pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHWEST REGIONAL OFFICE
CLEAN WATER PROGRAM

Application Type	**Renewal**	**NPDES PERMIT FACT SHEET ADDENDUM**	Application No.	**PA0004979**
Facility Type	**Industrial**		APS ID	**543699**
Major / Minor	**Major**		Authorization ID	**1395314**

Applicant and Facility Information

Applicant Name	**Neville Chemicals Co.**	Facility Name	**Neville Chemicals Co.**
Applicant Address	2800 Neville Road Pittsburgh, PA 15225-1496	Facility Address	2800 Neville Road Pittsburgh, PA 15225-1496
Applicant Contact	Daniel Kokoski	Facility Contact	Jeffrey Milhoan
Applicant Phone	(412) 777-4201	Facility Phone	(412) 777-4265
Client ID	82064	Site ID	242020
SIC Code	2821	Municipality	Neville Township
SIC Description	Manufacturing - Plastics Materials and Resins	County	Allegheny
Date Published in PA Bulletin	September 17, 2022	EPA Waived?	No
Comment Period End Date	October 17, 2022	If No, Reason	

Purpose of Application: 2nd Draft of Renewal of NPDES Permit Major Facility <250 MGD with ELG.

Internal Review and Recommendations

On August 30, 2022, the Draft NPDES permit PA00004979 for The Neville Chemical Company Facility was sent via electronic mail to Daniel Kokoski and Jeffrey Milhoan. Public notice of the Draft permit was published in the PA Bulletin on September 17, 2022. The 30-day public comment period expired on October 17, 2022.

On October 17, 2022, Jeffrey Milhoan submitted Neville Chemical's comments via OnBase upload regarding Draft NPDES Permit PA00004979.

Facility Comment 1:
Request the following modification to Part C Condition I.(C): *The terms and conditions of Water Quality Management (WQM permits* ***and Temporary Discharge Authorizations*** *that may have been issued to the permittee relating to discharge requirements are superseded by this NPDES permit unless otherwise stated herein.*

Department Response:
The Temporary Discharge Authorization authorized the facility to discharge treated contaminated groundwater via Outfall 005. Since the renewed NPDES Permit includes Outfall 005 and authorizes the discharge of the treated contaminated groundwater, the Temporary Discharge Authorization will be terminated upon issuance of the NPDES Permit. This discussion will also be included in the Cover Letter once the NPDES Permit is issued.

No change to the Draft permit was completed pertaining to this comment.

Approve	Return	Deny	Signatures	Date
X			Curtis Holes, P.E. / Environmental Engineer	January 30, 2023
X			Michael E. Fifth, P.E. / Environmental Engineer Manager	February 3, 2023

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Facility Comment 2:
Request the following modification to Part C Condition III.(C): *The permittee shall implement and maintain the following BMPs**, as applicable,** to remain in compliance with this permit.*

Department Response:
The Department has added the phrase **as applicable** to Part C Condition III.(C). The Department has also deleted the phrase "as necessary" from Part C, Condition III.(C) since it is redundant.

Two (2) changes to the Draft permit were completed pertaining to this comment, adding "as applicable" to Part C Condition III.(C); and deleting "as necessary" from Part C, Condition III.(C).

Facility Comment 3:
Neville Chemical is requesting that conditions A-G be removed from the permit as they seem to apply to Petroleum Marketing terminals. Only condition H applies to Neville's operations regarding hydrostatic testing.

Department Response:
The Draft Permit Part C Condition IV.A-G were inadvertently added to the permit and will be removed since they apply to Petroleum Marketing Terminals and industrial activities at Neville Chemical are not consistent with Petroleum Marketing Terminals.

Seven (7) changes to the Draft permit were completed pertaining to this comment. The Draft Permit Part C Condition IV.A-G were removed from the permit.

On September 29, 2022, Jennifer Fulton submitted EPA's comments via electronic mail in response to publication of Draft NPDES Permit PA00004979 for the Neville Chemical Company Facility.

EPA Comment 1: Regarding the boron fact sheet discussions and requirements for outfall 101:

EPA Comment 1A: Based on the DMR data summary on pg. 12 of the fact sheet, there is an existing mass load limit for boron. The fact sheet indicated that "The existing permit imposed effluent limitations of report for Total Boron and Fluoride, which were developed using BPJ as authorized under section 402(a)(1) of the Clean Water Act." It is noted that these parameters do not just include reporting requirements.

