pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHCENTRAL REGIONAL OFFICE
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0027375**
Facility Type	**Sewage**	APS ID	**1002905**
Major / Minor	**Major**	Authorization ID	**1290508**

NPDES PERMIT FACT SHEET ADDENDUM No. 1

Applicant and Facility Information

Applicant Name	**City of DuBois**	Facility Name	**City of DuBois WWTP**
Applicant Address	16 W Scribner Avenue PO Box 408	Facility Address	96 Guy Avenue
	Dubois, PA 15801-2210		Dubois, PA 15801
Applicant Contact	John Suplizio	Facility Contact	Scott Farrell
Applicant Phone	(814) 371-2002	Facility Phone	(814) 371-4508
Client ID	75158	Site ID	258005
SIC Code	4952	Municipality	DuBois City
SIC Description	Trans. & Utilities - Sewerage Systems	County	Clearfield
Date Published in PA Bulletin	April 25, 2020	EPA Waived?	No
Comment Period End Date	May 24, 2020	If No, Reason	Significant CB Discharge, TMDL

Purpose of Application: Application for a renewal of an NPDES permit for discharge of treated Sewage

Internal Review and Recommendations

DEP is in receipt of comments from the City of DuBois, dated May 15, 2020, and supplemental comments based on further discussions between the City and DEP, dated June 11, 2020. The comments and DEP's responses are as follows:

1. **Comment:** The current NPDES Permit includes a stormwater outfall identified as Outfall 002. The facility eliminated Outfall 002 in 2002 by routing stormwater through the Outfall 001 discharge pipe downstream of the Outfall 001 sampling location. The City requests that all reference to Outfall 002 be removed from the final fact sheet and NPDES Permit. (May 15, 2020)

   The City previously requested that all references to Outfall 002 be removed from the final fact sheet and NPDES Permit since the outfall was eliminated by routing stormwater through the Outfall 001 discharge pipe downstream of the compliance monitoring station for Outfall 001. PADEP requested clarification as to the location of the effluent sampling point. The current sampling location for the composite sampler is located upstream of the confluence of the effluent and stormwater pipes. However, grab samples for chlorine and fecal coliform are collected after the confluence. In the future, the stormwater sump pump will be de-activated when obtaining the grab sampling to ensure that the samples are fully representative of plant effluent. (June 11, 2020)

   Response: DEP does not believe that the proposed sampling protocol is adequate and is requesting that it is revised. The sump pump discharge must be downstream of the grab sample location so that there is no possibility of blending and diluting.

Approve	Return	Deny	Signatures	Date
x			*Derek S. Garner* Derek S. Garner / Project Manager	August 4, 2020
x			*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	August 4, 2020
x			*Thomas M. Randis* Thomas M. Randis / Program Manager	August 4, 2020

2. **Comment:** In Table 5-1 of the fact sheet, rows 4 and 5 are exact copies of the previous two rows. If rows 4 and 5 are inadvertent duplicates of rows 2 and 3, the City requests that the table be modified to eliminate rows 4 and 5 so that the table represents actual conditions at the municipal wastewater treatment plant during the review period. (May 15, 2020)

   Response: The corrected table has been attached to this addendum.

3. **Comment:** The draft permit requires the completion of a draft Chlorine Demand Study to prevent the use of default/assumed in-stream and discharge chlorine demands. The City is in the preliminary design phase of a comprehensive plant upgrade that is planned to include the implementation of a UV disinfection system. Therefore, it is requested that the Department extend the use of the 2006 study results and maintain any limits through this permit cycle. (May 15, 2020)

   Because the City is currently in a preliminary design phase of a plant upgrade that will replace effluent chlorination with UV disinfection, the City requested that the PADEP extend the current effluent limits on chlorine and incorporate a compliance schedule into the final permit for construction and operation of the new UV system. The City also requests that the requirements for the Chlorine Demand Study be removed from the final permit. The planned implementation schedule for installation and operation of the new UV system is below. The City requests that this timeline be used as the basis for a compliance schedule to be incorporated into the final permit. (June 11, 2020)

Water Quality Management Application Submittal	May 31, 2021
Commence Construction	May 31, 2022
Final UV Disinfection System Online	May 31, 2024

   Response: DEP agrees that a chlorine demand study is not necessary if the City will switch to UV disinfection prior to the expiration of the next permit cycle. Accordingly, DEP has removed the chlorine demand study requirement at Part C.V and has replaced it with a compliance schedule that reflects construction of the new treatment units as follows:

Submit Water Quality Management Application	September 30, 2021
Commence On-Site Construction	September 30, 2022
Submit Quarterly Construction Progress Reports	December 31, 2022, March 31, 2023, June 30, 2023, September 30, 2023, December 31, 2023, March 31, 2024, June 30, 2024
Commence Operation of Permitted Treatment Units	September 30, 2024

4. **Comment:** Please provide justification reducing the hardness from 113 to 96.8 mg/l in calculation water quality-based limits for hardness dependent parameters. (May 15, 2020)

   Response: The new hardness value was taken from effluent sample results provided by the City in the application.

