



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III

FINAL DECISION AND RESPONSE TO COMMENTS

MAX ENVIRONMENTAL TECHNOLOGIES, INC.
BULGER FACILITY
200 MAX DRIVE
BULGER, PENNSYLVANIA

EPA ID NO. PAD 059 087 072

Prepared by
RCRA Corrective Action Program
Land, Chemicals, and Redevelopment Division
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List of Acronyms

EPA	Environmental Protection Agency
COA	Consent Order and Agreement
MAX	MAX Environmental Technologies, Inc.
MCL	National Primary Drinking Water Standard Maximum Contaminant Level
NPDES	National Pollutant Discharge and Elimination System
PADEP	Pennsylvania Department of Environmental Protection
RCRA	Resource Conservation and Recovery Act
ROI	Radius of Influence
RSL	EPA Regional Screening Level

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Figure 1: Facility Location

Figure 2: Facility Layout

Section 1: Introduction

The United States Environmental Protection Agency (EPA) is issuing this Final Decision and Response to Comments (Final Decision) selecting a final remedy (Final Remedy) for the MAX Environmental Technologies, Inc. (MAX) Bulger Facility, located in Bulger, Pennsylvania (Facility).

EPA's Final Remedy for the Facility consists of capping and land use restrictions for soil; operation of pump-and-treat system and leachate collection systems; monitored natural attenuation; use restrictions for groundwater; and surface water monitoring. The components of EPA's Final Remedy may be implemented through an order, a permit, or an environmental covenant executed pursuant to the Pennsylvania Uniform Environmental Covenants Act, 27 Pa. C.S. Sections 6501-6517.

The Facility is subject to EPA's Corrective Action program under the Solid Waste Disposal Act, as amended, commonly referred to as the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et seq. The Corrective Action program requires that owners or operators of facilities subject to certain provisions of RCRA investigate and address releases of hazardous waste and hazardous constituents, usually in the form of soil or groundwater contamination, that have occurred at or from their properties. The Commonwealth of Pennsylvania is not authorized for the Corrective Action Program under Section 3006 of RCRA. Therefore, EPA retains primary authority in the Commonwealth of Pennsylvania for the Corrective Action Program.

On August 4, 2021, EPA issued a Statement of Basis (SB) in which it announced its proposed remedy for the Facility and solicited public comments. Based on comments received during the public comment period, which are included as Attachment A to this Final Decision, EPA is making minor modifications to the proposed remedy and incorporating them into the selected Final Remedy as described in more detail in Attachment B: EPA's Response to Public Comments.

Section 2: Facility Background

The Facility is located approximately ½ mile northwest of Bulger, PA, in Smith Township, Washington County, Pennsylvania. The Facility is surrounded by agricultural, wooded, and residential properties. Residual waste operations are permitted on 129 acres of the 202-acre Facility (see Figure 1, Facility Location).

Mill Service, Inc. began waste treatment and disposal operations in 1958 at the Facility in the location of a former strip mine. In 2002, Mill Service, Inc. changed its corporate name to MAX Environmental Technologies, Inc., which currently operates the Facility as a nonhazardous residual waste treatment facility.

From approximately 1981 to 1987, the Facility operated as a hazardous waste treatment and disposal facility. The Facility accepted wastes in liquid and semi-solid form generated primarily from the iron/steel and metal finishing industries. Treatment included

neutralization/precipitation, hexavalent chromium reduction for chromium-bearing wastes, cyanide destruction/oxidation for cyanide-bearing wastes, or no treatment for non-hazardous wastes already at the proper pH for disposal. The treated slurry was then placed in disposal impoundments.

In accordance with the provisions of the May 24, 1985 Consent Order and Agreement (COA), disposal operations at the Facility ceased in June 1987. Since the 1990s, residual wastes received at the Facility for treatment are primarily solids, including slag, air pollution control dusts, metal-impacted soils, and drill cuttings from the oil and gas industry. Since the early 2000s, the Pennsylvania Department of Environmental Protection (PADEP) has allowed MAX to reuse some treated residual wastes to rebuild the grade on the Facility impoundments prior to capping as part of the impoundment closures. Sludge generated at the Facility's wastewater treatment plant was included in this onsite reuse allowance; however, reuse of the Facility's wastewater sludge ceased in 2011 when EPA determined that the sludge should be classified as a listed hazardous waste (F039).

The Facility currently operates under the following enforcement documents:

- The February 3, 2014 Solid Waste Permit No. 301359 issued by PADEP, which authorizes residual waste processing operations.
- The May 24, 1985 order issued by the Pennsylvania Department of Environmental Resources (predecessor to the PADEP), which primarily concerns closure of Impoundment 2.
- The September 11, 2006 COA issued and amended on February 3, 2014 by PADEP, which primarily concerns re-closure of Impoundments 1 and 1A.
- The April 6, 2018 COA issued by PADEP concerning management of F039 waste from Impoundment 2.

Waste management units at the Facility include three closed impoundments, a proposed residual waste landfill, waste storage tanks and containers, waste treatment tanks, and a leachate management-wastewater treatment system. The waste management units and monitoring locations are depicted on Figure 2, Facility Layout, and are further described as follows:

Closed Disposal Impoundments

- Impoundments 1 and 1A: The two adjacent disposal impoundments collectively cover approximately 30 acres. The unlined impoundments operated from 1958 to 1981, prior to RCRA regulatory requirements. A perimeter leachate collection and treatment system was installed in the late 1970s. The impoundments received treated industrial waste and were initially closed in 1979 (Impoundment 1A) and 1981 (Impoundment 1) with waste left in place.
- Impoundment 2: The 16-acre impoundment operated from 1981 to 1988 and was constructed with a bentonite-clay liner and a leachate collection system. MAX capped and closed the impoundment in 2008 in accordance with RCRA closure requirements under oversight of PADEP.

Proposed Landfill

- MAX submitted an application for a new residual waste landfill, also known as Landfill 3, to PADEP in December 2017, which was revised and resubmitted in November 2020. Landfill 3 would be approximately 21 acres and located directly to the east of Impoundment 1 (see Figure 2). The application is currently under review by PADEP.

Waste Treatment and Storage Units

- Residual wastes are chemically and physically treated in containers to render them solidified/stabilized or otherwise adequately processed for either reuse in re-closure of Impoundments 1 and 1A or for off-site disposal.

Leachate Management/Wastewater Treatment Plant

- Leachate from the treatment and disposal units, surface water runoff from the impoundments, and contaminated groundwater are treated at the Facility's wastewater treatment plant. The effluent is discharged to Raccoon Creek under National Pollutant Discharge and Elimination System (NPDES) Permit No. PA0044326.
- The sludge generated at the wastewater treatment plant was previously considered a residual waste and disposed in the Facility's impoundment closures/re-closures to maintain grade requirements. In 2011, EPA determined that the sludge should be classified as a listed hazardous waste (F039). The sludge is currently being managed and taken off-site as a listed hazardous waste until it is specifically delisted by PADEP. In compliance with the April 2018 COA, MAX submitted a delisting petition for the sludge to PADEP and the PA Environmental Quality Board on May 30, 2018, which is under review.

Section 3: Environmental Investigations and Cleanup Actions

Environmental Investigations

Several hydrogeological investigations have been performed to characterize the geological, hydrogeological, and mining conditions at the Facility. The Facility overlies competent aquitards, resulting in low hydraulic conductivities that are reflected in the slow rate of groundwater flow (estimated at 0.035 to 0.05 ft/day) beneath the Facility. Three groundwater flow zones are monitored: Pittsburgh Limestone, Connelsville Sandstone, and Morgantown Sandstone. The Pittsburgh Coal zone overlies the Pittsburgh Limestone and was removed beneath most of the Facility via strip and pit mining. Groundwater generally follows topography and flows radially (i.e., northeasterly to southeasterly in the northern to southern parts of the Facility, respectively) toward Little Raccoon Run in all zones, although vertical (downward) gradients predominate in the Pittsburgh Limestone and Connelsville Sandstone.

In the mid-1980's, groundwater assessment reports showed that releases from Impoundment 2 had impacted the underlying groundwater, which was contaminated by salts from the disposal of

treated spent pickle liquor. PADEP then required MAX to close Impoundment 2 and implement a groundwater remediation and monitoring system.

Current Monitoring Program

In accordance with the 1985 COA, MAX conducts groundwater and surface water monitoring at the Facility pursuant to a Sitewide Sampling and Analysis Plan approved by PADEP. Most recently, PADEP approved a June 2020 Groundwater Assessment which included monitoring requirements as specified in Appendix D of the Assessment.

