



Aspinwall WTP 2021 Environmental Compliance Audit

Corrective Action Report

March 29, 2022

Environmental Compliance Audit

- Arcadis, as the Independent Environmental Consultant, performed the required annual environmental compliance audit of the Aspinwall Water Treatment Plant
 - Field audit was performed October 12 – 14, 2021
 - Final audit report was provided on January 13, 2022
- The final audit report was made publicly available and posted on PWSA's website on January 14, 2022
- PWSA has implemented corrective actions as outlined in this report which will be made publicly available on PWSA's public website by March 29, 2022

Drinking Water – Records Retention

Complete
In-Progress
Not Started

Finding/Comment

- 25 Pa. Code Chapter 109.701(d) indicates that laboratory reports must be maintained onsite
 - Coliforms – 5 years
 - Volatile Organic Chemicals – 12 years
 - Synthetic Organic Chemicals – 12 years
 - Inorganic Chemicals – 12 years
 - Fluoride – 3 years
 - Total Organic Carbon – 3 years
 - Alkalinity – 3 years
 - Radionuclides – 12 years
 - Lead and Copper WQPs – 3 years

Corrective Action

- PWSA Laboratory has requested records from subcontract laboratories.
- PWSA has received records from ESL, Fairway Labs and Microbac.
- PWSA is awaiting information from ALS, Pace, Eurofins and CWM.
- The vast majority of compliance laboratory from 2017 to early 2021 are stored on CWM's web server. This data has been requested, but not yet received.

Drinking Water – Data Storage

Complete
In-Progress
Not Started

Finding/Comment

- Electronic data are currently being stored in multiple locations: SCADA historian, LIMS, shared intranet folders, etc. which can make it difficult to locate/retrieve historical compliance data.
- It is recommended that a “roadmap” be developed that identifies the locations of all water quality compliance data and that is readily accessible to PWSA personnel.
- It is also recommended that files (e.g., lab reports) be labelled such that the file contents are easily identified.

Corrective Action

- PWSA’s Laboratory Information Management System (LIMS) contains compliance data that is run in-house, including chlorine, pH, and alkalinity.
- Data from subcontracted laboratories is stored on a shared computer drive.
- A “roadmap” with data sources and file paths has been developed.
- PWSA historically filed subcontracted lab data (PDF) based on the date sampled. The lab is transitioning to file based on project to more easily locate records.

Drinking Water – System Evaluation Results

Complete
In-Progress
Not Started

Finding/Comment	Corrective Action
<ul style="list-style-type: none">Yearly maintenance- and bond-related inspections do not typically cover all critical elements of the water system; an annual internal sanitary survey would allow for a comprehensive system evaluation	<ul style="list-style-type: none">The following water system inspections are currently being conducted:<ul style="list-style-type: none">Weekly interconnect vaultsMonthly tanks and reservoirsQuarterly filter bed evaluationsEnvironmental Compliance is hiring additional staff and will assign an Environmental Compliance Specialist to complete a Sanitary Survey for Water Production, Pumping, and Storage Facilities by December 31, 2022.

Drinking Water – Emergency Response Plan

Complete
In-Progress
Not Started

Finding/Comment	Corrective Action
<ul style="list-style-type: none">• 25 Pa. Code Chapter 109.702(c)(1) indicates that the ERP must be readily accessible to water system personnel; a redacted version could be made available that does not contain sensitive material, but does include certain “need to know” information (communication plan, important corrective actions, etc.)	<ul style="list-style-type: none">• The ERP is a living document which is currently being reviewed and updated by PWSA. PWSA hired a new staff person in Safety and Security to focus specifically on Aspinwall WTP, including review of the ERP.• The Environmental Compliance Manual will be updated by June 30, 2022 and a section with critical ERP information will be added. The Environmental Compliance Manual is available in hard copy and electronic to all PWSA personnel.

Drinking Water – Comprehensive Monitoring Plan

Complete
In-Progress
Not Started

Finding/Comment

- 25 Pa. Code Chapter 109.718(c) indicates that the date of last update to the Comprehensive Monitoring Plan must be recorded on the plan.

Corrective Action

- PWSA's Comprehensive Monitoring Plan is dated "8-16-19" on the PA DEP Form.

4-BSDW0573 4/2019
pennsylvania
 DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 BUREAU OF SAFE DRINKING WATER

**COMPREHENSIVE MONITORING PLAN FORM 2
 FOR WATER SYSTEMS WITH ANY ENTRY POINTS SUPPLIED BY MORE THAN ONE SOURCE**

Plan Updated: 8-16-19

Updated comprehensive monitoring plans should be submitted to the Department following any revisions. See page 9 of the form instructions for details on how to send completed comprehensive monitoring plan forms.