Department Response:

The previous Fact Sheet developed and imposed effluent limitations for Total Boron and Fluoride based on BPJ as authorized under Section 402(a)(1) of the Clean Water Act but was unclear on the original BPJ basis. Pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 ***(l) Reissued permits***, previous limits can be used***.*** Total Boron mass load effluent limitations will be reimposed in the NPDES permit for Outfall 101 (Average Monthly of 268.0 $^{lbs}/_{day}$ and Daily Maximum of 318.0 $^{lbs}/_{day}$).

Two (2) changes to the Draft permit were completed pertaining to this comment, reimposing the Total Boron mass loading (Average Monthly of 268.0 $^{lbs}/_{day}$ and Daily Maximum of 318.0 $^{lbs}/_{day}$).

EPA
Comment 1B: The antibacksliding analysis on pg. 47 will need to be revised. It states that the facility is not seeking to revise the previously permitted effluent limits, but the mass load limits and monitoring requirements for boron are being removed from the permit. If the limits for boron were based on BPJ, then the antibacksliding analysis in the fact sheet would have to document whether or not the evaluation that drove the previous PBJ-based TBEL is still valid or appropriate. If it is still valid the TBEL can't be removed but would need to be compared to the WQBEL to determine which is the more stringent and that limit would need to be imposed in the permit. If the BPJ analysis is no longer valid or appropriate, the fact sheet would need to undergo an antibacksliding analysis consistent with applicable regulatory and/or statutory provisions (40 CFR 122.44(l) and Section 402(o) of the Clean Water Act, respectively) to see if removal of the limit is permissible. It should be noted that pg. 44 of the fact sheet states that previously imposed monitoring

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requirements for boron, fluoride, and fluoroborates will be maintained, even though the permit is proposing to remove the limits and monitoring requirements for boron. Based on the comments that are to be addressed above, pg. 44 of the fact sheet may need to be revised.

Department Response:
As discussed in Department Response to EPA Comment 1A, previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 ***(l) Reissued permits.*** The previously imposed Total Boron monitoring requirements are being reimposed Outfall 101 (Average Monthly of 268.0 $^{lbs}/_{day}$ and Daily Maximum of 318.0 $^{lbs}/_{day}$). The TMS Model for Outfall 101 was also updated to evaluate the Total Boron concentration of 240 $^{mg}/_{L}$ (equivalent concentration for the Daily Maximum 318 $^{lbs}/_{day}$ mass load). The updated TMS Model did not recommend WQBEL's for Total Boron at the revised concentration.

No change to the Draft permit was completed pertaining to this comment, reimposing the previously developed TBEL BPJ effluent limitation for Boron to Outfall 101 is addressed in EPA Comment 1A.

EPA Comment 2: The TBELs imposed at outfall 101 appear to have been calculated using the design flow of the treatment plant (0.157 MGD) rather than the process wastewater flow subject to the ELG, as required by 40 CFR 414.91. The 0.157 MGD flow includes non-process wastewater flows that should not be used in the calculation of the permitted mass load limits for the ELG pollutants. The permit and fact sheet will need to be revised to document the process wastewater flows subject to the ELG, and to revise the mass loads in the permit. The process wastewater diagram included in the fact sheet suggests this flow may be closer to 0.056 MGD.

Department Response:
Outfall 101 has an average monthly flowrate of 0.157 MGD with a portion of this flow consisting of process wastewater that is subject to 40 CFR 414.91. The original ELG effluent limitation calculation for the Draft NPDES permit incorrectly used Outfall 101's total flowrate of 0.157 MGD. Refer to Attachment A for the effluent limitation calculation summary table of all sixty-two (62) ELG parameters. On the summary table, the columns for *1st Draft of Outfall 101 Total Flow 0.157 MGD Mass Load* document the limits provided in the 1st Draft permit. Refer to the sample calculation below.

$$\text{Mass Load } (^{lb}/_{Day}) = \text{ELG Effluent Limitation Concentration } (^{mg}/_{L}) * \text{Flowrate (MGD)} * \text{Unit Converting Constant}$$

$$\text{Mass Load } (^{lb}/_{Day}) = (0.059\ ^{mg}/_{L}) * (0.157 \text{ MGD}) * 8.345$$

$$\text{Maximum Daily Mass Load of Acenaphthene} = 0.077\ ^{lb}/_{Day}$$

When calculating the ELG effluent limitations, only the flowrate from the process wastewater subject to the ELG is to be used. The revised ELG effluent limitation calculation uses the process wastewater flowrate of 0.056 MGD, refer to Attachment A for the effluent limitation calculation summary table in the columns for *Outfall 101 Process Flow 0.056 MGD Mass Load* of all sixty-two (62) ELG parameters. Refer to the sample calculation below.

