourth test on September 2018 and the facility passed both of these tests for both species.

Due to the failures in the submitted information for the application it is believed that there is reasonable potential for WET and a chronic WET limit has been deemed necessary. A chronic WET limit where an inhibition concentration (IC_{25}) of less than 72.5% will constitute a violation has been included in the permit, along with a requirement for annual testing for two species, *Ceriodaphnia dubia* and *Pimephales promelas*. These requirements are as stringent as the requirements in the previous permit and are protective of the State of Mississippi's water quality standards downstream of the outfall.

D. Basis for Conventional Pollutants Limits

Pollutant of Concern	**Basis**
pH, SU	The effluent limitation range for pH was based on minimum level of effluent quality requirements of 40 CFR § 133.102 for discharges of wastewater from POTWs.
5-Day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), mg/l	Effluent $CBOD_5$ limits in the permit include a monthly average concentration of 10.0 mg/l and a weekly average concentration of 15.0 mg/l. Effluent $CBOD_5$ loading limits of 10.84 lbs/day monthly average and 16.26 lbs/day weekly average are also included in this permit. The concentration limits remained unchanged from the previous permit and are protective of the State of Mississippi's downstream water quality standard for dissolved oxygen based on a historical model's results. The loading limits were changed to reflect the design flow of 0.13 MGD reported on the application. These limits are more stringent than minimum level of effluent quality requirements of 40 CFR § 133.102 for discharges of wastewater from POTWs. The previous NPDES permit had cited using best professional judgement (BPJ) for determination of the loading limits. In the permit that became effective August 1, 2003 increased loadings were justified to satisfy the stipulations of a Total Maximum Daily Load for Toxicity due to Pesticides and Other Pollutants in the Pearl River, developed by the EPA July 2, 2001. This TMDL is for Toxicity due to Pesticides therefore this is not an applicable use for

	$CBOD_5$ load determination. The percent removal limitation for $CBOD_5$ has been added to this permit and is based on the minimum level of effluent quality requirements of 40 CFR § 133.102 for discharge of waters from POTWs. For calculation of the percent removal, influent $CBOD_5$ monitoring has been added.
Total Suspended Solids (TSS), mg/l	The effluent limitations for TSS are based on minimum level of effluent quality requirements of 40 CFR § 133.102 for discharges of wastewater from POTWs. The permit includes monthly average limits of 30 mg/l and 32.53 lbs/day and weekly average limits of 45 mg/l and 48.79 lbs/day, as well as an 85% removal limitation and influent monitoring. TSS concentration limits and monitoring requirements are unchanged from the previous permit.TSS loading limits were changed from the previous NPDES permit to reflect the design flow of 0.13 MGD reported on the application.
E. coli, #/100ml	The effluent limitations have been changed to E. coli from Fecal Coliform to maintain consistency with Mississippi's Water Quality Standards at the State/Tribal Boundary and state waters. The limits include a monthly geometric mean of 126 #/100 mL and a daily maximum of 410 #/100 ml. Monitoring requirements are consistent with the previous NPDES permit and the anti-backsliding provisions of 40 CFR § 122.44(l).

E. Basis for Nonconventional Pollutants Limits

Pollutant of Concern	**Basis**
Ammonia, mg/l	The permit includes monthly average ammonia limits of 2.0 mg/l and 2.17 lbs/day and weekly average ammonia limits of 3.0 mg/l and 3.25 lbs/day. These limits are unchanged from the previous permit and are protective of the State of Mississippi downstream water quality standard for dissolved oxygen based on model results. MDEQ currently interprets their ammonia toxicity water quality standard for freshwater to be the EPA 1999 Update of Ambient Water Quality Criteria for Ammonia. The DO-based ammonia limits included in this permit are more stringent than the calculated toxicity-based ammonia limits and are therefore protective of the MDEQ toxicity-based ammonia water quality standard (The EPA 1999 Update of Ambient Water Quality Criteria for Ammonia).
Dissolved Oxygen, DO, mg/l	The permit includes a daily minimum dissolved oxygen limit of 6.0 mg/l. This limit is unchanged from the previous permit and is protective of the State of Mississippi downstream water quality standard for dissolved oxygen based on model results.
Total Nitrogen, mg/l	Monitoring for Total Nitrogen is being required so that sufficient information will be available from this point source should it be necessary at some later time to impose limits on this discharge.
Total Phosphorus, mg/l	Monitoring for Total Phosphorus is being required so that sufficient information will be available from this point source should it be necessary at some later time to impose limits on this discharge.
Chronic Whole Effluent Toxicity, IC_{25}	A chronic WET limit of $IC_{25} \geq 72.5\%$ has been included in the permit with a requirement for annual testing for two species, *Ceriodaphnia dubia* and *Pimephales promelas*. These requirements are as stringent as the requirements in the previous permit. For more information see paragraph 4.C. above.

F. Calculations for Water Quality-Based Effluent Limits (WQBELs)

a. Instream Waste Concentration (IWC)

$$IWC\ (\%) = \frac{\text{Design Flow (gpd)}}{\text{Design Flow (gpd)+7Q10(gpd)}} x\ 100\%$$

$$IWC\ (\%) = \frac{130{,}000\ \text{gpd}}{130{,}000\ \text{gpd} + 49{,}000\ \text{gpd}}\ x\ 100\%$$

$IWC\ (\%) = 72.5\%$ in the Unnamed Tributary to Beasha Creek

b. Dissolved Oxygen (DO)

The Tribal Band of Choctaw has not promulgated water quality standards. The State of Mississippi has promulgated a DO standard that states that DO concentrations shall be maintained at a minimum daily average of at least 5.0 mg/L and an instantaneous minimum of at least 4.0 mg/L. A historical model was used to analyze the effect of the facility's effluent on the receiving waterbody and determine $CBOD_5$, ammonia, and DO limits that are protective of these criteria. A minimum DO limit of 6.0 mg/L in the effluent was determined to be protective. See Appendix 1 for a detailed description of the model.

Permit Limit: DO shall not be less than 6.0 mg/L

c. Carbonaceous Biochemical Oxygen Demand (5-day) ($CBOD_5$)

A monthly average $CBOD_5$ WQBEL of 10 mg/L was developed using a historical model to be protective of instream DO.

