



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III

FINAL PERMIT DECISION FOR CORRECTIVE ACTION

MAX ENVIRONMENTAL TECHNOLOGIES, INC.  
YUKON, PENNSYLVANIA

EPA ID NO. PAD004835146

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
PERMIT  
FOR CORRECTIVE ACTION;  
PURSUANT TO THE RESOURCE CONSERVATION AND RECOVERY ACT  
AS AMENDED BY THE HAZARDOUS AND SOLID WASTE  
AMENDMENTS OF 1984**

Permittee: MAX Environmental Technologies, Inc.  
Facility: Yukon Facility  
Permit Number: EPA ID No. PAD 004 835 146  
Facility Location: Yukon, Pennsylvania

INTRODUCTION

The United States Environmental Protection Agency (EPA) under the authority of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) and the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. §§ 6901-6992k, and regulations promulgated thereunder and set forth at 40 C.F.R. Parts 260-271, has prepared this Permit for Corrective Action (Corrective Action Permit or Permit) for the facility owned and operated by MAX Environmental Technologies, Inc. (hereinafter Permittee or Max) located at 233 Max Lane, Yukon, Westmoreland County, Pennsylvania (Facility).

The complete RCRA permit for purposes of 3005(c) of RCRA, 42 U.S.C. § 6925(c), consists of two portions: this Corrective Action Permit, issued by EPA which addresses the provisions of HSWA, and the RCRA Hazardous Waste Permit, No. PAD 004 835 146, issued by the Pennsylvania Department of Environmental Protection (PADEP), which address the provisions of Title 25 of the Pennsylvania Code, for which the Commonwealth of Pennsylvania (Commonwealth) has received authorization under Section 3006(b) of RCRA, 42 U.S.C. § 6926(b), to administer and enforce in lieu of the federal hazardous waste management program under RCRA (PADEP Permit). As of the date of issuance of this Permit, the Commonwealth has not received authorization to administer the corrective action provisions of HSWA. This Permit, which addresses corrective action provisions of HSWA for which EPA is the implementing authority in Pennsylvania, will be enforced by EPA. The PADEP Permit will be enforced by PADEP, but EPA may also exercise its enforcement discretion if and when appropriate.

This Permit consists of the conditions contained herein (Parts I and II and Attachments A, and B) and the applicable federal regulations, including 40 C.F.R. Parts 260 through 264, Part 266, Part 268, Part 270, Part 273 and Part 124. The Permittee shall comply with all terms and conditions set forth in this Corrective Action Permit. Nothing in this Corrective Action Permit shall limit EPA's authority to undertake, or require any person to undertake, response action or corrective action under any law, including, but not limited to, Sections 104 and 106 of CERCLA, 42 U.S.C. §§ 9604 and 9606, and Section 7003 of RCRA, 42 U.S.C. § 6973. Nor shall any permit condition relieve the Permittee of any obligations under any law, including, but not limited to, Section 103 of CERCLA, 42 U.S.C. § 9603, to report releases of hazardous wastes, constituents, or substances to, at, or from the Facility.

This Permit is based on information provided to EPA and PADEP by the Permittee. Section 3005(c)(3) of RCRA provides EPA the authority to review and amend the Permit at any time. Any inaccuracies found in the information submitted by the Permittee may be grounds for the termination,

modification or revocation and reissuance of this permit (see 40 C.F.R. §§ 270.41, 270.42 and 270.43). The Permittee must inform EPA of any deviation from or changes in the submitted information that would affect the Permittee's ability to comply with the applicable statutes, regulations or Permit conditions.

## PART I – STANDARD FACILITY CONDITIONS

### A. PERMIT ACTIONS

This Corrective Action Permit may be modified, revoked and reissued, or terminated for cause as specified in 40 C.F.R. §§ 270.41, 270.42 and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of Max, does not stay the applicability or enforceability of any permit condition (40 C.F.R. § 270.30(f)). Review of any application for a permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicability regulations and laws.

### B. STANDARD DUTIES AND REQUIREMENTS

#### 1. Duty to Comply

a. Max shall comply with all conditions of this Corrective Action Permit and PADEP Permit attached hereto, except to the extent and for the duration such noncompliance is authorized by an emergency permit issued under 40 C.F.R. § 270.61 or the analogous provisions of the Commonwealth's authorized hazardous waste management regulations. Any other permit noncompliance constitutes a violation of RCRA and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. (40 C.F.R. § 270.30(a))

b. It shall not be a defense for Max in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Corrective Action Permit.

#### 2. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee must apply for and obtain a new permit. (40 C.F.R. § 270.30(b))

#### 3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit. (40 C.F.R. § 270.30(c))

#### 4. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures as are reasonable to prevent

significant adverse impacts on human health or the environment. (40 C.F.R. § 270.30(d))

5. Duty to Properly Operate and Maintain

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 include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit. (40 C.F.R. § 270.30(e))

6. Duty to Provide Information

Max shall furnish, within the specified time, any relevant information which the EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Corrective Action Permit. Max shall also furnish to EPA, upon request, copies of records required to be kept by this Corrective Action Permit. (40 C.F.R. §§ 270.30(h) and 264.74(a))

7. Duty to Allow Inspection and Entry

Pursuant to 40 C.F.R. § 270.30(i), the Permittee shall allow the Regional Administrator, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and
- d. Sample or monitor, at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

8. Duty to Monitor and Record Results

Pursuant to 40 C.F.R. § 270.30(j), the Permittee shall comply with the following requirements:

- a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. All sampling and analyses shall be of adequate quality, scientifically valid, of known precision and accuracy, and of acceptable completeness,

representativeness and comparability. Laboratory analysis of each sample must be performed using an appropriate method for testing the parameter(s) of interest taking into account the sample matrix. The test methods found in the EPA publication Test Methods for Evaluating Solid Waste. Physical/Chemical Methods (SW-846), 3<sup>rd</sup> Edition, as updated, shall be used for: the Toxicity Characteristic analytes (40 C.F.R. § 261.24); the Free Liquids Test (Method 9095) used to determine if free liquid is a component of a waste as a specific requirement for bulk and containerized wastes (40 C.F.R. § 264.314(c)); and the chemical analysis of wastes for hazardous waste incineration permits. (40 C.F.R. § 270.62(b)(2)(i)(C))

- b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, the certification required by 40 C.F.R. § 264.73(b)(9) and records of all data used to complete the application for this Permit for a period of at least three (3) years from the date of the sample, measurement, report, certification or application. This period may be extended by request of the Regional Administrator at any time and are automatically extended during the course of any unresolved enforcement action regarding this Facility. (40 C.F.R. § 264.74) The Permittee shall maintain records from all groundwater monitoring wells and associated groundwater surface elevations for the active life of the Facility, and for disposal facilities, for the post-closure care period as well. (40 C.F.R. § 270.30(j))
- c. Records of monitoring information shall specify:
  - (1) The date, exact place, and time of sampling or measurements;
  - (2) The individual(s) who performed the sampling or measurements;
  - (3) The date(s) analyses were performed;
  - (4) The individual(s) who performed the analyses;
  - (5) The analytical techniques or methods used; and
  - (6) The results of such analyses.