Do you have any entry points that are supplied by more than one source? Yes No

Please switch to *Comprehensive Monitoring Plan Form 1: For Water Systems with a One to One Source to Entry Point Ratio (3930-FM-BSDW)*

1: General System Information

Public Water System (PWS) Name: Pittsburgh Water and Sewer Authority	PWSID: 5020038
Mailing Address: 1200 Penn Ave, Pittsburgh, PA 15222	

Local Board: Health, Welfare & Safety

Drinking Water – CT Calculation

Complete
In-Progress
Not Started

Finding/Comment

- The compliance calculation for log inactivation of *Giardia* does not always account for the peak hourly flow for a given day (as required under 25 Pa. Code Chapter 109). It is recommended that the protocol for calculating log inactivation of *Giardia* be modified so that it consistently occurs at the time of peak hourly flow.

Corrective Action

- PWSA SCADA is continually calculating CT and log inactivation *Giardia* with hourly CT values reported in SCADA.
- These calculations occur continuously and generate audible alarms that alert plant staff if CT is not sufficient.
- PWSA created a SOP for CT Calculation. This SOP establishes the method to calculate CT hourly and report the daily minimum CT value.

Drinking Water – Clearwell Level Sensor

Complete
In-Progress
Not Started

Finding/Comment

- Although the clearwell level sensor does not require routine calibrations, verifying the sensor output on a regular interval (e.g., yearly) is recommended, given that the clearwell level affects *Giardia* inactivation.

Corrective Action

- This is not a “non-compliance” finding, but a recommendation for improvement as the level sensor manufacturer has indicated calibration is not required or possible.
- Since the level sensor cannot be calibrated, the existing level sensor was changed out on March 24, 2022 with a new sensor as a means of addressing this finding.
- PWSA will annually verify configuration of the clearwell level sensor.

Stormwater – NPDES Records Retention

Complete
In-Progress
Not Started

Finding/Comment

- The NPDES permit for the Aspinwall plant does not specify that laboratory reports be maintained onsite, it is recommended that lab reports, going back three years, be downloaded and stored onsite as a more reliable location than a data portal maintained by a third party.

Corrective Action

- PWSA Laboratory has requested records from subcontract laboratories.
- NPDES records from 2017 to early 2021 are stored on CWM's web server. This data has been requested.
- NPDES sample data since 2021 has been maintained in-house.

Stormwater – Pollution Prevention

Complete
In-Progress
Not Started

Finding/Comment	Corrective Action
<ul style="list-style-type: none">• There was a lack of documentation related to construction activities which may impact stormwater pollution.	<ul style="list-style-type: none">• PWSA currently conducts monthly NPDES inspections of Aspinwall WTP stormwater system.• These inspections include observations if there are any possible contaminants entering the inlet or on the ground. If yes, there are follow up questions regarding specific types of possible issues.• Also, to be aware of upcoming construction activities Environmental Compliance staff attend regularly scheduled Engineering and Operations calls where work associated with Aspinwall WTP is discussed.

Stormwater – Integrated Contingency Plan

Complete
In-Progress
Not Started

Finding/Comment
<ul style="list-style-type: none">• The Site has an integrated Contingency Plan (ICP). The final ICP was dated March 2016; a draft ICP was dated September 2021.• The ICP needs to be reviewed for accuracy of the required information, including a stormwater pollution prevention team, Site description, summary of potential pollutant sources, description of control measures, documentation to support eligibility considerations under other federal laws, and signatures.

Corrective Action
<ul style="list-style-type: none">• Review and update of the Integrated Contingency Plan has been completed.• An updated plan was issued on February 4, 2022.• The Integrated Contingency Plan has been added to PWSA's Learning Management System for Sr. Management at Aspinwall WTP to review and acknowledge.

Stormwater – Corrective Action Plan

Complete
In-Progress
Not Started

Finding/Comment

- On February 4, 2021, the Site submitted a Corrective Action and Compliance Plan to the PA DEP. They are continuing to resolve the violations noted in the January 6, 2021, inspection report.

Corrective Action

- The remaining item in the Corrective Action and Compliance Plan is the disconnection of the Aspinwall P.S. sump from Outfall 19 and connection to ALCOSAN sanitary sewer.
- PWSA submitted an Industrial User Permit Modification Application to ALCOSAN on December 30, 2021 which includes the re-direction of the sump to ALCOSAN. Work to re-direct the sump will be scheduled upon approval from ALCOSAN.