Monthly average $CBOD_5$ limit = 10.0 mg/L

Monthly average $CBOD_5$ loading limit = 10.84 lb/day

A weekly average $CBOD_5$ limit was developed using the following equation:

Weekly average $CBOD_5$ limit = Monthly average $CBOD_5$ limit x 1.5

Weekly average $CBOD_5$ limit = 10.0 mg/L x 1.5

Weekly average $CBOD_5$ limit = 15 mg/L

Weekly average $CBOD_5$ loading limit = 16.26 lb/day

Loading limits were developed using the following equation:

Loading limit (lbs/day) = Concentration limit (mg/l) x Design flow (MGD) x 8.34

d. Ammonia

i. Ammonia Toxicity Analysis

The Tribal Band of Choctaw has not promulgated water quality standards. The State of Mississippi has adopted the *1999 Update of Ambient Water Quality Criteria for Ammonia;* The EPA document number *EPA-822-R-99-014* for ammonia toxicity. Toxicity-based ammonia limits have been developed for this permit so that these criteria will be met at the State/Tribal boundary and in state waters.

<u>Criterion Maximum Concentration (CMC) - Salmonid Fish Present</u>

$$CMC = \frac{0.0577}{1+10^{(7.204 - pH)}} + \frac{39.0}{1+10^{(pH - 7.204)}}$$

CMC = Instream criterion maximum concentration for total ammonia

pH = 7 SU

Instream CMC = 24.10 mg/L

$$C_E = \frac{[CMC \times (Design\ Flow + 7Q10)] - (7Q10 \times C_B)}{Design\ Flow}$$

$$C_E = \frac{[24.1 \times (0.13 + 0.05)] - (0.05 \times 0)}{0.13}$$

Where:

C_B = Upstream ammonia concentration = 0 mg/L

C_E = Allowable ammonia effluent concentration, mg/L

C_E = 33.4 mg/L

Criterion Continuous Concentration (CCC) – Early Life Stages Present

$$CCC = \left(\frac{0.13}{1+10^{(7.688 - \mathrm{pH})}} + \frac{2.487}{1+10^{(\mathrm{pH} - 7.688)}}\right) \times MIN(2.85, 1.45 \times 10^{[0.028 \times (25 - T)]})$$

$$CCC = \left(\frac{0.13}{1+10^{(7.688 - 7)}} + \frac{2.487}{1+10^{(7 - 7.688)}}\right) \times MIN(2.85, 1.45 \times 10^{[0.028 \times (25 - 30)]})$$

CCC = Instream criterion continuous concentration for total ammonia

$$C_E = \frac{[CCC \times (Design\ Flow + 7Q10)] - (7Q10 \times C_B)}{Design\ Flow}$$

$$C_E = \frac{[2.18 \times (0.13 + 0.05)] - (0.05 \times 0)}{0.13}$$

Where:

C_B = Upstream ammonia concentration = 0 mg/L

C_E = Allowable ammonia effluent concentration, mg/L

pH = 7 SU, T = 30 ºC

CCC = 2.18 mg/L

C_E = 3.01 mg/L

The seasonal limits based on the Instream CCC criteria are more stringent than the limit

based on the Instream CMC criteria. Therefore, the limits of 3.01 mg/L will be used to compare against the DO-based ammonia WQBELs developed in a historical model.

ii. DO-Based Ammonia Limits

Monthly average ammonia WQBELs of 2.0 mg/L was developed using the historic model to be protective of instream DO. This WQBEL are more stringent than those developed to be protective of toxicity (3.01 mg/L). Therefore, the DO-based ammonia WQBEL will be used to protect against toxicity while protecting instream DO.

Monthly average total ammonia limit = 2.0 mg/L

Monthly average total ammonia loading limit = 2.17 lb/day

Weekly average total ammonia limits were developed using the following equation:

Weekly average total ammonia limit = Monthly average total ammonia limit x 1.5

Weekly average total ammonia limit = 2.0 mg/L x 1.5

Weekly average total ammonia limit = 3.0 mg/L

Weekly average total ammonia loading limit = 3.25 lb/day

e. Total Residual Chlorine (TRC)

The Tribal Band of Choctaw has not promulgated WQS. The State of Mississippi has promulgated Fresh Water chlorine chronic criteria of 0.011 mg/L and acute criteria of 0.019 mg/L. A total residual chlorine limit has been developed for this permit so that these criteria will be met at the State/Tribal boundary and in state waters.

$$C_D = \frac{(Q_R \times C_R) + (Q_E \times C_E)}{Q_D}$$

Q_R = Critical streamflow = 7Q10 = 0.08 cfs
C_R = Upstream concentration = 0 mg/L
Q_E = Effluent design flow = 0.13 MGD
C_E = Effluent concentration
Q_D = Combined downstream flow = Q_D + Q_E = 0.19 MGD
C_D = Downstream concentration = 0.011 mg/L

$$0.011\ mg/L = \frac{(0.08\ cfs \times 0\ mg/L) + (0.13\ MGD \times C_E)}{0.13\ MGD}$$

$$C_E = 0.011\ mg/L$$

Daily Maximum Limit = 0.011 mg/L

G. Applicable Technology-Based Effluent Limits (TBELs)

Technology-based effluent limitations aim to prevent pollution by requiring a minimum level of effluent quality that is attainable using demonstrated technologies for reducing discharges of

pollutants or pollution into the waters of the United States.

i. Secondary Treatment Standards

Parameter	**Secondary Treatment Standard**
BOD_5 ($CBOD_5$)	30 mg/L (25 mg/L) Monthly Average 45 mg/L (37.5 mg/L) Weekly Average
TSS	30 mg/L Monthly Average 45 mg/L Weekly Average
Removal	85% BOD_5 (or $CBOD_5$) and TSS
pH	Maintained within the limits of 6.0-9.0 standard units

H. Comparison & Summary of Water Quality-Based vs. Technology-Based Effluent Limits

For each parameter, applicable technology-based limits (TBELs) were compared to the applicable water-quality based limits WQBELs), and the most stringent limits were selected for the permit. The selected limits, indicated by bold text, were compared to the limits in the current permit, and all are at least as stringent as the current permit limits.