## 9. Duty to Submit Certified Documents

- a. Except for submissions for which the Permittee is asserting a business confidentiality claim pursuant to Paragraph 9.d. and e., below, 1 electronic copy of all draft and final plans, reports, notifications or other documents which are required by this Permit to be submitted to the Region 3 RCRA Corrective Action digital repository for institutional control and reporting documents. The documents shall reference the RCRA Facility name and RCRA ID Number. The documents shall be submitted to:

Region 3 RCRA R3\_RCRAPOSTREM@epa.gov

In addition, one copy of such submission shall be sent to:

Pennsylvania Department of Environmental Resources  
Southwest Regional Office  
Waste Management Regional Manager  
400 Waterfront Drive  
Pittsburgh, PA 15222

- b. Each report, notification or other submission shall reference the Permittee's name, permit number and Facility address.
- c. All applications, reports or other information submitted to the Regional Administrator shall be signed and certified as described in 40 C.F.R. §§ 270.11 and 270.30(k).
- d. The Permittee may assert a business confidentiality claim covering all or part of any information submitted to EPA pursuant to this Permit in the manner described in 40 C.F.R. § 2.203(b). Any assertion of confidentiality shall be adequately substantiated by the Permittee when the assertion is made in accordance with 40 C.F.R. § 2.204(e)(4). Information subject to a confidentiality claim shall be disclosed only to the extent allowed by, and in accordance with, the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such confidentiality claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to the Permittee. The Permittee shall not assert any confidentiality claim with regard to any physical, sampling, monitoring, or analytical data.
- e. One hardcopy of all submissions for which the Permittee is asserting a business confidentiality claim pursuant to Paragraph 9.d, above, shall be sent Certified Mail, Return Receipt Requested, overnight mail, or hand-carried to:

Land, Chemicals and Redevelopment Division  
EPA Region III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103

#### 10. Duty to Minimize Waste

The Permittee shall certify no less often than annually that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that the Permittee generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage or disposal is the practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment. The Permittee shall maintain each such certification of waste minimization at the Facility until closure of such Facility. (40 C.F.R. § 264.73(b)(9))

#### 11. Reporting Requirements

- a. Planned Changes

The Permittee shall give notice to the Regional Administrator, as soon as possible, of any planned physical alterations or additions to the Facility. (40 C.F.R. § 270.30(1)(1))

b. Anticipated Noncompliance

The Permittee shall give advance notice to the Regional Administrator of any planned changes in the Facility or activity which may result in noncompliance with permit requirements. (40 C.F.R. § 270.30(1)(2))

c. Monitoring Reports

Monitoring reports shall be reported at the intervals specified elsewhere in this Permit. (40 C.F.R. § 270.30(1)(4))

d. Noncompliance with Schedules for Interim and Final Requirements

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than fourteen (14) days following each schedule date. (40 C.F.R. § 270.30(1)(5))

e. Twenty-four Hour Reporting

The Permittee shall report to the Regional Administrator any noncompliance which may endanger health or the environment within 24 hours from the time the Permittee becomes aware of the circumstances. The report shall contain the information listed in 40 C.F.R. § 270.30(1)(6).

f. Manifest Discrepancy Report

If a significant discrepancy in a manifest is discovered, the Permittee must attempt to reconcile the discrepancy. If not resolved within fifteen (15) days, the Permittee shall submit a letter report including a copy of the manifest, to the Regional Administrator. (40 C.F.R. § 270.30(1)(7))

g. Unmanifested Waste Report

The Permittee shall submit a report to the Regional Administrator within 15 days of receipt of unmanifested waste. (40 C.F.R. § 270.30(1)(8))

h. Biennial Report

The Permittee shall submit a biennial report covering Facility activities during odd numbered calendar years. (40 C.F.R. § 270.30(1)(9))

i. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time monitoring reports are submitted. The reports shall

contain the information listed in 40 C.F.R. § 270.30(1)(6). (40 C.F.R. § 270.30(1)(10))

j. Failure to Submit Relevant and/or Accurate Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, the Permittee shall notify the Regional Administrator of such failure within seven (7) days of becoming aware of such deficiency or inaccuracy. The Permittee shall submit the correct or additional information to the Regional Administrator within fourteen (14) days of becoming aware of the deficiency or inaccuracy (40 C.F.R. § 270.30(1)(11)). Failure to submit the information required in this Permit or misrepresentation of any submitted information is grounds for termination of this Permit. (40 C.F.R. § 270.43)

C. APPROVAL OF SUBMISSIONS; INCORPORATION INTO PERMIT

All plans, reports, schedules, and other submissions required by the terms of this Corrective Action Permit are, upon approval by EPA, incorporated into this Corrective Action Permit. Any noncompliance with such approved schedules, plans, reports, or other submissions shall be deemed noncompliance with this Corrective Action Permit. In the event of unforeseen circumstances beyond the control of the Max which could not be overcome by due diligence, Max may request a change, subject to EPA approval, in the previously approved plans, reports, schedules or other submissions. This request may result in a modification of the Corrective Action Permit.

D. MODIFICATION, REVOCATION AND REISSUANCE

1. This Permit may be modified, revoked and reissued, or terminated for cause. This Permit is based on information provided to EPA by the Permittee and PADEP. Section 3005(c)(3) of RCRA provides EPA the authority to review and amend the Permit at any time. Any inaccuracies found in the information submitted by the Permittee may be grounds for the termination, modification or revocation and reissuance of this Permit (see 40 C.F.R. §§ 270.41, 270.42 and 270.43). The Permittee must inform EPA of any deviation from or changes in the submitted information that would affect the Permittee's ability to comply with the applicable statutes, regulations or permit conditions.

2. In the event that information becomes available to EPA identifying solid waste management units that require corrective measures, EPA will modify this Corrective Action Permit. This paragraph does not limit EPA's authority to otherwise modify this Corrective Action Permit in accordance with 40 C.F.R. Part 270, Subpart D.

E. TRANSFER OF PERMIT

This Corrective Action Permit is not transferable to any person, except after notice to EPA (40 C.F.R. § 270.30(1)(3)). This Corrective Action Permit may be transferred by Max to a new owner or operator only if the Corrective Action Permit has been modified or revoked and reissued under 40 C.F.R. § 270.40(b) or 270.42(b)(2) to identify the new permittee and incorporate such other requirements as may be necessary under the appropriate Act. (40 C.F.R. § 270.40)



## F. PROPERTY RIGHTS

This Corrective Action Permit does not convey any property rights of any sort, or any exclusive privilege. (40 C.F.R. § 270.30(g)).

