U.S. EPA Region 8 NPDES Inspection Report

National Database Information	
Inspection Date: September 17, 2024	**Inspection Type:** Compliance Evaluation Inspection
Entry / Exit Time: Opening Conference: 8:00 AM – 11:00 AM Site Review: 11:30 AM – 2:00 PM	**NPDES ID:** • UT0000167 (Bonanza Mine) • UTG589407 (Town of Bonanza WWTF)
Major / Non-Major Facility: Non-Major	**NPDES Program Sector(s):** • Industrial Direct Discharge • Industrial Stormwater • Privately-Owned Treatment Works
NAICS Code: 212399 (all other nonmetallic mineral mining)	**Inspection ID:** • 202409_UT0000167 (Bonanza Mine) • 202409_UTG589407 (Town of Bonanza WWTF)
Lead inspector and affiliation: Akash Johnson / U.S. EPA Region 8	
Inspector and affiliation: Jennifer Ferrando / U.S. EPA Region 8	
Inspector and affiliation: Althea Wilson / U.S. EPA Region 8	

Site/Facility Location Information	
Site/Facility Name & Location: Bonanza Mine and Town of Bonanza WWTF Uintah County, Utah Uintah and Ouray Reservation	**Send Report to:** Gregg Galecki, Surface Operations Manager American Gilsonite Company gregg@americangilsonite.com

Inspection/Site Contacts	
	Name(s)/Title
Site/Facility Contacts	Jonathan Lombardo / Senior Engineer / AGC (present)
	Gregg Galecki / Surface Operations Manager / AGC (present)
	BJ Jensen / Environmental/Engineering Team / AGC (not present)
	Justin Spence / Environmental Team / AGC (not present)
Indian Health Service Contacts	N/A
Tribal Government Contacts	Alrita Murray / Environmental GAP Coordinator / Ute Tribe (not present)
	CeeJay Rebsom / Solid and Hazardous Waste Labor / Ute Tribe Environmental GAP Program (present)

	Darrel Ningealook / Solid and Hazardous Waste Labor / Ute Tribe Environmental GAP Program (present)
	Devonte Smith / Solid and Hazardous Waste Labor / Ute Tribe Environmental GAP Program (present)
	Bart Powaukee / Water Quality Coordinator / Ute Tribe (not present)

Permit/Site Information	
Permit on site and available: Did not evaluate	**Permit Application Date:** Did not evaluate
Effective Date: October 1, 2021 (UT0000167 – Bonanza Mine)	**Expiration Date:** September 30, 2026 (UT0000167 – Bonanza Mine)
Latitude: Various facility components and outfalls – see Permit	**Longitude:** Various facility components and outfalls – see Permit
Receiving Water(s): per Permit, an unnamed tributary of the White River, multiple unnamed tributaries of Coyote Wash, and Coyote Wash, which is a tributary to the White River	
Weather Conditions: During inspection: Sunny/partly cloudy, windy, no precipitation	
Inspector's source of information: AGC personnel, records, and webpages, EPA records and databases, Google Earth Pro, Boden, T., & Tripp, B. T. (2012). *Gilsonite Veins of the Uinta Basin, Utah*. Utah Geological Survey, and inspection observations	

Areas Evaluated During Inspection		
☐ Permit	☒ Self-Monitoring Program	☐ Pretreatment
☒ Records	☐ Compliance Schedule	☒ Pollution Prevention
☒ Facility/Site Review	☐ Laboratory	☒ Stormwater
☒ Effluent/Receiving Waters	☒ Operations and Maintenance	☐ Combined Sewer Overflow
☒ Flow Measurement	☐ Sludge Handling/Disposal	☐ Sanitary Sewer Overflow

Report Review and Signature		
Lead Inspector and Report Writer Name/Signature/Final Date		**Contact Information**
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Inspection Narrative and Facility Description

1.0 Introduction

On Tuesday, September 17, 2024, I, U.S. Environmental Protection Agency (EPA) inspector Akash Johnson, along with EPA inspectors Jennifer Ferrando and Althea Wilson (collectively, "we"), conducted a compliance evaluation inspection of American Gilsonite Company's (AGC's) Bonanza mining operations, Gilsonite® Processing Plant, and Town of Bonanza (Town) Wastewater Treatment Facility (WWTF) (collectively, "Facility"), located in Uintah County, Utah, within the exterior boundaries of the Uintah and Ouray Reservation (Reservation). The Facility was operated by AGC. Ownership of the Facility and underlying lands was not evaluated during the inspection.

The purpose of the inspection was to evaluate compliance with applicable Clean Water Act (CWA) and National Pollutant Discharge Elimination System (NPDES) requirements. The Facility was authorized to discharge in accordance with the conditions of individual NPDES Permit No. UT-0000167 (the Permit). Parts of the Facility had previously been covered under NPDES Permit No. UTG589407, discussed further in Section 2.4.

The EPA sent a letter notifying the Ute Tribe of the EPA's inspection presence on the Reservation on August 19, 2024. The EPA coordinated the inspection with AGC representatives via phone and email several weeks in advance.