The monitoring locations are identified in Figure 2, Facility Layout, which includes the proposed Landfill 3 location to be added upon permit approval by PADEP. The requirements include sampling:

- quarterly groundwater at 42 wells in the three flow zones;
- quarterly groundwater at two private wells, which are located side-gradient and upgradient of the Facility;
- surface water at two locations; and
- four leachate and seep management locations.

Sample analysis includes metals, ammonia-nitrogen, chloride, nitrate, sulfate, cyanide, volatile organic compounds, and phenols. The required analysis for each sampling point is based on the waste material managed in the sample area and an assessment of past sampling results. Chloride and nitrate are established as indicator parameters for release detection because they are primary contaminants associated with the disposal impoundments, and they are not associated with past coal mining impacts. All sample locations, including the two residential wells located approximately ¼ mile (to the west and to the north) of Impoundment 2, are analyzed for these indicator parameters.

As part of permitting requirements for proposed Landfill 3, MAX installed 18 monitoring wells in 2014 around the perimeter of proposed Landfill 3, and in 2019, installed six monitoring wells upgradient of the proposed Landfill 3 location. The wells are screened to monitor the water table (Pittsburgh Limestone), Connelville Sandstone, and Morgantown Sandstone.

Monitoring Assessment

MAX submitted a revised Groundwater Assessment Report (2020 Assessment Report) to PADEP, including an evaluation of historical water quality (from as far back as the 1980s) and an analysis of current conditions (2019 data). PADEP approved the 2020 Assessment Report in June 2020.

An evaluation of the most recent monitoring data from 2019 shows the following environmental conditions.

1. Groundwater

The following contaminants were detected above the Federal drinking water standards, known as Maximum Contaminant Levels (MCLs), promulgated pursuant to Section 42 U.S.C. §§ 300f et seq. of the Safe Drinking Water Act and codified at 40 CFR Part 141, or if there is no MCL for a contaminant, EPA Regional Screening Levels (RSLs) for tapwater set at target cancer risk of 1×10^{-6} or a non-cancer target hazard quotient of 1.

Impoundment 1 Area Wells

Arsenic, chromium, lead, manganese, nickel, and nitrate were detected above the applicable EPA MCL or RSL as follows:

- Arsenic exceeded its MCL of 0.01 mg/L in seven wells, all of which were wells installed to monitor proposed Landfill 3 (MW-LF3 prefix): 1I(R), 1D(R), 2I, 3D, 4I, 5I, and 7S. A maximum concentration of 0.0821 mg/L occurred at 5I.
- Chromium exceeded its MCL of 0.1 mg/L in well WO-16B, with a maximum concentration of 0.605 mg/L.
- Lead exceeded EPA's Lead and Copper Rule action level of 0.015 mg/L only once in well WO-38I at a concentration of 0.02 mg/L.
- Manganese exceeded its RSL of 0.43 mg/L in 10 wells: WO-15, WO-16A, WO-38S, WO-38I, MW-LF3-5S, MW-LF3-5D, MW-LF3-6S, MW-LF3-6D, MW-LF3-7S, and MW-LF3-9S. A maximum concentration of 58.8 mg/L occurred at MW-LF3-5S.
- Nickel exceeded its RSL of 0.39 mg/L in four wells: WO-38S, WO-38I, MW-LF3-5S, and MW-LF3-6S. A maximum concentration of 1.36 mg/L occurred at WO-38S.
- Nitrate exceeded its MCL of 10 mg/L in 10 wells: WO-15, WO-38S, WO-38I, WO-38C, WO-39C, MW-LF3-3D, MW-LF3-5S, MW-LF3-6S, MW-LF3-6D, and MW-LF3-9S. A maximum concentration of 76.27 mg/L occurred at MW-LF3-5S.

Tables 1A and 1B, below, provide a broader historical analysis of the contaminants remaining in the Impoundment 1 Area. Table 1A compares the historical maximum contaminant concentration versus maximum in 2019. Table 1B predicts any trend in contaminant concentrations using the last eight monitoring events in which the contaminant was detected.

Table 1A: Impoundment 1 Area Groundwater Maximum Historical and Maximum 2019 Contaminant Concentrations (mg/L)

Monitoring location	Contaminant	Maximum historical concentration (date)	Maximum 2019 concentration
MW-LF3-5I	Arsenic	0.0893 (2015)	0.0821
WO-16B	Chromium	0.605 (2019)	0.605
WO-38I	Lead	0.06 (2004)	0.02
MW-LF3-5S	Manganese	79.5 (2015)	58.8
WO-38S	Nickel	53.7 (2015)	1.36
MW-LF3-5S	Nitrate	418 (2015)	76.27

Table 1B: Impoundment 1 Recent Groundwater Contaminant Concentration Trends (mg/L)

Monitoring location	Contaminant	Sampling Date	Concentration	Concentration Trend
MW-LF3-5I	Arsenic			None/stable
		6/22/2015	0.0569	
		9/14/2015	0.0893	
		12/17/2015	0.0373	
		3/22/2016	0.0424	
		3/18/2019	0.0765	
		5/29/2019	0.0821	
		9/13/2019	0.0394	
		12/5/2019	0.0754	
WO-16B	Chromium			None/stable
		6/1/2017	0.41	
		8/25/2017	0.6	
		12/6/2017	0.6	
		3/26/2018	0.5	
		6/15/2018	0.58	
		12/11/2018	0.53	
		3/13/2019	0.12	
		5/16/2019	0.605	
WO-38I	Lead			Decreasing
		8/26/2003	0.06	
		11/12/2003	0.05	
		2/7/2004	0.06	
		10/28/2004	0.06	
		12/18/2014	0.01	
		8/30/2017	0.02	
		3/13/2019	0.02	
		6/21/2019	0.002	
MW-LF3-5S	Manganese			None/stable
		6/5/2015	79.5	
		9/14/2015	10.1	
		12/18/2015	0.12	
		3/22/2016	9.32	
		3/18/2019	55.8	

		5/29/2019	58.8	
		9/13/2019	22.9	
		12/5/2019	52.7	
WO-38S	Nickel			Decreasing
		9/7/2018	1.69	
		11/30/2018	1.39	
		3/6/2019	1.35	
		3/18/2019	1.36	
		6/6/2019	1.35	
		9/24/2019	1.32	
		11/18/2019	1.25	
		12/10/2019	1.28	
MW-LF3-5S	Nitrate			Decreasing
		3/12/2015	137.8	
		6/5/2015	418	
		9/14/2015	6.56	
		3/22/2016	12.4	
		3/18/2019	76.27	
		5/29/2019	71.61	
		9/13/2019	15.8	
		12/5/2019	54.56	

Impoundment 2 Area Wells

Manganese and nitrate were detected above the applicable EPA MCL or RSL as follows:

- Manganese exceeded its RSL of 0.43 mg/L in two wells: WO-22 and WO-23. A maximum concentration of 12.2 mg/L occurred at WO-22.
- Nitrate exceeded its MCL of 10 mg/L in three wells: WO-23, WO-27, and WO-28. A maximum concentration of 21.83 mg/L occurred at WO-28.

Tables 2A and 2B, below, provide a historical analysis of the contaminants remaining in the Impoundment 2 Area. Table 2A compares the historical maximum contaminant concentration versus the maximum in 2019. Table 2B predicts any trend in contaminant concentrations using the last eight monitoring events in which the contaminant was detected.

Table 2A: Impoundment 2 Area Groundwater Maximum Historical and Maximum 2019 Contaminant Concentrations (mg/L)

Monitoring location	Contaminant	Maximum historical concentration (date)	Maximum 2019 concentration
WO-22 (within ROI of GW)	Manganese	12.2 (2019)	12.2

pumping)			
WO-28 (pumping well)	Nitrate	960 (2005)	21.83

Table 2B: Impoundment 2 Recent Groundwater Contaminant Concentration Trends (mg/L)

Monitoring location	Contaminant	Sampling Date	Concentration	Concentration Trend
WO-22 (within ROI of GW pumping)	Manganese			Increasing
		6/10/2010	0.197	
		12/3/2010	0.707	
		6/20/2014	0.342	
		12/31/2014	0.493	
		12/20/2016	0.467	
		5/30/2017	0.0324	
		12/1/2017	0.34	
		11/25/2019	12.2	
WO-28 (pumping well)	Nitrate			Increasing
		9/14/2016	1.55	
		3/13/2017	1.116	
		5/30/2017	0.924	
		8/31/2017	0.431	
		12/1/2017	2.52	
		5/17/2019	16.39	
		8/6/2019	19.03	
		11/19/2019	21.83	

Sampling at the two off-Facility residential wells showed no evidence of groundwater contamination from the Facility.