## G. PERMIT EXPIRATION AND CONTINUANCE

1. Pursuant to 40 C.F.R. § 270.50, this Permit shall be effective for a fixed term not to exceed ten years. Pursuant to 40 C.F.R. § 270.51, this Permit and all conditions herein will remain in effect beyond the Permit's expiration date if the Permittee has submitted a timely and complete application for a new permit (see 40 C.F.R. §§ 270.10 and 270.13 - 270.29) and, through no fault of the Permittee, the Director has not issued a new permit under 40 C.F.R. § 124.15 on or before the expiration date of this permit. In addition, each permit for a land disposal facility shall be reviewed by the Regional Administrator five years after the date of permit issuance or reissuance and shall be modified as necessary, as provided in 40 C.F.R. § 270.41 (40 C.F.R. § 270.50(d)).

2. If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee must submit a complete application for a new permit at least 180 days before this Permit expires, unless permission for a later date has been granted by the Regional Administrator (40 C.F.R. §§ 270.10(h) and 270.30(b)).

3. The corrective action obligations contained in this Permit shall continue regardless of whether the Permittee continues to operate or ceases operation and closes the Facility. The Permittee is obligated to complete Facility-wide corrective action under the conditions of a RCRA permit regardless of the operational status of the Facility. The Permittee must submit an application for a new permit at least one hundred eighty (180) days before this Permit expires pursuant to 40 C.F.R. § 270.10(h), unless the Permit has been modified to terminate the corrective action schedule of compliance and the Permittee has been released from the requirements for financial assurance for corrective action.

## H. DUTY TO SUBMIT CERTIFIED DOCUMENTS

All reports or other information submitted to EPA shall be signed and certified as required by 40 C.F.R. §§ 270.11 and 270.30(k).

## PART II – SPECIFIC FACILITY CONDITIONS

### A. CORRECTIVE ACTION FOR CONTINUING RELEASES; PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

1. Section 3004(u) of RCRA, 42 U.S.C. § 6924(u), and regulations codified at 40 C.F.R. § 264.101, provide that all permits issued after November 8, 1984 must require corrective action as necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any solid waste management unit (SWMU), regardless of when waste was placed in the SWMU.

2. Under Section 3004(v) of RCRA, 42 U.S.C. § 6924(v), and 40 C.F.R. § 264.101(c), EPA may require that corrective action at a permitted facility be taken beyond the facility boundary where necessary to protect human health and the environment, unless the owner or operator of the facility concerned demonstrates to the satisfaction of the EPA that, despite the owner or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action.

3. Section 3005(c)(3) of RCRA, 42 U.S.C. § 6925(c)(3), and 40 C.F.R. § 270.32(b) provide that each Permit shall contain such terms and conditions as EPA determines necessary to protect human health and the environment.

## B. REMEDY IMPLEMENTATION

Based on the Administrative Record, EPA selected a Final Remedy for the Facility in a Final Decision and Response to Comments (FDRTC), set forth in Attachment A and made a part hereof. The requirements of this Permit provide for the implementation of the Final Remedy described in the FDRTC.

Commencing on the effective date of this Permit and thereafter, the Permittee shall implement the Final Remedy selected by EPA and described in the FDRTC, as follows:

The Permittee shall implement the following components of the Final Remedy at the Facility:

1. Permit Compliance – MAX shall continue to comply with the terms and conditions of the PADEP Permit and the Solid Waste Permit No. 301071 issued by PADEP in 2016 (2016 Solid Waste Permit) (together, the Permits), including reporting to PADEP any releases or potential releases of hazardous waste or solid waste from the Facility that may endanger public drinking water supplies or otherwise threaten human health or the environment.
2. Residential Water Supply Well Monitoring – In addition to the sampling parameters specified in Appendix A, page ix (Residential Water Supply Wells), of the 2016 Solid Waste Permit, MAX shall analyze the residential well water for the following: arsenic, barium, cadmium, fluoride, iron, lead, manganese, nickel, selenium, silver, ammonia, and sulfate. These additional analytes are based on the COPCs in Disposal Area 6 leachate. If exceedances attributable to releases from the Facility are detected above the Drinking Water Standards, EPA will solicit public comments on additional corrective measures to protect human health and the environment prior to amending the FDRTC and including such additional corrective measures in the Final Remedy for the Facility. If such additional corrective measures are added to the Final Remedy, the Permittee shall comply with EPA's Final Remedy, as so amended.

## C. EMERGENCY RESPONSE; RELEASE REPORTING

1. In the event Permittee identifies a newly discovered SWMU or new releases of hazardous waste and/or hazardous constituents at or from the Facility not previously identified, or discovers an immediate or potential threat to human health and/or the environment at the Facility, Permittee shall notify the EPA Project Coordinator orally within forty-eight (48) hours of discovery and notify EPA in writing within three (3) calendar days of such discovery summarizing the potential for the migration or release of hazardous wastes, solid wastes and/or hazardous constituents at and/or from the Facility and the immediacy and magnitude of the potential threat(s) to human health and/or the environment, as applicable. Upon written request of EPA, Permittee shall submit to EPA for approval an Interim

Measures (IM) Workplan in accordance with the IM Scope of Work (see Permit Condition II.D) that identifies interim measures which will mitigate the migration or release of hazardous wastes, solid wastes and/or hazardous constituents at and/or from the Facility and mitigate any threat to human health and/or the environment. If EPA determines that immediate action is required, the EPA Project Coordinator may orally authorize Permittee to act prior to EPA's receipt of the IM Workplan.

2. If EPA identifies a newly discovered SWMU or new releases of hazardous waste and/or hazardous constituents at or from the Facility not previously identified, or discovers an immediate or potential threat to human health and/or the environment at the Facility, EPA will notify Permittee in writing. Within ten (10) days of receiving EPA's written notification, Permittee shall submit to EPA for approval an IM Workplan in accordance with the IM Scope of Work, that identifies interim measures which will mitigate the migration or release of hazardous wastes, solid wastes and/or hazardous constituents at and/or from the Facility and mitigate any threat to human health and/or the environment. If EPA determines that immediate action is required, the EPA Project Coordinator may orally require Permittee to act prior to Permittee's receipt of EPA's written notification.
3. All IM Workplans shall ensure that the interim measures are designed to mitigate the migration or release of hazardous wastes, solid wastes and/or hazardous constituents at and/or from the Facility and mitigate any immediate or potential threat(s) to human health and/or the environment, and should be consistent with the objectives of, and contribute to the performance of the Final Remedy set forth in the FDRTC or any additional remedy which may be required at the Facility.
4. Each IM Workplan shall include the following sections as appropriate and approved by EPA: Interim Measures Objectives, Public Involvement Plan, Data Collection Quality Assurance, Data Management, Waste Management Plan, Design Plans and Specifications, Operation and Maintenance, Project Schedule, Interim Measures Construction Quality Assurance, and Reporting Requirements.
5. Concurrent with submission of an IM Workplan, Permittee shall submit to EPA an IM Health and Safety Plan.