We were joined by the individuals identified as present on pages 1-2 of this report for respective portions of the inspection as described herein. Throughout the inspection, we took notes on our discussions and observations in field logbooks. Photographs taken during the inspection are included in the enclosed photo log.

2.0 Facility and NPDES Permitting Overview

Facility operations and outfalls are spread across several square miles of predominantly rural area. The Permit authorizes discharges from thirteen outfalls at the Facility, twelve of which are associated with mine dewatering activities (Outfalls 010, 013, 016, 017, 024, 029, 030, 031, 032, 033, 034, and 036) and one of which is associated with the North (Stormwater/Process Water) Cell of the WWTF lagoon, which receives stormwater/process water from the Processing Plant and Town (Outfall 037). A description of each outfall is provided in Table 1 of the Permit (Description of Discharge and Monitoring Points).[1] Facility components and associated Permit requirements are discussed in respective subsections below.

2.1 Mining, Dewatering, and Discharge Treatment

Gilsonite® is an AGC registered trademark name for uintaite (also known by other names, including asphaltite and asphaltum), a naturally occurring hydrocarbon material. Gilsonite® is used in a variety of products and applications, including printing inks, oil well drilling mud and cements, foundry and casting sand additives, asphalt products, waterproofing, and more.

Gilsonite® deposits typically occur as continuous vertical veins, ranging from less than an inch to over 20 feet in width, several hundred to several thousand feet in depth, and often extending for miles in

1 The Facility's Permit and Permit Statement of Basis are accessible online at https://www.epa.gov/npdes-permits/npdes-permit-american-gilsonite-company-bonanza-mine-utah

length. Gilsonite® mining at the Facility is currently conducted using predominantly underground mining methods. Typically, a vertical shaft is sunk into a vein and ore is removed from horizontal tunnels extended from the shaft in opposite directions into the vein. Ore is chipped from the vein using a handheld pneumatic hammer. Dislodged ore is vacuumed to a headframe at the surface where it is collected in a bin. A baghouse at the surface filters the air that is used to transport the ore. Filtered air from the baghouse is released to the atmosphere. Ore collected in the headframe bin is periodically hauled via truck to the Processing Plant for processing and shipment.

Groundwater is sometimes encountered during Gilsonite® mining operations. Mining suction equipment is capable of transporting residual groundwater to the surface along with "wet" Gilsonite®. If dewatering of wet ore is needed, the wet mixture is ambiently dried on drying beds before hauling to the Processing Plant or via mixing with drier Gilsonite® during processing. According to Facility representatives, no drying beds were active at the Facility at the time of the inspection.

When more substantial amounts of groundwater are encountered in a mine, the lowest portion of the shaft is used as a sump. Groundwater collected in the shaft sump is pumped to the surface. AGC has determined pH adjustment and/or suspended solids removal is needed at some outfalls to meet Permit effluent limitations. Table 1 in the Permit Statement of Basis (Outfall Locations and Descriptions) identifies treatment technologies present at each outfall. During the inspection, AGC representatives indicated only four outfalls had been used for dewatering discharges since the Permit effective date (October 1, 2021), Outfalls 013, 031, 033, and 036. Of those four outfalls, two utilized both pH and suspended solids treatment (Outfalls 031 and 036), one utilized only suspended solids treatment (Outfall 013), and one did not utilize any treatment (Outfall 033).

pH and suspended solids treatment are configured similarly across outfalls where treatment occurs. Typically, only pH lowering is needed to meet Permit effluent limits. pH of pumped groundwater is automatically monitored and adjusted using a programmable logic controller (PLC) system. A continuously-reading in-line pH probe is located downstream of sulfuric acid injection and mixing and provides feedback to the PLC on acid injection needed to lower the pH to an AGC-determined target maximum value of 8.75 (the maximum pH allowed by the Permit is 9). Sulfuric acid and PLCs are typically housed in Conex boxes or similar shed-type structures.

Suspended solids treatment is located at the point of discharge and consists of a manifold which distributes water to four runners, each of which is considered a filter unit. Each filter unit comprises a wire frame over which a fabric bag filter is fitted and secured with hose clamps. Water is discharged from each of the four filter units. AGC representatives indicated the bag filters used are air filters designed for use as air particulate filters in baghouses, not aqueous applications. AGC representatives indicated individual filter units are determined to be full or requiring replacement or maintenance when water begins to spurt out of the bag filter seams or clamps. During the inspection, AGC representatives indicated samples had historically been collected by holding a sample container below one of the four filter units. After the inspection, AGC updated their sample collection procedures to collect an equal amount of water from each discharging filter unit, discussed further in the Findings, Corrective Actions, and Recommendations section. During the inspection and a February 10, 2025, follow-up call, AGC representatives indicated the bag filters sometimes experience blockages due to biological film growth on the filters or the filters freezing during low flow and freezing conditions.