2. Surface Water

Because groundwater discharges to Little Raccoon Run, its surface water is monitored at five locations for nitrate, chloride, as well as metals. None of the samples showed nitrate concentrations above its Pennsylvania Surface Water Quality Criteria, and in 2019, only one out of four samples at location SWTR-1 exceeded Pennsylvania's Surface Water Quality Criteria for chloride of 250 mg/L with a concentration of 486 mg/L. For metals, in 2019, manganese exceeded its Pennsylvania Surface Water Quality Criteria of 1 mg/L once at both SWTR-1 and SWTR-3, with a maximum concentration of 1.24 mg/L occurring at SWTR-1.

Tables 3A and 3B, below, provide a historical analysis of the contaminants remaining in surface

water. Table 3A compares the historical maximum contaminant concentration versus the maximum in 2019. Table 3B predicts any trend in contaminant concentrations using the last eight monitoring events in which the contaminant was detected.

Table 3A: Historical and Maximum 2019 Surface Water Contaminant Concentrations (mg/L)

Monitoring location	Contaminant	Maximum historical concentration (date)	Maximum 2019 concentration
SWTR-1	Chloride	1190 (2015)	486
SWTR-1	Manganese	2.6 (2015)	1.24

Table 3B: Recent Surface Water Contaminant Concentration Trends (mg/L)

Monitoring location	Contaminant	Sampling Date	Concentration	Concentration Trend
SWTR-1	Chloride			None/stable
		3/11/2015	108	
		6/15/2015	105	
		9/4/2015	1190	
		12/3/2015	444	
		3/21/2019	96.3	
		5/28/2019	83.5	
		9/15/2019	486	
		12/4/2019	88.4	
SWTR-1	Manganese			None/stable
		3/11/2015	0.405	
		6/15/2015	0.127	
		9/4/2015	2.6	
		12/3/2015	1.31	
		3/21/2019	0.618	
		5/28/2019	0.109	
		9/15/2019	1.24	
		12/4/2019	0.788	

Cleanup Actions

1. Impoundments 1 and 1A

The disposal impoundments were initially closed in 1979 (Impoundment 1A) and in 1981 (Impoundment 1); however, subsequent sampling data indicated groundwater contamination

existed downgradient of the unlined closed impoundments and consolidation of waste material led to subsidence of the existing impoundments' covers. Because of these factors, MAX voluntarily entered into the 2006 COA with PADEP to re-close the impoundments to RCRA requirements. Under the oversight of PADEP, MAX has been re-closing the impoundments in phases by rebuilding the surface grading with residual waste, then installing a low-permeable cap on each unit to seal off precipitation infiltration. The Impoundment 1 re-closure was completed in summer 2021, and the Impoundment 1A re-closure is anticipated to be completed by early 2022. It is anticipated that, with final RCRA closure of Impoundments 1 and 1A, contaminant concentrations in groundwater downgradient of the impoundments will continue to decrease.

2. Impoundment 2

In accordance with the 1985 COA, Impoundment 2 ceased operation in 1987. Cover material was placed over the waste surface, and the surface was monitored for settlement from consolidation of the waste in the impoundment. Because of continuing consolidation, PADEP allowed MAX to regrade the surface of the impoundment with residual waste to assure long-term positive drainage prior to final capping. A RCRA cap was then installed over the entire disposal area. Final closure was completed with PADEP approval in 2008.

3. Groundwater Remediation

The pump and treat groundwater remediation system has treated contaminated groundwater downgradient of Impoundment 2 for over 30 years. Accumulated groundwater is withdrawn from three pumping wells and conveyed to the on-site wastewater treatment plant. A time-trend analysis of groundwater over time shows that water quality downgradient of Impoundment 2 continues to improve over time; however, as noted above, manganese and nitrate concentrations downgradient of Impoundment 2 continue to exceed their applicable RSL and MCL, respectively.

Section 4: Corrective Action Objectives

1. Soil/ Waste Material:

EPA's Corrective Action Objective for soil/waste material is to prevent unacceptable exposure to human health and the environment from any hazardous constituents remaining in the soil/waste material. Except for Impoundment 1A, which must be re-closed in accordance with the 2006 COA, the contaminated soil/waste material at the Facility is already contained within a capped containment structure, and therefore, satisfies this objective.

2. Groundwater:

EPA expects final remedies to return groundwater to its maximum beneficial use within a timeframe that is reasonable given the particular circumstances of the facility. For facilities where aquifers are either currently used for water supply or have the potential to be used for water supply, EPA will use MCLs as the cleanup standards for groundwater, or RSLs for contaminants that do not have an MCL.

Therefore, EPA's Corrective Action Objectives for Facility groundwater is to restore the groundwater to drinking water standards, and until such time as drinking water standards are restored, to control exposure to the hazardous constituents remaining in the groundwater by requiring the continued implementation of the groundwater monitoring program and compliance with and maintenance of groundwater use restrictions.

3. Surface Water:

Contaminants remain in surface water at levels that create an unacceptable risk to human health and the environment. Therefore, EPA's Corrective Action Objective for surface water is to prevent the migration of contaminants to surrounding surface water at concentrations that may exceed Surface Water Quality Criteria.

Section 5: Final Remedy

EPA's Final Remedy for the Facility consists of the following components:

1. Soil/Waste Material:

EPA's Final Remedy for soil/waste material consists of the following:

- The Facility property shall be restricted to commercial and/or industrial purposes and shall not be used for residential purposes unless it is demonstrated to EPA that such use will not pose a threat to human health or the environment or adversely affect or interfere with the Final Remedy, and EPA provides prior written approval for such use.
- For Impoundment 2, operate and maintain the existing cap over the waste disposal area in accordance with the 1985 COA and an EPA-approved Post-Remediation Care Plan (PRCP); and
- For Impoundments 1 and 1A, install, operate, and maintain a RCRA cap in accordance with the 2006 COA and an EPA-approved PRCP.

2. Groundwater:

Ongoing groundwater monitoring shows sporadic exceedances of MCLs or RSLs, as applicable. Remaining groundwater contamination primarily occurs downgradient of Impoundment 1. Analysis of historical trends in groundwater contamination shows a general decrease in contaminant concentrations over time. Following completion of re-closure of Impoundments 1 and 1A, groundwater conditions are expected to continue to improve.

Therefore, EPA's Final Remedy for groundwater consists of:

- monitored natural attenuation outside the pump-and-treat system's zone of influence downgradient of Impoundment 2 in accordance with an EPA-approved PRCP until MCLs, or RSLs for contaminants that do not have MCLs, are achieved;
- continued operation of the groundwater pump-and-treat and leachate collection systems in accordance with an EPA-approved PRCP; and
- a groundwater use restriction prohibiting potable use of groundwater unless it is demonstrated to EPA that:
 - such use will not pose a threat to human health or the environment or adversely affect or interfere with the Final Remedy selected by EPA, and EPA provides prior written approval for such use.

3. Surface Water:

Ongoing stream sampling shows sporadic exceedances of Surface Water Quality Criteria. Analysis of historical trends shows general improvement of surface water quality over time, and EPA anticipates that completion of Impoundments 1 and 1A re-closure along with continued operation of the leachate collection system will further reduce the contaminant levels migrating to Little Raccoon Run.

Therefore, EPA's Final Remedy requires, until Surface Water Quality Criteria are achieved, surface water monitoring in accordance with an EPA-approved PRCP to verify that contaminant levels continue to decrease.

If, however, monitoring results show that contaminant levels are not decreasing, EPA may determine that additional corrective measures are necessary to protect human health and/or the environment. EPA will then solicit public comments on any such additional corrective measures prior to including them in the Final Remedy for the Facility.

Section 6: Evaluation of Final Remedy

This section provides a description of the criteria EPA used to evaluate the Final Remedy consistent with EPA guidance. The criteria are applied in two phases. In the first phase, EPA evaluates three decision threshold criteria as general goals. In the second phase, for those remedies which meet the threshold criteria, EPA then evaluates seven balancing criteria.

Threshold Criteria	Evaluation
1) Protect human health and the environment	The primary human health and environmental threats posed by the disposal areas are related to direct contact with the waste and contamination remaining in place as well as any hazardous constituents leaching to the groundwater. These threats have been mitigated by the monitoring and closure activities required by PADEP under the COAs, and EPA's Final Remedy will continue to protect human health and the environment by requiring compliance with an EPA-approved PRCP and the COAs.
2) Achieve media cleanup objectives	Media cleanup objectives for soil were achieved and will continue to be achieved by consolidating, stabilizing, and capping the waste material. Groundwater objectives, MCLs or RSLs, as applicable, will be achieved by continued operation of the groundwater pump-and-treat and leachate collection systems as well as monitored natural attenuation. Completion of Impoundments 1 and 1A re-closure along with continued operation of the leachate collection system are expected to decrease surface water contamination. Surface water monitoring will also ensure that surface water contaminants continue to decrease to achieve Surface Water Quality Criteria.
3) Remediating the Source of Releases	Remediation of source areas was achieved by consolidating, stabilizing, and capping the waste material. In addition, groundwater monitoring and site inspections will continue under the COAs and an EPA-approved PRCP to detect any releases that may occur in the future.