$$\text{Mass Load } (^{lb}/_{Day}) = \text{ELG Effluent Limitation Concentration } (^{mg}/_{L}) * \text{Flowrate (MGD)} * \text{Unit Converting Constant}$$

$$\text{Mass Load } (^{lb}/_{Day}) = (0.059\ ^{mg}/_{L}) * (\mathbf{0.056\ MGD}) * 8.345$$

$$\text{Maximum Daily Mass Load of Acenaphthene} = 0.028\ ^{lb}/_{Day}$$

The flowrate of the process wastewater (0,056 MGD) is only one component of the total flow at the sampling location at Outfall 101 (0,157 MGD total flow). The ELG effluent limitations are adjusted to account for the additional wastewaters via mass balance calculation. Outfall 101 has a total flowrate of 0.157 MGD from eight (8) wastewater sources. Table 1 below summarizes the wastewater sources and flowrates.

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Wastewater Source	Flowrate (MGD)
Stormwater	0.034
Facility Operations (ELG)	**0.056**
Water Softener Backwash	0.008
Misc. Operations	0.026
Groundwater Treatment Plant	0.004
Steam Condensate	0.012
Boiler Blowdown	0.01
NCCW	0.006

The additional wastewater sources do not contain concentrations of the ELG parameters. The ELG Effluent Limitation adjustment of other wastewater sources was completed using the following mass balance calculation:

$$C_{FO}(Q_{FO}) = C_{Total}(Q_{Total})$$

Where:

C_{FO} = Facility Operations Wastewater ELG Effluent Limitation Concentration of Parameter
Q_{FO}= Facility Operations Wastewater Flow (MGD)
C_{Total} = Allowable Effluent Limitation Concentration of Outfall 101
Q_{Total} = Total flow at Outfall 101

Sample Calculation:

C_{FO} = Acenaphthene Max Daily Limitation of 59 $^{\mu g}/_{L}$
Q_{FO}= 0.056 MGD
C_{Total} = Allowable Effluent Limitation Concentration of Outfall 101
Q_{Total} = 0.157 MGD

$$59\ ^{\mu g}/_{L}(0.056\text{ MGD}) = C_{Total}(0.157\text{ MGD})$$

$$C_{Total} = 21.0\ ^{\mu g}/_{L}\text{ of Acenaphthene}$$

Refer to Attachment A for the effluent limitation calculation summary table documented in the columns for *Mass Balance Effluent Limitations Based on 0.157 MGD* of all sixty-two (62) ELG parameters.

Two hundred and forty-eight (248) changes to the Draft permit were completed pertaining to this comment, the mass load effluent limitations (Daily Maximum and Average Monthly) of the parameters identified by 40 CFR 414.91 have been revised using the process wastewater flowrate of 0.056 MGD and then adjusted the ELG Effluent Limitation via mass balance calculation to account for wastewater flows from other sources. Refer to Attachment A for the summary of the 1st Draft Permit effluent limitations that are in red text and the revised effluent limitations that are in blue text.

EPA Comment 3: The ELG (40 CFR 414.91(b)) also instructs that in the case of chromium, copper, lead, nickel, zinc, and total cyanide, the discharge quantity (mass) shall be determined by multiplying the concentrations listed in the following table for these pollutants times the flow from metal-bearing waste streams for the metals and times the flow from cyanide bearing waste streams for total cyanide. The fact sheet and permit will need to be revised to address this requirement for both the metal-bearing and cyanide bearing waste streams, since it appears that the entire wastewater treatment plant flow was used.

Department Response:
This comment has been addressed in EPA Comment 2. The mass load effluent limitations for the parameters identified by 40 CFR 414.91 have been revised using the process wastewater flowrate of 0.056 MGD. The mass load effluent

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limitations of 40 CFR 414.91 pertaining to the process wastewater is recalculated using the flowrate of 0.056 MGD and is summarized in Attachment A – Outfall 101 Mass Load Calculation Summary.