Analysis for total suspended solids (TSS) and total dissolved solids (TDS) is conducted at an offsite laboratory. The in-line pH probes used for pH adjustment process control are not used for measuring

pH values reported on Discharge Monitoring Report (DMRs). AGC representatives stated pH and dissolved oxygen measurement is conducted in the field using handheld field probes. Flow measurement is conducted using continuously-reading in-line electromagnetic flow meters installed at each outfall, also connected to a PLC. Grid power is present at each outfall.

Mining eventually depletes Gilsonite® ore from the area accessible from a given mine shaft. Depleted shafts are temporarily or permanently abandoned and new shafts are sunk further along the vein. This process may necessitate new outfalls being added and former outfalls being abandoned over time as active mining progresses along a vein. Section 2 of the Permit (Description of Discharge and Monitoring Point(s)) includes requirements that allow AGC to move outfall locations up to 0.25 miles from their locations as identified in the Permit. Mine reclamation activities were not discussed or evaluated during the inspection.

2.2 Wastewater – Town of Bonanza and Processing Plant

The Town is an unincorporated community, developed as a company town to support Gilsonite® mining and processing operations. The Town comprises several residences, AGC office buildings, the Processing Plant, and supporting operations. AGC representatives indicated there were no permanent residents living in Town but some staff stayed in company housing several nights a week and approximately several dozen people worked in or passed through the Town each day during the work week, primarily Monday through Thursday. AGC representatives indicated most buildings in Town are connected to individual septic tanks and drain fields. During the inspection, AGC representatives stated only two structures in Town were connected to the sanitary sewer system, the Processing Plant (Building 24) and the Bath House (Building 10); however, Stormwater Pollution Prevention Plan (SWPPP) maps (Figures 2, 2b, and 2c) indicate at least two additional structures, the Old Bath House/Maintenance Shop (Building 4) and Septic Tank 3, associated with the Warehouse (Building 6), may also be connected to the sanitary sewer system. This discrepancy is discussed further in the Findings, Corrective Actions, and Recommendations Section. All wastewater collected by the Town's sanitary sewer system flows through a cluster septic tank located between the Town and the lagoon. Effluent from the cluster septic tank flows into the South (Wastewater) Cell of the lagoon.

The Processing Plant receives Gilsonite® ore from two AGC-operated mines, the subject Bonanza Mine and the Cottonwood Mine, the latter of which is located approximately 20 miles southwest of the Town and Processing Plant.[2] Unprocessed ore was stored outside, south of the Processing Plant, in partially enclosed sheds and uncovered stockpiles. Facility representatives indicated operations in the Processing Plant were limited to Gilsonite® drying (via mixing), sizing, and bagging, and no industrial wastewater streams were generated at the Processing Plant. We did not enter the processing plant during the inspection. Facility representatives indicated bulk chemicals stored in the vicinity of the Processing Plant included diesel fuel, used oil, and antifreeze.

According to Facility representatives, at the time of the inspection, all wastewater received by the Town's sanitary sewer system, including from the Processing Plant, was generally domestic and non-industrial in nature. Facility representatives indicated non-domestic industrial wastewater had previously been generated in an Environmental Resin (ER) Plant located in Town, but the ER Plant had burned down several years prior and had not been rebuilt. The EPA's August 2, 2017, inspection report

2 A NPDES inspection of the Cottonwood Mine was conducted the same day as the subject inspection, discussed in a separate inspection report (Inspection ID: 202409_UT0025259).

for the EPA's June 21, 2017, inspection of the Facility (Inspection ID: 201706_UT0000167) contains additional information on the historical location of the discharge of industrial wastewater from the ER Plant.

2.3 Stormwater and Stormwater/Process Water – Town of Bonanza and Processing Plant

Drainage in the vicinity of the Town generally flows from south to north. At the south, upgradient, end of Town, there are two abandoned ponds which do not receive significant drainage from the Processing Plant or other areas of Town. The Processing Plant and associated operations, such as unprocessed ore storage, vehicle fueling, and processed Gilsonite® storage, packaging, and offloading, are located north of the abandoned ponds and south of the Town. Stormwater originating in the vicinity of the Processing Plant, particularly on the south side, is likely to contact Gilsonite®, as bulk and fugitive Gilsonite® is widely present on the ground outdoors in this area. For the purposes of this report, stormwater from this area is referred to as "stormwater/process water." Facility SWPPP maps indicate natural drainages, ditches, berms, culverts, and underground piping convey the majority of stormwater/process water from the south side of the Processing Plant to either the "Truck Dump Bin and Hopper Stormwater Retention Basin," located in the vicinity of unprocessed Gilsonite® bulk storage on the south side of the Processing Plant, or to the east side of Town and into two area drains located north of the Processing Plant and east of Town, identified as Area Drain 1 (AD-1) and Area Drain 2 (AD-2) on SWPPP maps. Stormwater/process water is conveyed from AD-1 and AD-2 through predominantly underground piping to the North (Stormwater/Process Water) Cell of the lagoon.