Balancing Criteria	Evaluation
4) Long-term effectiveness	Facility use restrictions will maintain protection of human health and the environment over time by controlling exposure to contaminated waste and soil.
5) Reduction of toxicity, mobility, or volume of the Hazardous Constituents	Reduction of toxicity, mobility, and volume of hazardous constituents has been achieved through closure and capping of the impoundments in accordance with RCRA requirements, as well as operation of the groundwater and leachate collection and treatment systems.
6) Short-term effectiveness	EPA's Final Remedy does not involve any activities, such as construction or excavation that would pose short-term risks to workers, residents, and the environment.
7) Implementability	EPA's Final Remedy is readily implementable. EPA's Final Remedy requires capping and monitoring that Facility property owners may implement in accordance with the existing COAs and an EPA-approved PRCP.
8) Cost	The Final Remedy is cost effective, as it does not require any further corrective actions other than maintaining compliance with existing permits and orders. Also, the existing COAs require financial assurance, and EPA's Final Remedy does not require additional financial assurance.
9) Community Acceptance	EPA solicited public comments on the SB from August 4, 2021-October 14, 2021. The public comments received are included as Attachment A, and EPA's response are included in Attachment B.
10) State/Support Agency Acceptance	PADEP has reviewed and concurred with the Final Remedy.

Overall, based on the evaluation criteria, EPA has determined the Final Remedy meets the threshold criteria and provides the best balance of tradeoffs with respect to the evaluation criteria.

Section 7: Financial Assurance

EPA has evaluated whether financial assurance for corrective action is necessary to implement EPA's Final Remedy at the Facility. PADEP requires financial assurance in accordance with the COAs. EPA has determined that additional financial assurance is not required.

Section 8: Signature

Based on the Administrative Record compiled for the corrective action at the Facility, I have determined that the Final Remedy selected in this Final Decision is protective of human health and the environment.

Date: 12/16/2021

Dana Aunkst, Director
Land, Chemicals, and Redevelopment Division
US EPA, Region III

Attachments

Figure 1 - Facility Location

Figure 2 – Facility Layout

Attachment A – Public Comments on the Statement of Basis

Attachment B – EPA’s Response to Public Comments on the Statement of Basis

Section 9: Index to Administrative Record

Consent Order – Bulger Facility, prepared by Pennsylvania Department of Environmental Resources, May 24, 1985.

Historical Environmental Audit – Bulger and Yukon Sites, prepared by The Chester Engineers, June 1992.

Consent Order and Agreement, prepared by Pennsylvania Department of Environmental Protection, September 11, 2006.

First Amendment to September 11, 2006 Consent Order and Agreement, prepared by Pennsylvania Department of Environmental Protection, February 3, 2014.

Solid Waste Permit No. 301359, prepared by Pennsylvania Department of Environmental Protection, February 3, 2014.

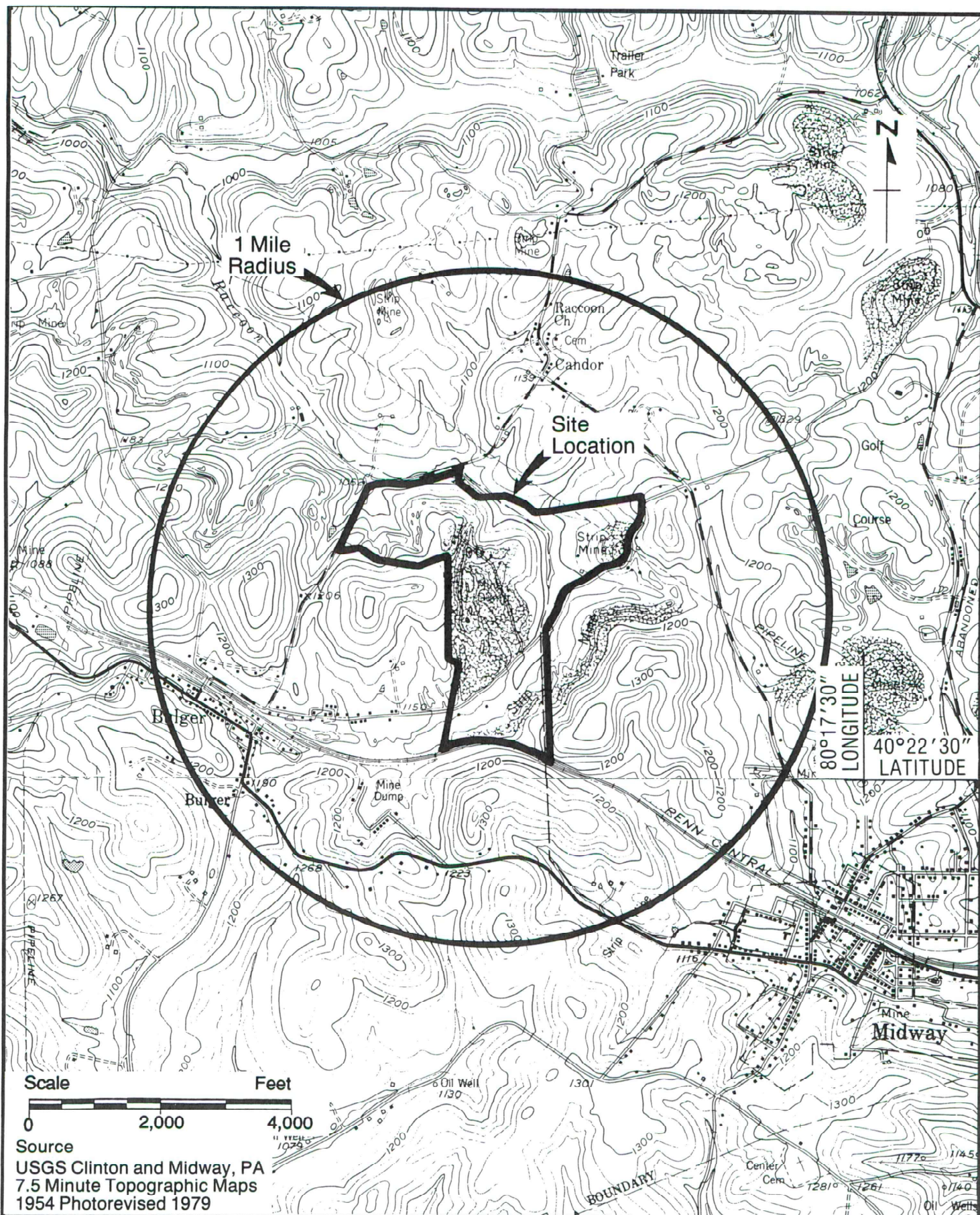
MAX Fact Sheet, prepared by MAX Environmental, June 2017.

Consent Order and Agreement, prepared by Pennsylvania Department of Environmental Protection, April 6, 2018.

NPDES Permit No. PA0044326, prepared by Pennsylvania Department of Environmental Protection, September 17, 2019.

Groundwater Assessment – Bulger Facility, prepared by BAI Group, June 2020.

Response to April 27, 2021 Request for Information email, prepared by MAX, April 29, 2021.



TheChesterEngineers

DWN.BY: JS	SCALE: As Shown	DATE
CHK'D.BY: CH	APPR.BY:	6/2/92

SHEET NO.

DWG. NO.

Figure II-1

**Mill Service Inc.
Bulger Facility, Bulger PA
Site Location**


1. NEW WELLS MW-LF3-11(R), MW-LF3-1D(R), MW-LF3-7X, MW-LF3-7S, MW-LF3-8S AND MW-LF3-9S WERE SURVEYED BY ENERCON ON MARCH 11, 2019.

1. NEW BELLS (WELL-1108), MW-1-F3-100, MW-1-F3-76, MW-1-F3-75, MW-1-F3-86 AND MW-1-F3-95 WERE SURVEYED BY EXERCISE ON MARCH 11, 1979.
2. TEN (10) MONITORING BELLS IN THE MONITORING WELL NETWORK ARE PROPOSED FOR ADDITIONAL QUALITY ANALYSES SPECIFIC TO LANDFILL 5 AND MAY NEED TO BE EXTENDED BASED ON FINAL LANDFILL DESIGN AND PROXIMITY TO THE LANDFILL BERM. WELL MW-1-F3-45 WILL REMAIN IN-PLACE UNTIL CONSTRUCTION OF LANDFILL 5 WILL BE COMPLETED.
3. OTHER BELLS PROPOSED FOR SITEWIDE MONITORING OF THE EXISTING IMPROVEMENTS WILL CONTINUE TO BE MONITORED AND MAINTAINED AS NECESSARY. MONITORING OF THE EXISTING LANDFILL 1 AND MW-1-F3-95 WILL BE EXTENDED AND/OR AMENDED AS NECESSARY AS LANDFILL 1 IS CONSTRUCTED.