5. **Comment:** Checkboxes on the Supplemental Form Inventory sheet for the WET Test Summary Report and the Stormwater Annual Report were not checked for the draft permit. These unchecked boxes imply that these reports do not need to be completed. Please provide clarification on the requirements for the completion and submission of these forms. (May 15, 2020)

   Response: The appropriate boxes have been checked on the Supplemental Form Inventory.

6. **Comment:** The City has performed an analysis of the draft permit to compare historical effluent data to the proposed permit limits for Outfall 001. The analysis was intended to verify that the City can consistently comply with the proposed effluent limits and to evaluate the sampling frequency established for each parameter listed. The comparison of effluent data to the proposed limits is presented in Table 1.

   Columns 2 and 3 of Table 1 demonstrate actual daily maximum and average monthly values for the listed parameters from available data collected by the City. For aluminum and copper, the DMR data from 2019-2020 was selected since it represents actual effluent quality following the installation of a copper removal system at the treatment facility. For the remaining parameters, the representative data is the dataset from 2017 to 2018 used to prepare the permit application

submitted to PA DEP in September 2019. The proposed limits are listed in Columns 4 and 5 of the table for comparison to actual effluent data.

The number of data points in the dataset for each parameter, as well as the number of data points exceeding the proposed daily maximum value for each parameter, are presented in Columns 6 and 7. Finally, Columns 8 and 9 demonstrate the relationship of historical data to the proposed permit limits.

Based on the calculations and comparisons summarized in Table 1, the City is requesting PA DEP consider the proposed modifications to the draft permit listed in Column 10 of the table. The rationale for the modifications is discussed in the following sections. (May 15, 2020)

Isophorone

Given that the monitored effluent values of isophorone are significantly less than either the proposed permit limits and the water quality standards, the City requests that the monitoring frequency of isophorone be decreased to once per month as discussed during the June 8, 2020 conference call. (June 11, 2020)

Total Mercury and Free Cyanide

As discussed in the initial comment letter of May 15, 2020, the data for these two parameters is suspect. Total mercury concentrations in the effluent were non-detect in all samples with the exception of one detection at 500 ug/l, while on this same day, the influent mercury concentration was 60 ug/l. In addition, free cyanide effluent concentrations are, in general, higher than total cyanide. There are many potential interferences in this analysis, and it is possible the analytical data represented many false positive results. The City requests that a compliance schedule for mercury and free cyanide be incorporated into the final permit so that the cause of the suspect values can be evaluated. During the permit redraft period the City will take weekly samples to supplement the data submitted with the permit application and work with our analytical laboratory to investigate potential analytical interferences and outside contamination sources for these parameters. The city requests a 36-month schedule for both parameters, and that weekly monitoring with no limits be established for both parameters in the final permit for the duration of the schedule. If the data taken during the redraft period indicate that the permit limits should be recalculated and/or the sampling frequency reduced, the City will submit this request in writing during the comment period on the redrafted permit. (June 11, 2020)

Bis(2-ethylhexl) Phthalate

The current treatment system used by the City has reported Bis(2-ethylhexyl) Phthalate removal rates ranging from 0-40%. The planned facility upgrade, which will utilize a suspended growth activated sludge system, is anticipated to exhibit better performance for the removal of Bis(2-ethylhexyl) Phthalate as a result of increased removal rates through the system. Some reported values are near 80% removal for similar activated sludge treatment systems. Therefore, the City requests a compliance schedule for Bis(2-ethylhexyl) Phthalate that is consistent with the schedule provided in Comment #3. The City also requests that monthly monitoring with no limits be established in the final permit for Bis(2-ethylhexyl) Phthalate for the duration of the compliance schedule. (June 11, 2020)

Response: Based on the data presented and further discussions between the City and DEP, the monitoring frequency for isophorone has been reduced from 1/week to 1/month. Additionally, to avoid immediate noncompliance effluent limits for Bis(2-ethylhexyl) will go into effect upon start-up of the new treatment units on, no later than September 30, 2024 per the compliance schedule outlined in Response No. 3. Until startup of the new treatment units, interim monitoring requirements are proposed.

DEP does not object to the City collecting more samples for total mercury and free cyanide. DEP will reevaluate proposed limits and monitoring frequency requirements if the City provides DEP with additional sample results taken during the draft permit review period.

Additionally, DEP is in receipt of comments from the U.S. EPA via email dated May 20, 2020. The agency's comment and DEP's response is as follows:

1. **Comment:** Based on our review of the Redbank Creek TMDL and discussions with EPA's TMDL staff, it does not appear that this facility discharges to a TMDL segment and is not directly impacted by the Redbank TMDLs. We would recommend modifying the fact sheet discussion of the TMDL requirements to document this. In the TMDL discussion,

however, you have identified that there is RP for aluminum and that a WQBEL is necessary. The fact sheet also states that Sandy Lick Creek is impaired for AMD metals, and EPA's TMDL staff have commented that this waterway should be classified as a waterway that needs a TMDL (category 5, rather than category 4a – a TMDL is in place). If the receiving water is impaired for aluminum, there may be no assimilative capacity for this pollutant. Please reconsider the fact sheet's RP assessment to determine whether a mixing zone is appropriate for this discharge, and whether the aluminum WQBEL needs to be re-evaluated.

