pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHWEST REGIONAL OFFICE
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0041378**
Facility Type	**Industrial**	APS ID	**960097**
Major / Minor	**Minor**	Authorization ID	**1215213**

NPDES PERMIT FACT SHEET ADDENDUM 2

Applicant and Facility Information

Applicant Name	**Prime Metals Acquisition LLC dba Prime Metals & Alloys**	Facility Name	**Prime Metals & Alloys Homer City Plant**
Applicant Address	101 Innovation Drive	Facility Address	101 Innovation Drive
	Homer City, PA 15748-7433		Homer City, PA 15748-7433
Applicant Contact	Brian Knupp, Vice President	Facility Contact	Michelle Knupp
Applicant Phone	724-479-4155	Facility Phone	724-479-4361
Client ID	145602	Site ID	252030
SIC Code	3316	Municipality	Center Township
SIC Description	Manufacturing - Cold Finishing Of Steel Shapes	County	Indiana
Date Published in PA Bulletin	July 31, 2021	EPA Waived?	No
Comment Period End Date	September 14, 2021 (extend.)	If No, Reason	TMDL
Purpose of Application	Renewal of an NPDES permit for existing discharges of treated sanitary wastewater and new discharges of non-contact cooling water, groundwater, and storm water associated with industrial activities.		

Internal Review and Recommendations

The second draft NPDES permit for Prime Metals & Alloys' (PMA) Homer City Plant was published in the *Pennsylvania Bulletin* on July 31, 2021. By email dated August 13, 2021, PMA, through its consultant, Hillcrest Group, requested a 15-day extension of the comment period. On August 13, 2021, DEP approved the 15-day extension through September 14, 2021.

By emailed letter dated September 13, 2021, Hillcrest Group submitted comments on the second draft NPDES permit on behalf of PMA. Following a September 21, 2021 conference call with DEP to discuss PMA's comments, PMA submitted supplemental comments on November 5, 2021.

Comment 1 (9/13/2021): Part A. I.A. Page 2 – Internal Monitoring Point 101 – Sewage Treatment Plant: The previously requested reduction in Flow, pH, Dissolved Oxygen and Total Residual Chlorine sampling frequency was not granted by the Department. We understand the Department's concern to impose these parameters and frequency to monitor the Plant operation effectiveness. However, as shared before, the daily frequency is excessive and not needed to gage the Plant's operating status. We previously requested a 2/month or preferably 1/month frequency but are willing to move off of that given the Department's concerns and request the frequency be set as 2/week, i.e., beginning of workweek and week mid-point, say Thursday. Please be advised that the Plant does not operate over the weekend. Our requested frequency will identify any issues when Plant work and sewage loading resumes after the weekend and [also] provide an active sewage loading, mid-work check point. We also want to clarify that taking these readings is not required during Plant downtime, namely the weekends and infrequent, temporary Plant work stoppages.

Comment 1 Follow-up (11/5/2021): Part A. I.A. Page 2 – Internal Monitoring Point 101 – Sewage Treatment Plant: The Department agreed that a Certified Wastewater Treatment Plant Operator is not required to obtain the Flow, pH, Dissolved Oxygen and Total Residual Chlorine data points. The Plant is discussing the Plant staff training and equipment needs with the current outside treatment plant operator and will determine if the data points will be obtained by Plant staff.

Approve	Return	Deny	Signatures	Date
X			Ryan C Decker Ryan Decker, P.E. / Environmental Engineer	November 23, 2021
X			Michael E. Fifth Michael E. Fifth, P.E. / Environmental Engineer Manager	November 23, 2021

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The Department also agreed that obtaining Sewage Plant data points is not required when the plant is not operating, i.e., no flow.

We reviewed the applicable Standard Operating Procedure and Technical Guidance citations provided by the Department. However, we still believe the daily monitoring frequency specified for Flow, pH, Dissolved Oxygen and Total Residual Chlorine is excessive and not needed to gage the Plant's operating status.

We respectfully note that the justifications cited by the Department are "guidance", and not regulations per se, and as such, the Department has flexibility to set less stringent requirements. The Sewage Plant size and positive compliance record does not support the daily frequency. In fact, the technical guidance document Chapter 6 acknowledges a Department …"effort… (to) reduce the burden on smaller facilities". We continue to believe the lessened monitoring frequency is adequate to assure plant compliance and request it be set as 2/Week.

DEP Response to Comment 1: DEP's "Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits", which directs the establishment of daily monitoring for total residual chlorine (TRC), dissolved oxygen (D.O.), and pH for sewage dischargers with design flows between 0.0005 MGD and 25 MGD, has been in effect since October 1997. In accordance with that guidance, sewage treatment facilities statewide must comply with the daily monitoring requirements for TRC, D.O. and pH. In the Department's judgment, pursuant to its long-standing guidance, daily monitoring for TRC, D.O., and pH is not excessive. Technological advances in effluent monitoring equipment, automation, and remote computing have made compliance with the daily monitoring requirements easier since the guidance was published 24 years ago. In addition, if/when an upset occurs, DEP has observed that troubleshooting the cause of an upset is difficult when there are not enough data to perform a diagnosis.

Guidance is not regulation, but guidance does not need the weight of regulation to inform DEP's decision-making norms. DEP publishes guidance (which goes through a draft public comment period before finalization) and makes its SOPs available to the public so that all dischargers know what to expect in their permits. Consistent application of guidance sets baseline requirements in permits so that all dischargers are regulated equitably.

DEP appreciates that PMA's STP has historically exhibited a good compliance record. However, that is not an exceptional circumstance that warrants continued deviation from daily measurement frequencies for TRC, D.O., and pH. Other STPs with a good compliance record are subject to daily monitoring for TRC, D.O., and pH.

Table 6-3 of the technical guidance already accounts for a reduced sampling burden for smaller facilities. PMA's STP does not fall into the classification of small facilities (single residence sewage treatment plants) that are eligible for reduced sampling frequencies for TRC, D.O., and pH.