No change to the Draft permit was completed pertaining to this comment. This comment was addressed in EPA Comment 2.

EPA Comment 4: The fact sheet indicates that the CO&A requires monitoring for benzene for outfall 005 and that using influent concentrations, the benzene limit of 0.442 mg/l is required. It is unclear why influent values were used in the RP assessment for benzene. Does the CO&A establish these expectations? The fact sheet should include some discussion on this to explain the rationale.

Department Response:
The original authorization of Outfall 005 discharge was through a Temporary Discharge Authorization (TDA). The TDA applied the most stringent water quality criteria with no assimilation of the receiving water. Best Professional Judgment (BPJ) was not conducted for Benzene at Outfall 005. Below is the BPJ analysis for Benzene.

Best Professional Judgement (BPJ)

Best Professional Judgement (BPJ) TBEL's have not been evaluated for Outfall 005. In Accordance with 40 CFR § 125.3(c)(2), TBELs can be developed on a case-by-case basis using BPJ under section 402(a)(1) of the Clean Water Act when pollutants are present in the wastewater at treatable concentrations. In the previous permit renewal, these limits were converted to technology based effluent limits because the treatment system was meeting the limits and therefore constituted Best Practicable Control Technology Currently Available (BPT). Neville Chemical installed Calgon Carbon Corporation Modular Model 10 Granular Activated Carbon treatment system in 2006 to treat groundwater collected from the groundwater pumping wells at an average flowrate of 700 gpm.

Sections 304(b)(2)(B), 304(b)(4)(B), and 402(a)(1) of the Clean Water Act allow for the establishment of effluent limits on a case-by-case basis using Best Professional Judgment (BPJ). Regulations under 40 CFR § 125.3(d) require that certain factors be considered when developing case-by-case effluent limitations using BPJ for the levels of technology-based control described in the Clean Water Act (as amended) including: Best Practicable Control Technology Currently Available (BPT), Best Conventional Pollutant Control Technology (BCT) and Best Available Control Technology Economically Achievable (BAT). There is no BPJ for New Source Performance Standards. The required factors are listed below.

General Considerations; 40 CFR § 125.3(c):

(i) The appropriate technology for the category or class of point sources of which the applicant is a member, based upon all available information

(ii) Any unique factors relating to the applicant

Best Practicable Control Technology Currently Available (BPT); 40 CFR § 125.3(d)(1):

(i) The total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application;

(ii) The age of equipment and facilities involved

(iii) The process employed

(iv) The engineering aspects of the application of various types of control techniques

(v) Process changes

(vi) Non-water quality environmental impact (including energy requirements)

Best Conventional Pollution Control Technology (BCT); 40 CFR § 125.3(d)(2):

(i) The reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived;

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(ii) The comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources;

(iii) The age of equipment and facilities involved;

(iv) The process employed;

(v) The engineering aspects of the application of various types of control techniques;

(vi) Process changes; and

(vii) Non-water quality environmental impact (including energy requirements).

Best Available Technology Economically Achievable (BAT); 40 CFR § 125.3(d)(3):

(i) The age of equipment and facilities involved

(ii) The process employed

(iii) The engineering aspects of the application of various types of control techniques

(iv) Process changes

(v) The cost of achieving such effluent reduction

(vi) Non-water quality environmental impact (including energy requirements).

The factors common to each level of control technology include the following: the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes and non-water quality environmental impacts (including energy requirements). Factors specific to each level of control technology include costs, pollutant reduction benefits and economic achievability.

EPA's Best Available Technology for Benzene Removal

Activated Carbon Adsorption is a physical separation process in which organic and inorganic materials are removed from wastewater by sorption or the attraction and accumulation of one substance on the surface of another. Carbon adsorption systems have been demonstrated to be practical and economical for the reduction of dissolved organic and toxic pollutants from industrial wastewaters.

The EPA's guidance document, "*Treatability Manual, Volume III – Technologies for Control/Removal of Pollutants*", dated September 1981, identifies activated carbon's removal efficiency range of 64-90% for benzene treatment and a median value or 77% removal. During the facility's bench study, the removal efficiency was on the higher end of the removal efficiency range, so 90% will be used as site specific removal efficiency. The contaminated groundwater Benzene concentration of 1,460 µg/L was used for the design of the existing activated carbon treatment system and development of BAT. Applying the 90% removal efficiency of the activated carbon treatment system the site-specific BAT for Benzene is 0.146 mg/L Average Monthly and 0.292 mg/L Daily Maximum.