Stormwater originating north and west of the Processing Plant, including stormwater originating in Town, is not expected to contact bulk Gilsonite®, but may still contact fugitive Gilsonite®, as it is present on the ground outdoors in these areas, due at least in part to wind deposition from bulk storage areas. Facility SWPPP maps indicate natural drainages, ditches, and berms direct the majority of stormwater from these areas south of Town northward, through conveyances across the Independent Vein, and into a natural drainage that would flow generally north-northwest, around the east side of the lagoon and offsite. No water was present in the portions of this drainage observed during the inspection.

2.4 Town of Bonanza WWTF Lagoon and NPDES Permitting History

The Town's WWTF lagoon comprises two cells, the North (Stormwater/Process Water) Cell and the South (Wastewater) Cell. According to AGC representatives, there is no piping connecting the two cells. Outfall 037 is located near the northeast corner of the North (Stormwater/Process Water) Cell. Footnote b to Table 3 (Effluent Limitations for Outfall 037) of the Permit specifies, "Only that volume of water resulting from greater than a 10-year, 24-hour rainfall event may be discharged from the process wastewater/stormwater lagoon. The 10-year, 24-hour rainfall event is established by the National Climatic Center, National Oceanic and Atmospheric Administration and for the facility is defined as 1.46 inches of rainfall within 24 hours." According to AGC representatives and the Permit Statement of Basis, Outfall 037 has never discharged. No discharge is authorized from the South (Wastewater) Cell and, according to AGC representatives, no discharge outlet is present at this cell. Both cells appeared generally dry during the inspection.

AGC historically maintained NPDES permit coverage for the Town's WWTF under a separate NPDES permit. Most recently, the Town's WWTF was covered under NPDES Permit No. UTG589407, effective from March 9, 2016, through around 2020 (exact expiration date not evaluated during

inspection). During the process of renewing NPDES permit coverage for the Town's WWTF and the Bonanza Mine, AGC and the EPA determined AGC would not continue NPDES permit coverage for the Town's sanitary sewer system and the South (Wastewater) Cell, and NPDES requirements applicable to the Processing Plant and the North (Stormwater/Process Water) Cell would be included in the NPDES Permit for the Bonanza Mine, NPDES Permit No. UT0000167.

3.0 Inspection Narrative

3.1 Opening Conference

The inspection commenced at approximately 8:00 AM on Tuesday, September 17, 2024, when we arrived at AGC's main office in Town and met with AGC representatives Jonathan Lombardo, Senior Engineer, and Gregg Galecki, Surface Operations Manager. We presented our inspector credentials, participated in a safety briefing, signed a hazard training acknowledgement form, and convened in a conference room. We then proceeded to conduct an opening conference where we discussed both the subject Bonanza Mine and the Cottonwood Mine. During the opening conference, we explained the purpose of the inspections, discussed inspection itineraries and logistics, reviewed Facility records, and asked questions pertaining to mining operations and implementation of NPDES permit requirements at the Bonanza and Cottonwood Mines. Facility records reviewed included self-inspection records, operation and maintenance records, the Facility's SWPPP, and employee training records. We conducted a cursory review of SWPPP maps and training records but did not conduct a comprehensive review of the SWPPP.

At approximately 10:15 AM, we were joined by representatives of the Ute Tribe Environmental General Assistance Program (GAP), Devonte Smith, Darrel Ningealook, and CeeJay Rebsom, who accompanied us for the remainder of the opening conference and part of the subsequent site review. The opening conference concluded around 11:00 AM, after which we broke for lunch in the conference room.

3.2 Processing Plant Area

The group reconvened at approximately 11:30 AM to commence Facility site reviews. We began our site reviews by driving to the south end of the Processing Plant, where we observed the raw material intake area (Photograph 2), the exterior of the Processing Plant and processed Gilsonite® storage, packaging, and offloading (Photograph 3), and two above-ground storage tanks (ASTs) (Photograph 4). Facility representatives indicated the ASTs contained diesel fuel, primarily used by haul trucks. The volumes of the ASTs and secondary containment were not evaluated during the inspection. As discussed in Section 2.2, we did not enter the processing plant during the inspection.

Jonathan Lombardo and I then drove to observe bulk ore stored south of the Processing Plant. The AGC representatives expressed safety concerns with multiple individuals and vehicles entering the area, so the rest of the inspection team remained near the ASTs and did not accompany us to observe the bulk storage areas. Bulk unprocessed ore was stored under partially enclosed sheds in a truck offload area (Photograph 5) and in stockpiles located south of access roads in this area (Photograph 6). Bulk and fugitive Gilsonite® was widely present on the ground outdoors in these areas. As discussed in Section 2.3, SWPPP maps indicate stormwater/process water from this area would generally be conveyed northeast into AD-1 and AD-2, and eventually to the North (Stormwater/Process Water) Cell of the lagoon. We were not able to verify the flow path of all drainages around the Processing Plant and the Town during the inspection.