#### D. GUIDANCE DOCUMENTS

All work to be performed at the Facility pursuant to this Permit shall be in general accordance with applicable EPA RCRA corrective action guidance available at:

<https://www.epa.gov/hwcorrectiveactionsites/corrective-action-resources-specific-epas-region-3>

#### E. RECORDKEEPING

Upon completion of closure of any current or future SWMU, the Permittee shall maintain in the Facility operating record, documentation of the closure measures taken.

#### F. ACCESS FOR CORRECTIVE ACTION OVERSIGHT

EPA and its authorized representatives shall have access to the Facility at all reasonable times for the purpose of monitoring compliance with the provisions of this Permit. Max shall use best efforts to obtain access to the Facility property and property beyond the boundaries of the Facility, if needed, for: (1) itself and any contractor of Max for the purpose complying with the provisions of this Permit and (2) EPA and its authorized representatives for the purpose of monitoring compliance with the provisions of this Permit. Best efforts shall include, but not be limited to, agreement to reasonable

conditions for access and/or the payment of reasonable fees.

G. EFFECTIVE DATE

This Permit is effective on February 1, 2021 and shall remain in effect until January 31, 2031 unless revoked and reissued, modified, or terminated in accordance with 40 C.F.R. §§ 270.41, 270.42 and 270.43 or continued in accordance with 40 C.F.R. § 270.51(a).

H. SIGNATURE

\_\_\_\_\_  
Stacie Driscoll, Acting Director  
Land, Chemicals and Redevelopment Division  
US EPA, Region III

Date: 1/28/2021

Attachment A: Final Decision and Response to Comments  
MAX Environmental Technologies, Inc.  
Yukon Facility  
PAD 004 835 146  
January 2021

Attachment B: Commonwealth of Pennsylvania  
Department of Environmental Protection  
Hazardous Waste Permit No. PAD 004 835 146

Attachment C: Commonwealth of Pennsylvania  
Department of Environmental Protection  
Solid Waste Permit No. 301071

Attachment D: Public Comments on Draft Permit

Attachment E: Response to Comments

**ATTACHMENT A**  
**FINAL DECISION AND RESPONSE TO COMMENTS**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III

FINAL DECISION AND RESPONSE TO COMMENTS

MAX ENVIRONMENTAL TECHNOLOGIES, INC.  
YUKON, PENNSYLVANIA

EPA ID NO. PAD004835146

## I. FINAL DECISION

In this Final Decision and Response to Comments (Final Decision), the United States Environmental Protection Agency (EPA) selects the following two components as the Final Remedy for the MAX Environmental Technologies, Inc. (MAX) facility (the Facility), located at 233 Max Lane in Yukon, Pennsylvania:

1. Permit Compliance – MAX shall continue to comply with the terms and conditions of the Pennsylvania Department of Environmental Protection (PADEP) Hazardous Waste Permit No ID # PAD004835146 and PADEP Solid Waste Permit No. 301071 issued by PADEP (formerly the Pennsylvania Department of Environmental Resources), including reporting to PADEP any releases or potential releases of hazardous waste or solid waste from the Facility that may endanger public drinking water supplies or otherwise threaten human health or the environment.
2. Residential Water Supply Well Monitoring – In addition to the sampling parameters specified in Appendix A, page ix (Residential Water Supply Wells) of the PADEP Solid Waste Permit No. 301071, MAX shall analyze the residential well water for the following: arsenic, barium, cadmium, fluoride, iron, lead, manganese, nickel, selenium, silver, ammonia, and sulfate. These additional analytes are based on the contaminants of potential concern in Disposal Area 6 leachate. If EPA determines that additional corrective measures are necessary to protect human health and/or the environment from contaminants that remain in the groundwater above drinking water standards and that are attributable to releases from the Facility, EPA will solicit public comments on any such additional corrective measures prior to amending the Final Decision and including them in the Final Remedy for the Facility.

The Final Remedy is based on EPA's findings as detailed in the Statement of Basis (SB), which EPA issued for the Facility on August 17, 2020, and is consistent with EPA's February 2003 *Final Guidance on Completion of Corrective Action Activities at RCRA Facilities* (68 FR 8757).

EPA's Final Remedy, as selected in this Final Decision, is implemented through EPA Corrective Action Permit PAD004835146.

If the owner and/or operator of the Facility fail to meet their/its obligations or EPA, in its sole discretion, deems that additional activities and/or controls are necessary to protect human health or the environment, EPA has the authority to require and enforce additional corrective actions consistent with public participation provisions under the Resource Conservation and Recovery Act (RCRA).

## II. PUBLIC COMMENT PERIOD

On August 17, 2020, EPA issued a 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 forty-five (45)-day public comment period was announced in the *Trib Total Media* on August 26, 2020 and on the EPA Region III website. The public comment period was subsequently extended to November 19, 2020 via an additional announcement on the EPA website and in the *Trib Total Media* on October 10, 2020. The public comment period ended on November 19, 2020.

### III. RESPONSE TO COMMENTS

EPA received two comments on the proposed remedy described in the SB. The comments in their entirety are provided in Attachment B of this document, and EPA's response to public comments is provided in Attachment C. Each comment is summarized and followed by EPA's response. EPA made a minor change to the proposed remedy based on the comments received. No significant change from the proposed remedy was made. Therefore, the remedy proposed in the SB is the Final Remedy selected by EPA for the Facility. The SB for the Facility is incorporated herein and made a part hereof as Attachment A.

### IV. AUTHORITY

EPA is issuing this Final Decision under the authority of the Solid Waste Disposal Act, as amended by RCRA, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, 42 U.S.C. Sections 6901 to 6992k.

### V. DECLARATION

Based on the Administrative Record compiled for the Corrective Action at the Facility, EPA has determined that the Final Remedy selected in this Final Decision is protective of human health and the environment.

