

October 16, 2024

Christopher Kriley, P.E.
Environmental Program Manager
Clean Water Program
PA Department of Environmental Protection
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222
ckriley@pa.gov

Re: Modification Request for PA0002208, Shell Chemical Appalachia Petrochemicals Complex

Dear Mr. Kriley,

We, the Environmental Integrity Project (EIP), Three Rivers Waterkeeper (3RWK), Mountain Watershed Association (MWA), Beaver County Marcelus Awareness Community (BCMAM) and the Clean Air Council are requesting modifications to the Pennsylvania discharge permit PA0002208, Shell Chemical Appalachia Petrochemicals Complex, 300 Frankfort Rd, Monaca. Specifically, we are requesting the following modifications:

1. Add monthly monitoring for antimony, arsenic, cadmium, lead, selenium, thallium, and zinc at Outfall 001 (which includes stormwater) given the presence of these pollutants in the facility's stormwater.
2. Add case-by-case technology-based zinc limits to Outfalls 2, 8, 15, 16, and 21 because of the high levels sampled there since permit issuance.
3. Add lead limits to Outfalls 14 and 16 because of the high levels sampled there since permit issuance.
4. Add aluminum limits to Outfalls 1, 16, 17, and 19 because of the high levels sampled there since permit issuance.
5. Add limits for 1,2,4,5-tetrachlorobenzene and pentachlorobenzene based on Pennsylvania's numeric water quality criteria and the Ohio River Valley Water Sanitation Commission (ORSANCO) narrative standard to Outfall 001 because of the high levels sampled and so that Shell's discharges do not compromise the Ohio's use as a drinking water source. Add monitoring for 1,2,4,5-tetrachlorobenzene and pentachlorobenzene monitoring at other process water outfalls, like Outfall 04.
6. Increase the frequency of the stormwater inspections and require a groundwater remediation plan to prevent future violations.
7. Add PFAS monitoring to process water and groundwater outfalls.

We are requesting these modifications pursuant to Pennsylvania and federal water quality laws, under which any interested person may request a modification to an NPDES permit. 25 Pa. Code § 92a.72, *Modification or revocation and reissuance of permits*, states that “[t]he provisions of 40 C.F.R. 122.62 (relating to modification or revocation and reissuance of permits (applicable to State programs, see 123.25)) are incorporated by reference.” 25 Pa. Code § 92a.72. Federal regulation 40 C.F.R. § 122.62 lays out the criteria for modification when the permitting agency “receives any information relating to a modification including, a request for modification ... under § 124.5.” 40 C.F.R. § 124.5 in turn states that “[p]ermits (other than PSD permits) may be modified, revoked and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Director’s initiative.” 40 C.F.R. § 124.5(a) (emphasis added). Reflecting this regulation, EPA’s permit writer manual states that “[o]f course, any interested person may make a request for a permit modification.” EPA, *NPDES Permit Writers’ Manual* at §11.4.2, *Modification or Revocation and Reissuance of Permits* (Sept. 2010) (emphasis added).¹

I. Chart of Modification Requests

Outfall #	Description	Modification Requested
001	Treated process water and stormwater from the wastewater treatment plant (monitored at IMP 101), cooling tower blowdown (monitored at IMP 201), and hydrostatic test water (monitored at IMP 108)	Add limits for 1,2,4,5-tetrachlorobenzene and pentachlorobenzene based on PA’s numeric water quality criteria and ORSANCO’s narrative standard. Add case-by-case technology-based aluminum limits. Add monthly monitoring for antimony, arsenic, cadmium, lead, selenium, thallium, zinc, and PFAS.
101 (internal)	Treated process water and stormwater from the wastewater treatment plant (ELGs)	
201 (internal)	Cooling tower blowdown	
002	Stormwater from the East RR Pond	Add case-by-case technology-based zinc and aluminum limits.
003	Overflows of stormwater from the East RR Pond	
004	Overflows of process water and stormwater from the Accidentally Contaminated (AC) Pond	Add monitoring for 1,2,4,5-tetrachlorobenzene and pentachlorobenzene based on PA’s numeric water quality criteria and ORSANCO’s narrative standard. Add monthly PFAS monitoring.
005	Groundwater discharges from Mall Lot 2	Add case-by-case technology-based zinc and aluminum limits. Add monthly PFAS monitoring.
006	Stormwater from the South Ponds	Add case-by-case technology-based aluminum limits.
007	Overflows of stormwater from the South Ponds	Add case-by-case technology-based aluminum limits.
008	Stormwater from the Clean Rainwater (CR) Pond; steam condensate; and sources monitored at Internal Monitoring Point 108	Add case-by-case technology-based zinc and aluminum limits.