During the September 21, 2021 conference call, DEP proposed to give PMA time in the renewed permit to implement daily monitoring of TRC, D.O., and pH in the event that PMA might have a financial hardship with immediate compliance (e.g., purchasing new equipment) or if PMA needs time to establish new standard operating procedures for plant personnel. PMA did not indicate it needed time to comply. Therefore, DEP concludes that PMA can implement daily monitoring for TRC, D.O., and pH, which will take effect when the renewed permit takes effect.

A certified operator is not required to collect the daily data if data collection methods/analyses are consistent with EPA approved analytical methods (see 40 CFR part 136). Samples are required 1/day on days when there is a discharge; the minimum measurement frequencies for TRC, D.O., and pH at IMP 101 will be changed to "Daily when discharging" to clarify the sampling requirement.

Comment 2 (9/13/2021): Part A. I.B. Page 3 – Internal Monitoring Point 301 – Induction Furnace Cooling Tower: The previously requested deletion of the Free Available Chlorine (FAC) parameter was not granted by the Department. We still strongly believe this parameter should be deleted and keeping it makes no technical sense or environmental improvement.

As previously shared with the Department, the Mold Machines #1 and #2 Cooling Tower which was listed as a Sub-source contributor to this Outfall was not installed and appropriately deleted from the final draft Permit. In addition, it has been determined that the actual discharge values for IMP 301 are much lower than those initially reported to the Department and still on record. It was previously reported that the discharge was intermittent with a maximum volume of 9 GPM. This data was based on idealized system design and operating conditions supplied by the system manufacturer and do not reflect

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actual Plant operations. A review of Plant operations shows that there is no discharge during warmer weather, i.e., ambient temperatures 50 degrees and above (typically April through October). Small evaporative system losses during warmer weather results in no system blowdown. During the remaining months when evaporative system evaporative losses are lower in colder temperatures, i.e., ambient temperatures less than 50 degrees and above (typically November through March), the discharge is intermittent (approximately every 5 minutes for one minute) with a maximum flow of 2 GPM. This greatly reduced, seasonally intermittent volume, along with the belief that FAC value unto itself will be of no consequence environmentally, supports deleting this parameter.

As previously shared, the concern for FAC in cooling towers is from much larger power plant or other cooling towers where active chlorination of raw water make-up (i.e., river or stream) is done to prevent biofouling of the cooling system. The Plant uses only public water supply for this sub-source make-up water which by Federal and State standards complies with the FAC Drinking water Standard.

The Department stated it did not base its decision to retain FAC on 40 CFR Part 423 Steam Electric Guidelines (i.e., fossil power plants) but cited the 40 CFR Part 423.11(j) definition of "blowdown" as the "the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further build-up of which would cause concentration in amounts exceeding limits established by best engineering practices". We acknowledge that concentration of physical parameters such as TSS, TDS, etc. can occur in a cooling system blowdown as a result of evaporation and make-up water *BUT* this will not occur with FAC which is a chemical parameter which breaks down and dissipates over a short time in the system. There is no technical way FAC will increase with a concentration factor but rather decrease with water being retained in the system before being blown down. FAC cannot increase beyond the level in the public water supply and the blowdown FAC will accordingly meet or be lower than Drinking Water Standards.

Lastly, the low level of FAC in the discharge, if any, will combine with IMP 101 and with significant travel time to the receiving water (over 750 feet) FAC will have further time to break down and dissipate.

Comment 2 Follow-up (11/5/2021): Part A. I.B. Page 3 – Internal Monitoring Point 301 – Induction Furnace Cooling Tower: We still continue to believe the Free Available Chlorine (FAC) parameter should be deleted. It was our understanding that the Department is willing to consider discharge FAC sample data in support of this request.

The current Plant STP Operator obtained FAC data for the Plant water supply inlet spigot and at the Cooling Tower outlet at the point where the IMP pipe discharge leading to Outfall 001 begins. The inlet FAC value was 0.63 mg/l and the outlet value was 0.02 mg/l. It is also noted that the TRC results similarly showed the inlet TRC value was 0.26 mg/l and the outlet value was 0.00 mg/l. Refer to the attached data sheet and Operator credentials (3 pages).

This is totally consistent with our position throughout that there is no chlorine concentration factor in the tower system and in-fact the public water supply chlorine level(s) significantly dissipate with retention time inside the system.

We also discussed the situation and chlorination practices with our public water supply Plant Operators at the Central Indiana County Water Authority. They agreed with our position on chlorine dissipation inside the cooling system and felt our data points were to be expected.

We refer the Department back to our prior comments that noted the Mold Machines #1 and #2 Cooling Tower which was listed as a Sub-source contributor to this Outfall was not installed and appropriately deleted from the final draft Permit, the seasonal and intermittent nature of this discharge and, lastly, the maximum flow rate is actually 2 GPM which only occurs approximately every 5 minutes for one minute.

In summary, we believe this information supports our position that chlorine does not "concentration" in that Outfall's cooling system and the FAC parameter should be deleted from IMP 301.

> **DEP Response to Comment 2:** Some pollutant concentrations will build-up in a recirculating cooling system and others will not. DEP did not limit Free Available Chlorine (FAC) in PMA's cooling tower blowdown based on the expectation that FAC will concentrate in the cooling tower. DEP limited FAC at IMP 301 because chlorine was likely to be present in discharges of cooling tower blowdown at levels that could be controlled using available and affordable treatment technologies such as chemical treatment (dechlorination). Chemical treatment was classified as an available treatment technology to remove chlorine in 1974 when EPA first imposed the Free Available Chlorine limits on blowdown, so treating to remove chlorine is reasonable.