Parameter	**Current Permit Limits**				**Proposed Permit Limits**							
					WQBELs				**TBELs**			
	Daily Min	Monthly Avg	Weekly Avg	Daily Max	Daily Min	Monthly Avg	Weekly Avg	Daily Max	Daily Min	Monthly Avg	Weekly Avg	Daily Max
Flow, MGD	---	Report	Report	---	---	**Report**	**Report**	---	---	---	---	---
Dissolved Oxygen, mg/l	6.0	---			**6.0**	---			---			
$CBOD_5$, mg/l (lb/d)	---	10.0 (15.88)	15.0 (23.82)	---	---	**10.0 (10.84)**	**15.0 (16.26)**	---	---	25	37.5	---
$CBOD_5$ % Removal	---				---				**85%**			
TSS, mg/l (lb/d)	---	30.0 (125.1)	45.0 (187.6)	---	---				**---**	**30.0 (32.53)**	**45.0 (48.79)**	**---**
TSS % Removal	85%				---				**85%**			
Total Ammonia as Nitrogen, mg/l (lb/d)	---	2.0 (8.34)	3.0 (12.51)	---	---	**2.0 (2.17)**	**3.0 (3.25)**	---	---			
pH, S.U.	6.0	---		9.0	**6.0**	---		**9.0**	6.0	---		9.0
Fecal Coliform, Summer, #/100 ml	---	200	400	---	**---**	---	**---**	**---**	---			
Fecal Coliform, Winter, #/100 ml	---	2000	4000	---	**---**	---	**---**	**---**	---			
E. coli, #/100 ml	---	---	---	---	**---**	**126**	**---**	**410**	---			
TN, mg/l	---	---	---	Report	---	**Report**	**Report**	---	---			
TP, mg/l	---	---	---	Report	---	**Report**	**Report**	---	---			

Chronic WET	IC_{25} > 72.5%	**IC_{25} > 72.5%**	---
Instream Monitoring	Upstream/Downstream DO, pH, temperature, conductivity	**Upstream/Downstream DO, pH, temperature, conductivity**	---

5. 401 Certification

The Clean Water Act (CWA) § 401 statute and regulations stipulate that no federal permit or license can be issued that may result in a discharge to waters of the United States unless the state or authorized tribe certifies that the discharge is consistent with water quality standards and other water quality goals or waives its certification authority. The EPA Regional offices are directed to certify on behalf of tribes without CWA § 401 program authority.

The CWA § 401 regulations direct certifying agencies to conclude that the permitted activity will be consistent with effluent limitations for conventional and non-conventional pollutants, water quality standards, new source performance standards, and toxic pollutant limitations, and any other appropriate state and/or tribal requirements. A second component of the scope of the CWA § 401 review is determining whether an activity requiring certification in one state or tribe (i.e., in the location where the discharge originates) may potentially impact the water quality of a neighboring state or tribe. In those instances, the EPA is directed to notify the state or tribe whose water quality may be affected, and other review processes may be triggered.

The Tribal Band of Choctaw has not promulgated water quality standards, and discharges from the New Harmony WWTF will occur just upstream of the Mississippi state boundary. The subject permit was developed to be consistent with the State of Mississippi's Water Quality Standards (part 6, chapter 2, Rule 2.4). It is protective of designated uses of state waters and with the other applicable provisions of the CWA (i.e., §§ 301, 302, 303, 306, and 307).

6. Services Consultation

In accordance with 40 CFR § 122.49(c) the EPA is required to ensure, in consultation with the U.S. Fish and Wildlife Service (Service), that "any action authorized by the EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat". In a letter dated April 15, 2019, the Service concurred with the EPA determination that the proposed project "May affect, but [is] not likely to adversely affect" federally listed species or critical habitat.

7. Public Participation

The public notice for this draft permit will be published in the Neshoba Democrat with the permit documents available on the EPA Region 4 website. The public comment period will be open for 30 days after publication of the public notice. A response to comment document will be drafted and included with the final permit should any significant comments be received.

DATE: June 24, 2019

AMENDMENT TO THE FACT SHEET AT THE TIME OF ISSUANCE

PERMIT NO: MS0058645

NAME OF APPLICANT: New Harmony Wastewater Treatment Facility

A. Public Comments

In accordance with 40 CFR § 124.10(d)(1) the Public Notice announcing the proposed reissuance of the EPA Region 4's Individual NPDES Permit for New Harmony Wastewater Treatment Facility, No. MS0058645, was published in the Neshoba Democrat on May 22, 2019. The comment period was open for 30 days until June 21, 2019. The EPA Region 4 received no comments during this time.

Appendix 1 – Summary of DMR Data

Effluent Flow

Monitoring Period End Date	Monthly Average, MGD	Weekly Average, MGD
7/31/2014	**	**
8/31/2014	**	**
9/30/2014	82.00*	0.10
10/31/2014	0.08	0.11
11/30/2014	0.10	0.16
12/31/2014	0.15	0.27
1/31/2015	0.15	0.09
2/28/2015	0.13	0.21
3/31/2015	0.26	0.29
4/30/2015	0.17	0.24
5/31/2015	0.09	0.12
6/30/2015	0.17	0.20
7/31/2015	0.07	0.11
8/31/2015	0.07	0.09
9/30/2015	0.06	0.09
10/31/2015	0.13	0.25
11/30/2015	0.20	0.31
12/31/2015	0.17	0.25
1/31/2016	0.16	0.23
2/29/2016	0.23	0.48
3/31/2016	0.26	0.40
4/30/2016	**	**
5/31/2016	**	**
6/30/2016	**	**
7/31/2016	**	**
8/31/2016	**	**
9/30/2016	**	**
10/31/2016	**	**
11/30/2016	**	**
12/31/2016	0.14	0.23
1/31/2017	0.22	0.55
2/28/2017	0.14	0.33
3/31/2017	0.13	0.23
4/30/2017	0.18	0.25
5/31/2017	0.20	0.37
6/30/2017	0.22	0.46
7/31/2017	0.13	0.22
8/31/2017	0.15	0.25
9/30/2017	0.20	0.27
10/31/2017	0.06	0.07
11/30/2017	0.07	0.08
12/31/2017	0.09	0.12
1/31/2018	0.10	0.15
2/28/2018	0.11	0.13
3/31/2018	0.11	0.17
4/30/2018	0.12	0.17
5/31/2018	0.09	0.12
6/30/2018	0.08	0.10
7/31/2018	0.11	0.23
8/31/2018	0.09	0.11
9/30/2018	0.09	0.10
10/31/2018	0.08	0.10
11/30/2018	0.11	0.13
12/31/2018	0.15	0.42
1/31/2019	0.09	0.24
2/28/2019	**	**