[illegible]

BASEMAP	LEGEND
	PROPERTY BOUNDARY (SEE BASEMAP NOTE 2)
	APPROXIMATE ADJACENT PROPERTY LINE (SEE BASEMAP NOTE 2)
	MUNICIPAL BOUNDARY (SEE BASEMAP NOTE 3)
	PROPOSED LANEWAY 3' POINT OF IMPASS
	PROPOSED LANEWAY 3' LIMIT OF IMPASS
	EXISTING WETLAND BOUNDARY (SEE BASEMAP NOTE 1)
	EXISTING WATER MANAGEMENT INFRASTRUCTURE
	EXISTING INTERSECTION NO. 1 LOCATED INTERSECTOR TRENCH/CORNERWAKE
	EXISTING GRADEWORK INTERSECTION
	EXISTING GRADEWORK FORCE MAIN (OF SIZE 40 P.C.)
	EXISTING JUMPED DISCONTINUOUS OUTFALL LINE (SEE BASEMAP NOTE 5)
	FEMA 100 YEAR FLOODPLAIN (SEE BASEMAP NOTE 6)
	WETLANDS BOUNDARY (SEE BASEMAP NOTE 4)
	WATERCOURSE
	PAVED ROAD
	UNPAVED ROAD
	WATER LINE INCLUDING "A" CITY WATER
	COMMUNICATIONS LINE (TELEPHONE OR FIBER OPTIC)
	COLUMBIA GAS LINE
	ELECTRIC LINE
	GASOLINE OR RIGHT-OF-WAY
	GROUNDWATER MONITORING WELL
	GROUNDWATER PUMPING WELL/MONITORING WELL
	STATIONING MARKERS
	FLOW MEASUREMENT POINTS
	FLOW REVERSAL POINTS



	REVISIONS					
MAX ENVIRONMENTAL TECHNOLOGIES, INC. BULGER LANDFILL 3 - RESIDUAL WASTE LANDFILL SMITH TOWNSHIP WASHINGTON COUNTY PENNSYLVANIA			DATE	9/2/21		
			DRAWN BY	KEF		
			CHECKED	EAL		
			BAT DRAWING NO.	MAX-4003009		
			CHECKED	FIGURE 2		
State College Office * Delaware Valley Office			MONITORING WELL LOCATION MAP			

ATTACHMENT A
PUBLIC COMMENTS ON THE STATEMENT OF BASIS



[Sent via email]

August 27, 2021

Griff Miller
U.S. Environmental Protection Agency Region III
3LD20
1650 Arch Street
Philadelphia, PA 19103

**Re: MAX Environmental Technologies – Bulger Facility
Draft RCRA Corrective Action Statement of Basis**

Dear Mr. Miller,

We have reviewed the draft RCRA corrective action statement of basis (“SB”) received on July 26, 2021, and have the following comments as noted below. Since a draft permit did not accompany the SB and evidently has not been prepared, we request the opportunity to review any draft permit prior to final permit issuance. In the absence of a draft permit to review, we request that EPA prepare a final permit that incorporates our comments as appropriate.

1. As a matter of clarification, solid waste permit 301359 only addresses residual waste processing and does not include any conditions related to groundwater and surface water monitoring, remediation/closure work or leachate management. The April 6, 2018 COA between MAX and DEP only addresses the management of on-site generated wastewater treatment plant sludge. There are several references to these two documents throughout the SB that MAX believes should be removed if they do not apply to the corrective action determination.
2. Page 2, ¶4, we request that the word “disposal” be replaced with “beneficially use” since the COAs between MAX and DEP that have allowed residual waste to rebuild the grade on the facility impoundments prior to capping refer to this practice as beneficial use. Also, we request that reference to electric arc furnace dust be removed since we have not used this waste for any re-closure work.
3. Page 3, ¶ Waste Treatment and Storage Units: first sentence, replace “tanks” with “containers” since permit 301359 only authorized residual waste processing in

containers. Second sentence should be revised to read " Treatment involved residual waste solidification". The other waste treatment processes were not authorized by DEP as part of permit 301359 (although those other processes were part of the facility's RCRA interim status hazardous treatment activities at one time). The third sentence should be deleted since permit 301359 does not authorize those activities (although those activities were part of the facility's RCRA interim status hazardous waste management at one time).

4. Page 3, ¶ Leachate Management/Wastewater Treatment Plant, first bullet item: treated effluent is discharge under NPDES permit to Raccoon Creek, not Little Raccoon Run.
5. Page 6, Table 2: MAX disagrees with EPA's interpretation of trends of groundwater previously impacted by past operation of closed Impoundment 2 as the data shown indicates a stable trend for manganese and a decreasing trend for nitrate.
6. Pages 6 and 7, ¶ Surface Water: MAX does not believe that the detection of chloride and manganese in Little Raccoon Run is a definite indication of impact from groundwater that was impacted by past facility disposal operations as there are remnants of past strip mining at the headwaters of that stream
7. Page 7, Table 3: MAX disagrees with EPA's interpretation of trends of surface water (Little Raccoon Creek) chemical concentrations for chloride as the data shown indicates a decreasing trend.
8. Page 7, ¶ Cleanup Actions Impoundments 1 and 1A: As a matter of clarification, MAX entered into the 2006 COA with DEP on a voluntary basis to reclose these impoundments with a RCRA cap after rebuilding the grades with residual waste. Also, as of the date of this letter, MAX has completed closing the Phase 6 section and expects to complete the final Phase 7 section closure in 2022.
9. Page 9, ¶ Soil: We are not aware of any soil contamination at the Bulger facility and are uncertain as to why EPA has included this paragraph. Please review and correct as appropriate.
10. Page 9, ¶¶ 2 Groundwater and 3 Surface Water: MAX objects to the proposal to restore groundwater to drinking water standards or ensure that DEP or EPA surface water quality criteria are not exceeded because there have been other sources of impacts to both environmental media (primarily past mining activity). MAX will



continue with site remediation but proposes to make a demonstration to EPA (and DEP) that remediation from impacts from past waste disposal activities is complete even though there may be lingering impacts from past mining activity.

11. Page 10, ¶ Soil: As stated above, we are not aware of any soil contamination at the Bulger facility, and this section appears to have been added in error. Please correct this error. To the extent that EPA is referring to the closed impoundments, please note that reference to solid waste permit 301359 should be removed since that permit has no bearing on closure or post-closure care of the impoundments.
12. Page 10, ¶ Groundwater: As stated above, MAX proposes to demonstrate (at some point in the future) that groundwater impacted from past waste disposal activities has been sufficiently remediated, regardless of any lingering impacts from past mining activities. Also, please note that our solid waste and NPDES permit have no bearing on our groundwater monitoring and remediation activities so references to those documents should be removed.
13. Page 11 , ¶ Surface Water: reference to our solid waste and NPDES permits should be removed since they have no bearing on surface water monitoring activities.
14. Pages 11 and 12, Section 6 table: reference to solid waste permit 301359 should be removed since that permit has no bearing on impoundment closure and post closure or site monitoring and remediation.
15. Page 12 Section 7: financial assurance for activities covered by EPA's proposed corrective action remedies is governed by the closure and beneficial reuse COAs, not our solid waste permit.

If you have any questions on our comments or need additional information, please let us know.

Sincerely,

A handwritten signature in blue ink that reads "Carl Spadaro".

Carl Spadaro
Environmental General Manager

Cathy and Chris Lodge
257 Meinrad Drive
Bulger, PA 15019
tophcat@gmail.com

October 14, 2021

Griff Miller, EPA Project Manager
miller.griff@epa.gov

**RE: +Proposed RCRA Corrective Action - Cleanup Proposal for MAX
Environmental Technologies in Bulger, PA - EPA ID: PAd059087072**

Mr. Miller,

Max Environmental Services (Max)- formerly Mill Service straddles both Robinson and Smith Townships in Washington County, PA. It is located next to Little Raccoon Run and the Panhandle rail trail.

Bulger, a small rural town in Smith Township, is considered the host municipality based on Max's entrance and receives a host fee from Max based on the number of waste trucks into the facility.

Robinson and Smith Township residents, like all Pennsylvanians, have a right to clean air, pure water and to the preservation of the natural, scenic, historic and esthetic values of the environment. We live in a Commonwealth and therefore, the public natural resources are the common property of the people in Pennsylvania, so says, Article 1 §27 of the Pennsylvania Constitution.