---

Stacie Driscoll, Acting Director  
Land, Chemicals, and Redevelopment Division  
U.S. EPA Region III

---

1/28/2021  
Date

Attachment A: Statement of Basis, August 2020  
Attachment B: Public Comments  
Attachment C: Response to Comments



**ATTACHMENT A**  
**STATEMENT OF BASIS**



UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION III

STATEMENT OF BASIS

MAX ENVIRONMENTAL TECHNOLOGIES, INC.  
YUKON FACILITY  
233 MAX LANE  
YUKON, PENNSYLVANIA

EPA ID NO. PAD 004 835 146

Prepared by  
RCRA Corrective Action Program  
Land, Chemicals and Redevelopment Division  
August 2020

## Table of Contents

<b>Section 1: Introduction</b> .....	1
<b>Section 2: Facility Background</b> .....	2
<b>Section 3: Environmental Investigations and Corrective Action</b> .....	4
<b>Section 4: Corrective Action Objectives</b> .....	7
<b>Section 5: Proposed Remedy</b> .....	8
<b>Section 6: Evaluation of Proposed Remedy</b> .....	8
<b>Section 7: Financial Assurance</b> .....	10
<b>Section 8: Public Participation</b> .....	10
<b>Section 9: Signature</b> .....	10
<b>Section 10: Index to Administrative Record</b> .....	11

## List of Acronyms

EPA	Environmental Protection Agency
COA	Consent Order and Agreement
COPC	Constituent of Potential Concern
Final Decision	Final Decision Response to Comments
MAX	MAX Environmental Technologies, Inc.
MCL	National Primary Drinking Water Standard Maximum Contaminant Level
PADEP	Pennsylvania Department of Environmental Protection
RCRA	Resource Conservation and Recovery Act
RSL	EPA Region III Screening Level for tap water

## List of Figures

Figure 1: Facility Location

Figure 2: Facility Layout

## Section 1: Introduction

---

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis to solicit public comment on its proposed remedy for the MAX Environmental Technologies, Inc. (MAX) Yukon Facility, located in Yukon, Pennsylvania (hereinafter referred to as MAX Yukon or the Facility).

EPA believes the cleanup actions MAX has implemented under Pennsylvania Department of Environmental Protection (PADEP) oversight at the Facility, which EPA proposes MAX continue to implement as described further in this Statement of Basis, will satisfy MAX's corrective action obligations under RCRA.

Therefore, EPA's proposed remedy for the Facility consists of the following components:

1. Continued compliance with the terms and conditions of the PADEP Hazardous Waste Permit No ID # PAD004835146 (Hazardous Waste Permit) and PADEP Solid Waste Permit No. 301071 (Solid Waste Permit) (together, the Permits); issued by PADEP (formerly the Pennsylvania Department of Environmental Resources), and
2. Additional monitoring of residential water supply wells adjacent to Disposal Area 6 for parameters related to that disposal area.

This Statement of Basis highlights key information relied upon by EPA in proposing its remedy for the Facility.

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 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.

EPA is providing a forty-five (45) day public comment period on this Statement of Basis. EPA may modify its proposed remedy based on comments received during this period. EPA will announce its selection of a final remedy for the Facility in a Final Decision and Response to Comments (Final Decision) after the public comment period has ended. Concurrently with this Statement of Basis, EPA is soliciting comments on a draft federal permit to be issued under Section 3004(u) of RCRA, 42 U.S.C. § 6924. The draft federal permit incorporates the Facility's PADEP Permits.

Information on the Corrective Action program as well as a fact sheet for the Facility can be found by navigating to: <https://www.epa.gov/hwcorrectiveactionsites/hazardous-waste-cleanup-max-environmental-technologies-incorporated-1>.

The Administrative Record for the Facility contains all documents, including data and quality

assurance information, on which EPA's proposed remedy is based. See Section 8, Public Participation, below, for information on how you may review the Administrative Record.

## **Section 2: Facility Background**

---

The Facility is located approximately 30 miles southeast of Pittsburgh, PA, in South Huntingdon Township, Westmoreland County, Pennsylvania. The Facility is surrounded by agricultural, wooded and residential properties. Waste operations are permitted on 137 acres of the 160-acre Facility. (see Figure 1, Facility Location)

The Facility is currently owned by MAX which operates it as a treatment and disposal facility for hazardous and residual waste. The Facility was formerly owned by Mill Service, Inc., and began operations in 1964 in the location of a former strip mine. In 2002, Mill Service, Inc. changed its corporate name to MAX Environmental Technologies, Inc. The Facility has operated under Permits and Consent Order and Agreements (COAs) that directed the disposal operations, unit closures, environmental investigations, and environmental remediation at the Facility. The Facility currently operates under the Permits and two COA; ENF ID NO 346585S, and ENF ID NO 347065S, both of which were issued by PADEP on September 21, 2016.

The Facility initially accepted acids and other inorganic wastes from steel and glass manufacturing, electroplating, and other industries. The wastes were treated with lime to neutralize the acids and immobilize metals. The treated slurry was then placed in disposal impoundments. Historically, the largest volume wastes processed and disposed at the Facility were K061 (electric arc furnace dust) and K062 (spent pickle liquor). Since the 1990's, the wastes received at the Facility for treatment and disposal are primarily solids, including slag, electric arc furnace dust, metal-impacted soils, and drill cuttings from the oil and gas industry.

The Facility currently operates under the following Permits:

- The Solid Waste Permit authorizes the disposal of residual waste in Disposal Area 6 (formerly Impoundment 6). A major permit modification was issued in September 2016. The modification permits the vertical expansion of the active residual waste landfill, Disposal Area 6. The Solid Waste Permit also specifies the Facility-wide monitoring requirements and requires the submission of an annual evaluation of all groundwater and surface sampling and analysis.
- The Hazardous Waste Permit authorizes the storage and treatment of inorganic hazardous waste. The Facility is operating under an administrative extension to the permit issued in February 2005. The extension was granted while MAX implements the leachate management and delisting requirements of the COAs executed in September 2016.

Waste management units at the Facility include five closed impoundments, an active 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 and Storage Impoundments

- Impoundments 1, 2, and 3: The three adjacent disposal impoundments collectively cover approximately 12 acres. The unlined impoundments operated from 1963 to 1978, prior to RCRA regulatory requirements. They received treated industrial waste, primarily waste acids from steelmaking. They were closed with waste left in place.
- Impoundment 4: The lined leachate management impoundment operated from 1978 through 1984, when it was replaced with aboveground storage tanks. It was clean-closed in 1986 by removing waste and subsoil and placing the material in Impoundment 5.
- Impoundment 5: The 13.5-acre hazardous waste disposal impoundment was constructed with a bentonite-clay liner and a leachate collection system, which consists of an underdrain layer and a perimeter collection system. It operated under interim status from 1978 until 1985, but a RCRA permit was never issued to the unit. MAX capped and closed the impoundment in 2002 in accordance with RCRA closure requirements.

### Active Landfill

- Disposal Area 6, also known as Landfill 6, is an active residual waste landfill unit opened in 1988. It covers approximately 16.5 acres. It is constructed with a double liner, a leachate collection system, and a leak detection system. The Solid Waste Permit requires the disposal area to be capped within one year of final waste placement.