Data Points, n	44	45
Average	0.13	0.21
Maximum	0.26	0.55

* Didn't use data point due to an input error
** Data Unavailable

$CBOD_5$

Monitoring Period End Date	Monthly Average, mg/L	Weekly Average, mg/L
7/31/2014	**	**
8/31/2014	**	**
9/30/2014	2.00	3.00
10/31/2014	1.50	2.00
11/30/2014	1.30	2.00
12/31/2014	1.80	2.00
1/31/2015	1.60	2.00
2/28/2015	1.50	3.00
3/31/2015	2.50	6.00
4/30/2015	2.00	3.00
5/31/2015	1.50	2.00
6/30/2015	2.80	4.00
7/31/2015	1.80	2.00
8/31/2015	3.50	5.00
9/30/2015	3.50	4.00
10/31/2015	2.60	3.00
11/30/2015	2.00	3.00
12/31/2015	3.20	5.00
1/31/2016	2.00	2.00
2/29/2016	1.25	2.00
3/31/2016	4.80	5.00
4/30/2016	**	**
5/31/2016	**	**
6/30/2016	**	**
7/31/2016	**	**
8/31/2016	**	**
9/30/2016	**	**
10/31/2016	**	**
11/30/2016	**	**
12/31/2016	1.80	4.00
1/31/2017	1.50	3.00
2/28/2017	2.30	4.00
3/31/2017	1.00	1.00
4/30/2017	1.30	2.00
5/31/2017	1.30	2.00
6/30/2017	1.50	2.00
7/31/2017	2.00	3.00
8/31/2017	2.50	4.00
9/30/2017	1.50	2.00
10/31/2017	1.00	1.00
11/30/2017	1.80	5.00
12/31/2017	1.30	2.00
1/31/2018	3.80	10.00
2/28/2018	2.80	3.00
3/31/2018	2.00	3.00
4/30/2018	2.50	3.00
5/31/2018	3.00	4.00
6/30/2018	5.50	7.00
7/31/2018	3.30	5.00
8/31/2018	9.00	16.50
9/30/2018	1.50	3.00
10/31/2018	2.20	3.00
11/30/2018	1.50	2.00
12/31/2018	1.00	1.00
1/31/2019	3.80	12.00
2/28/2019	**	**

Data Points, n	45	45
Average	2.35	3.72
Maximum	9.00	16.50

** Data Unavailable

TSS

Monitoring Period End Date	Weekly Average, mg/L	Monthly Average, mg/L	TSS Removal, %
7/31/2014	**	**	**
8/31/2014	**	**	**
9/30/2014	19.00	16.30	90.00
10/31/2014	18.00	15.80	90.00
11/30/2014	20.00	16.50	89.00
12/31/2014	16.00	15.30	91.00
1/31/2015	18.00	15.80	90.00
2/28/2015	14.00	13.80	92.00
3/31/2015	22.00	18.30	90.00
4/30/2015	20.00	17.80	91.00
5/31/2015	19.00	18.00	89.00
6/30/2015	21.00	18.50	87.00
7/31/2015	22.00	20.40	87.00
8/31/2015	24.00	20.80	87.00
9/30/2015	17.00	13.40	92.00
10/31/2015	18.00	14.40	91.00
11/30/2015	21.00	18.30	88.00
12/31/2015	26.00	7.40	92.00
1/31/2016	9.00	5.00	97.00
2/29/2016	5.00	4.00	97.00
3/31/2016	5.00	4.80	96.00
4/30/2016	**	**	**
5/31/2016	**	**	**
6/30/2016	**	**	**
7/31/2016	**	**	**
8/31/2016	**	**	**
9/30/2016	**	**	**
10/31/2016	**	**	**
11/30/2016	**	**	**
12/31/2016	13.00	6.60	95.20
1/31/2017	7.00	4.75	95.80
2/28/2017	6.00	5.25	96.30
3/31/2017	6.00	5.25	96.60
4/30/2017	9.00	6.00	93.00
5/31/2017	5.00	3.50	96.90
6/30/2017	5.00	4.50	94.50
7/31/2017	13.00	7.00	92.30
8/31/2017	27.00	15.50	87.60
9/30/2017	9.00	5.75	96.00
10/31/2017	5.00	5.00	93.50
11/30/2017	5.00	5.00	95.40
12/31/2017	10.00	6.25	96.40
1/31/2018	61.00	23.25	54.50
2/28/2018	11.00	8.50	93.90
3/31/2018	5.00	5.00	94.30
4/30/2018	9.00	6.00	94.10
5/31/2018	8.00	6.00	95.10
6/30/2018	53.00	21.00	74.90
7/31/2018	11.00	10.00	90.40
8/31/2018	41.00	15.00	84.80
9/30/2018	20.00	9.00	91.30
10/31/2018	7.00	5.00	93.40
11/30/2018	6.00	6.00	95.10
12/31/2018	5.00	5.00	95.20
1/31/2019	12.00	8.00	91.10
2/28/2019	**	**	**
Data Point, n	45	45	45
Average	15.62	10.73	91.19
Max (Min)	61.00	23.25	54.50

** Data Unavailable

Total Ammonia as N

Monitoring Period End Date	Monthly Average, mg/L	Weekly Average, mg/L
7/31/2014	**	**
8/31/2014	**	**
9/30/2014	0.00	0.00
10/31/2014	0.00	0.00
11/30/2014	0.00	0.00
12/31/2014	0.00	0.00
1/31/2015	0.00	0.00
2/28/2015	0.10	0.20
3/31/2015	0.00	0.00
4/30/2015	0.00	0.00
5/31/2015	0.00	0.00
6/30/2015	0.00	0.00
7/31/2015	0.20	0.93
8/31/2015	0.90	1.50
9/30/2015	0.10	0.20
10/31/2015	0.20	0.40
11/30/2015	0.50	1.30
12/31/2015	0.40	1.10
1/31/2016	0.20	0.50
2/29/2016	0.20	0.30
3/31/2016	2.80	7.60
4/30/2016	**	**
5/31/2016	**	**
6/30/2016	**	**
7/31/2016	**	**
8/31/2016	**	**
9/30/2016	**	**
10/31/2016	**	**
11/30/2016	**	**
12/31/2016	2.00	9.00
1/31/2017	1.00	2.50
2/28/2017	0.30	0.40
3/31/2017	0.30	0.50
4/30/2017	0.60	1.10
5/31/2017	0.40	0.70
6/30/2017	0.80	1.30
7/31/2017	2.70	4.90
8/31/2017	1.70	5.50
9/30/2017	0.70	1.70
10/31/2017	0.10	0.20
11/30/2017	0.20	0.50
12/31/2017	0.20	0.40
1/31/2018	0.20	0.30
2/28/2018	0.20	0.30
3/31/2018	0.40	1.30
4/30/2018	0.90	2.60
5/31/2018	2.80	7.30
6/30/2018	2.30	4.80
7/31/2018	7.90	12.00
8/31/2018	8.00	14.00
9/30/2018	0.70	2.60
10/31/2018	0.30	1.00
11/30/2018	0.10	0.10
12/31/2018	0.10	0.10
1/31/2019	0.50	2.40
2/28/2019	**	**