Response: Upon reevaluation of the proposed total aluminum limit and the Redbank Creek TMDL discussion, DEP believes assimilative capacity for total aluminum remains in Sandy Lick Creek and that the proposed total aluminum effluent limits are appropriate. The following discussion supports DEP's decision.

In April 2019 DEP sampled three locations in Sandy Lick Creek, all upstream of Outfall 001 and Interstate 80. The sample results are as follows:

Sample Location	Total Aluminum (µg/L)
Upstream Reference Station	104
Downstream Impact Station	85.9
Downstream "Recovery" Station	67.5

As demonstrated by the sample results, total aluminum concentrations appear to decrease as you move downstream Sandy Lick Creek. This trend is further supported by a 2006 aquatic biological investigation of Outfall 001's impact on Sandy Lick Creek performed by DEP (attached). As part of the investigation, water quality samples were taken approximately 150 feet upstream of the outfall and 0.5 miles downstream of the outfall (to ensure complete mixing had occurred). Both locations are downstream of the 2019 sample locations. Sample results yielded aluminum concentrations of 326 µg/l upstream and 71.9 µg/l downstream of the outfall. Compared to the 2019 sample results, not only does there appear to be an overall improvement in Sandy Lick Creek's aluminum concentrations, but it continues the trend of water quality improving downstream.

The upmost sampling point identified in the Redbank Creek TMDL is RC09, approximately 800 ft downstream of the mouth of Sandy Lick Creek and approximately 30.2 miles from Outfall 001. Sampling point RC09 establishes load allocations for the upstream watershed, which includes the Outfall 001. The TMDL states that no reductions for total aluminum are necessary at RC09 since water quality standards are already being met.

Based on the TMDL's recommendation that no load reductions are necessary to meet aluminum criterion, and supported by DEP sample results that indicate aluminum concentrations continue to improve downstream of Outfall 001, DEP believes that the existing proposed limits based on modeling output are protective of Sandy Lick Creek.

An internal review of the draft permit did not yield any comments. No comments were received from the public.

Based on the above responses and subsequent changes to the drafted permit, DEP is recommending the permit is redrafted and published in the PA Bulletin for another thirty-day commenting period.

Corrected Table 5-1. Effluent Violations

Monitoring Period Begin Date	Monitoring Period End Date	Non-Compliance Category	Parameter	Sample Value	Violations Condition	Permit Value	Units	SBC
5/1/2015	5/31/2015	Concentration 3 Effluent Violation	Ammonia-Nitrogen	3.579	>	3.5	mg/L	Weekly Average
6/1/2015	6/30/2015	Concentration 2 Effluent Violation	Fecal Coliform	308	>	200	CFU/100 ml	Geometric Mean
6/1/2015	6/30/2015	Concentration 3 Effluent Violation	Fecal Coliform	2419.6	>	1000	CFU/100 ml	Instantaneous Maximum
7/1/2015	7/31/2015	Concentration 2 Effluent Violation	Fecal Coliform	1394	>	200	CFU/100 ml	Geometric Mean
7/1/2015	7/31/2015	Concentration 3 Effluent Violation	Fecal Coliform	2419.6	>	1000	CFU/100 ml	Instantaneous Maximum
9/1/2015	9/30/2015	Concentration 3 Effluent Violation	Fecal Coliform	1300	>	1000	CFU/100 ml	Instantaneous Maximum
10/1/2015	12/31/2015	Concentration 3 Effluent Violation	Toxicity, Chronic - Ceriodaphnia Reproduction	3.03	>	1.5	TUc	Daily Maximum
7/1/2016	7/31/2016	Concentration 3 Effluent Violation	Fecal Coliform	1036	>	1000	CFU/100 ml	Instantaneous Maximum
10/1/2016	12/31/2016	Concentration 3 Effluent Violation	Toxicity, Chronic - Ceriodaphnia Reproduction	3.03	>	1.5	TUc	Daily Maximum
2/1/2017	2/28/2017	Load 2 Effluent Violation	Total Suspended Solids	2385	>	1650	lbs/day	Weekly Average
4/1/2017	6/30/2017	Concentration 3 Effluent Violation	Toxicity, Chronic - Ceriodaphnia Reproduction	3.03	>	1.5	TUc	Daily Maximum
7/1/2017	7/31/2017	Concentration 3 Effluent Violation	Fecal Coliform	2420	>	1000	CFU/100 ml	Instantaneous Maximum
9/1/2017	9/30/2017	Concentration 3 Effluent Violation	CBOD5	23	>	22	mg/L	Weekly Average
5/1/2018	5/31/2018	Concentration 2 Effluent Violation	Copper, Total	14.6	>	14.43	ug/L	Average Monthly