¹ https://www.epa.gov/sites/default/files/2015-09/documents/pwm_chapt_11.pdf

Outfall #	Description	Modification Requested
108 (internal)	Hydrostatic test water	
009	Overflows of stormwater from the Clean Rainwater (CR) Pond; steam condensate	
010	Stormwater from the West RR Basin	
011	Intake screen backwash water	
012	Overflows of stormwater from the West RR Basin	
013	Stormwater from the North Pond; steam condensate; and sources monitored at Internal Monitoring Point 108	Add case-by-case technology-based aluminum limits.
014	Overflows of stormwater from the North Pond	Add case-by-case technology-based lead and aluminum limits.
015	Groundwater seep	Add case-by-case technology-based limits for zinc. Add monthly PFAS monitoring.
016	Stormwater from the plant and Duquesne Light and PennDOT rights-of-way	Add case-by-case technology-based zinc, lead, and aluminum limits.
017	Stormwater runoff from Parking Area Pond A West	Add case-by-case technology-based aluminum limits.
018	Overflows from the Parking Area Pond A West	
019	Stormwater from the Parking Area Pond B East	Add case-by-case technology-based aluminum limits.
020	Overflows from Parking Area Pond B East	
021	Stormwater runoff from Electric Tower Road	Add case-by-case technology-based zinc and aluminum limits.
022	Stormwater runoff from the Training Center	
Overall	Increase the frequency of the stormwater inspections in Part II.D of the permit from semi-annual to monthly to prevent future violations and keep sediment and pollutants out of waterways.	
Overall	Require that Shell draft a full plan to remediate the groundwater on site to meet drinking water standards, with enforceable deadlines, and that Shell begin implementing such plan within the year.	

II. Interest

The Mountain Watershed Association (MWA) is a nonprofit organization whose mission is to protect, preserve and restore the Youghiogheny River watershed and its broader communities through conservation, recreation, education, and advocacy. MWA is home to the Youghiogheny Riverkeeper and has worked tirelessly for years to improve water quality throughout the Youghiogheny River watershed. MWA has an interest in keeping those hard-fought improvements from being destroyed by downstream pollution from Shell's Cracker Plant. In addition, MWA has interest on behalf of its over 1,400 members, many of whom rely on downstream Ohio River water sources for recreational activities and drinking water supplies.

Three Rivers Waterkeeper (3RWK) was founded in 2009 and works to improve and protect the water quality of the Allegheny, Monongahela, and Ohio Rivers. These waterways are critical to the health, vitality, and economic prosperity of our region and communities. 3RWK is both a scientific and legal advocate for the community, working to ensure that our three rivers are protected and that our waters are safe to drink, fish, swim, and enjoy. We are one of the over 300

organizations that make up the global Waterkeeper Alliance and work together to connect local communities to global environmental and advocacy resources.

The Beaver County Marcellus Awareness Community (BCMAC) seeks to protect the residents of Southwestern Pennsylvania, with emphasis on those in Beaver County, by informing them about the health, safety, environmental and economic impacts of fracking infrastructure, including the petrochemical buildout; and by supporting sustainable alternatives to carbon-based energy sources and economic development strategies in Beaver County.