Best Professional Judgment Evaluation

Equipment and Facility Age

Facility age impacts the feasibility of modifying existing equipment to implement a technology. The older a facility is the more costly additions and upgrades can be. Springdale currently has a treatment system employed that meets the BAT limit above, so no additions or upgrades are required. The system was constructed in 2004 and is meeting the BAT limit of 0.146 mg/L Average Monthly and 0.292 mg/L Daily Maximum.

Processes Employed

The existing treatment system utilizes activated carbon and is designed for the removal of benzene concentration in the discharge.

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Engineering Aspects of Control Techniques

Requirements for BPT, BCT and BAT are limited to technologies or control techniques that are feasible from an engineering standpoint. From an Engineering standpoint the system currently employed is designed to treat the parameters in a way at effectively removes benzene.

Process Changes

Consideration of process changes relates to the feasibility of modifying the processes that generate a wastewater with the goal of reducing the volume and/or pollutant load of the wastewater before treatment, thus reducing the volume and toxicity of the discharge. At the Neville Chemical site, the source is contaminated groundwater. The pumping rate is determined to mitigate the spread of the contamination so a reduction in contaminated groundwater volume or pollutant load does not apply to this specific situation.

Technology Cost v. Effluent Reduction Benefits

The intent of the cost-benefit analysis is to avoid requiring wastewater treatment when the amount of effluent reduction is disproportionate to the cost of the reduction. In balancing costs in relation to effluent reduction benefits, factors to consider include the volume and nature of existing discharges, the volume and nature of discharges expected after application of the technology, the general environmental effects of the pollutants and the cost and economic impact of the required pollution control. However, the permittee has a system currently installed that adequately reduces the concentration of benzene in the discharge. Therefore, the cost applied would be the operational and maintenance cost, which is substantially less than constructing a new system and was previously considered when the plant was originally constructed.

Non-Water Quality Environmental Impacts (Including Energy Requirements)

Non-water quality impacts including air pollution, solid waste generation and energy consumption may present challenges for implementing treatment technology. The system currently employed includes pumps, which can pose non-water quality environmental impacts as the use of energy and protentional outages causing failures and groundwater table changing potentially mobilizing benzene directly to the Ohio River. The system also includes solid waste generation via spent activated carbon media that must be replaced to preserve the effectiveness of the system. These environmental concerns can be prevented with proper maintenance and disposal practices. It is anticipated that the proposed treatment system will reduce energy consumption and potential equipment failures while employing more sustainable pollutant controls. These benefits are the primary bases for reconsideration of the BPJ effluent limitations.

Economic Achievability

The cost analysis for BAT is an evaluation of the economic achievability of implementing pollution control technologies. The intent of the BAT economic achievability determination is to evaluate whether a technology can be implemented without forcing the facility to close due to the increased financial burden of operating and maintaining additional treatment systems (i.e., can the facility maintain profitability and remain in business while operating the pollution control technologies). To meet the BAT limitations above, the permittee does not need to install new treatment technology; so, no additional cost, other than maintenance and operational cost, are appropriate for consideration.

Best Professional Judgment of BPT, BCT and BAT

At a minimum the system currently employed is considered BAT based on the factors above. The system is currently employed and meeting the BAT limitations above and the BPJ limitations in the current permit. The cost to the system is only the operational and maintenance cost. The only concern with the current system is the potential to discharge untreated groundwater directly to the Ohio River during outages, but with proper maintenance and operational procedures, the concern should be mitigated. Therefore, because Neville Chemical has a treatment system currently installed that is BAT, if Neville Chemical decides to propose a new treatment system, the system must meet the BAT limitations at a minimum.

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Proposed Best Professional Judgement Limitations

The BPJ limitations from the above analysis are summarized below in Table 1.

Table 1. Proposed BPJ Limitations at the proposed Outfall 005 Location

Parameter	Concentration (mg/l)	
	Average Monthly	Maximum Daily
Benzene	0.146	0.292

One change to the Draft permit was completed pertaining to this comment. Outfall 005's effluent limitation of Benzene was changed from 0.442 mg/L to the BPJ limitation of 0.146 mg/L Average Monthly and 0.292 mg/L Daily Maximum.