Keeping this in mind, please accept these comments addressing the United States Environmental Protection's RCRA Corrective Action- Cleanup Proposal for Max Environmental Bulger Facility.

We appreciate and encourage corrective action by the United States Environmental Protection (EPA) in remediation of the Max-Bulger site.

The biggest ask, residents request is for Max to provide public water to residents ½ mile from the facility based on a 1990 promise.

Max, as you know, has been in our area since 1958. It apparently began its long history by illegally dumping Kolene drums at the Bulger facility in the early 1960's. Another burial of drums is described in a January 12, 1995 EHB Docket No. 92-106-MJ where a Compliance Panel revealed that in the early 1980's Max Bulger (then Mill Service) buried drums and failed to properly report the incident to the Pennsylvania Department of Environmental Protection (DEP, then DER) or to the EPA.

In 1995, Leon Kuchinski, Chief of the Division of Enforcement with the Department's Bureau of Waste Management who also served on the Compliance Panel which reviewed Mill Service's compliance history in connection with reinstating their state permits even after toxic buried drums were uncovered at the Bulger facility acknowledged **there is a long history of violations** at the Max facilities (even back in the 1990's).

At the time of the 1995 EHB Docket No. 92-106-MJ, Carl Spadaro was an engineer in the Department's Waste Management Section.

On October 19, 1990 residents of Bulger received a letter from the company's Vice President, Carl Bender. This letter appears to promise a public water supply to residents living ½ mile of the facility. This letter was shared with local officials in Smith Township and again resurfaced in 2007 when Max applied for another approval. Smith Township Board of Supervisors requested Max revisit providing public water for nearby residents in a letter dated March 16, 2007 to Max.

Max never addressed Township's concerns. Water was not provided to local residents living near a facility that has trouble staying in compliance with regulations. There are 7 homes in Smith Township and 2 in Robinson Township within ½ mile of the facility that are on well water. **Through EPA RCRA corrective action, it is requested that Max's 1990 promise of public water for residents within ½ mile be honored finally!**

Over the years residents of Robinson and Smith Townships are aware of Max's residual waste truck spills around the facility at State Road 980, Beech Hollow Road, Candor Road and on Bulger Candor Road where it meets Bulger Arch Road.

Heavy rainfall causes some basements along these roads to flood, potentially exposing residents to chemicals or waste from Max's truck spills.

It has been said that Max provides water to at least one of the homes near the facility. But, why not all those within the ½ mile radius of the facility's site? **Through EPA RCRA corrective action, it is requested that Max's 1990 promise of public water for residents within ½ mile be honored finally!**

Additionally, throughout the company's disposal history there have been a variety of issues from spontaneous combustion of alumina waste as seen by DEP in 2011 to an open fly ash pit that had ash swirling in the air at the facility that I witnessed during a site tour with Max's Carl Spadaro and Ken Interval in 2016.

Many violations to Max's state permits resulted in Consent Orders, Consent Assessment of Civil Penalties and Agreements, Opinions and RCRA Corrective Action.

To name a few, below are the dates of such documents:

- May 24, 1985
- January 12, 1995
- February 5, 1999
- September 11, 2006
- January 27, 2012
- February 9, 2012
- April 17, 2013
- February 3, 2014
- April 6, 2018

In 2011 Carl Spadaro left DEP to join Max. Residents like myself felt betrayed and that our DEP contact person on Max issues was no longer working on the side of protecting our health, safety and environment.

Also in 2011, Max sought approval from DEP to begin accepting Marcellus shale waste at the Bulger facility.

This company, which has never been able to stay in compliance, was requesting permission to dispose of another kind of waste stream, one that has TENORM or radioactive material in it. Those of us on well water became extremely worried.

We have been repeatedly told that trucks entering the facility visit a radiation detection monitor. This is of little comfort as it is easy to drive around it or dilute a load and return with more trucks. **The result is the same, radioactive material is laid to rest in Bulger! There is no check for radium 226 or 228 in any residents' well water, groundwater, surface water, leachate or effluent testing that residents have been able to find. Where is our protection?**

Over the years, Max has shown an inability to stay in compliance, yet it continues to obtain DEP and local approvals. Below are several years of DEP violations even with Consent Orders and Agreements in place. This is not a complete list, there are more unfortunately.

December 9, 2011

- DEP “observed several bags of ‘alumina’ waste spontaneously combusting with a visible flame on Impoundment No. 1” during an inspection.
- Subsequent inspections later that month revealed the “alumina waste emitting strong ammonia odors sufficient to cause eye and throat irritation” with a “potential to create a danger to the public health, safety or the environment.”

August 12, 2014

- Person or municipality has violated Act 97, Department regulation, order, or term of permit.
- Handles solid waste contrary to rules and regulations, or orders of the Department, or any permit condition, or in any manner as to create a public nuisance.
- Person or municipality operates a facility without a permit.

July 20, 2017 NPDES

- Failure to monitor pollutants as required by the NPDES permit,
- Violation of effluent limits in Part A of permit,
- Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance

April 6, 2018

- Documentation of claims that materials are not solid wastes or are conditionally exempt. Fee paid.

June 29, 2018 NPDES

- Violation of effluent limits in Part A of permit, with civil penalties!

The most recent notice of violations occurred in July 13, 2021 with the following violations:

- Person or municipality has violated Act 97, Department regulation, order, or term of permit.
- Handles solid waste contrary to rules and regulations, or orders of the Department, or any permit condition, or in any manner as to create a public nuisance.
- Person or municipality operates a facility without a permit.

September 10, 2020 Max petitioned DEP's Solid Waste Advisory Committee (SWAC) to de-list part of its waste stream. Max requested reclassifying its waste from hazardous to non-hazardous.

It should be noted that SWAC members consist primarily of individuals in the solid waste industry. During the meeting several members needed to recuse their vote as their companies also had a petition to de-list a waste stream before the boards.

I attended the September 2020 SWAC meeting. I was very disappointed and angry at the procedural error that occurred during the public meeting.

SWAC voted to move Max's petition on to the Environmental Quality Board (EQB), closed the meeting and opened their Recycling Committee meeting and then took public comments.

My comments pointed to resident's concerns that declassifying sludge created after collecting runoff from the existing cocktail of wastes at Max could pose a hazard to the community. **We feel that declassifying the waste from Hazardous to Non- Hazardous would mischaracterize a waste stream created from many wastes of many industries, most recently the Tenorm or radioactive waste from the Marcellus shale industry.**

Max admits that 75% of their waste now comes from the Marcellus shale industry. The 2020 PA Attorney General Grand Jury Report sighted DEP's lack of ability to provide oversight of the oil and gas industry waste stream.

Max's petition requests even less oversight by DEP. Yet, Max has never been able to stay in compliance consistently over the years of operation with existing DEP regulations. AG Josh Shapiro's findings concern residents living near Max's residual waste landfill in Bulger where 75% of the waste accepted at the landfill comes from the oil and gas industry waste stream.

My September 2020 SWAC comments were not made part of the record for the EQB to consider. September 21, 2021 EQB approved Max's request to de-list.

November 2020, Max began the application process for yet another landfill at the Bulger site. Landfill #3 (LF3) is proposed for the eastern side of the property adjacent to Little Raccoon Run, close to the Panhandle rail trail and next to the Robinson Township line.

Max's 2021 revised application submitted for LF3 shows a footprint adjustment which appears to place part of the new landfill on top of Impoundment 1.

Will this create a vertical waste increase in the area of overlap?

Can the Impoundment 1 cap support the activity associated with constructing LF3 on top of it? 6

Local residents are frustrated with Max. We don't want another landfill which probably will not stay in compliance with state approved permits or local approvals.

We are concerned for our health, safety and environment. We encourage Max to be good neighbors and honor promises of public water made in 1990 to those living ½ mile from the site.

EPA involvement is a welcomed relief. DEP does not seem capable of making Max get or stay in compliance.

We appreciate and encourage corrective action by the EPA in remediation of the Max-Bulger site.

Respectfully submitted,

Cathy Lodge- tophcat@gmail.com

Along with Robinson and Smith Township residents:

Brenda and Nolan Vance- blvance71@yahoo.com

Amy Shuler- Amyschulershaw2@gmail.com

Tom Pascutic- tompas1993@hotmail.com

Pam and Charles Dove- midov1@windstream.net

Pamela and Raymond Scruppi- pammypresley@gmail.com

Tracey Kampian- kampiant@yahoo.com

Dave and Jan Thomas- jthomas2007@windstream.net

ATTACHMENT B

EPA'S RESPONSE TO PUBLIC COMMENTS ON STATEMENT OF BASIS

RESPONSE TO COMMENTS ON STATEMENT OF BASIS

On August 4, 2021, EPA issued a Statement of Basis (SB) in which it announced its proposed remedy for the Facility. Consistent with public participation requirements under RCRA, EPA requested comments from the public on the proposed remedy. The commencement of a thirty (30)-day public comment period was announced in the *Observer-Reporter* on August 4, 2021 and on the EPA Region III website. The public comment period was subsequently extended to October 14, 2021 via an additional announcement on the EPA website and in the *Observer-Reporter* on September 3, 2021. The public comment period ended on October 14, 2021.