### Waste Treatment and Storage Units

- Hazardous and residual wastes are chemically and physically treated in tanks to render them non-hazardous. Treatment processes include neutralization/precipitation, chemical reduction/oxidation, oil separation, solidification, and dewatering. Waste is stored in approved tanks, containers, and a containment building prior to and after treatment. Treated, non-hazardous waste is placed in Disposal Area 6 or disposed off-site.

### Leachate Management/Wastewater Treatment System

- Leachate from the treatment and disposal units, contact surface water, and contaminated groundwater are treated at the Facility's wastewater treatment plant. The effluent is discharged to Sewickley Creek under NPDES Permit No. PA0027715.
- The sludge generated at the plant was previously disposed in Disposal Area 6 as a residual waste. In 2011, EPA determined that the sludge should be classified as a listed hazardous waste (FO39). The sludge is currently being managed and taken off-site as a listed hazardous waste until it is specifically delisted by PADEP. MAX submitted a delisting petition for the sludge to PADEP and the PA Environmental Quality Board on May 30, 2018, in compliance with the September 2016 COA between PADEP and MAX, which is under review.

## Section 3: Environmental Investigations and Corrective Action

---

### Environmental Investigations

Several hydrogeological investigations have been performed to characterize the geological, hydrogeological, and mining conditions at the Facility. Three groundwater flow zones are monitored: Redstone Coal, Pittsburgh Coal, and Pittsburgh Limestone. The Redstone Coal outcrops at the edge of Impoundments 1-3. It is not present under the other disposal units. The Pittsburgh Coal zone was removed from the Disposal Area 6 location by strip mining of the coal. Only the Pittsburgh Limestone is continuous beneath the Facility. Groundwater flows to the northwest in all three zones.

In the mid-1980's, PADEP-approved groundwater investigations showed that releases from the impoundments impacted the Redstone Coal zone and Pittsburgh Coal zone. The mine water was contaminated by the salts from the disposal of treated spent pickle liquor: chloride, nitrate, and sulfate. MAX was then required by PADEP to close Impoundments 1, 2, and 3; clean-close Impoundment 4; close Impoundment 5; and implement a groundwater remediation and monitoring system.

### Current Monitoring Program

Currently, the Facility Wide Monitoring Program incorporates the closed impoundments and Disposal Area 6. The monitoring locations are identified in Figure 2, Facility Layout.

The monitoring requirements are specified in Appendix A of the Solid Waste Permit and the Facility Wide Monitoring Plan (Cribbs and Associates, Inc., 2013). The requirements include sampling of:

- groundwater at 26 wells in the three flow zones: Redstone Coal, Pittsburgh Coal, and Pittsburgh Limestone;
- groundwater at three private wells, located upgradient and side gradient of Disposal Area 6, that draw water from the Pittsburgh Limestone zone;
- surface water at 7 locations;
- one spring at the south embankment of Disposal Area 6; and
- sixteen leachate and seep management locations.

Sample analysis includes metals, calcium, 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 are analyzed for these indicator parameters.

Three residential wells, located approximately 200 foot to 300 feet from the perimeter of Disposal Area 6, are analyzed for chloride, nitrogen, and organic compounds. They are not analyzed for all parameters associated with Disposal Area 6.

As part of an investigation for proposed Landfill 7, MAX installed 13 monitoring wells in 2018 in the northern portion of the Facility near Sewickley Creek. The wells are screened to monitor the water table (if present above the Pittsburgh Coal horizon), Pittsburgh Coal horizon, and Pittsburgh Limestone.

### Monitoring Assessment

In July 2020, MAX submitted a revised Facility-Wide Groundwater Assessment Report (2020 Assessment Report), including an evaluation of water quality from January 2015 through January 2020.

An evaluation of the most recent 8 quarters of monitoring data shows the following environmental conditions.

Groundwater - The following contaminants were detected above the EPA Drinking Water Standards: the National Primary Drinking Water Standard 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 EPA Region III Screening Levels (RSLs) for tap water, if there is no MCL for a contaminant.

#### Redstone Coal Groundwater Flow Zone

Only barium was detected above the EPA Drinking Water Standards. Barium exceeded the MCL of 2 mg/l in well, RC-2. Barium was detected at concentrations up to 4.62. It was not detected above the MCL in either of the downgradient Point-of-Compliance wells, RC-6A and W-2.

#### Pittsburgh Coal Groundwater Flow Zone

Manganese and nitrate were detected above the EPA Drinking Water Standards.

- Nitrate exceeded the MCL of 10 mg/l in two wells. Well PC-3 contained concentrations from 4.2 mg/l to 36.3 mg/l. Well SP-3, located within mine spoil backfill, contained concentrations from 4.2 mg/l to 34.8 mg/l.
- Manganese exceeded the RSL of 0.43 mg/l in 2 wells. Well PC-3 contained concentrations from 2.05 mg/l to 8.21 mg/l. Well PC-1 contained concentrations from 1.26 mg/l to 2.21 mg/l.

The Pittsburgh Coal zone is extensively deep mined beneath the Facility and the surrounding area. The groundwater is severely degraded by the past mining activities. It is not suitable for potable water use, with pH values as low as 3 S.U.

#### Pittsburgh Limestone Groundwater Flow Zone

Only fluoride was detected above the EPA Drinking Water Standards. Fluoride exceeded the MCL of 4 mg/l in 4 wells: W-4, W-5, W-10, and W-13. Concentrations in these wells ranged from 0.34 mg/l to 8.9 mg/l. An assessment of the aquifer characteristics indicates that the elevated fluoride may be originating from fluoride-bearing minerals in the limestone rock, with higher alkalinity groundwater areas showing higher concentrations of fluoride. Wells located along the downgradient property line, W-6, MW-702LS, and MW-704LS, show no fluoride concentrations above the MCL.



There were no exceedances of Drinking Water Standards in the three domestic water wells monitored.

Surface Water – Surface water is monitored at 7 locations for nitrate and chloride, as parameters that indicate a release may be occurring. No samples showed concentrations above the Drinking Waste Standards or Pennsylvania Surface Water Quality Standards.

### **Corrective Actions**

Impoundments 1, 2, and 3: The disposal impoundments were closed in the late 1970's with a compacted soil covers, approximately three to five feet thick. In the mid-1980's, PADEP determined that the covers were not effectively containing contaminants from the waste material. Under the direction of PADEP, MAX reclosed the impoundments by rebuilding the surface grading with residual waste, then installing a low-permeable cap on each unit to seal off precipitation infiltration. Impoundments 1 and 2 were reclosed and capped as one unit. Final closure was completed in 2013. PADEP determined that these actions effectively remediated the Redstone Coal zone. The point-of compliance wells show no contamination above the Drinking Water Standards.