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Prior to PMA's most recent supplemental comments, DEP had no information on the level of chlorine dissipation in the cooling tower, so influent chlorine from the municipal water supply could have passed through the cooling tower with minimal dissipation-based reductions, but still be elevated enough in blowdown to warrant removal based on either technology or water quality-based considerations.

Consider that the water quality criteria for TRC in 25 Pa. Code Chapter 93 are 0.011 mg/L four-day average and 0.019 mg/L 1-hour average, so residual chlorine in potable water at the level of PMA's inlet TRC concentration (0.26 mg/L) could be toxic to fish and other aquatic life depending on a receiving stream's available assimilative capacity. In the absence of additional data, the draft permit's limits on chlorine in discharges of cooling tower blowdown were reasonable and conservatively applied.

PMA's supplemental analytical data demonstrate that chlorine is present in the water used in the cooling tower despite PMA not adding chlorine. However, the data also demonstrate that recirculation in the cooling tower dissipates chlorine to levels below applicable TBELs. Since free available chlorine is not present in the effluent in elevated concentrations and PMA does not add chlorine, TBELs for FAC will be removed from IMP 301.

Comment 3 (9/13/2021): Part A. I.C. Page 4 – Outfall 001 – Sewage Treatment Plant, Furnace Cooling Water and Building Roof Drainage: The previously requested deletion of Total Aluminum, Total Iron and Total Manganese was not granted by the Department. We once again strongly request their deletion. In the final draft Permit Fact Sheet, the Department acknowledged that the data that was submitted for IMP 101 – Sewage Treatment Plant and IMP 301 – Induction Furnace Cooling Tower did not exceed the Total Maximum Daily Load (TMDL) for this Outfall. The Fact Sheet also noted that the Department imposed monitoring for these metals on IMP 201 – Building Roof Drainage, when in-fact this IMP was deleted since they were not installed. Accordingly, there is no identified source for these metals, and once again this supports the full deletion of these parameters for Outfall 001.

Also, a very significant requested change that was no made by the Department is 24-Hr Composite sampling for the above metals. We stand by our above comment and retaining these parameters is extremely burdensome given they are not expected to be present. 24-Hr Composite sampling will place significant, unneeded expense on PMA with no environmental benefit. It is also noted that the sampling method is not appropriate for the three (3) intermittent IMPs that contribute to this Outfall.

It should also be noted that metals parameters in a similar Outfall 003 (Furnace Cooling Water, Groundwater Sump and Building Roof Drainage) were revised from 24-Hr Composite sampling method to Grab samples.

Comment 3 Follow-up (11/5/2021): Part A. I.C. Page 4 – Outfall 001 – Sewage Treatment Plant, Furnace Cooling Water and Building Roof Drainage: The Department agreed to reduce the 24-Hr Composite sampling requirement for the Total Aluminum, Total Iron and Total Manganese parameters from 2/Month to 2/Quarter and also change the sampling method from a 24-Hr composite to a Grab sample.

We are grateful for the Department agreeing to reducing the above noted sampling frequency and methods revisions but still believe the Total Aluminum, Total Iron and Total Manganese parameters should be deleted.

There are no process related contributors of those parameters. In the final draft Permit Fact Sheet, the Department acknowledged that the data that was submitted for IMP 101 – Sewage Treatment Plant and IMP 301 – Induction Furnace Cooling Tower did not exceed the Total Maximum Daily Load (TMDL) for this Outfall.

The storm water contributors to the Outfall are limited to roof downcomers and there are no other stormwater sources that could contribute these metals. The Fact Sheet also noted that the Department imposed monitoring for these metals on IMP 201 – Building Roof Drainage, when in-fact this IMP was deleted since they were not installed. Accordingly, there are no identified sources for these metals, and we once again request the deletion of these parameters for Outfall 001.

DEP Response to Comment 3: DEP agrees that grab sampling will be adequate for aluminum, iron, and manganese at Outfall 001. Also, the minimum measurement frequency for aluminum, iron, and manganese at Outfall 001 will be reduced to 2/quarter.

As previously explained, permit requirements for aluminum, iron, and manganese are necessarily imposed to be consistent with 40 § 122.44(d)(1)(vii)(B). When there are TMDL waste load allocations for a facility's discharge as there

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are for PMA's Outfall 001, the permit must impose those limits. Negligible contributors are not exempt from TMDL requirements when there is an applicable final TMDL waste load allocation. DEP does have flexibility to adjust TMDL requirements for outfalls that discharge to impaired waters, but do not have TMDL waste load allocations (e.g., PMA's storm water only outfalls, which are subject to benchmark monitoring).

DEP's reference to PMA's data showing that TMDL limits were not exceeded was to clarify that a schedule of compliance is not necessary for the limits because PMA can already comply. The ability to comply with a limit does not justify removal of a limit.

Comment 4 (9/13/2021): Part A. I.D. Page 5 – Internal Monitoring Point 402 – Compressor Oil-Water Separator: As previously shared with the Department, the Compressor Oil-Water Separator (OWS) discharges very infrequently and is largely dependent on ambient humidity levels, making the specified 2/Quarter sampling frequency difficult if not impossible. We once again request the frequency be set at 1/Quarter or be deleted.

In the event the 2/Quarter sampling frequency is not possible, the values in the future eDMR will appropriately be entered as "No Discharge" ("ND").

Comment 4 Follow-up (11/5/2021): Part A. I.D. Page 5 – Internal Monitoring Point 402 – Compressor Oil-Water Separator: The Department agreed to reduce the sampling frequency from 2/Quarter to 1/Quarter.

DEP Response to Comment 4: A sampling frequency should not be construed as a requirement to collect samples when there is no discharge or as a requirement to somehow force a discharge only to collect a sample. If there is no discharge from IMP 402 in a calendar quarter, then PMA would report "No Discharge". Nevertheless, DEP's agrees to a reduced Minimum Measurement Frequency of 1/quarter since discharges are infrequent.