Data Points, n	45	45
Average	0.91	2.03
Maximum	8.00	14.00

** Data Unavailable

pH

Monitoring Period End Date	Daily Max, SU	Daily Min, SU
7/31/2014	**	**
8/31/2014	**	**
9/30/2014	8.00	7.00
10/31/2014	7.50	7.00
11/30/2014	7.50	7.00
12/31/2014	7.50	7.00
1/31/2015	7.50	7.50
2/28/2015	7.50	7.00
3/31/2015	7.50	7.00
4/30/2015	7.50	7.50
5/31/2015	7.50	7.00
6/30/2015	7.50	7.00
7/31/2015	7.50	7.00
8/31/2015	7.50	7.00
9/30/2015	7.50	7.50
10/31/2015	7.50	7.00
11/30/2015	7.50	7.50
12/31/2015	7.50	7.00
1/31/2016	7.50	7.00
2/29/2016	7.50	7.00
3/31/2016	7.50	7.00
4/30/2016	**	**
5/31/2016	**	**
6/30/2016	**	**
7/31/2016	**	**
8/31/2016	**	**
9/30/2016	**	**
10/31/2016	**	**
11/30/2016	**	**
12/31/2016	7.50	7.00
1/31/2017	7.50	7.00
2/28/2017	7.50	7.50
3/31/2017	7.50	7.00
4/30/2017	7.50	7.00
5/31/2017	7.50	7.00
6/30/2017	7.50	7.00
7/31/2017	8.00	7.50
8/31/2017	7.50	7.00
9/30/2017	7.50	7.00
10/31/2017	7.50	7.50
11/30/2017	8.80	7.30
12/31/2017	7.90	7.30
1/31/2018	7.90	7.00
2/28/2018	7.60	6.90
3/31/2018	7.30	6.40
4/30/2018	8.00	6.80
5/31/2018	**	**
6/30/2018	7.20	7.00
7/31/2018	7.70	7.20
8/31/2018	7.40	7.10
9/30/2018	7.10	6.80
10/31/2018	7.30	6.70
11/30/2018	7.20	6.80
12/31/2018	7.50	6.80
1/31/2019	7.50	6.70
2/28/2019	**	**

Data Points, n	44	44
Average	7.55	7.05
Min/Max	8.80	6.40

**Data Unavailable

Dissolved Oxygen (DO)

Monitoring Period End Date	**Daily Minimum, mg/L**
7/31/2014	**
8/31/2014	**
9/30/2014	6.90
10/31/2014	7.20
11/30/2014	7.90
12/31/2014	8.30
1/31/2015	9.20
2/28/2015	9.20
3/31/2015	8.40
4/30/2015	7.80
5/31/2015	7.60
6/30/2015	6.80
7/31/2015	68.00*
8/31/2015	6.60
9/30/2015	6.50
10/31/2015	7.00
11/30/2015	7.20
12/31/2015	8.10
1/31/2016	8.01
2/29/2016	8.30
3/31/2016	6.70
4/30/2016	**
5/31/2016	**
6/30/2016	**
7/31/2016	**
8/31/2016	**
9/30/2016	**
10/31/2016	**
11/30/2016	**
12/31/2016	6.80
1/31/2017	7.00
2/28/2017	6.60
3/31/2017	6.40
4/30/2017	7.50
5/31/2017	7.00
6/30/2017	6.80
7/31/2017	6.20
8/31/2017	6.10
9/30/2017	5.80
10/31/2017	6.70
11/30/2017	7.00
12/31/2017	6.90
1/31/2018	6.40
2/28/2018	6.00
3/31/2018	5.60
4/30/2018	3.90
5/31/2018	**
6/30/2018	4.80
7/31/2018	5.60
8/31/2018	5.40
9/30/2018	6.00
10/31/2018	6.10
11/30/2018	7.10
12/31/2018	9.10
1/31/2019	6.00
2/28/2019	**

Data Points, n	44
Average	8.28
Minimum	3.90

** Data Unavailable

Fecal Coliform

Monitoring Period End Date	Monthly Geomean, #/100mL	Weekly Geomean, #/100mL
7/31/2014	**	**
8/31/2014	**	**
9/30/2014	1.30	1.30
10/31/2014	0.20	0.20
5/31/2015	0.60	0.60
6/30/2015	1.00	1.00
7/31/2015	2.00	2.00
8/31/2015	1.30	1.30
9/30/2015	1.00	1.00
10/31/2015	1.10	1.10
5/31/2016	**	**
6/30/2016	**	**
7/31/2016	**	**
8/31/2016	**	**
9/30/2016	**	**
10/31/2016	**	**
5/31/2017	137.90	480.00
6/30/2017	82.10	108.00
7/31/2017	55.10	24,000.00
8/31/2017	254.20	50,000.00
9/30/2017	23.50	69.00
10/31/2017	4.00	4.00
5/31/2018	20.00	485.00
6/30/2018	224.00	2,323.00
7/31/2018	433.00	60,606.00
8/31/2018	111.00	2,273.00
9/30/2018	24.00	80.00
10/31/2018	28.00	44.00

Data Points, n	20	20
Average	70.27	7,024.03
Maximum	433.00	60,606.00

Monitoring Period End Date	Monthly Geomean #/100mL	Weekly Geomean, #/100mL
11/30/2014	0.80	0.80
12/31/2014	1.00	1.00
01/31/2015	0.70	0.70
02/28/2015	4.00	4.00
03/31/2015	1.40	1.40
04/30/2015	1.00	1.00
11/30/2015	2.00	2.00
12/31/2015	1.00	1.00
01/31/2016	1.00	2.00
02/29/2016	1.00	1.00
03/31/2016	1.00	1.00
04/30/2016	**	**
11/30/2016	**	**
12/31/2016	19.30	112.00
01/31/2017	7.50	40.00
02/28/2017	36.60	180.00
03/31/2017	13.20	160.00
04/30/2017	81.20	112.00
11/30/2017	15.40	3,434.00
12/31/2017	5.40	13.00
01/31/2018	6.30	12.00
02/28/2018	25.10	64.00
03/31/2018	176.00	3,030.00
04/30/2018	56.00	17,172.00
11/30/2018	7.00	16.00
12/31/2018	14.00	36.00
01/31/2019	35.00	3,506.00
02/28/2019	**	**