EPA received 19 comments from two commenters on the proposed remedy described in the SB. The comments in their entirety are provided in Attachment A of this Final Decision. Each comment is summarized and followed by EPA's response. EPA made several minor changes to the proposed remedy based on the comments received. No significant changes to the proposed remedy were made. Therefore, the remedy proposed in the SB, with minor modifications, is the Final Remedy selected by EPA for the Facility.

EPA's responses to the comments are as follows:

A. Mr. Carl Spadaro of MAX Environmental, Inc. submitted the following comments on the SB via letter to Mr. Griff Miller, EPA, dated August 27, 2021. EPA has carefully reviewed these comments and found that they merited minor modifications to the proposed remedy as detailed below.

1. Comment: *As a matter of clarification, solid waste permit 301359 only addresses residual waste processing and does not include any conditions related to groundwater and surface water monitoring, remediation/closure work or leachate management. The April 6, 2018 COA between MAX and DEP only addresses the management of on-site generated wastewater treatment plant sludge. There are several references to these two documents throughout the SB that MAX believes should be removed if they do not apply to the corrective action determination.*

EPA Response: EPA agrees that the Corrective Action requirements in the proposed remedy go beyond the requirements in the solid waste permit and COAs, though some portions of the COAs may satisfy Corrective Action program requirements. Therefore, EPA has removed most references to these documents in the Final Decision and required that operation and maintenance of the impoundment caps as well as groundwater and surface water monitoring be conducted in accordance with an EPA-approved Post-Remediation Care Plan.

2. Comment: *Page 2, paragraph 4, we request that the word "disposal" be replaced with "beneficially use" since the COAs between MAX and DEP that have allowed residual waste to rebuild the grade on the facility impoundments prior to capping refer to this practice as beneficial use. Also, we request that reference to electric arc furnace dust be removed since we have not used this waste for any re-closure work.*

EPA Response: EPA acknowledges that the COAs state that MAX may place “off-site generated beneficial use residual waste” as an intermediate cover that rebuilds the grade on the impoundments prior to capping. EPA has replaced the word “disposal” with the word “reuse” and included the following explanatory language in the Final Decision: “Since the early 2000s, the Pennsylvania Department of Environmental Protection (PADEP) has allowed MAX to reuse some treated residual wastes to rebuild the grade on the Facility impoundments prior to capping as part of the impoundment closures.”

3. Comment: *Page 3, paragraph Waste Treatment and Storage Units: first sentence, replace “tanks” with “containers” since permit 301359 only authorized residual waste processing in containers. Second sentence should be revised to read “Treatment involved residual waste solidification”. The other waste treatment processes were not authorized by DEP as part of permit 301359 (although those other processes were part of the facility’s RCRA interim status hazardous treatment activities at one time). The third sentence should be deleted since permit 301359 does not authorize those activities (although those activities were part of the facility’s RCRA interim status hazardous waste management at one time).*

EPA Response: EPA has made the requested changes in the Final Decision.

4. Comment: *Page 3, paragraph Leachate Management/Wastewater Treatment Plant, first bullet item: treated effluent is discharge under NPDES permit to Raccoon Creek, not Little Raccoon Run.*

EPA Response: EPA has made the requested change in the Final Decision.

5. Comment: *Page 6, Table 2: MAX disagrees with EPA’s interpretation of trends of groundwater previously impacted by past operation of closed Impoundment 2 as the data shown indicates a stable trend for manganese and a decreasing trend for nitrate.*

EPA Response: As explained in the text that introduces Tables 1-3, EPA’s interpretation of trends in groundwater is based on the data from the last eight monitoring events in which the contaminant was detected. To provide greater clarification, EPA added Tables 1B and 2B to the Final Decision which include the data used to predict these trends in groundwater in the Impoundment 1 and Impoundment 2 areas, respectively, using EPA’s Groundwater Statistics Tool, available at: <https://www.epa.gov/superfund/completing-groundwater-response>.

6. Comment: *Pages 6 and 7, paragraph Surface Water: MAX does not believe that the detection of chloride and manganese in Little Raccoon Run is a definite indication of impact from groundwater that was impacted by past facility disposal operations as there are remnants of past strip mining at the headwaters of that stream.*

EPA Response: Sheet 9 of the June 2020 Groundwater Assessment shows approximate areas of elevated chloride concentrations in groundwater downgradient of Impoundment 1 (and Impoundment 2) and, more specifically, high chloride concentrations in the wells

nearest surface water sampling point SWTR-1. For that reason, EPA believes that groundwater impacted by the Facility is discharging to the creek and contributing to surface water quality exceedances. Please also see EPA's response to Comment 10, below, with respect to a demonstration that MAX is not the source of chloride and manganese contamination in groundwater.

Therefore, EPA has not modified the language in the Final Decision from that proposed in the SB.

7. Comment: *Page 7, Table 3: MAX disagrees with EPA's interpretation of trends of surface water (Little Raccoon Creek) chemical concentrations for chloride as the data shown indicates a decreasing trend.*

EPA Response: As explained in the text that introduces Tables 1-3, EPA's interpretation is based on the data from the last eight monitoring events in which the contaminant was detected. As stated in EPA's response to Comment 5, above, to provide greater clarification, "B" tables have been added to Tables 1-3. Table 3B includes all data used to predict these trends in surface water, which were determined using the statistical tool available at: <https://www.epa.gov/superfund/completing-groundwater-response>.

8. Comment: *Page 7, paragraph Cleanup Actions Impoundments 1 and 1A: As a matter of clarification, MAX entered into the 2006 COA with DEP on a voluntary basis to reclose these impoundments with a RCRA cap after rebuilding the grades with residual waste. Also, as of the date of this letter, MAX has completed closing the Phase 6 section and expects to complete the final Phase 7 section closure in 2022.*

EPA Response: EPA has revised this section accordingly in the Final Decision.

9. Comment: *Page 9, paragraph Soil: We are not aware of any soil contamination at the Bulger facility and are uncertain as to why EPA has included this paragraph. Please review and correct as appropriate.*

EPA Response: EPA agrees that there is no evidence of widespread soil contamination at the Facility. EPA attempted to address the waste material remaining at the Facility under soil media because the waste material is primarily solids and has been land disposed. EPA's intent with this paragraph (and the Soil paragraph mentioned in Comment 11, below) is to ensure that unacceptable exposures to waste material within the former impoundments does not occur to protect human health and the environment.

To provide greater clarity, EPA has modified the language in the Final Decision to explain the Final Remedy encompasses soil/waste material at the Facility.

10. Comment: *Page 9, paragraph 2 Groundwater and 3 Surface Water: MAX objects to the proposal to restore groundwater to drinking water standards to ensure that DEP or EPA surface water quality criteria are not exceeded because there have been other sources of impacts to both environmental media (primarily past mining activity). MAX will continue*

with site remediation but proposes to make a demonstration to EPA (and DEP) that remediation from impacts from past waste disposal activities is complete even though there may be lingering impacts from past mining activity.

EPA Response: EPA notes the comment and its response to Comment 6, above. MAX may submit to EPA a demonstration that contamination above drinking water standards in groundwater and state surface water quality criteria are solely the result of past mining impacts or other non-Facility related circumstances or that these other sources make it technically impracticable to achieve drinking water standards and Pennsylvania Surface Water Quality Criteria. EPA will consider that demonstration, and if EPA agrees, EPA will modify the Final Remedy, accordingly, provided all necessary public participation requirements are met.

11. Comment: *Page 10, paragraph Soil: As stated above, we are not aware of any soil contamination at the Bulger facility, and this section appears to have been added in error. Please correct this error. To the extent that EPA is referring to the closed impoundments, please note that reference to solid waste permit 301359 should be removed since that permit has no bearing on closure or post-closure care of the impoundments.*

EPA Response: See response to Comment 9, above. EPA has removed the references to the solid waste permit in the Final Decision.

12. Comment: *Page 10, paragraph Groundwater: As stated above, MAX proposes to demonstrate (at some point in the future) that groundwater impacted from past waste disposal activities has been sufficiently remediated, regardless of any lingering impacts from past mining activities. Also, please note that our solid waste and NPDES permit have no bearing on our groundwater monitoring and remediation activities so references to those documents should be removed.*

EPA Response: EPA notes the comment (also see response to Comment 10, above). EPA has removed the references to the solid waste and NPDES permits in the Final Decision.