Comment 5 (9/13/2021): Part A. I.F. Pages 7 and 8 – Outfall 003 – Induction Furnace 1 and 2 Cooling Tower, AOD Vessel Groundwater Collection Sump and Stormwater: The previously requested deletion of the Total Residual Chlorine (TRC) and Free Available Chlorine (FAC) parameters was not granted by the Department ***and in-fact a more stringent TRC limit*** was added effective two years after the Permit's effective date. We still strongly believe these parameters should be deleted and cite the rationale given above for Internal Monitoring Point 301 – Induction Furnace Cooling Tower. Keeping these parameters makes no technical sense or environmental improvement.

Modeled temperature limits were also retained and re-modeled by the Department at a 1 GPM flow rate, which is significantly down from the 21.5 GPM maximum flow rate initially to the Department. We previously commented that this very small flow will not make it to the unnamed tributary during dry weather and will otherwise be mitigated by ambient temperature stormwater. Temperature monitoring at this Outfall will be a waste of Prime Metals and the Department's time and resources. We also believe it runs against the Department's appropriate decision to delete the temperature requirements on Outfall 001 and IMP 301 – Induction Furnace Cooling Tower after their low flow and related heat load was pointed out. The Department's decision to delete the temperature requirements on outfall 001 and IMP 301 – Induction Furnace Cooling Tower after their low flow and related heat load was pointed out. The Department's decision to delete temperature monitoring for that Outfall and IMP following our prior comment set was based on a reported maximum flow of 9 GPM, which is much greater than the subject Outfall. The maximum heat content related flow rate from Outfall 003 at a flow rate of 1 GPM is much smaller making the heat loading inconsequential.

The TMDL WQBEL compliance schedule [f]or Total Aluminum, Iron and Manganese, was shortened from 3 years to 2 years and we request it be restored to a 3-year schedule. 24 months will be necessary to get an adequate sampling results database and complete a Toxics Reduction Evaluation, including the evaluation [of] possible controls or reduction strategy, if needed.

Comment 5 Follow-up (11/5/2021): Part A. I.F. Pages 7 and 8 – Outfall 003 – Small Induction Furnace 1 and 2 Cooling Tower, Groundwater Collection Sump and Stormwater:

*Outfall Description

Please note the above Outfall description was revised to accurately described the current source contributors. Please revise accordingly in the Final Permit.

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TRC and FAC Parameters

We continue to believe the Total Residual (TRC) and Free Available Chlorine (FAC) parameters should be deleted. It was our understanding the Department is willing to consider discharge TRC and FAC sample data in support of this request.

The current Plant STP Operator obtained TRC and FAC data for the Plant was supply inlet spigot and at the Cooling Tower outlet at the point where the outfall pipe discharge empties into the earthen ditch just outside the Plant exterior wall. From this point, the ditch extends approximately 500-feet before emptying into the stormwater, only, tributary on the southern side of the Plant property.

The inlet TRC value was 0.42 mg/l and the outlet value was 0.00 mg/l. The FAC results similarly showed the inlet FAC value was 0.26 mg/l and the outlet value was 0.04 mg/l. Refer to the attached data sheet and Operator credentials (3 pages).

This is totally consistent with our position throughout that there is no chlorine concentration factor in the tower system and in-fact the chlorine level(s) significantly dissipate with retention time inside the system. It should also be noted that discharge earthen path leading to Outfall 003 was dry after flowing no more than 20 feet. These low levels chlorine values would further dissipate with stormwater and flow time to reach Outfall 003.

We also discussed the situation and chlorination practices with our public water supply Plant Operators at the Central Indiana County Water Authority. They agreed with our position on chlorine dissipation inside the cooling system and felt our data [points] were to be expected.

In summary, we believe this information supports our position that chlorine does not “concentrate” in the Outfall’s cooling system and the TRC and FAC parameters should be deleted from Outfall 003.

Seasonally Adjusted Temperature Limits

The Department agreed to re-evaluate and we believe is inclined to delete the seasonally adjusted discharge temperature limits based on the actual discharge being intermittent and 1 GPM maximum versus the 21.5 GPM maximum flow rate initially reported to the Department.

The Plant did a spot check of cooling tower temperatures and discharge status in October. A small flow was observed and the tower basin spigot inlet temperature was 70 degrees F and the discharge temperature was 82 degrees F. This yielded only a small 12 degrees F temperature increase across the tower. This was expected since the tower has a high cooling capacity that far exceeds the cooling needs for the two (2) small furnaces that were actually installed. Coupled with a 1 GPM maximum, season, cold weather discharge, we do not expect the small discharge volume to make its way through the approximately 500-foot long earthen ditch just outside the Plant exterior wall and actually creating a discharge into the tributary on the southern side of Plant property. As evidence and as noted above, when the discharge was observed, the earthen path leading to Outfall 003 was essentially dry after flowing no more than 20 feet and the recorded temperature in the small amount of water collected in the ditch was the ambient temperature of 50 degrees F.

The only time the cooling tower discharge actually reaches the tributary is during stormwater events. Accordingly, in the event a discharge to the tributary does occur, it will consist almost solely of ambient temperature stormwater and a cooling tower temperature increase will simply not occur.

We refer the Department back to our other justifications provided in our September 13, 2021 comment letter. In closing we once again request that any temperature monitoring of this Outfall be deleted.

TMDL WQBEL Compliance Schedule

The Department agreed to consider mitigating factors supporting the Plant request to restore the TMDL WQBEL compliance schedule for Total Aluminum, Iron and Manganese to 3 years, as originally proposed by the Department.

Certain elements contained in the 24-month Compliance schedule found in the Draft Permit Part C. Section C.1. on page 34 are overly aggressive and likely cannot be completed in the allotted time specified.

We do not object to the first element, namely submitting a TRE Work Plan in 6 months after the permit effective date.