Data Points, n	25	25
Average	20.52	1,116.12
Maximum	8.00	17,172.00

** Data Unavailable

Total Nitrogen as N

Monitoring Period End Date	**Daily Max, mg/L**
09/30/2014	**
12/31/2014	0.20
03/31/2015	1.36
06/30/2015	0.00
09/30/2015	3.90
12/31/2015	2.80
03/31/2016	**
06/30/2016	**
09/30/2016	**
12/31/2016	4.24
03/31/2017	**
06/30/2017	**
09/30/2017	1.32
12/31/2017	0.99
03/31/2018	2.80
06/30/2018	3.08
09/30/2018	9.14
12/31/2018	18.31

Data Points, n	12
Average	4.01
Maximum	18.31

** Data Unavailable

Total Phosphorous as P

Monitoring Period End Date	**Daily Max, mg/L**
09/30/2014	**
12/31/2014	1.20
03/31/2015	1.08
06/30/2015	1.40
09/30/2015	3.27
12/31/2015	4.14
03/31/2016	**
06/30/2016	**
09/30/2016	**
12/31/2016	1.77
03/31/2017	**
06/30/2017	**
09/30/2017	1.13
12/31/2017	1.30
03/31/2018	1.42
06/30/2018	1.32
09/30/2018	8.44
12/31/2018	2.50

Data Points, n	12
Average	2.41
Maximum	8.44

Appendix 2 – Summary of Instream Monitoring

Conductivity

Monitoring Period End Date	Upstream – Beasha Creek before confluence with Unnamed Tributary			Downstream – Beasha Creek below confluence with Unnamed Tributary		
	Daily Min, umho/cm	Daily Avg, umho/cm	Daily Max, umho/cm	Daily Min, umho/cm	Daily Avg, umho/cm	Daily Max, umho/cm
06/30/2018	121.00	262.50	404.00	79.00	82.00	85.00
07/31/2018	466.00	496.50	527.00	59.00	70.00	81.00
08/31/2018	84.00	94.00	104.00	73.00	74.00	75.00
09/30/2018	87.00	92.50	98.00	393.00	397.00	401.00

Data Points	4	4	4	4	4	4
Minimum	84.00	-	-	59.00	-	-
Average	-	236.38	-	-	155.75	-
Maximum	-	-	527.00	-	-	401.00

Dissolved Oxygen (DO)

Monitoring Period End Date	Upstream – Beasha Creek before confluence with Unnamed Tributary			Downstream – Beasha Creek below confluence with Unnamed Tributary		
	Daily Min, mg/l	Daily Avg, mg/l	Daily Max, mg/l	Daily Min, mg/l	Daily Avg, mg/l	Daily Max, mg/l
06/30/2018	2.50	3.20	3.80	7.00	7.20	7.30
07/31/2018	4.40	4.80	5.10	7.20	7.30	7.30
08/31/2018	7.30	7.60	7.90	4.30	5.80	7.30
09/30/2018	7.30	7.40	7.50	6.50	6.50	6.50

Data Points	4	4	4	4	4	4
Minimum	2.50	-	-	4.30	-	-
Average	-	5.75	-	-	6.70	-
Maximum	-	-	7.90	-	-	7.30

pH

Monitoring Period End Date	Upstream – Beasha Creek before confluence with Unnamed Tributary		Downstream – Beasha Creek below confluence with Unnamed Tributary	
	Daily Min, SU	Daily Max, SU	Daily Min, SU	Daily Max, SU
06/30/2018	2.50	3.80	6.60	6.90
07/31/2018	4.40	5.10	6.60	6.60
08/31/2018	7.30	7.90	6.40	6.60
09/30/2018	7.30	7.50	7.20	7.30

Data Points	4	4	4	4
Minimum	2.50	-	6.40	-
Maximum	-	7.90	-	7.30

Temperature

Monitoring Period End Date	Upstream – Beasha Creek before confluence with Unnamed Tributary			Downstream – Beasha Creek below confluence with Unnamed Tributary		
	Daily Min, mg/l	Daily Avg, mg/l	Daily Max, mg/l	Daily Min, mg/l	Daily Avg, mg/l	Daily Max, mg/l
06/30/2018	81.00	81.10	81.10	82.20	82.30	82.40
07/31/2018	79.00	81.10	81.10	77.90	79.20	80.40
08/31/2018	77.90	82.80	82.80	80.20	81.00	81.70
09/30/2018	79.30	80.60	80.60	81.00	81.00	81.00

Data Points	4	4	4	4	4	4
Minimum	77.90	-	-	77.90	-	-
Average	-	80.00	-	-	80.90	-
Maximum	-	-	82.80	-	-	82.40

Upstream Monitoring

Conductivity

Monitoring Period End Date	**Daily Min, umho/cm**	**Daily Max, umho/cm**	**Daily Average, umho/cm**
06/30/2018	121.00	404.00	262.50
07/31/2018	466.00	527.00	496.50
08/31/2018	84.00	104.00	94.00
09/30/2018	87.00	98.00	92.50
Data Points, n	4	4	4
Average	189.50	283.25	236.38
Min	84.00	98.00	92.50
Max	466.00	527.00	496.50

Temperature

Monitoring Period End Date	**Daily Min, deg F**	**Daily Max, deg F**	**Daily Average, deg F**
06/30/2018	81.00	81.10	81.10
07/31/2018	79.00	81.10	80.10
08/31/2018	77.90	82.80	80.30
09/30/2018	79.30	80.60	80.00
Data Points, n	4	4	4
Average	79.30	81.40	80.38
Min	77.90	80.60	80.00
Max	81.00	82.80	81.10

Dissolved Oxygen (DO)