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3.3 Area Drain 2

We then drove to observe the inlet for AD-2 (Photographs 7 and 8). A semi-rigid plastic particulate control fence had been installed around part of the inlet, identified by AGC representatives as an ERTEC® fence product. The fence was partially collapsed and appeared to have been partially overwhelmed with Gilsonite® deposition. Gilsonite® was present on the ground around the inlet.

3.4 WWTF Lagoon

We then drove to observe the WWTF lagoon cells. We drove along the western boundary of the lagoon and parked near the northwest corner of the North (Stormwater/Process Water) Cell (Photograph 9). From there, we walked along the northern berm of the cell to observe piping comprising Outfall 037 (Photograph 10). No water was flowing through the outfall and the cell appeared dry. We then drove south back along the western boundary of the lagoon and stopped between the cells to observe the South (Wastewater) Cell (Photograph 12). The cell appeared dry. We then continued driving south along the western boundary of the lagoon and returned to the Town's main gate. At this point, Ute Tribe GAP representatives departed the inspection and we continued with the AGC representatives to observe several mine dewatering outfalls.

3.5 Mine Dewatering Outfalls

As discussed in Section 2.1, AGC representatives indicated only four outfalls had been used for dewatering discharges since the Permit effective date (October 1, 2021), Outfalls 013, 031, 033, and 036. Of those four outfalls, two utilized both pH and suspended solids treatment (Outfalls 031 and 036), one utilized only suspended solids treatment (Outfall 013), and one did not utilize any treatment (Outfall 033). For the inspection, we visited the three outfalls which AGC representatives indicated had discharged during the current Permit cycle and which featured treatment, Outfalls 013, 031, and 036.

We first drove to Outfall 036 (Photographs 13-22). The wellhead for the dewatering well was present near the outfall (Photograph 13). We observed the flow measurement and treatment processes. The configuration of pH and suspended solids treatment and discharge was generally as is described in Section 2.1. At the filter manifold, backpressure was forcing some water out through the hose clamps of some filter units (Photograph 20). Upon seeing the water escaping from the hose clamps, Jonathan Lombardo called other AGC staff to report to the outfall and maintain the bag filters.

We then drove to Outfall 031 and Shaft B-46 (Photographs 23-26). Outfall 031 was not discharging at the time of the inspection. AGC representatives indicated this was because dewatering was not occurring at any shafts in the area. We did not observe the interior of the structures where sulfuric acid and the PLC were stored. We observed the area around the entrance to Shaft B-46, including the headframe and bulk ore silos (Photograph 25). Fugitive Gilsonite® was present on the ground in the vicinity of the shaft opening and had been concentrated in paths of stormwater flow (Photograph 26). An ERTEC® fence had been installed across one drainage path flowing north, away from the headframe.

We then drove to Outfall 013 (Photographs 27 and 28). Outfall 013 was not discharging at the time of the inspection because the water that would normally have been flowing to the outfall was being redirected for use in nearby Gilsonite® drilling exploration activities (Photograph 27).

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The inspection concluded when we left Outfall 013 at approximately 2:00 PM.

4.0 Post-Inspection Activities and Conclusion

Over several months following the inspection, I corresponded with AGC representatives on numerous occasions via email and Microsoft Teams video calls to request additional records, clarify information related to the inspection, and communicate on routine matters relating to AGC's implementation of Permit requirements. During preparation of this report, I also reviewed select Discharge Monitoring Reports (DMR) data submitted by AGC from the Permit effective date (October 1, 2021) though August 31, 2024.

Findings, requested corrective actions, and recommendations identified pursuant to the inspection are identified in the section below.

Findings, Corrective Actions, and Recommendations

Finding 1:

AGC reported excursions of the Permit's allowable pH range.

The following pH excursions were reported for Outfall 013, which does not have pH treatment, and Outfall 031, which does have pH treatment:

Outfall	Monitoring Period End Date	Parameter	Limit Value	DMR Value	Violation Code
013-A	08/31/2024	pH	9	9.2	E90
031-A	12/31/2021	pH	9	9.4	E90

Permit Requirements:

Part 3 of the Permit (Effluent Limitations), Table 2 (Effluent Limitations for Outfalls 010, 013, 016, 017, 024, 029, 030, 031, 032, 033, 034, and 036) provides the following effluent limitations:

Findings, Corrective Actions, and Recommendations

Table 2 – Effluent Limitations for Outfalls 010, 013, 016, 017, 024, 029, 030, 031, 032, 033, 034, and 036

Effluent Characteristic	30-Day Average Effluent Limitations a/	7-Day Average Effluent Limitations a/	Daily Maximum Effluent Limitations a/	Instantaneous Minimum Effluent Limitations a/
Flow, million gallons per day (mgd)	report only	N/A	report only	N/A
Total Suspended Solids (TSS), mg/L	25	35	N/A	N/A
Oil and Grease (O&G), mg/L	N/A	N/A	10	N/A
Total Dissolved Solids (TDS), mg/L	N/A	N/A	3,500	N/A
Dissolved Oxygen (DO), mg/L	5.5 b/	N/A	N/A	3.0 b/
pH	Shall not be less than 6.5 nor greater than 9.0 at any time.			
TDS Load, tons/year	The TDS load from the sum of all outfalls shall not be greater than 1,281 tons/year			
Process water	There shall be **no** discharge of process generated wastewater pollutants or contact cooling water.			
Sanitary wastewater	There shall be **no** discharge of sanitary wastewater.			
Visible sheen	There shall not be any visible sheen in the receiving water or adjoining shoreline.			

a/ See section 1 for definition of terms.
b/ Dissolved oxygen (DO) effluent limitations only apply to **Outfall 024**.