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However, we are very doubtful that the second element, namely completion of the TRE and Data Collection can be completed only six months later. We are reluctant to commit to those steps without Department approval of the TRE Work Plan submittal and believe 6 months is not adequate to collect and analyze the data and implement actions identified in the TRE to reduce pollutant levels, if applicable. That would push the Final Compliance Report out to 24-months after the permit effective date.

Lastly, 12 months is needed to go from the Final Compliance Report to compliance with the TRE and Permit Limits since this step may require installation of treatment equipment. This step may involve submittal and Department approval of a WQM II Permit for the treatment system and we are reluctant to commit to a final system design and procurement with Department approval. Also, recent events have shown that supply chain issues may be a complication factor that could affect the overall schedule.

In summary, we believe the following schedule is appropriate and reasonable:

Action	Due date (after Permit Effective date)
Complete TRE Work Plan	6 months
Complete TRE and Data Collection	18 months
Submit Final Compliance Report	24 months
Complete TRE Actions and Comply with Final Permit Limit(s)	36 months

DEP Response to Comment 5:

Outfall Description

The Outfall 003 effluent description is updated.

TRC and FAC Parameters

More stringent limits for TRC were not added to the second draft permit. The WQBELs for TRC at Outfall 003 were in the first draft permit from 2017. DEP only modified the schedule timeframe for the TRC limits in Draft 2.

PMA's data demonstrate that recirculation in the cooling tower dissipates chlorine to levels below applicable TBELs and WQBELs. Since free available chlorine is not present in the effluent in elevated concentrations and PMA does not add chlorine, TBELs for FAC will be removed from Outfall 003. Also, since TRC is not present in the effluent, there is no reasonable potential to cause or contribute to in-stream excursions above TRC water quality criteria. Therefore, WQBELs for TRC will be removed from Outfall 003. The compliance schedule for TRC WQBELs in Part C.V of the permit is also removed.

Seasonally Adjusted Temperature Limits

Outfall 001 discharges to Two Lick Creek. Outfall 003 discharges to a small unnamed tributary (Stream Code 44227). Two Lick Creek is a large receiving stream and has assimilative capacity whereas the unnamed tributary has little flow and little to no assimilative capacity. Therefore, comparing the two outfalls' temperature requirements is not appropriate.

Based on the information provided in PMA's comments, DEP has determined that discharges from Outfall 003 do not have a reasonable potential to cause or contribute to in-stream excursions above temperature water quality criteria. Therefore, the temperature WQBELs and temperature monitoring requirements will be removed from Outfall 003.

TMDL WQBEL Compliance Schedule

DEP agrees to the extended compliance schedule.

Please note that DEP approval of the TRE Work Plan is not required. DEP may request to review and comment on the plan, but implementation of the next schedule milestone should not be delayed waiting for DEP's approval of the work plan if DEP has not requested to review the plan. The TRE condition identifies what is required in the plan.

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Comment 6 (9/13/2021): Part A. I.J. and K. Pages 13 and 14 – Outfall 012 and 013 – Pour Pit and Main Furnace Area Groundwater and Stormwater Runoff, and Part A. I.L. – Page 15 Stormwater Runoff: Outfalls 012 and 013 are listed as Groundwater and Stormwater and directly downstream Outfall 014 is listed as Stormwater, only. The sampling parameters and frequency are identical for all three (3) Outfalls and are unnecessarily duplicative. It is requested that the requirements for Outfalls 012 and 013 be deleted as duplicative and technically infeasible and that the Outfall 014 sampling requirements be retained. At a minimum, one of the Outfalls 012 or 013 should be deleted as duplicative and Outfall 014 retained.

Comment 6 (11/5/2021): Part A. I.J. and K. Pages 13 and 14 – Outfall 012 and 013 – Pour Pit and Main Furnace Area Groundwater and Stormwater Runoff, and Part A. I.L. – Page 15 Stormwater Runoff: The Department agreed to consolidate / eliminate the duplicative Outfalls 12, 13, and 014 and designate a remaining single downstream Outfall, with the remaining outfall number to be determined.

DEP Response to Comment 6: The draft permits included Outfalls 012, 013, and 014 because PMA identified three separate outfalls on the permit application. PMA clarified during the September 21, 2021 conference call that those outfalls combine into a single outfall. Therefore, Outfalls 013 and 014 will be removed from the permit and Outfall 012 will remain in the permit as the final discharge point for those sources.

Comment 7 (9/13/2021): General Comment – Outfalls 001, 002, 010 through 014 – Basis for Benchmark Stormwater Discharge Values: We gratefully acknowledge and thank the Department for removing TMDL WQBELs and reducing the sampling frequency for a number of stormwater related Outfalls. In their place the Department imposed discharge Benchmark Values and related Corrective Action Plan requirements and 1/6 Months sampling frequency.

Given the change from WQBELs to the Benchmark Values approach, it is unclear in some instances how the metals (Total Iron, Manganese, Copper, Lead and Zinc) values were determined. It is kindly requested that the Department provide the basis for the metals Benchmark Values. The values for the remaining parameters, namely TSS, O&G and CBOD appear to be typical of the values imposed routinely by the Department in other Permits, and no additional information is requested for them.

Comment 7 (11/5/2021): General Comment – Outfalls 001, 002, 010 through 014 – Basis for Benchmark Stormwater Discharge Values: We reviewed the follow-up information provided by the Department related to the basis used to impose TMDL limitations for Aluminum, Iron and Manganese for certain Outfalls and IMPs. However, we are still not able to determine the basis used by the Department to determine the stormwater Benchmark Values given for the remaining metals parameters, i.e., Copper, Lead and Zinc. We also went back and reviewed the related Fact Sheet Addendum and could not determine the basis for these metals' Benchmark values.

It is also unclear how all of the metals Benchmark parameters will be evaluated for the Outfalls and related IMPs that consists of sources in addition to stormwater.