Monitoring Period End Date	**Daily Min, mg/L**	**Daily Max, mg/L**	**Daily Average, mg/L**
06/30/2018	2.50	3.80	3.20
07/31/2018	4.40	5.10	4.80
08/31/2018	7.30	7.90	7.60
09/30/2018	7.30	7.50	7.40
Data Points, n	4	4	4
Average	5.38	6.08	5.75
Min	2.50	3.80	3.20
Max	7.30	7.90	7.60

pH

Monitoring Period End Date	**Daily Min, SU**	**Daily Max, SU**	**Daily Average, SU**
06/30/2018	2.50	3.80	3.20
07/31/2018	4.40	5.10	4.80
08/31/2018	7.30	7.90	7.60
09/30/2018	7.30	7.50	7.40
Data Points, n	4	4	4
Average	5.38	6.08	5.75
Min	2.50	3.80	3.20
Max	7.30	7.90	7.60

Downstream

Conductivity

Monitoring Period End Date	Daily Min, umho/cm	Daily Max, umho/cm	Daily Average, umho/cm
07/31/2014	**	**	**
08/31/2014	**	**	**
09/30/2014	**	**	**
06/30/2015	205.00	205.00	205.00
07/31/2015	401.50	401.50	401.50
08/31/2015	368.00	401.00	384.50
09/30/2015	401.00	401.00	401.00
06/30/2016	**	**	**
07/31/2016	**	**	**
08/31/2016	**	**	**
09/30/2016	**	**	**
06/30/2017	43.00	44.00	43.50
07/31/2017	96.00	396.00	246.00
08/31/2017	351.00	391.00	371.00
09/30/2017	378.00	381.50	385.00
06/30/2018	79.00	85.00	82.00
07/31/2018	59.00	81.00	70.00
08/31/2018	73.00	75.00	74.00
09/30/2018	393.00	401.00	397.00

Data Points, n	12	12	12
Average	237.29	271.92	255.04
Min	59.00	81.00	43.50
Max	401.50	401.00	401.50

Dissolved Oxygen (DO)

Monitoring Period End Date	Daily Min, mg/L	Daily Max, mg/L	Daily Average, mg/L
07/31/2014	**	**	**
08/31/2014	**	**	**
09/30/2014	**	**	**
06/30/2015	7.00	7.00	7.00
07/31/2015	6.85	6.85	6.85
08/31/2015	7.30	7.60	7.45
09/30/2015	6.70	6.70	6.70
06/30/2016	**	**	**
07/31/2016	**	**	**
08/31/2016	**	**	**
09/30/2016	**	**	**
06/30/2017	5.60	6.40	6.00
07/31/2017	6.10	6.10	6.10
08/31/2017	3.70	5.40	4.55
09/30/2017	6.20	6.60	6.40
06/30/2018	7.00	7.30	7.20
07/31/2018	7.20	7.30	7.30
08/31/2018	4.30	7.30	5.80
09/30/2018	6.50	6.50	6.50

Data Points, n	12	12	12
Average	6.20	6.75	6.49
Min	3.70	5.40	4.55
Max	7.30	7.60	7.45

** Data Unavailable

pH

Monitoring Period End Date	Daily Min, SU	Daily Max, SU
07/31/2014	**	**
08/31/2014	**	**
09/30/2014	**	**
06/30/2015	7.15	7.15
07/31/2015	7.05	7.05
08/31/2015	6.90	7.10
09/30/2015	6.80	6.90
06/30/2016	**	**
07/31/2016	**	**
08/31/2016	**	**
09/30/2016	**	**
06/30/2017	6.40	6.60
07/31/2017	6.60	7.60
08/31/2017	7.10	7.50
09/30/2017	7.20	7.40
06/30/2018	6.60	6.90
07/31/2018	6.60	6.60
08/31/2018	6.40	6.60
09/30/2018	7.20	7.30

Data Points, n	12	12
Average	6.83	7.06
Min	6.40	6.60
Max	7.20	7.60

Temperature

Monitoring Period End Date	**Daily Min, def F**	**Daily Max, deg F**	**Daily Average, deg F**
07/31/2014	**	**	**
08/31/2014	**	**	**
09/30/2014	**	**	**
06/30/2015	77.00	77.00	77.00
07/31/2015	26.00	26.00	26.00
08/31/2015	22.00	24.00	23.00
09/30/2015	25.00	26.00	25.50
06/30/2016	**	**	**
07/31/2016	**	**	**
08/31/2016	**	**	**
09/30/2016	**	**	**
06/30/2017	74.84	75.02	74.93
07/31/2017	70.52	81.14	75.83
08/31/2017	77.40	80.78	79.10
09/30/2017	75.20	78.80	77.00
06/30/2018	82.20	82.40	82.30
07/31/2018	77.90	80.40	79.20
08/31/2018	80.20	81.70	81.00
09/30/2018	81.00	81.00	81.00

Data Points, n	12	12	12
Average	64.11	66.19	65.16
Min	22.00	24.00	23.00
Max	82.20	82.40	82.30

Appendix 3- Reasonable Potential Analysis

Method

The Mississippi Band of Choctaw Indians have not promulgated water quality standards for metals and organics for tribal waters. The receiving waterbody crosses the State/Tribal boundary shortly downstream of the outfall, and the State of Mississippi has promulgated metals and organics water quality standards. Therefore, the reasonable potential analysis was designed to assess if there is reasonable potential for the Pearl River WWTF's effluent to cause or contribute to the exceedance of the State of Mississippi's water quality standards at the State/Tribal boundary.

The EPA's *Technical Support Document for Water Quality-Based Toxics Control* (1991 EPA/505/2-90-001) (TSD) provides guidance for assessing potential toxicity for metals and man-made organic toxicant pollutants. The following from the TSD Chapter 3 page 53 illustrates the methodology employed for this permit reissuance. The method references a Table 3-1 or 3-2 in the TSD for selection of reasonable potential multiplying factors. For this analysis, the EPA used the 95%ile (Table 3-2).

Box 3-2. Determining "Reasonable Potential" for Excursions Above Ambient Criteria Using Effluent Data Only

EPA recommends finding that a permittee has "reasonable potential" to exceed a receiving water quality standard if it cannot be demonstrated with a high confidence level that the upper bound of the lognormal distribution of effluent concentrations is below the receiving water criteria at specified low-flow conditions.

Step 1 Determine the number of total observations ("*n*") for a particular set of effluent data (concentrations or toxic units [TUs]), and determine the highest value from that data set.