The Environmental Integrity Project (EIP) is a non-profit, non-partisan watchdog organization that advocates for effective enforcement of environmental laws. EIP is headquartered in Washington, DC and has staff who live and recreate in Pennsylvania. Comprised of former EPA and state government enforcement attorneys, public interest lawyers, analysts, investigators, and community organizers, EIP has 3 primary goals: (1) To illustrate through objective facts and figures how the failure to enforce or implement environmental laws increases pollution and harms public health; (2) to hold federal and state agencies, as well as individual corporations, accountable for failing to enforce or comply with environmental laws; and (3) to help local communities obtain the protections of environmental laws.

The Clean Air Council is an environmental health advocacy organization that fights for everyone's right to a healthy environment. Its mission is to protect people's health from harmful pollution, and the Council fulfills this mission through public education, community action, accountability, and enforcement of environmental laws. The Council strongly advocates against all facets of the oil and gas industry due to its adverse impacts on both air and water, which continuously devastate public health and the environment.

III. Basis for Modification Requests

This permit “may be modified, terminated, or revoked and reissued during its term in accordance with 25 Pa. Code § 92a.72 and 40 C.F.R. 122.41(f).” Shell PA0002208 Permit at 46. 25 Pa. Code § 92a.72 incorporates 40 C.F.R. § 122.62, which in turn incorporates 40 C.F.R. § 122.64. These federal regulations establish that permits may only be modified for certain reasons. *See* 40 C.F.R. § 124.5(a) (“permits may only be modified, revoked and reissued, or terminated for the reasons specified in §§ 122.62 or 122.64”); *see also* 40 C.F.R. § 122.62. Together, they set out the following modification grounds:

- ***New information.*** Permits can be modified based on information that was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) “and would have justified the application of different permit conditions at the time of issuance.” 40 C.F.R. § 122.62(a)(2).
- ***Non-limited pollutants above technology-based limits.*** “When the level of discharge of any pollutant which is not limited in the permit exceeds the level which can be achieved by the technology-based treatment requirements appropriate to the permittee under § 125.3(c).” 40 C.F.R. § 122.62(a)(11).
- ***Noncompliance.*** Noncompliance by the permittee with any condition of the permit. 40

C.F.R. §§ 122.62(b)(2), 122.64(a)(1).

The specific reasons for each modification request are described below.

1. Zinc: Add case-by-case technology-based zinc limits to Outfalls 2, 8, 15, 16, and 21 because of the high levels sampled there since permit issuance.

Permits can be modified based on information that was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) “and would have justified the application of different permit conditions at the time of issuance.” 40 C.F.R. § 122.62(a)(2).

The levels of zinc sampled in the current permit term at Outfalls 2, 8, 16, and 21 have been significantly higher than those in Shell’s 2019 permit application. These higher levels would have justified the application of different permit conditions at the time of permit issuance, including technology-based or water-quality-based limits, more frequent monitoring, and/or monitoring at additional outfalls.

Outfall #	2019 Max Application Zinc Sample in mg/L	Monitoring Period	Highest Zinc Sample Since Permit Issuance in mg/L
2	0.18	6/30/2021	0.36
8	0.18	6/30/2021	0.29
15	No sample provided	9/30/2022	3.2
16	2.2	6/30/2022	4
21	0.12	12/31/2023	0.19

An additional ground for modifying the permit is when “the level of discharge of any pollutant which is not limited in the permit exceeds the level which can be achieved by the technology-based treatment requirements appropriate to the permittee under case-by-case limits under 40 CFR § 125.3(c).” 40 CFR § 122.62(a)(11). The new source performance standards for process water at organic chemical manufacturing facilities (like the Shell cracker plant) require that facilities not exceed the quantity (mass) determined by multiplying the process wastewater flow with a daily maximum of 2.61 mg/L of zinc. 40 CFR §§ 414.64, 414.91; *see also* Draft Fact Sheet at 41 (ELG applicability).² Outfalls 15 and 16 have been sampled above 2.61 mg/L several times. Zinc at Outfall 15 was sampled at 3.2 mg/L on 9/30/2022. Zinc at Outfall 16 was sampled at 4 mg/L on 6/30/2022.