We requested the deletion of the Copper, Lead and Zinc. Stormwater Benchmark Values and it be clarified that he Benchmark requirements apply to Stormwater, only discharges.

DEP Response to Comment 7: The Benchmark Values were explained on p.19 of the 2017 Fact Sheet as follows:

> As with any storm water discharge that is exposed to industrial activities, BMPs must be implemented to control pollutants in storm water. At this time, no TBELs will be imposed on Prime Metals' storm water discharges. However, TBELs may be warranted in the future if pollutant concentrations in storm water consistently exceed the benchmark values from EPA's Multi-Sector General Permit (MSGP). EPA's MSGP is the federal equivalent of DEP's PAG-03 General Permit for Discharges of Storm Water Associated with Industrial Activity. EPA uses benchmark monitoring in the MSGP as an indicator of the effectiveness of a facility's best management practices. DEP uses benchmark values for the same purpose. Benchmark values of 100 mg/L for TSS, 5.0 mg/L for oil and grease, 30 mg/L for CBOD5, 0.75 mg/L for aluminum, 1.0 mg/L for iron, 1.0 mg/L for manganese, 0.014 mg/L for copper, 0.082 mg/L for lead, and 0.12 mg/L for zinc will be listed in Part C of the permit based, in part, on EPA's Multi-Sector General Permit benchmark values (see Attachment G). The 5.0 mg/L benchmark value for oil and grease is based on DEP's minimum target quantitation level for oil and grease (i.e., oil and grease generally should not be present in storm water). The 1.0 mg/L benchmark for manganese is the water quality criterion for manganese from 25 Pa. Code Chapter 93.

Internal Review and Recommendations

The only changes to the benchmark values in the second draft permit were for iron and manganese to better align the benchmark values with the acute impacts that may result from short-term storm water discharges. The water quality criterion for total iron in 25 Pa. Code § 93.7 (1.5 mg/L) is a 30-day average. Storm water discharges may not cause impacts over a 30-day duration (adverse impacts from intermittent chronic exposures have not been quantified), so the concentration was transformed to a maximum concentration using a multiplier of two pursuant to Chapter 2 of DEP's "Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits" [Doc. No. 362-0400-001]. The same premise applies to the manganese criterion and its benchmark value in the permit.

On January 15, 2021, EPA reissued the MSGP. The 2021 MSGP updates some of the benchmark values with the aluminum and copper benchmarks being revised and the iron benchmark being removed from the 2021 MSGP. The aluminum, iron, and manganese benchmarks are included in PMA's permit pursuant to the Kiski-Conemaugh TMDL. Pennsylvania's water quality criteria for aluminum and copper have not been revised to be consistent with the federal water quality criteria-based benchmarks in the 2021 MSGP, so the benchmarks in PMA's permit will not be changed for this renewal. The benchmarks will still serve their intended purpose of evaluating BMP effectiveness at their existing magnitudes.

Attached to this Fact Sheet Addendum is the table of benchmark values from the 2021 MSGP, which is the reference used for the Copper, Lead, and Zinc benchmarks. PMA does not present any new information in its comments that warrant deletion of the benchmark values for those metals.

The benchmark values apply to outfalls with semi-annual monitoring and discharges composed primarily of storm water—except for Outfall 002, which has a small condensate contribution, and Outfall 012, which may include groundwater. Other outfalls that discharge storm water in combination with another wastewater are subject to effluent limits in Part A of the permit. For example, Outfall 001 discharges roof drainage and other internally limited wastewaters. The aluminum, iron, and manganese limits at Outfall 001 supersede the benchmark values for those parameters in Part C. Monitoring for copper, lead, and zinc is not required at Outfall 001, so the benchmarks for those metals do not apply to Outfall 001's discharges.

To clarify the applicability of the benchmark values, Paragraph F.6 of the storm water condition in Part C of the permit is revised as follows:

> In the event that stormwater discharge concentrations for a parameter monitored at Outfall 002, Outfall 010, Outfall 011, and/or Outfall 012 exceed the benchmark values identified below at the same outfall for two or more consecutive monitoring periods, the permittee shall develop and implement a corrective action plan to reduce the concentrations of the parameters in stormwater discharges…

The rest of the storm water requirements in the storm water condition (BMPs, good housekeeping, etc.) apply to storm water from the whole site.

By emailed dated August 12, 2021, the U.S. Environmental Protection Agency provided the following comments on the draft NPDES permit:

According to our Memorandum of Agreement, the Environmental Protection Agency (EPA) Region III has received the revised draft National Pollutant Discharge Elimination System (NPDES) permit for:

Prime Metals and Alloys Homer City Plant
NPDES Number: PA0041378
EPA Received: July 15, 2021
30-day response due date: August 14, 2021

This is a minor permit that discharges to an Unnamed Tributary to Two Lick Creek and Two Lick Creek, and is affected by the Kiskiminetas-Conemaugh River Watersheds TMDL. Therefore, EPA has performed a limited review of the revised draft permit based on the proposed changes related to the wasteload allocation (WLA) requirements of the approved TMDL. EPA has completed its review and offers the following comments:

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1. The revised draft permit is replacing the WQBELs that were proposed in the previous (2017) draft permit for stormwater outfalls 002, 010, 011, 012, 013, and 014, with benchmark values and BMP requirements. It is not clear that these changes are appropriate and consistent with the assumptions of the TMDL for several reasons:

    a. The fact sheet states that there are elevated concentrations of iron and aluminum (greater than criteria) at outfalls 002, 010, and 011;

    b. The fact sheet states that outfalls 012 and 013 exhibited significant concentrations of iron and manganese, and that discharges at those levels would contribute to the impairment of the receiving streams; and
    c. No rationale seems to have been provided for removing the WQBELs at outfall 014.