Step 2 Determine the coefficient of variation for the data set. For a data set where $n<10$, the coefficient of variation (CV) is estimated to equal 0.6, or the CV is calculated from data obtained from a discharger. For a data set where $n>10$, the CV is calculated as standard deviation/mean (see Figure 3-1). For less than 10 items of data, the uncertainty in the CV is too large to calculate a standard deviation or mean with sufficient confidence.

Step 3 Determine the appropriate ratio from Table 3-1 or 3-2.

Step 4 Multiply the highest value from a data set by the value from Table 3-1 or 3-2. Use this value with the appropriate dilution to project a maximum receiving water concentration (RWC).

Step 5 Compare the projected maximum RWC to the applicable standard (criteria maximum concentration, criteria continuous concentration [CCC], or reference ambient concentration). EPA recommends that permitting authorities find reasonable potential when the projected RWC is greater than an ambient criterion.

Example

Consider the following results of toxicity measurements of an effluent that is being characterized: 5 TU_c, 2 TU_c, 9 TU_c, and 6 TU_c. Assume that the effluent is diluted to 2 percent at the edge of the mixing zone. Further assume that the CV is 0.6, the upper bound of the effluent distribution is the 99th percentile, and the confidence level is 99 percent.

Step 1 There are four samples, and the maximum value of the sample results is 9 TU_c.

Step 2 The value of the CV is 0.6.

Step 3 The value of the ratio for four pieces of data and a CV of 0.6 is 4.7.

Step 4 The value that exceeds the 99th percentile of the distribution (ratio times x_{max}) after dilution is calculated as:

$$[9\ TU_c \times 4.7 \times 0.02] = 0.85\ TU_c.$$

Step 5 0.85 TU_c is less than the ambient criteria concentration of 1.0 TU_c. There is no reasonable potential for this effluent to cause an excursion above the CCC.

Appendix 4 – Performance-Based Reduction in Monitoring Frequency

The Mississippi Band of Choctaw Indians requested the monitoring frequency of the effluent limits in the New Harmony permit be reduced to 1/month to coincide with the monitoring requirements of other Mississippi Band of Choctaw Indians minor POTWs. The EPA R4 used the 1996 U.S. EPA Memorandum, "*Interim guidance for performance-based reduction of NPDES Permit monitoring frequencies"* to determine if a particular facility is eligible for reductions, and, if so, the amount of these reductions. The list below outlines the different steps in the guidance and if New Harmony WWTP is eligible under each.

1) Facility Enforcement History

This step looks at criminal convictions and NPDES civil judicial and administrative 5enforcement actions. Facilities are eligible for consideration of reductions at a minimum of five years after a criminal action, one year after a civil judicial action and upon compliance with any Administrative Penalty Order or Administrative Order requirements, and payment of any assessed penalty. New Harmony WWTP does not have any enforcement history to invalidate its eligibility.

2) Parameter – by – Parameter Compliance

This step examines any significant noncompliance as well as any effluent violations for selected parameters. To determine eligibility the permitting authority will look for any significant noncompliance during the last two years and effluent violations during the previous year. Table 1 data was taken from the Detailed Facility Report in the U.S. EPA's Enforcement and Compliance History Online (ECHO). Percentages in Table 1 are the percentage the reported parameter is over the permits effluent limit. Due to the significant noncompliance and the effluent violations these parameters are not eligible for a decrease in monitoring frequency.

Table 1- Compliance History

Parameter	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12
	1/1/17-3/31/17	4/1/17-6/30/17	7/1/17-9/30/17	10/1/17-12/31/17	1/1/18-3/31/18	4/1/18-6/30/18	7/1/18-9/30/18	10/1/18-12/31/18
	RNC[a]		SNC[b]	SNC	SNC	SNC	SNC	SNC
Carbonaceous Biochemical Oxygen Demand, 5-day							10%	
Fecal Coliform, Monthly Geomean			27%			12%	117%	
Fecal Coliform, Weekly Geomean		20%	Violation			481%	15052%	

Ammonia, as N Monthly Average			27%			40%	300%	
Ammonia, as N Weekly Average			83%			143%	367%	
Disolved Oxygen (DO)			3%		7%	35%	10%	
Total Suspended Solids, % removal					203%	67%	1%	
Total Suspended Solids					36%	18%		

[a] Reportable Noncompliance (RNC)
[b] Significant Noncompliance (SNC)

Due to the history of significant noncompliance in the previous two years and the effluent violations identified in the previous year, this renders New Harmony ineligible for monitoring frequency reduction.

3) Parameter – by – Parameter Performance History

This step uses the two most recent years of monthly average effluent data to represent the current operating conditions for the parameter, at the outfall, to calculate a long-term average discharge rate. In Table 2 below, baseline monitoring frequencies represents the level of monitoring in the existing effective NPDES permit. To control an increased risk of undetected violations, monitoring should only be reduced for such parameters if the applicant can demonstrate a low variation in the concentrations. Based on Table 3 we can see that fecal coliform and $CBOD_5$ would be eligible for a reduction to 1/month based on the ratios given in Table 2, however based on the coefficient of variability there is variability in the data.

Table 2 – Ratio of Long-Term Effluent Average to Monthly Average Limit

Baseline Monitoring	75-66%	65-50%	49-25%	<25%
7/week	5/week	4/week	3/week	1/week
6/week	4/week	3/week	2/week	1/week
5/week	4/week	3/week	2/week	1/week
4/week	3/week	2/week	1/week	1/week
3/week	3/week	2/week	1/week	1/week
2/week	2/week	1/week	2/month	1/month
1/week	1/week	1/week	2/month	1/2months
2/month	2/month	2/month	2/month	Quarterly
1/month	1/month	1/month	Quarterly	Bi annually

Table 3 – Parameter Performance Levels

Parameter	Long-term Average	% of Effluent Limit	Standard Deviation	Coefficient of Variability	Level of Variability
Carbonaceous Biochemical Oxygen Demand, 5-day	2.43	24.3%	1.7	70%	Medium Variability
Total Suspended Solids	8.06	26.8%	5.1	62%	Medium Variability
Total Ammonia, as N	1.33	66.5%	2.1	156%	High Variability
Fecal Coliform (winter)	36.82	1.8%	45.6	124%	High Variability
Fecal Coliform (summer)	116.40	58.2%	123.5	106%	Medium Variability

4) Residency Criteria for Continued Participation

This step dictates the evaluation for continual eligibility while the permit is effective. As New Harmony is not eligible for monitoring frequency reductions due to significant violations and effluent limit violations found in step 2, this is not applicable.