Given this new information, we request that the Pennsylvania Department of Environmental Protection (“PADEP”) modify the permit to add case-by-case technology-based limits for zinc to Outfalls 2, 8, 15, 16, and 21. Technology-based limits based on BAT should be established for all nonconventional and toxic pollutants discharged by a point source category, as well as all “classes of point sources,” which includes industrial stormwater and other point sources. 33 U.S.C. §§ 1311(b)(2)(A), 1317(a)(1), 1317(a)(2), 1342(p)(2)(B). Under EPA’s permitting regulations, when “EPA-promulgated effluent limitations are inapplicable,” or “[w]here promulgated effluent limitations guidelines only apply to certain aspects of the discharger's

² [DRAFT - Fact Sheet for PA0002208.pdf](#)

operation, or to certain pollutants,” the permitting agency is required to step in on a case-by-case basis to set limits. 40 C.F.R. §§ 125.3(a)(2), (3).

Including these case-by-case technology-based limits is not optional. “[A]n authorized state must include technology-based effluent limitations in its permits for pollutants not addressed by the effluent guidelines for that industry. In the absence of an effluent guideline for those pollutants, the CWA requires permitting authorities to conduct the ‘BPJ’ analysis discussed above on a case-by-case basis for those pollutants in each permit.” EPA, *National Pollutant Discharge Elimination System (NPDES) Permitting of Wastewater Discharges from Flue Gas Desulfurization (FGD) and Coal Combustion Residuals (CCR) Impoundments at Steam Electric Power Plants*, Attachment 2 at 2 (June 7, 2010) (citing 33 USC § 1314(b); 40 CFR §§ 122.44(a)(1), 123.25, 125.3).³

2. Lead: Add case-by-case technology-based lead limits to Outfalls 14 and 16 because of the high levels sampled there since permit issuance.

Similarly, the levels of lead sampled in the current permit term have been significantly higher than those in the 2019 permit application. These higher levels at Outfalls 14 and 16 would have justified the application of different permit conditions at the time of permit issuance, including technology-based or water-quality-based limits, more frequent monitoring, and/or monitoring at additional outfalls.

Outfall #	2019 Application Sample in mg/L	Monitoring Period	Highest Sample Since Permit Issuance in mg/L	More Than Five Times Above the Level in the 2019 Permit Application?
14	0.02	8/31/2023	0.19	Yes, 9.5x
16	0.12	6/30/2022	0.23	Yes, 1.917x

In addition, Outfalls 14 and 16 have routinely discharged lead above 100 ug/L since the issuance of the 2021 permit. In addition, Outfall 14 routinely discharged pollutants at more than five times above the level in the 2019 permit application since the issuance of the 2021 permit. Both of these are triggers for the permit’s “Specific Toxic Pollutant Notification Levels (for Manufacturing, Commercial, Mining, and Silvicultural Direct Dischargers).” Shell PA0002208 Permit at 44; *see also* 40 C.F.R. §§122.42(a)(1)(ii), (iii).

Given this new information, we request that PADEP modify the permit to add case-by-case technology-based limits for zinc to Outfalls 14 and 16 for the reasons described in Section III.1.

3. Aluminum: Add case-by-case aluminum limits to Outfalls 1, 16, 17, and 19 because of the high levels sampled there since permit issuance.

Similarly, the levels of aluminum sampled in the current permit term have been significantly higher than those in the 2019 permit application. These higher levels at Outfalls 1, 16, and 19 justify a modification because they would have justified the application of different permit

³ <https://www3.epa.gov/npdes/pubs/steamelectricbpjguidance.pdf>

conditions at the time of permit issuance, including technology-based or water-quality based limits, more frequent monitoring, and/or monitoring at additional outfalls.