    Imposing limits at criteria end-of-pipe for discharges that were not provided WLAs (such as for these outfalls) would be considered consistent with the assumption of the TMDL. In this case, it seems that PADEP may need to determine whether these stormwater discharges cause, have the reasonable potential to cause, or contribute to an in-stream excursion of water quality criteria for the TMDL pollutants, and if so, then WQBELs consistent with the assumptions of the TMDL should be imposed in the permit at the appropriate outfalls (40 CFR 122.44(d)(1)(iii) and 122.44(d)(1)(vii)(B)).

2. Considering the noted concern over the elevated discharge levels of the TMDL metals, it is not clear that adequate justification was provided for reducing the monitoring frequency for the TMDL pollutants from once per quarter to once every six months.

Please address the above and provide us with any changes to the draft permit and/or fact sheet, if necessary. Please contact Dana Hales on my staff via telephone at 215-814-2928 or via electronic mail at hales.dana@epa.gov.

DEP Response to EPA Comments: Maintaining consistency with the TMDL does not necessarily require the imposition of numerical end-of-pipe effluent limits when no waste load allocations were assigned to PMA's storm water outfalls by the Kiski-Conemaugh TMDL. Condition VI in Part C of the permit includes benchmark values (i.e., target storm water effluent concentrations) that PMA must achieve by implementing a combination of best management practices (BMPs) including pollution prevention and exposure minimization, good housekeeping, erosion and sediment control, and spill prevention and response. The specific requirements for each of those BMP categories are listed in Condition VI. PMA's achievement of the benchmark values will ensure that the facility's discharges do not cause or contribute to the existing impairments of the receiving streams.

Pursuant to Part C, Condition V.F.6. in Draft 3, if PMA does not achieve a benchmark value for two consecutive semi-annual monitoring periods, then PMA must develop a corrective action plan and implement one or more BMPs or control measures to reduce pollutant concentrations in storm water. If storm water pollutant concentrations subsequently exceed a benchmark value for two consecutive semi-annual monitoring periods after a corrective action plan is implemented, then PMA must again develop and implement a corrective action plan. This iterative process would continue until storm water concentrations are sufficiently reduced or until PMA demonstrates that (1) the exceedances are solely attributable to natural background sources; (2) no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice; or (3) further pollutant reductions are not necessary to prevent stormwater discharges from causing or contributing to an exceedance of applicable water quality standards.

So, the permit presumes that PMA's storm water discharges exhibit a reasonable potential to cause or contribute to excursions above water quality criteria and imposes requirements to address those excursions consistent with the assumptions and requirements of the Kiski-Conemaugh TMDL (as required by 40 § 122.44(d)(1)(vii)(B)), but without resorting to numerical effluent limits as the primary regulatory mechanism. If this process does not adequately address storm water pollutant concentrations, then numerical effluent limits can always be imposed in a subsequent permit renewal.

With respect to the magnitudes of the benchmark values, as explained in DEP's Response to Comment 7, the benchmark values for TMDL metals were modified to represent maximum concentrations consistent with the intermittent acute exposures that may result from PMA's storm water discharges.

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The 750 µg/L aluminum criterion in 25 Pa. Code § 93.8c is an acute criterion. Therefore, 750 µg/L is listed as the storm water benchmark value for aluminum.

The 1.5 mg/L iron criterion is given as a 30-day average in 25 Pa. Code § 93.7(a). Therefore, the benchmark value (a maximum value) was calculated using a multiplier of two times the average based on DEP's "Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits" [Doc. No. 362-0400-001, Chapter 3, pp. 15, 16].

The 1 mg/L potable water supply criterion for manganese in 25 Pa. Code § 93.7(a) is a human health criterion (chronic). Per Table 1 of DEP's "Water Quality Toxics Management Strategy", the duration for a THH criterion is 30 days. Therefore, the benchmark value (a maximum value) was calculated using a multiplier of two times 30-day average based on the above-referenced guidance.

Other Changes

- Conditions pertaining to annual permit fees are updated and moved from Part B.IV of the permit to Part A.III.E of the permit. These changes update the permit to the most recent permit template revision from August 2021.

- Part C, Condition III.C of the permit is modified to remove references to site-specific data collection (other than source evaluation and related evaluations/analyses). The TMDL limits are based on waste load allocations assigned by the Kiskiminetas-Conemaugh River Watershed TMDL and were not derived from site-specific modeling using assumed input values. Therefore, collection of site-specific data on the stream would not result in any modification of those WQBELs.

- Part C, Condition I.H in Draft 2 stated the following:

  > Chlorine or other approved biocides may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharges for more than two hours are required for macroinvertebrate control. Simultaneous multi-unit chlorination/biocide application is permitted.

  Part C, Condition I.H will be deleted because it is not relevant. Other than chlorine use for sewage disinfection, PMA does not use chlorine or biocides and doesn't operate a generating unit. The remaining conditions in Part C, Section I are renumbered.

  Please note that, if PMA decides to use chlorine as a biocide in the facility's cooling tower systems, then such use would be subject to the requirements in Part C, Condition E, which states, in part:

  > Where the permittee does not use chlorine for primary or backup disinfection, but proposes the use of chlorine for cleaning or other purposes, the permittee shall notify DEP prior to initiating use of chlorine and monitor TRC concentrations in the effluent on each day in which chlorine is used. The results shall be submitted as an attachment to the DMR.

  Any other additives are subject to the requirements of Part C, Condition IV regarding chemical additives.

Due to the substantial change made to the permit in response to comments on Draft 2, a revised draft permit (Draft 3) will be published for another 30-day comment period.