Impoundments 4: Impoundment 4 was clean-closed in 1989 under PADEP oversight by excavating all accumulated waste material, PVC liner, dyke walls, and two feet (minimum) of subsoils. All the excavated material was deposited into Impoundment 5 prior to closure of that impoundment.

Impoundment 5: Impoundment 5 stopped operation in 1985. Cover material was placed over the waste surface, and the surface was monitored for settlement from consolidation of the waste in the impoundment. Due to 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. Closure was completed with PADEP approval in 2002.

Groundwater Remediation: The pump and treat groundwater remediation system, which has been operating for over 25 years, has removed impacted groundwater from the Pittsburgh Coal flow zone. Accumulated coal mine water is withdrawn from pumping wells and conveyed to the on-site wastewater treatment plant. Only one of three pumping wells, PW-1, still produces enough water to pump. A time-trend analysis of groundwater over time (2007 through 2017) shows that water quality in the Pittsburgh Coal zone continues to improve over time.

Leachate Management: As required by the 2016 COA, ID# 347065S, and the Solid Waste Permit, MAX constructed leachate collection and storage system improvements for Disposal Area 6. Construction was completed between April 2017 and May 2018. System improvements included construction of:

- subbase for a new storage tank, including subsurface mine void stabilization;
- leachate storage tank for additional storage capacity (approximately 1.2 million gallons);

- leachate transmission lines from the landfill to the new storage tank, and between the new and existing storage tanks; and
- lined leachate collection trench around the interior perimeter of the landfill.

## Section 4: Corrective Action Objectives

---

**Soil:** The Corrective Action Objective for soil is to prevent unacceptable exposure to human health and the environment from any hazardous constituents remaining in the soil.

EPA proposes this objective be achieved through protective caps. Except for Disposal Area 6, all contaminated material is already contained within a capped containment structure. Disposal Area 6 is an active landfill. The Solid Waste Permit requires placement of cover material over exposed waste at the end of every business day. It also requires final capping of the entire disposal area within one year of final waste placement.

- Impoundments 1, 2, 3, and 5 existing caps over the waste disposal areas and cap maintenance, required under the Solid Waste Permit, will achieve this objective.
- For Disposal Area 6, this objective will be achieved by meeting the Solid Waste Permit requirement to cap the disposal area within one year of final waste placement.

**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 project. For projects where aquifers are either currently used for water supply or have the potential to be used for water supply, EPA will use the National Primary Drinking Water Standard Maximum Contaminant Levels promulgated pursuant to Section 42 U.S.C. §§ 300f et seq. of the Safe Drinking Water Act and codified at 40 C.F.R. Part 141.

Ongoing groundwater monitoring shows sporadic exceedances of the Drinking Water Standards.

- The Redstone Coal flow zone meets Drinking Water Standards at the point of compliance wells.
- The Pittsburgh Coal flow zone contains manganese and nitrate above Drinking Water Standards at the point of compliance well PC-3. However, the aquifer is not suitable for potable water use due to degradation from past coal mining in the region. In addition, remediation of the aquifer continues under the pump and treat system required by PADEP.
- The Pittsburgh Limestone flow zone contains areas of fluoride concentrations that are up to twice the MCL of 4 mg/l. However, the 3 wells located along the downgradient property line, W-6, MW-702LS, and MW-704LS, show no fluoride concentrations above the MCL.
- The three residential well that are located within 300 feet of Disposal Area 6 are not monitored for the complete set of constituents related to the disposal area. The proposed remedy requires monitoring of the residential wells to include all the potential COPCs for Disposal Area 6, including fluoride.

The Corrective Action Objective for groundwater is to prevent unacceptable exposure to human health and the environment from contaminated groundwater. EPA proposes this objective be achieved by:

- compliance with the Permits, and
- monitoring of the residential wells for all COPCs for Disposal Area 6.

**Surface Water:** The 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.

Ongoing stream sampling shows no existing contamination. Ongoing monitoring as required by the Permits will ensure this objective continues to be achieved.

## Section 5: Proposed Remedy

---

EPA’s proposed remedy for the Facility consists of the following components.

1. Permit Compliance – MAX shall continue to comply with the terms and conditions of the Permits, including reporting to PADEP any releases or potential releases of hazardous waste from the Facility that may endanger public drinking water supplies or otherwise threaten human health or the environment.
2. Residential Water Supply Well Monitoring – In addition to the sampling parameters specified in Appendix A, page ix (Residential Water Supply Wells), of the 2016 Solid Waste Permit, MAX shall analyze the residential well water for the following: arsenic, barium, cadmium, fluoride, iron, lead, manganese, nickle, selenium, silver, ammonia, and sulfate. These additional analytes are based on the COPCs in Disposal Area 6 leachate. If EPA believes that additional corrective measures are necessary to protect human health and/or the environment from contaminants that remain in the groundwater above drinking water standards and that are attributable to releases from the Facility, EPA will solicit public comments on any such additional corrective measures prior to amending the FDRTC and including them in the final remedy for the Facility.

## Section 6: Evaluation of Proposed Remedy

---

This section provides a description of the criteria EPA used to evaluate the proposed 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 Permits and the COAs.
2) Achieve media cleanup objectives	Media cleanup objectives were achieved and will continue to be achieved by consolidating, stabilizing, and capping the waste material.
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 continue under the Permits to detect any releases that may occur in the future.

Balancing Criteria	Evaluation
4) Long-term effectiveness	Facility use restrictions under the Permits 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, or volume of hazardous constituents has already been achieved, as demonstrated by the data from the groundwater monitoring.
6) Short-term effectiveness	EPA's proposed 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 proposed remedy is readily implementable. EPA does not anticipate any regulatory constraints in requiring the Facility property owners to continue compliance with the Permits and the COAs and to increase groundwater analysis at the residential wells.
8) Cost	The proposed remedy is cost effective. The cost of increasing groundwater analysis at the residential wells will be minimal.
9) Community Acceptance	EPA will evaluate community acceptance during the public comment period and provide an analysis in the Final Decision.
10) State/Support Agency Acceptance	EPA will evaluate state acceptance during the public comment period and provide an analysis in the Final Decision.

Overall, based on the evaluation criteria, EPA has determined the proposed 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 proposed remedy at the Facility. PADEP requires financial assurance in accordance with the Permits. EPA has determined that additional financial assurance is not required.

## Section 8: Public Participation

---

Interested persons are invited to comment on EPA's proposed remedy. The public comment period will last forty-five (45) calendar days from the date that notice is published in a local newspaper. Comments may be submitted by mail, or electronic mail to Maureen Essenthier at the contact information listed below.