Outfall #	2019 Application Sample in mg/L	Monitoring Period	Highest Sample Since Permit Issuance in mg/L	More Than Five Times Above the Level in the 2019 Permit Application?
1	4.873	9/30/2022	250	Yes, 51.30x
16	14	6/30/2022	36	Yes, 2.5714x
17	Did not exist yet	6/30/2022	7.3	
19	2.2	6/30/2023	8.5	Yes, 3.8636x

In addition, all of these have routinely discharged aluminum at levels above 100 ug/L (.1 mg/L) since issuance of the 2021 permit and at more than five times above the level in the 2019 permit application since issuance of the 2021 permit. These are the triggers for the permit’s “Specific Toxic Pollutant Notification Levels (for Manufacturing, Commercial, Mining, and Silvicultural Direct Dischargers).” Shell PA0002208 Permit at 44; *see also* 40 C.F.R. §§122.42(a)(1)(ii), (iii).

Given this new information, we request that PADEP modify the permit to add case-by-case technology-based limits for aluminum to Outfalls 1, 16, 17, and 19 for the reasons described in Section III.1.

4. 1,2,4,5-tetrachlorobenzene and pentachlorobenzene: Add limits and monitoring for 1,2,4,5-tetrachlorobenzene and pentachlorobenzene based on Pennsylvania’s numeric water quality criteria and ORSANCO’s narrative standard

Both 1,2,4,5-tetrachlorobenzene and pentachlorobenzene are bioaccumulative chemicals of concern. Ohio River Valley Water Sanitation Commission (ORSANCO), an interstate commission that establishes the Ohio River’s water quality standards, defines bioaccumulative chemicals of concern as chemicals that have “the potential to cause adverse effects which, upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor greater than 1000, after considering metabolism and other physicochemical properties that might enhance or inhibit bioaccumulation.” ORSANCO Water Quality Standards Part XVIII.⁴

The receiving segments of the Ohio River are classified as drinking water.⁵ While ORSANCO restricts the use of mixing zones for these two bioaccumulative chemicals of concern,

⁴ <https://www.orsanco.org/wp-content/uploads/2019/06/Final-Standards-Doc-2019-Revision.pdf>

⁵ <https://mywaterway.epa.gov/community/300%20Frankfort%20Road%20Monaca,%20PA,%20USA/overview>

ORSANCO does not have specific human health water quality standards for 1,2,4,5-tetrachlorobenzene and pentachlorobenzene. Pennsylvania has a human health criteria of .03 ug/L for 1,2,4,5-tetrachlorobenzene and .01 ug/L for pentachlorobenzene, but these do not apply to the Ohio River. 25 Pa. Code § 93.8c. ORSANCO does have a general water quality standard that “[n]o discharge ... shall cause or contribute to a violation of these wastewater discharge requirements, or preclude the attainment of any designated use of the main stem waters of the Ohio River,” which is intended to protect, among other things, the use of the Ohio as a drinking water source. Draft Fact Sheet at 64; ORSANCO Water Quality Standards at Chapter 3.

Shell did not submit data for either 1,2,4,5-tetrachlorobenzene and pentachlorobenzene in its application. In the 2021 permitting process, PADEP did not consider adding WQBELs for 1,2,4,5-tetrachlorobenzene and pentachlorobenzene to implement the ORSANCO narrative standards and protect the Ohio’s use as drinking water source. Nor did Pennsylvania consider adding case-by-case technology-based limits. PADEP did include monitoring for these two pollutants pursuant to ORSANCO. Draft Fact Sheet at 64.

Levels of both 1,2,4,5-tetrachlorobenzene and pentachlorobenzene since permit issuance have been high. Levels of 1,2,4,5-tetrachlorobenzene have been as high as 160 times the Pennsylvania human health criteria of .03 ug/L. Levels of pentachlorobenzene have been as high as 32 times the Pennsylvania human health criteria of .01 ug/L.