2015 and 2021 MSGP Benchmark Values and Sources

Pollutant		2015 MSGP Benchmark	2015 MSGP Source (see footnotes)	2021 MSGP Benchmark	2021 MSGP Source (see footnotes)
Total Recoverable Aluminum (T)		0.75 mg/L	1	1,100 µg/L	18
Total Recoverable Beryllium		0.13 mg/L	2	130 µg/L[a]	2
Total Recoverable Iron		1.0 mg/L	3	Removed	16
Biochemical Oxygen Demand (5-day)		30 mg/L	4	30 mg/L	4
pH		6.0 – 9.0 s.u.	4	6.0 – 9.0 s.u.	4
Chemical Oxygen Demand		120 mg/L	5	120 mg/L	5
Total Phosphorus		2.0 mg/L	6	2.0 mg/L	6
Total Suspended Solids (TSS)		100 mg/L	7	100 mg/L	7
Nitrate and Nitrite Nitrogen		0.68 mg/L	7	0.68 mg/L	7
Total Recoverable Magnesium		0.064 mg/L	8	Removed	16
Turbidity		50 NTU	9	50 NTU	9
Total Recoverable Antimony		0.64 mg/L	12	640 µg/L[a]	1
Ammonia		2.14 mg/L	13	2.14 mg/L	1
Total Recoverable Cadmium	Freshwater[b]	0.0021 mg/L	1	1.8 µg/L[a]	15
	Saltwater	0.04 mg/L	14	33 µg/L[a]	15
Total Recoverable Copper	Freshwater	0.014 mg/L	1	5.19µg/L	18
	Saltwater	0.0048 mg/L	14	4.8 µg/L	14
Total Recoverable Cyanide	Freshwater	0.022 mg/L	1	22 µg/L[a]	1
	Saltwater	0.001 mg/L	14	1 µg/L[a]	14
Total Recoverable Mercury	Freshwater	0.0014 mg/L	1	1.4 µg/L[a]	1
	Saltwater	0.0018 mg/L	14	1.8 µg/L[a]	14
Total Recoverable Nickel	Freshwater[b]	0.47 mg/L	1	470 µg/L[a]	1
	Saltwater	0.074 mg/L	14	74 µg/L[a]	14
Total Recoverable Selenium	Freshwater	0.005 mg/L	3	1.5 µg/L for still/standing (lentic) waters 3.1 µg/L for flowing (lotic) waters	17
	Saltwater	0.29 mg/L	14	290 µg/L[a]	14
Total Recoverable Silver	Freshwater[b]	0.0032 mg/L	1	3.2 µg/L[a]	1
	Saltwater	0.0019 mg/L	14	1.9 µg/L[a]	14
Total Recoverable Zinc	Freshwater[b]	0.12 mg/L	1	120 µg/L[a]	1
	Saltwater	0.09 mg/L	14	90 µg/L[a]	14
Total Recoverable Arsenic	Freshwater[b]	0.15 mg/L	3	150 µg/L[a]	3
	Saltwater	0.069 mg/L	14	69 µg/L[a]	14

Pollutant		2015 MSGP Benchmark	2015 MSGP Source (see footnotes)	2021 MSGP Benchmark	2021 MSGP Source (see footnotes)
Total Recoverable Lead	Freshwater[b]	0.082 mg/L	3	82 µg/L[a]	3
	Saltwater	0.21 mg/L	14	210 µg/L[a]	1

[a] Values have been updated to match original units found in source documents.

[b] These pollutants are dependent on water hardness where discharged into freshwaters. The freshwater benchmark value listed is based on a hardness of 100 mg/L. When a facility analyzes receiving water samples for hardness, the operator must use the hardness ranges provided in Table 1 in Appendix J of the 2015 MSGP and in the appropriate tables in Part 8 of the 2015 MSGP to determine applicable benchmark values for that facility. Benchmark values for discharges of these pollutants into saline waters are not dependent on receiving water hardness and do not need to be adjusted.

Sources:

1. "National Recommended Water Quality Criteria." Acute Aquatic Life Freshwater (EPA-822-F-04-010 2006-CMC). https://nepis.epa.gov/Exe/ZyNET.exe/P1003R9X.txt?ZyActionD=ZyDocument&Client=EPA&Index=2006%20Thru%202010&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&UseQField=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5CZYFILES%5CINDEX%20DATA%5C06THRU10%5CTXT%5C00000007%5CP1003R9X.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=2#
2. "EPA Recommended Ambient Water Quality Criteria for Beryllium." LOEL Acute Freshwater (EPA-440-5-80-024 October 1980)
3. "National Recommended Water Quality Criteria." Chronic Aquatic Life Freshwater (EPA-822-F-04- 010 2006-CCC)
4. Secondary Treatment Regulations (40 CFR 133)
5. Factor of 4 times BOD5 (5-day biochemical oxygen demand) concentration - North Carolina Benchmark
6. North Carolina stormwater Benchmark derived from NC Water QualityStandards
7. National Urban Runoff Program (NURP) median concentration
8. Minimum Level (ML) based upon highest Method Detection Limit (MDL) times a factor of 3.18
9. Combination of simplified variations on Stormwater Effects Handbook, Burton and Pitt, 2001 and water quality standards in Idaho, in conjunction with review of DMR data
10. "National Ambient Water Quality Criteria." Acute Aquatic Life Freshwater. This is an earlier version of the criteria document that has subsequently been updated. (See source #1)
11. "National Ambient Water Quality Criteria." Chronic Aquatic Life Freshwater. This is an earlier version of the criteria document that has subsequently been updated. (See source #3)
12. "National Ambient Water Quality Criteria. "Human Health for the Consumption of Organism Only (EPA-822-F-01-0102006)
13. "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses." USEPA Office of Water (PB85-227049 January 1985)
14. "National Recommended Water Quality Criteria." Acute Aquatic Life Saltwater (CMC) available at: http://water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#altable
15. "Aquatic Life Ambient Water Quality Criteria: Cadmium, 2016" (EPA 820-R-16-002)
16. Improving the EPA Multi-Sector General Permit for Industrial Stormwater Discharges, 2019. Available at: https://www.nap.edu/catalog/25355/improving-the-epa-multi-sector-general-permit-for-industrial-stormwater-discharges