Storage Tanks – Secondary Containment

Complete
In-Progress
Not Started

Finding/Comment

- There is a lack of documentation verifying that containment is sufficient for the tank contents. This includes oil tanks and chemical tanks.

Corrective Action

- Documentation of secondary containment volumes for chemical and oil tanks within containment dikes at Aspinwall WTP has been completed and is filed with storage tank information.

Storage Tanks – Inspections

Complete
In-Progress
Not Started

Finding/Comment

- Although tank inspections are being conducted via SpryPoint, there is a lack of notifications and follow-up with the compliance group when tank inspections occur. There is also a lack of notification and follow-up when tank inspection issues are identified and resolved.

Corrective Action

- SpryPoint is no longer being utilized for storage tank inspections. This task has been transferred from Operations to Environmental Compliance.
- Inspections of all storage tanks (registered and non-registered) will be conducted monthly by Environmental Compliance, with any corrective actions completed by Operations.
- Environmental Compliance will maintain documentation of corrective actions.
- Paper forms will be utilized until the Environmental Management Information System platform is running.

Storage Tanks – Labeling

Complete
In-Progress
Not Started

Finding/Comment

- The labels on the Soda Ash and Lime Slurry tanks were damaged and needed replaced.

Corrective Action

- Environmental Compliance and Safety are working to update labels on all storage tanks at Aspinwall WTP and will be complete May 31, 2022.
- Labels will include Tank Number, Chemical Name, and DOT symbol.
- Confirmation of tank labeling has been added to monthly storage tank inspections.

Spill Prevention, Control, and Countermeasures - Plan

Complete
In-Progress
Not Started

Finding/Comment

- Based on the amount of oil observed to be stored aboveground, the facility is subject to SPCC requirements.
- An SPCC Plan, dated March 3, 2021, was prepared but was found to be inadequate to meet the needs of the facility.

Corrective Action

- Review and update of the Spill Prevention, Control, and Countermeasures (SPCC) Plan has been completed.
- An updated plan was issued on February 4, 2022.
- The SPCC Plan has been added to PWSA's Learning Management System for Sr. Management at Aspinwall WTP to review and acknowledge.

Spill Prevention, Control, and Countermeasures - Implementation

Complete
In-Progress
Not Started

Finding/Comment
<ul style="list-style-type: none">• The SPCC Plan does not appear to have been fully implemented at the Site, based on a lack of housekeeping and labelling, and interviews with personnel.• There was a lack of documentation pertaining to the monthly inspections of oil containing tanks and containers as indicated in the SPCC Plan.

Corrective Action
<ul style="list-style-type: none">• Environmental Compliance has implemented monthly inspections of oil containing tanks, containers, and equipment indicated in the SPCC Plan.• The monthly inspections include area specific checklists and corrective action log.

Spill Prevention, Control, and Countermeasures – Secondary Containment

Complete
In-Progress
Not Started

Finding/Comment	Corrective Action
<ul style="list-style-type: none">• There is a lack of documentation verifying that containment is sufficient for the tank contents. This includes oil tanks and chemical tanks.	<ul style="list-style-type: none">• PWSA has provided secondary containment pallets for waste oil drums in Ross P.S., Aspinwall P.S., and Repair Shop.• PWSA has provide secondary containment pallets for 55 gal. drums of boiler water treatment chemicals.• Other bulk chemical storage is already located within secondary containment.

Air – Permitting

Complete
In-Progress
Not Started

Finding/Comment

- There are discrepancies in the emission factors and maximum annual fuel usage used for the basis of potential to emit (PTE) of the natural gas fired generator engine, which may mean the generator engine's permitted potential to emit is not correct.

Corrective Action

- PWSA contacted the Allegheny County Health Department (ACHD) regarding this finding.
- ACHD issued a response that while the change in PTE is not *de minimis* the change does not alter the conditions of the permit and it remains a minor source.
- PWSA will submit a Minor Modification Amendment to correct the permit by May 31, 2022.

Air – New Source Performance Standards

Complete
In-Progress
Not Started

Finding/Comment

- The propane fired emergency generator engine, which was installed in 2014 is subject to NSPS, 40 CFR 60 Subpart JJJJ - Standards of Performance for Stationary Spark Ignition Internal Combustion Engines based on its date of manufacture.
- The air permit does not specifically list the federal requirements for the source but does state that sources subject to New Source Performance Standards must comply with the applicable requirements.
- As a certified engine, the owner/operator is required to operate and maintain the certified stationary SI IC engine and control device according to the manufacturer's emissions-related written instructions and keep records of conducted maintenance.
- The site did not have information readily available on file that documented that manufacturer's emissions-related written instructions had been completed by the third-party contractor and when the activities were completed.