Outfall	Pollutants	Monitoring period end date	PA drinking water standards	Unit	Sample Value	Unit
1	1,2,4,5-Tetrachlorobenzene	3/31/2021	.03	ug/L	4.8	ug/L
1	Pentachlorobenzene	12/31/2022	0.1	ug/L	3.2	ug/L

These high levels of 1,2,4,5-tetrachlorobenzene and pentachlorobenzene require permit modification because they are new information that “would have justified the application of different permit conditions at the time of issuance.” 40 C.F.R. § 122.62(a)(2). If PADEP had these high 1,2,4,5-tetrachlorobenzene and pentachlorobenzene samples before permit issuance, PADEP would have been justified in establishing water-quality based effluent limits (WQBELs) based on Pennsylvania’s numeric water quality criteria and ORSANCO’s narrative standard in order to ensure that Shell’s discharges do not compromise the Ohio River’s use as a drinking water source. ORSANCO Water Quality Standards at Chapter 3; 25 Pa. Code § 93.8c. These high levels also would justify adding 1,2,4,5-tetrachlorobenzene and pentachlorobenzene monitoring at other process water outfalls, like Outfall 04.

Given this new information, we request that PADEP modify the permit to add case-by-case technology-based limits for 1,2,4,5-tetrachlorobenzene and pentachlorobenzene to Outfall 001 for the reasons described in Section III.1. We also request that PADEP add monitoring for 1,2,4,5-tetrachlorobenzene and pentachlorobenzene to Outfall 004 because Outfall 004 discharges process water. Under 40 C.F.R. § 122.48, states must include in permit monitoring at

a type, interval, and frequency sufficient to yield data representative of the discharge. Obtaining data about aluminum at Outfall 4 is needed to yield data representative of the Shell discharge.

5. *Metals Monitoring: Add monthly monitoring for antimony, arsenic, cadmium, lead, selenium, thallium, and zinc at Outfall 001 (which includes stormwater) given the presence of these pollutants in the facility's stormwater.*

Federal regulations require that new facilities in categories considered “primary industries” must include in their permit applications estimates for a long list of pollutants when the facilities “know[] or have reason to believe will be present in the discharge.” 40 C.F.R. § 122.21(k)(5); 40 C.F.R. Pt. 122, App. A. 40 C.F.R. Pt. 122, Appendix D lists these pollutants and includes many metals.⁶ Pennsylvania’s similar list of metals is called “Group 2.” Pa. Application Instructions at 27.⁷

This application requirement applies to Shell because it was considered a “new” plant in the permit application and organic chemical manufacturing plants are on the federal list of “primary industry facilities.” 40 C.F.R. Pt. 121, Appendix A. States and EPA use this application information to evaluate whether the pollutant should be limited, monitored, or not addressed at the outfall in the permit.

Outfall 001 includes almost every wastestream present at the Shell cracker except groundwater: treated process water and stormwater from the wastewater treatment plant (monitored at Internal Outfall 101); cooling tower blowdown (monitored at Internal Outfall 201); and hydrostatic test water (monitored at Internal Outfall 108). Permit at 3.

When Shell filled out its 2019 application for Outfall 001, Shell stated that many Appendix D pollutants, including antimony, arsenic, cadmium, lead, selenium, thallium, and zinc, “are not expected to be in wastewater based on process engineering and similar reference plants.” Shell Application at 49.⁸ Presumably based on that information, PADEP did not include any monitoring for antimony, arsenic, boron, cadmium, lead, selenium, thallium, and zinc at Outfall 001 or any of the related internal outfalls. Permit at 3, Draft Fact Sheet at B-2. Nor did PADEP consider establishing WQBELs for these pollutants at Outfall 001.