Requested Corrective Action:

In a response, provide a narrative explaining why these pH excursions occurred and what steps AGC has taken or plans to take to ensure pH remains within the allowable range.

Finding 2:

AGC reported No Data Indicator Code "E – Analysis Not Conducted/No Sample," as follows:

Outfall	Monitoring Period End Date	Parameter	Units	Limit Value	DMR Value	Stat Base Desc	NODI Code
031-A	08/31/2023	Solids, total dissolved	mg/L	3500		DAILY MX	E
036-A	08/31/2023	Solids, total dissolved	mg/L	3500		DAILY MX	E
031-A	08/31/2023	Solids, total suspended	mg/L	25		30DA AVG	E
031-A	08/31/2023	Solids, total suspended	mg/L	35		7 DA AVG	E

Findings, Corrective Actions, and Recommendations

036-A	08/31/2023	Solids, total suspended	mg/L	25		30DA AVG	E
036-A	08/31/2023	Solids, total suspended	mg/L	35		7 DA AVG	E

Permit Requirements:

Part 4 of the Permit (Self-Monitoring and Data Requirements), Table 4 (Monitoring and Reporting Requirements for Outfalls 010, 013, 016, 017, 024, 029, 030, 031, 032, 033, 034, and 036) provides the following monitoring requirements:

Table 4 – Monitoring and Reporting Requirements for Outfalls 010, 013, 016, 017, 024, 029, 030, 031, 032, 033, 034, and 036

Effluent Characteristic	Monitoring Frequency	Sample Type a/	Data Type a/
Flow, mgd	Monthly b/	Instantaneous	Daily Maximum 30-Day Average
Total Suspended Solids (TSS), mg/L	Monthly	Grab	30-Day Average 7-Day Average c/
Oil and Grease, visual	Weekly	Visual	Present/Not Present d/
pH, s.u.	Weekly	Grab	Instantaneous Minimum Instantaneous Maximum e/
Dissolved Oxygen (DO), mg/L f/	Monthly	Grab	Instantaneous Minimum 30-Day Average g/
Total Dissolved Solids (TDS), mg/L	Monthly	Grab	Daily Maximum 30-Day Average h/
Total Dissolved Solids (TDS) Load, tons/year	Quarterly	Calculation	Rolling Annual Average i/

Requested Corrective Action:

In a response, provide a narrative explaining why the required monitoring and reporting was not conducted and what steps AGC has taken or plans to take to ensure all required monitoring and reporting is conducted.

Finding 3:

Manufacturer recommendations and AGC procedures regarding frequency of pH meter calibration, cleaning, and storage when not in use were unclear.

During the inspection, Facility representatives indicated the type of in-line pH probe used for pH adjustment process control had recently been changed such that monthly cleaning and recalibration of the in-line pH probes was no longer necessary. During the inspection and in a December 20, 2024, follow-up email, Facility representatives indicated an AGC Automation Specialist is responsible for programming all meters, sensors, and other equipment throughout the Facility, and that this employee checks measurements from the in-line pH probes against measurements from a handheld meter.

Findings, Corrective Actions, and Recommendations

In a January 31, 2025, letter relating to follow-up from the recent Cottonwood Mine NPDES inspection (Inspection ID: 202409_UT0025259), Facility representatives indicated the in-line pH probe used in Facility pH adjustment systems was the M4 Knick – SE 571 Memosens Digital Glass Combination pH/Temperature Sensor (225mm) (SE 571X/2-NMSN). The user manual for this pH probe is accessible online.[3] The user manual provides calibration instructions; however, it does not provide any information on the recommended frequency of calibrations or cleaning. Additionally, the user manual states, "When the sensor is not in operation, store it with sensor tip and junction well submerged in electrolyte (3 mol/l KCl). If a sensor is stored dry for a few days by mistake, let it soak in electrolyte for several hours before use."