Corrective Action

- To comply with JJJJ the propane fired generator needs to be operated within factory specifications.
- PWSA has the manufacturer (Cummins) perform annual maintenance on the propane generator.
- Environmental Compliance will begin to collect and maintain the maintenance records to demonstrate compliance.

Air – New Source Performance Standards

Complete
In-Progress
Not Started

Finding/Comment
<ul style="list-style-type: none">The site does not document how long each portable emergency engine operates at the location where it is utilized to demonstrate that it does not stay in one location for more than 12 months.

Corrective Action
<ul style="list-style-type: none">Environmental Compliance is working with Operations to create an inventory of emergency engine driven generators and pumps at Aspinwall WTP. The inventory will be completed by May 31, 2022.Environmental Compliance will at least quarterly check location and status of emergency engine driven generators and pumps to confirm they are not remaining in one location for more than 12 months.

Air – National Emissions Standards for Hazardous Air Pollutants (NESHAPs)

Complete
In-Progress
Not Started

Finding/Comment

- Based on the date of manufacture and that the facility is a minor source of hazardous air pollutants, 40 CFR 63 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines applies to the natural gas fired emergency generator engine.
- Therefore, the engine is subject to maintenance practices requirements in the rule. While the site does perform and document the maintenance activities, it is unclear if the maintenance activities are conducted according to the schedule specified in the regulation.

Corrective Action

- ZZZZ requires maintenance events related to oil/filter changes, spark plug inspections, and hose/belt inspections.
- PWSA Stationary Engineers perform these activities.
- Environmental Compliance will begin to collect and maintain the ZZZZ maintenance records from Stationary Engineers to demonstrate compliance.

Hazardous Waste – Onsite Accumulation Quantity

Complete
In-Progress
Not Started

Finding/Comment

- There is a lack of documentation regarding monthly waste generator status (hazardous and universal). As of 10/9/2021, the site identified as a Very Small Quantity Generator (VSQG), but evidence observed during the audit indicates that they may in fact be an SQG or LQG.
- The site will need to track and make a business decision regarding their final generator status.

Corrective Action

- PWSA communicated this finding with PA DEP and on December 7, 2021.
- Notification 8700-12 for Aspinwall WTP was submitted changing status to a Small Quantity Generator (SQG). This process was finalized on December 9, 2021.
- Aspinwall WTP EPA ID PAR000561282

Hazardous Waste – Personnel Training

Complete
In-Progress
Not Started

Finding/Comment	Corrective Action
<ul style="list-style-type: none">A third-party vendor completes annual RCRA training for site personal, however it does not appear that employees fully understand RCRA regulations or the waste management procedures at the site.	<ul style="list-style-type: none">PWSA adopted a Waste Management Policy on February 25, 2022 and is implementing training on the policy in 2022 to make plant staff aware of waste handling.A third-party vendor completed RCRA and DOT Hazardous Materials training for Environmental Compliance Staff on March 15, 2022.

Hazardous Waste – Personnel Training

Complete
In-Progress
Not Started

Finding/Comment	Corrective Action
<ul style="list-style-type: none">• There is a lack of documentation pertaining to how waste (i.e., hazardous, non-hazardous, residual, medical) is managed on-site including how it is containerized, stored, labelled, manifested and disposed.• There is confusion regarding proper container labelling.	<ul style="list-style-type: none">• PWSA adopted a Waste Management Policy on February 25, 2022• The Waste Management Policy includes guidance on how waste is managed and labeled on-site.• PWSA has transitioned responsibility for waste documentation and labeling to Environmental Compliance to assure proper management.

Hazardous Waste – Manifest

Complete
In-Progress
Not Started

Finding/Comment
<ul style="list-style-type: none">• The Site tracks hazardous waste shipments using manifests as required. However, employees signing hazardous waste manifests do not fully understand what they are signing.

Corrective Action
<ul style="list-style-type: none">• A third-party vendor completed RCRA and DOT Hazardous Materials training for Environmental Compliance Staff on March 15, 2022.• Environmental Compliance staff is now responsible for characterization and signing of all waste manifests.

Hazardous Waste – Pre-Transport Requirements

Complete
In-Progress
Not Started

Finding/Comment

- There is confusion regarding proper container labelling.

Corrective Action

- The Waste Management Policy includes guidance on how waste is managed on-site including proper container labelling.
- A third-party vendor completed RCRA and DOT Hazardous Materials training for Environmental Compliance Staff on March 15, 2022.
- Environmental Compliance staff is now responsible for labelling of waste.