Since permit issuance, however, samples of other stormwater outfalls have shown the presence of antimony, arsenic, cadmium, lead, selenium, thallium, and zinc, sometimes at very high

⁶ <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122/appendix-Appendix%20D%20to%20Part%20122>

⁷

<https://greenport.pa.gov/elibrary/PDFProvider.ashx?action=PDFStream&docID=1459227&chksum=&revision=4&docName=01+APPLICATION+INSTRUCTIONS&nativeExt=pdf&PromptToSave=False&Size=551484&ViewerMode=2&overlay=0>

⁸ [Shell NPDES Renewal Application Submitted 9.12.19 \(1\).pdf](#)

levels.⁹ Given that Outfall 001 includes stormwater, it is highly likely that these pollutants are also present at Outfall 001. At a minimum, the permit should be modified to add monthly monitoring for these pollutants. Under 40 C.F.R. § 122.48, states must include in permits monitoring at a type, interval, and frequency sufficient to yield data representative of the discharge. Obtaining data about aluminum at Outfall 4 is needed to yield data representative of the Shell discharge.

6. More Frequent Inspections and a Strengthened Remediation Plan to Prevent Future Violations

Modification is also justified by the permittee’s noncompliance. 40 C.F.R. §§ 122.62(b)(2), 122.64(a)(1). Shell has had a number of violations this permit term at various outfalls.

Outfall #	Pollutant	Limit	Unit	End of Monitoring Period	Sample Value	Unit	Exceedance Percentage
4	BOD, 5-day, 20 deg. C	287	lb/d	4/30/2024	385	lb/d	34%
4	BOD, 5-day, 20 deg. C	27	mg/L	4/30/2024	32.7	mg/L	21%
4	Di-n-butyl phthalate	0.608	lb/d	4/30/2024	0.7	lb/d	15%
4	Di-n-butyl phthalate	0.288	lb/d	4/30/2024	0.3	lb/d	4%
4	Solids, total suspended	43	mg/L	8/31/2023	52.5	mg/L	22%
101	Toluene	0.08	mg/L	4/30/2023	0.13	mg/L	63%
4	BOD, 5-day, 20 deg. C	27	mg/L	11/30/2022	36	mg/L	33%
4	Toluene	0.026	mg/L	11/30/2022	0.03	mg/L	15%
108	Chlorine, total residual	0.05	mg/L	8/31/2021	1.2	mg/L	2,300%
101	Chloroform	0.046	mg/L	7/31/2021	0.06	mg/L	30%
108	Solids, total suspended	60	mg/L	3/31/2021	220	mg/L	267%
108	Solids, total suspended	30	mg/L	3/31/2021	175	mg/L	483%
108	Iron, dissolved [as Fe]	7	mg/L	3/31/2021	11	mg/L	57%
15	pH	9	SU	9/30/2020	9.16	SU	

To address the violations that may be related to stormwater, like those at Outfall 4, we request that PADEP increase the frequency of the stormwater inspections in Part II.D of the permit from semi-annual to monthly to prevent future violations and keep sediment and pollutants out of waterways.

To address the violations that may be related to the existing groundwater contamination on the site, as well as the high lead and zinc levels at Outfalls 4 and 15 discussed above, we request that PADEP require that Shell draft a full plan to remediate the groundwater on the Shell site to meet drinking water standards, with enforceable deadlines, and that Shell begin implementing such plan within the year.

7. Nurdles: Add Specific Prohibition on the Discharge of Plastic Pellets and Nurdles and

⁹ <https://echo.epa.gov/detailed-facility-report?fid=110000329038>

Increase Frequency of Visual Inspections

Shell plant produces polyethylene pellets which, if discharged into waterways, can harm birds and animals. The Shell permit includes a prohibition on the discharge of “[f]loating solids, scum, sheen or substances that result in observed deposits in the receiving water,” but does not specifically prohibit the discharge of all pellets and nurdles. Shell PA0002208 Permit Part A(1). Moreover, the Shell permit only requires semiannual visual inspections for these substances. Shell PA0002208 Permit Part C, Section III.D.

These weak restrictions are inadequate. MWA’s nurdle patrols have identified nurdles in the Ohio River below the Shell plant, including within the boomed area. Such noncompliance justifies modifying the permit. 40 C.F.R. §§ 122.62(b)(2), 122.64(a)(1). In order to prevent the further discharge of pellets and nurdles we request that the permit be modified to require weekly visual inspections, as described in Permit Part C, Section III.D, and that a specific prohibition on any discharge of pellets or nurdles be added to the permit.