The following points regarding the in-line pH probes are unclear to the EPA:

- Manufacturer recommendations for frequency of calibrations
- Manufacturer recommendations for frequency of cleaning
- Frequency of calibrations performed by AGC
- Frequency of cleanings performed by AGC
- AGC procedures for storage of the pH probes when outfalls are not discharging

Permit Requirements:

Part 5.1.2 of the Permit (pH) states:

Currently, pH adjustment with sulfuric acid is performed at Outfalls 024, 031, and 036 to control high pH in the discharge. BMPs for the pH adjustment process shall include, but are not limited to, the following:

- Calibrate handheld pH meters regularly, per the manufacturer's instructions;
- Check calibration of pH sensors in automatic injection control against handheld pH meters at least monthly while discharging;
- Clean pH sensors in automatic injection controls regularly. At a minimum, these pH sensors shall be cleaned on a monthly basis while discharging. Always check pH calibration of sensors after cleaning;
- If pH violations continue to occur at a particular outfall, consider adjusting the pH setpoint at that outfall to ensure compliance with Permit limitations; and
- Install pH injection controls at additional outfalls if discharge water quality is approaching pH limits.

Part 7.6 of the Permit (Proper Operation and Maintenance) states:

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is

3 User manual for in-line pH probes: https://www.knick-international.com/media/2b/5b/76/1708105021/PH_Sensor_TA-SE571XNMSN-TIIS-KNEN02_096864_s-2879938.pdf?ts=1708105021

necessary to achieve compliance with the conditions of the Permit. Proper operation and maintenance also includes application of appropriate Operational BMPs (see section 5.1).

Requested Corrective Action:

Part 1

In a response, clarify the following points regarding the in-line pH probes:

- Manufacturer recommendations for frequency of calibrations
- Manufacturer recommendations for frequency of cleaning
- Frequency of calibrations performed by AGC
- Frequency of cleanings performed by AGC
- AGC procedures for storage of the pH probes when outfalls are not discharging

Part 2

If AGC procedures for in-line pH probe calibration, cleaning, or storage when not in use diverge from manufacturer recommendations or Permit requirements, update AGC procedures to align with manufacturer recommendations and Permit requirements, unless Permit requirements conflict with manufacturer recommendations. In a response, provide a narrative explaining how AGC has addressed this requested corrective action.

Finding 4:

The maximum flow rate of the TSS bag filters was not known and therefore it could not be verified whether the maximum flow rate was being exceeded.

During the inspection, Facility representatives stated the bag filters used for TSS removal were designed for use as air particulate filters in baghouses, not aqueous applications. No manufacturer recommendations for maximum water flow rates or run times was available for the bag filters. During a February 10, 2025, follow-up call, Facility representatives indicated AGC had empirically determined their own target maximum water flow rate for the filter bags based on investigative sampling and visual observations of apparent filter performance correlated with varying known discharge flow rates. Facility representatives indicated water flow to each of the filter units could be controlled by an adjustable ball valve.

Permit Requirements:

Section 5.1.1 of the Permit (TSS) states:

Currently, bag filters are installed at Outfalls 013, 031 and 036 to control TSS in the discharge. BMPs for the use of bag filters shall include, but are not limited to, the following:

- Ensure that the maximum flow rate of the bag filters are not exceeded. If the discharge flow rate is approaching or exceeding the maximum flow rate of the bag filters, re-structure the outfall as needed;

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- Check bag filters weekly while discharging to ensure that they are not fouled and replace as needed. If the bag filter is at a stage where it may be overdue for replacement at the next weekly check, replace bag at that inspection (i.e., before it is overdue for replacement);
- When removing bag filters from piping, use caution to avoid dumping/discharge of collected sediment/slurry back into the receiving water;
- Dispose of used/fouled bag filters appropriately (see section 7.7); and
- Install bag filters at additional outfalls if discharge water quality is approaching TSS limits.

Requested Corrective Action:

Ensure the use of bag filters to control TSS is conducted in accordance with all requirements of the Permit, including determining and preventing exceedances of maximum flow rates. In a response, provide either design and operating specifications from the manufacturer detailing appropriate use of these filters for aqueous suspended solids removal applications, or provide information (e.g. calculations, tables, measurements, photographs, etc.) supporting AGC's empirically derived target maximum flow rate for the filter bags, considering relevant filter design and operating parameters, such as allowable pressure differential, suspended solids loading, filter efficiency, etc.

Finding 5:

Portions of discharge were sometimes circumventing bag filter TSS treatment.

Facility representatives indicated filters are determined to be full or requiring replacement or maintenance when water begins to spurt out of the bag filter seams or clamps, at which point some water is circumventing TSS treatment. For example, during the inspection, at Outfall 036, backpressure was forcing some water out through the hose clamps of some filter units (Photograph 20).

Permit Requirements:

Part 7.6 of the Permit (Proper Operation and Maintenance) states:

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the Permit. Proper operation and maintenance also includes application of appropriate Operational BMPs (see section 5.1).

Requested Corrective Action:

In a response, provide a narrative explaining how AGC plans to ensure all discharge flows through bag filter TSS treatment as intended.

Finding 6:

Routine facility SWPPP inspection documentation did not include all required information.