EPA Comment 5: The fact sheet identifies that there is a final TMDL for the Ohio River, but there is no TMDL discussion. The fact sheet will need to be revised to discuss how the permit is consistent with the assumptions and requirements of the TMDL.

Department Response:
Wastewater discharges from Neville Chemical are to the Ohio River for which the Department has developed a TMDL. The TMDL was finalized on March 6, 2001 and regulates PCB and Chlordane. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA 1991a).

The TMDL does not have waste allocations for Neville Chemical discharges. Neville Chemical does not generate or discharge wastewaters containing PCBs or Chlordane; therefore, the Ohio River TMDL is not applicable to Neville Chemical.

No change to the Draft permit was completed pertaining to this comment.

Due to the significant changes proposed in response to the Draft Permit comments, the Department will publish a 2nd Draft of the NPDES Permit in the PA Bulletin.

Attachment A - Outfall 101 ELG Mass Load Calculation Revised Summary

Neville Chemical
Outfall 101

ELG 40 CFR 414.91
Effluent Limitation Calculation

Effluent Characteristics	ELG Effluent Limitations		1st Draft of Outfall 101 Total Flow 0.157 MGD Mass Load (pounds/day)[1]		Outfall 101 Process Flow 0.056 MGD Mass Load (pounds/day)[2]		Mass Balance Effluent Limitations Based on 0.157 MGD[3]	
	Max Daily (ug/L)	Max Monthly (ug/L)	Daily Max	Average Monthly	Daily Max	Average Monthly	Max Daily (ug/L)	Max Monthly (ug/L)
Acenaphthene	59	22	0.077	0.029	0.028	0.010	21.0	7.8
Acenaphthylene	59	22	0.077	0.029	0.028	0.010	21.0	7.8
Acrylonitrile	242	96	0.317	0.126	0.113	0.045	86.3	34.2
Anthracene	59	22	0.077	0.029	0.028	0.010	21.0	7.8
Benzene	136	37	0.178	0.048	0.064	0.017	48.5	13.2
Benzo(a)Anthracene	59	22	0.077	0.029	0.028	0.010	21.0	7.8
3,4-Benzofluoranthene	61	23	0.080	0.030	0.029	0.011	21.8	8.2
Benzo(k)Fluoranthene	59	22	0.077	0.029	0.028	0.010	21.0	7.8
Benzo(a)Pyrene	61	23	0.080	0.030	0.029	0.011	21.8	8.2
Bis(2-Ethylhexyl) Phthalate	279	103	0.366	0.135	0.130	0.048	99.5	36.7
Carbon Tetrachloride	38	18	0.050	0.024	0.018	0.008	13.6	6.4
Chlorobenzene	28	15	0.037	0.020	0.013	0.007	10.0	5.4
Chloroethane	268	104	0.351	0.136	0.125	0.049	95.6	37.1
Chloroform	46	21	0.060	0.028	0.021	0.010	16.4	7.5
2-Chlorophenol	98	31	0.128	0.041	0.046	0.014	35.0	11.1
Chrysene	59	22	0.077	0.029	0.028	0.010	21.0	7.8
Di-n-Butyl Phthalate	57	27	0.075	0.035	0.027	0.013	20.3	9.6
1,2-Dichlorobenzene	163	77	0.214	0.101	0.076	0.036	58.1	27.5
1,3-Dichlorobenzene	44	31	0.058	0.041	0.021	0.014	15.7	11.1
1,4-Dichlorobenzene	28	15	0.037	0.020	0.013	0.007	10.0	5.4
1,1-Dichloroethane	59	22	0.077	0.029	0.028	0.010	21.0	7.8
1,2-Dichloroethane	211	68	0.276	0.089	0.099	0.032	75.3	24.3
1,1-Dichloroethylene	25	16	0.033	0.021	0.012	0.007	8.9	5.7
1,2-trans-Dichloroethylene	54	21	0.071	0.028	0.025	0.010	19.3	7.5
2,4-Dichlorophenol	112	39	0.147	0.051	0.052	0.018	39.9	13.9
1,2-Dichloropropane	230	153	0.301	0.200	0.107	0.071	82.0	54.6
1,3-Dichloropropylene	44	29	0.058	0.038	0.021	0.014	15.7	10.3