8. PFAS: Add Monitoring at Process Water and Groundwater Outfalls

In 2022, EPA identified the Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) industrial category, which includes the Shell plant, as a source “known or suspected to discharge” per- and polyfluoroalkyl substances (PFAS) and recommended that states include PFAS monitoring and best management practices in permits for facilities in the OCPSF sector.¹⁰ On January 14, 2023, Pennsylvania established maximum contaminant levels (MCLs) and maximum contaminant level goals (MCLGs) for 2 PFAS: perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). MCLs and MCLGs may be used as the basis for health-based water quality standards and numeric limits implementing narrative standards. *See Water Quality Criteria Methodology Revisions: Human Health*, 65 Fed. Reg. 66,444 (Dec. 3, 2000) (EPA recommends that MCLs be used when they are numerically the same as the MCLG and intended to protect drinking water source); *Draft Water Quality Criteria Methodology Revisions: Human Health*, 63 Fed. Reg. 43,756 (Aug. 4, 1998) (the use of MCLs is acceptable in the absence of 304(a) criteria); EPA, *Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs* at 4 (Dec. 5, 2022) (discussing use of narrative water quality standards for PFAS limits).¹¹ Here, these new MCLs and MCLGs can be used to protect the Ohio River’s drinking water use pursuant to ORSANCO’s narrative water quality standard that “[n]o discharge ... shall cause or contribute to a violation of these wastewater discharge requirements, or preclude the attainment of any designated use of the main stem waters of the Ohio River.” Draft Fact Sheet at 64; ORSANCO Water Quality Standards at Chapter 3.

This 2022 EPA memo and Pennsylvania’s new MCLs constitutes new information that was not available at the time of permit issuance and would have justified the application of different permit conditions at the time of issuance, including PFAS monitoring and potentially PFAS limits. 40 C.F.R. § 122.62(a)(2).

¹⁰ https://www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf

¹¹ https://www.epa.gov/system/files/documents/2022-12/NPDES_PFAS_State%20Memo_December_2022.pdf

We request that, based on this new information, PADEP add monthly monitoring for all PFAS listed under EPA Method 1633¹² at Outfalls 1 and 4, because PFAS may be present in the process water, and at Outfalls 5 and 15, because if Class B foam was used on the site, PFAS is likely still present in the groundwater.

9. Conclusion

Thank you for your consideration of this request. We request a response within 90 days. Please note that PADEP has a mandatory duty to respond to this request with the publication of a draft modification or a denial. 25 Pa. Code § 92a.72; 40 C.F.R. § 122.62. We further note that a denial of this request is an action subject to administrative appeal. 25 Pa. Code 1021.2; *Arlene Kalinowski and Joseph Kalinowski v. Commonwealth of Pennsylvania, Department of Environmental Protection and Westmoreland Land, LLC, Permittee*, EHB Docket No. 2016-032-R, 2016 WL 3579066, at *2 (June 28, 2016).

Please feel free to reach out with questions.

Sincerely,

Meg Parish, Senior Attorney
Environmental Integrity Project
888 17th Street, NW, Suite 810
Washington, D.C. 20006
mparish@environmentalintegrity.org

Heather Hulton VanTassel
Three Rivers Waterkeeper
800 Vinial Street, Suite B314
Pittsburgh, PA 15212
Heather@ThreeRiversWaterkeeper.org

Lauren E. Otero, Staff Attorney
Clean Air Council
1617 JFK Boulevard, Suite 1130
Philadelphia, PA 19103
lotero@cleanair.org

Melissa Marshall, Esq. Community Advocate
Stacey Magda, Managing Community Organizer
Mountain Watershed Association
stacey@mtwatershed.com

Hilary O'Toole, Executive Director
Beaver County Marcelus Awareness Community (BCMAC)
hilary.bcmac@gmail.com

¹² <https://www.epa.gov/system/files/documents/2024-01/method-1633-final-for-web-posting.pdf>