Findings, Corrective Actions, and Recommendations

A report for the 2024 3rd Quarter SWPPP inspection report of Facility, dated September 16, 2024, did not document the following items required to be inspected and included in inspection documentation:

- The time of the inspection
- The signature of the inspector
- A statement, signed and certified in accordance with Section 5.2.6 of the Permit

Permit Requirements:

Section 5.2.9.1.3 of the Permit (Routine Facility Inspection Documentation) states:

Findings of the facility inspections must be documented and maintained with the SWPPP. Any corrective actions required as a result of a routine facility inspection must be promptly taken. Do not submit routine facility inspection reports to EPA unless specifically requested to do so. However, they must be summarized in the annual report per section 5.2.10. Document all findings, including but not limited to, the following information.

- The inspection date and time;
- The name(s) and signature(s) of the inspector(s);
- The areas of the facility that were inspected;
- Weather information;
- All observations relating to the implementation of control measures at the facility, including:
    - A description of any discharges occurring at the time of the inspection;
    - Any previously unidentified discharges from and/or pollutants at the facility;
    - Any evidence of, or the potential for, pollutants entering the drainage system;
    - Observations regarding the physical condition of and around all discharge points, including any flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water; and
    - Any control measures needing maintenance, repairs, or replacement;
- Any additional control measures needed to comply with permit requirements;
- The precipitation event date and depth, duration and flow rate of discharge from the stormwater lagoon outfall, if a discharge occurs;
- Any incidents of noncompliance; and
- A statement, signed and certified in accordance with section 5.2.6.

Section 5.2.6 of the Permit (Signature Requirements) states:

The SWPPP, including changes to the SWPPP to document any corrective actions or advanced implementation measures taken, and any other compliance documentation required under the SWPPP such as the Annual Report, must be signed in accordance with section 8.7.2. All other changes to the SWPPP must be signed and dated by the person preparing the change or documentation.

Requested Corrective Action:

Ensure SWPPP inspection documentation includes all requirements identified in the Permit. In a response, provide an example of a SWPPP inspection report or revised form that incorporates all information required by the Permit.

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Finding 7:

A stormwater management device had not been maintained.

Sediment control fencing around the inlet to AD-2 was partially collapsed and appeared to have been partially overwhelmed with Gilsonite® deposition. Gilsonite® was present on the ground around the inlet (Photographs 7 and 8).

Permit Requirements:

Part 5.2.4.2.4 of the Permit states:

Perform inspections and preventive maintenance of stormwater drainage, source controls, treatment systems, and plant equipment and systems that could fail and result in contamination of stormwater.

Part 5.2.4.2.5 of the Permit states:

Inspect and maintain stormwater management devices (oil/water separators, catch basins, etc.).

Requested Corrective Action:

Repair the sediment control fencing around the inlet to AD-2 and remove Gilsonite® accumulated around the inlet. In a response, provide a photograph of the repaired fence and indicate the date this corrective action was completed.

Finding 8:

Samples collected at outfalls with TSS treatment may not have been representative.

AGC representatives indicated samples from outfalls with TSS treatment had historically been collected by holding a sample container below one of the four filter units at each outfall. However, since all four filter units typically discharge simultaneously, this sampling procedure may not result in collection of a sample that is representative of the entire discharge, as the amount of sediment build-up and the flow rate through the filter could vary across the different filter units. Furthermore, AGC representatives indicated filter bags were sometimes changed out on an individual, as-needed basis, increasing the potential for differing amounts of sediment build-up across the filter units.

Permit Requirements:

Section 6.1 of the Permit (Representative Sampling) states:

All samples taken in compliance with the monitoring requirements established under section 4 shall be representative. Effluent samples shall be collected from the effluent stream prior to discharge into the receiving waters. Any influent samples shall be taken of the influent stream at the first influent access point, and if feasible prior to entering any treatment unit. Any receiving water samples shall be collected in a representative location of the receiving stream. Samples and measurements shall be representative of the volume and nature of the monitored discharge, influent, receiving stream, or other

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monitored location. Sludge samples shall be collected at a location representative of the quality of sludge immediately prior to use or disposal practice. **Requested Corrective Action – completed:** A similar finding was identified in the inspection report for the recent Cottonwood Mine NPDES inspection (Inspection ID: 202409_UT0025259). In a January 31, 2025, response to that finding, AGC indicated their sampling protocol had been changed to employ a graduated cylinder or similar measuring device to collect an equal percentage of water from each filter unit. At this time, no additional corrective action is requested pursuant to this finding.
Finding 9: **It was unclear which structures were connected to the Town's sanitary sewer system.** During the inspection, Facility representatives stated only two structures in Town were connected to the sanitary sewer system, the Processing Plant (Building 24) and the Bath House (Building 10); however, Stormwater Pollution Prevention Plan (SWPPP) maps (Figures 2, 2b, and 2c) indicate at least two additional structures, the Old Bath House/Maintenance Shop (Building 4) and Septic Tank 3, associated with the Warehouse (Building 6), may also be connected to the sanitary sewer system. **Recommendation:** Verify which structures are connected to the Town's sanitary sewer system and ensure SWPPP maps and other relevant Facility documents accurately reflect real-world conditions. At this time, no response is requested pursuant to this recommendation.