Diethyl phthalate	203	81	0.266	0.106	0.095	0.038	72.4	28.9
2,4-Dimethylphenol	36	18	0.047	0.024	0.017	0.008	12.8	6.4
Dimethyl phthalate	47	19	0.062	0.025	0.022	0.009	16.8	6.8
4,6-Dinitro-o-Cresol	277	78	0.363	0.102	0.129	0.036	98.8	27.8
2,4-Dinitrophenol	123	71	0.161	0.093	0.057	0.033	43.9	25.3
2,4-Dinitrotoluene	285	113	0.373	0.148	0.133	0.053	101.7	40.3
2,6-Dinitrotoluene	641	255	0.840	0.334	0.300	0.119	228.6	91.0
Ethylbenzene	108	32	0.141	0.042	0.050	0.015	38.5	11.4
Fluoranthene	68	25	0.089	0.033	0.032	0.012	24.3	8.9
Fluorene	59	22	0.077	0.029	0.028	0.010	21.0	7.8
Hexachlorobenzene	28	15	0.037	0.020	0.013	0.007	10.0	5.4
Hexachlorobutadiene	49	20	0.064	0.026	0.023	0.009	17.5	7.1
Hexachloroethane	54	21	0.071	0.028	0.025	0.010	19.3	7.5
Methyl Chloride	190	86	0.249	0.113	0.089	0.040	67.8	30.7
Methylene Chloride	89	40	0.117	0.052	0.042	0.019	31.7	14.3
Naphthalene	59	22	0.077	0.029	0.028	0.010	21.0	7.8
Nitrobenzene	68	27	0.089	0.035	0.032	0.013	24.3	9.6
2-Nitrophenol	69	41	0.090	0.054	0.032	0.019	24.6	14.6
4-Nitrophenol	124	72	0.162	0.094	0.058	0.034	44.2	25.7
Phenanthrene	59	22	0.077	0.029	0.028	0.010	21.0	7.8
Phenol	26	15	0.034	0.020	0.012	0.007	9.3	5.4
Pyrene	67	25	0.088	0.033	0.031	0.012	23.9	8.9
Tetrachloroethylene	56	22	0.073	0.029	0.026	0.010	20.0	7.8
Toluene	80	26	0.105	0.034	0.037	0.012	28.5	9.3
Total Chromium	2,770	1,110	3.629	1.454	1.294	0.519	988.0	395.9
Total Copper	3,380	1,450	4.428	1.900	1.580	0.678	1205.6	517.2
Total Cyanide	1,200	420	1.572	0.550	0.561	0.196	428.0	149.8
Total Lead	690	320	0.904	0.419	0.322	0.150	246.1	114.1
Total Nickel	3,980	1,690	5.214	2.214	1.860	0.790	1419.6	602.8
Total Zinc	2,610	1,050	3.420	1.376	1.220	0.491	931.0	374.5
1,2,4-Trichlorobenzene	140	68	0.183	0.089	0.065	0.032	49.9	24.3
1,1,1-Trichloroethane	54	21	0.071	0.028	0.025	0.010	19.3	7.5
1,1,2-Trichloroethane	54	21	0.071	0.028	0.025	0.010	19.3	7.5
Trichloroethylene	54	21	0.071	0.028	0.025	0.010	19.3	7.5
Vinyl Chloride	268	104	0.351	0.136	0.125	0.049	95.6	37.1

Notes:

1. **Outfall 101 Total Flow 0.157 MGD (pounds/day) details the mass loads (Daily Max and Average Monthly) of each of the sixty-two (62) ELG parameter using the total flow at Outfall 101 of 0.157 MGD, as contained in the 1st Draft permit.**
2. **Outfall 101 Process Flow 0.056 MGD (pounds/day) details the corrected mass loads (Daily Max and Average Monthly) of each of the sixty-two (62) ELG parameter using the process flow of 0.056 MGD instead of the total flow of 0.157 MGD contained in the 1st Draft permit.**
3. **Mass Balance Effluent Limitations Based on 0.157 MGD details the corrected effluent limitations (Daily Max and Average Monthly) of each of the sixty-two (62) ELG parameter correcting the limitations via mass balance to account for the comingling of all the source waters (total flow of 0.157 MGD) at sampling point Outfall 101. Only the process wastewater (0.056 MGD) is assumed to contain the ELG parameters.**
4. **Red text reflects the effluent limitations that were in the 1st Draft permit and blue text are the revised effluent limitations in the 2nd Draft permit.**