Hazardous Waste – Record Keeping

Complete
In-Progress
Not Started

Finding/Comment	Corrective Action
<ul style="list-style-type: none">• The Site maintains copies of signed manifests for at least three years.• However, documentation pertaining to waste characterization (analytical, generator knowledge, etc.) could not be located. It was suggested, but unclear if a third-party waste vendor maintains this documentation on behalf of the Site.• Waste determinations should be maintained on-site for at least three years from the date that the waste was last sent for on-site or off-site treatment, storage, or disposal.• There is a lack of documentation pertaining to how waste is managed on-site, including how it is characterized.	<ul style="list-style-type: none">• The Waste Management Policy includes guidance on record keeping for waste handling includes waste characterization and manifests.• PWSA is working to assemble available historical records and has begun to maintain appropriate files going forward.• Going forward PWSA will download files from third-party waste vendors and RCRAInfo to maintain those documents on-site.

Other Regulated Waste – Municipal Waste

Complete
In-Progress
Not Started

Finding/Comment
<ul style="list-style-type: none">The municipal waste dumpster has a tarp which covers the top. Environmental Compliance personal indicated that a hard top was not available from the vendor due to supply and demand.

Corrective Action
<ul style="list-style-type: none">PWSA is working with a waste vendor who is developing options to provide dumpsters with hard covers.Hard covered dumpsters will be utilized as soon as they can be procured, currently a timeframe is not available as the public bidding process may be required and supply-chain delays may not allow for quick turn around of new dumpsters.

Other Regulated Waste – Residual Waste Biennial Report

Complete
In-Progress
Not Started

Finding/Comment

- After reviewing the 2020 Residual Waste Biennial Report, it was unclear which waste streams are included in the Residual Waste Codes (RWCs) 499 Generic Waste and 399 Other Chemical Waste and if a more specific codes apply. Other waste streams which may have been misclassified included: 301 Acidic Waste; 419 Empty Containers; and 509: Waste Oil.

Corrective Action

- PWSA had a third-party assist with preparation of the 2021 26R which included various waste streams and submitted the form to DEP.
- PWSA recycles its waste oil, as such a residual waste report is not required.
- PWSA is evaluating improved segregation of wastes and once implemented will complete a chemical analysis of its residual waste by December 31, 2022.

Other Regulated Waste – Residual Waste 25R Reports

Complete
In-Progress
Not Started

Finding/Comment

- After reviewing the 2020 Residual Waste Biennial Report, it was determined that 25R Forms for Source Reduction Strategy have not been completed.

Corrective Action

- PWSA is evaluating means to reduce residual waste generation including recycling and separation of waste streams.
- PWSA will complete the 25R Source Reduction Strategy by December 31, 2022, once reduction strategies are implemented.

Other Regulated Waste – Waste Oil

Complete
In-Progress
Not Started

Finding/Comment

- Areas of concern for waste oil management include the Ross Pump Station top floor and the main building maintenance shop. Both areas had several drums that were in bad condition (rusty) and unlabeled. Waste oil was also being stored in unauthorized containers (coffee creamer and protein containers) in the main building maintenance shop.

Corrective Action

- PWSA has implemented a Waste Management Policy covering waste oil management and updated the Spill Prevention Plan.
- Monthly inspections of waste oil storage areas are being conducted by Environmental Compliance to assure proper storage and management of oil.
- PWSA is scheduling for removal of unused and waste oil from Ross Pump Station and Maintenance Shop and will have it completed by May 31, 2022.

Other Regulated Waste – Lead Based Paint

Complete
In-Progress
Not Started

Finding/Comment

- It is recommended that the Site identify and document buildings/areas that contain lead-based paint. Special consideration (waste management, employee exposure, etc.) must be considered during construction pre-planning activities.

Corrective Action

- This is not a “non-compliance” finding, but a recommendation for improvement.
- PWSA will continue to require environmental material surveys during the design of capital improvement projects.
- PWSA will evaluate during development of the 2023 Operating Budget the capacity to perform proactive hazardous materials surveys of buildings at Aspinwall WTP.

Other Regulated Waste – Asbestos and ACM

Complete
In-Progress
Not Started

Finding/Comment

- It is recommended that the Site identify and document buildings/areas that contain asbestos and ACM. Special consideration (waste management, employee exposure, etc.) must be considered during construction pre-planning activities.

Corrective Action

- This is not a “non-compliance” finding, but a recommendation for improvement.
- PWSA will continue to require environmental material surveys during the design of capital improvement projects.
- PWSA will evaluate during development of the 2023 Operating Budget the capacity to perform proactive hazardous materials surveys of buildings at Aspinwall WTP.

Frank Sidari
Chief Environmental Compliance and Ethics Officer
(412) 529-0217 or
fsidari@pgh20.com