13. Comment: *Page 11, paragraph Surface Water: reference to our solid waste and NPDES permits should be removed since they have no bearing on surface water monitoring activities.*

EPA Response: EPA has removed the references to the solid waste and NPDES permits.

14. Comment: *Pages 11 and 12, Section 6 table: reference to solid waste permit 301359 should be removed since that permit has no bearing on impoundment closure and post closure or site monitoring and remediation.*

EPA Response: EPA has removed most references to the solid waste permit in this section of the Final Decision.

15. Comment: *Page 12 Section 7: financial assurance for activities covered by EPA's proposed corrective action remedies is governed by the closure and beneficial reuse COAs, not our solid waste permit.*

EPA Response: EPA has made the requested change in the Final Decision.

- B. Ms. Cathy Lodge requested a public meeting via an email message sent on August 24, 2021 to Mr. Griff Miller, EPA Corrective Action Project Manager. The public meeting was held virtually on October 5, 2021. On behalf of herself and 13 other residents living near the MAX Bulger facility, Ms. Lodge submitted comments on the Statement of Basis via letter to Mr. Miller, dated October 14, 2021 which are included in their entirety in Attachment A. The following are excerpts from those comments and EPA's responses:

1. Comment: *The biggest ask residents request is for Max to provide public water to residents ½ mile from the facility based on a 1990 promise. ...*

Over the years residents of Robinson and Smith Townships are aware of Max's residual waste truck spills around the facility at State Road 980, Beech Hollow Road, Candor Road and on Bulger Candor Road where it meets Bulger Arch Road. Heavy rainfall causes some basements along these roads to flood, potentially exposing residents to chemicals or waste from Max's truck spills. ...

On October 19, 1990 residents of Bulger received a letter from the company's Vice President, Carl Bender. This letter appears to promise a public water supply to residents living ½ mile of the facility. This letter was shared with local officials in Smith Township and again resurfaced in 2007 when Max applied for another approval. Smith Township Board of Supervisors requested Max revisit providing public water for nearby residents in a letter dated March 16, 2007. Max never addressed the Township's concerns.

Through EPA RCRA corrective action, it is requested that Max's 1990 promise of public water for residents within ½ mile be honored finally!

EPA Response:

First, EPA thanks the commenter for submitting these concerns. EPA recognizes the frustration expressed in these comments and assures you that the Corrective Action program is addressing the contamination caused by MAX to protect human health and the environment.

As part of its routine quarterly groundwater monitoring program in accordance with the 1985 COA, MAX samples groundwater at the Facility and two residential wells located approximately ¼ mile to the northeast and north of the Facility, respectively, which have the potential to be impacted by the Facility groundwater contamination because of their locations. However, the 40 years of groundwater monitoring data show that the groundwater contamination is not migrating outside of the Facility property boundaries. This determination is supported by the fact that the groundwater data show that the two

residential wells within ¼ mile of the Facility have not been impacted by groundwater contamination from the Facility.

EPA's Final Remedy requires MAX to continue the groundwater monitoring at the Facility and at two residential wells mentioned above until groundwater achieves drinking water standards (i.e., MCLs, or, if there is no MCL for a contaminant, RSLs for tapwater set at target cancer risk of 1×10^{-6} or a non-cancer target hazard quotient of 1). In addition, the current groundwater monitoring program will detect groundwater contamination at the Facility or the two residential wells within ¼ mile of the Facility before it would impact any other residential wells. If data do show that groundwater contamination is migrating off Facility property at concentrations that exceed drinking water standards, EPA has the authority to require and enforce additional corrective actions to address such contamination, provided all necessary public participation requirements are met.

Additionally, the October 19, 1990 letter from MAX, which is referred to in Smith Township's March 16, 2007 letter, pertained to a proposed hazardous waste landfill that was ultimately never constructed. At that time, MAX had to demonstrate the ability to provide an alternative water supply to properties within ½ mile of the Facility as part of the operation of that proposed hazardous waste landfill. Given that the landfill was never constructed, that demonstration was not necessary.

MAX's current application is for a residual waste landfill. The residual waste landfill permitting process, along with the authority to oversee and enforce landfill operations (which includes best management practices to minimize trucks spilling or tracking waste materials off-site), resides with PADEP. It is EPA's understanding that PADEP is currently reviewing MAX's application. Therefore, if you have questions or concerns about the residual waste landfill operations, PADEP would be the appropriate agency to contact. Mr. Matthew Barch at PADEP is a point of contact in the Waste Management Program.

2. Comment: *Additionally, throughout the company's disposal history there have been a variety of issues from spontaneous combustion of alumina waste as seen by DEP in 2011 to an open fly ash pit that had ash swirling in the air at the facility that I witnessed during a site tour with Max's Carl Spadaro and Ken Interval in 2016.*

Many violations to Max's state permits resulted in Consent Orders, Consent Assessment of Civil Penalties and Agreements, Opinions and RCRA Corrective Action. ...

This company, which has never been able to stay in compliance, was requesting permission to dispose of another kind of waste stream, one that has TENORM or radioactive material in it. Those of us on well water became extremely worried.

We have been repeatedly told that trucks entering the facility visit a radiation detection monitor. This is of little comfort as it is easy to drive around it or dilute a load and return with more trucks. The result is the same, radioactive material is laid to rest in Bulger!

There is no check for radium 226 or 228 in any residents' well water, groundwater, surface water, leachate or effluent testing that residents have been able to find. Where is our protection?

Over the years, Max has shown an inability to stay in compliance, yet it continues to obtain DEP and local approvals. Below are several years of DEP violations even with Consent Orders and Agreements in place. This is not a complete list, there are more unfortunately. [List]

EPA Response: The violations listed by the commenter are violations of state-implemented programs (NPDES, Waste Management). The RCRA Corrective Action Program addresses facility-wide conditions. If any of the violations had resulted in a release that remained unaddressed, EPA would have required MAX to address it under the Corrective Action program. To EPA's knowledge, there are no unaddressed releases resulting from these violations. For specific questions regarding these violations, PADEP is the appropriate agency to contact.

Regarding TENORM, because this question is regarding the solid waste permit issued by PADEP, EPA suggests that the commenter reach out to PADEP with any questions about these issues.

3. Comment: *September 10, 2020 Max petitioned DEP's Solid Waste Advisory Committee (SWAC) to de-list part of its waste stream. Max requested reclassifying its waste from hazardous to non-hazardous. ...*

SWAC voted to move Max's petition on to the Environmental Quality Board (EQB) ...

My comments pointed to resident's concerns that declassifying sludge created after collecting runoff from the existing cocktail of wastes at Max could pose a hazard to the community. We feel that declassifying the waste from Hazardous to Non-Hazardous would mischaracterize a waste stream created from many wastes of many industries, most recently the Tenorm or radioactive waste from the Marcellus shale industry.

Max admits that 75% of their waste now comes from the Marcellus shale industry. The 2020 PA Attorney General Grand Jury Report sighted [sic] DEP's lack of ability to provide oversight of the oil and gas industry waste stream.

Max's petition requests even less oversight by DEP. Yet, Max has never been able to stay in compliance consistently over the years of operation with existing DEP regulations. AG Josh Shapiro's findings concern residents living near Max's residual waste landfill in Bulger where 75% of the waste accepted at the landfill comes from the oil and gas industry waste stream.

My September 2020 SWAC comments were not made part of the record for the EQB to consider. September 21, 2021 EQB approved Max's request to de-list.

EPA Response: The de-listing process is site-specific, state agency-led effort to determine whether the Facility's leachate meets the definition of a hazardous waste. Therefore, EPA recommends the commenter consult with PADEP regarding the de-listing process.

4. Comment: *November 2020, Max began the application process for yet another landfill at the Bulger site. Landfill #3 (LF3) is proposed for the eastern side of the property adjacent to Little Raccoon Run, close to the Panhandle rail trail and next to the Robinson Township line.*

Max's 2021 revised application submitted for LF3 shows a footprint adjustment which appears to place part of the new landfill on top of Impoundment 1. Will this create a vertical waste increase in the area of overlap? Can the Impoundment 1 cap support the activity associated with constructing LF3 on top of it?

Local residents are frustrated with Max. We don't want another landfill which probably will not stay in compliance with state approved permits or local approvals. ...

EPA Response: As stated in EPA's response to Comment 1, above, PADEP has oversight authority over landfill permitting and operations; therefore, questions concerning the potential new landfill at the Facility should be directed to PADEP. EPA's Corrective Action program does not have jurisdiction over this potential landfill's permitting and has therefore forwarded this comment to PADEP. Please contact PADEP for questions regarding the new landfill permitting at the Facility.