A public meeting will be held upon request. A meeting will not be scheduled unless one is requested.

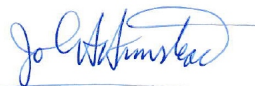
The Administrative Record contains all the information considered by EPA for the proposed remedy at this Facility. The Administrative Record is available at the following location:

U.S. EPA Region III  
1650 Arch Street  
Philadelphia, PA 19103  
Contact: Maureen Essenthier (3LD20)  
Phone: (215) 814-3416  
Email: [essenthier.maureen@epa.gov](mailto:essenthier.maureen@epa.gov)

## Section 9: Signature

---

Date: 8/17/20



John A. Armstead, Director  
Land, Chemicals and Redevelopment Division  
US EPA, Region III

### Attachments

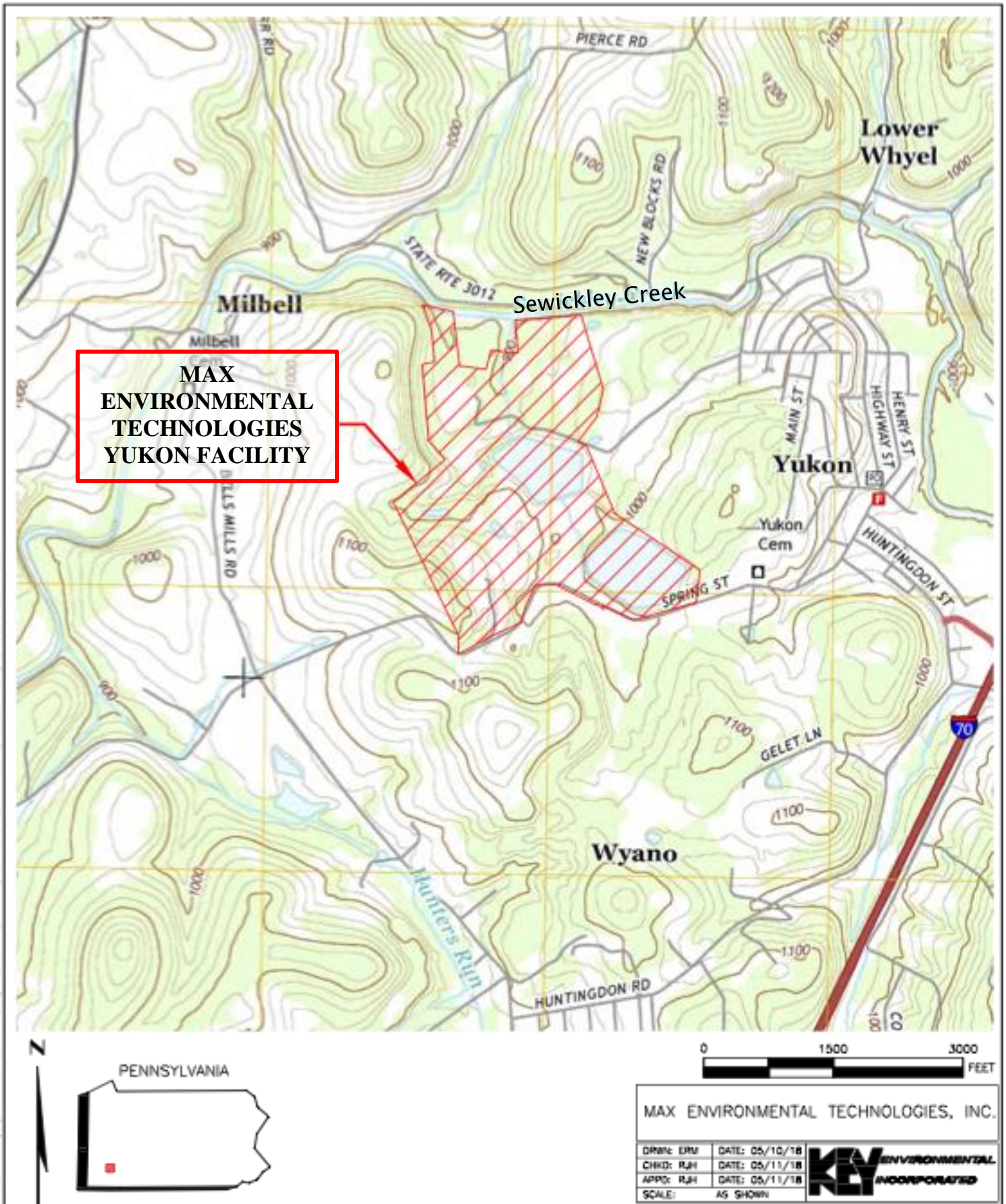
Figure 1 - Facility Location  
Figure 2 - Facility Layout



## Section 10: Index to Administrative Record

---

1. Facility-Wide Groundwater Assessment Report, CEC for MAX, July 2020
2. MAX response to 1-7-2020 GW request, MAX email dated 2-5-2020
3. Groundwater Analysis Summary, 3<sup>rd</sup> Quarter 2017 through 2<sup>nd</sup> Quarter 2019, MAX
4. 3<sup>rd</sup> Quarter 2018 Groundwater Sampling, MAX, dated October 2018
5. Construction Certification Documents, September 2016 COA Related, CEC for MAX, October 2016 through May 2018
6. MAX Yukon Facility, F039 delisting petition, Key Environmental Inc, for MAX, dated May 30, 2018
7. First Amendment to FO39 Consent Order and Agreement, PADEP and MAX Environmental Technologies, dated March 28, 2018
8. Groundwater Time-Trend Plots, MAX, 2007 through 2017
9. Consent Order and Agreement (FO39, ENF ID NO 346585S), PADEP and MAX Environmental Technologies, dated September 21, 2016
10. Consent Order and Agreement (ENF ID NO 347065S), PADEP and MAX Environmental Technologies, dated September 21, 2016
11. PADEP Solid Waste Permit No 301071 (Residual Waste Disposal), issued 9/21/2016
12. MAX Environmental Technologies Fact sheet dated July 2014
13. Facility Wide Groundwater Monitoring Plan, Cribbs and Associates, Inc. for MAX. dated 2013
14. MAX Environmental Technologies Response to Request for information dated August 15, 2013
15. PADEP Hazardous Waste Permit No PAD004835146, issued February 14, 2005
16. MAX Environmental Technologies Inc Yukon Facility Capping of Pre-RCRA Disposal units Revised Plan, dated May 2005
17. Facility Wide Groundwater Monitoring and Reporting Plan, Mill Service dated July 1996
18. Mill Service Historical Environmental Audit, dated June 1992.
19. Mill Service - Yukon Plant Impoundment No 5 Closure Plan dated October 1986
20. Pennsylvania Department of Environmental Resources Consent Order and Agreement, dated 1985



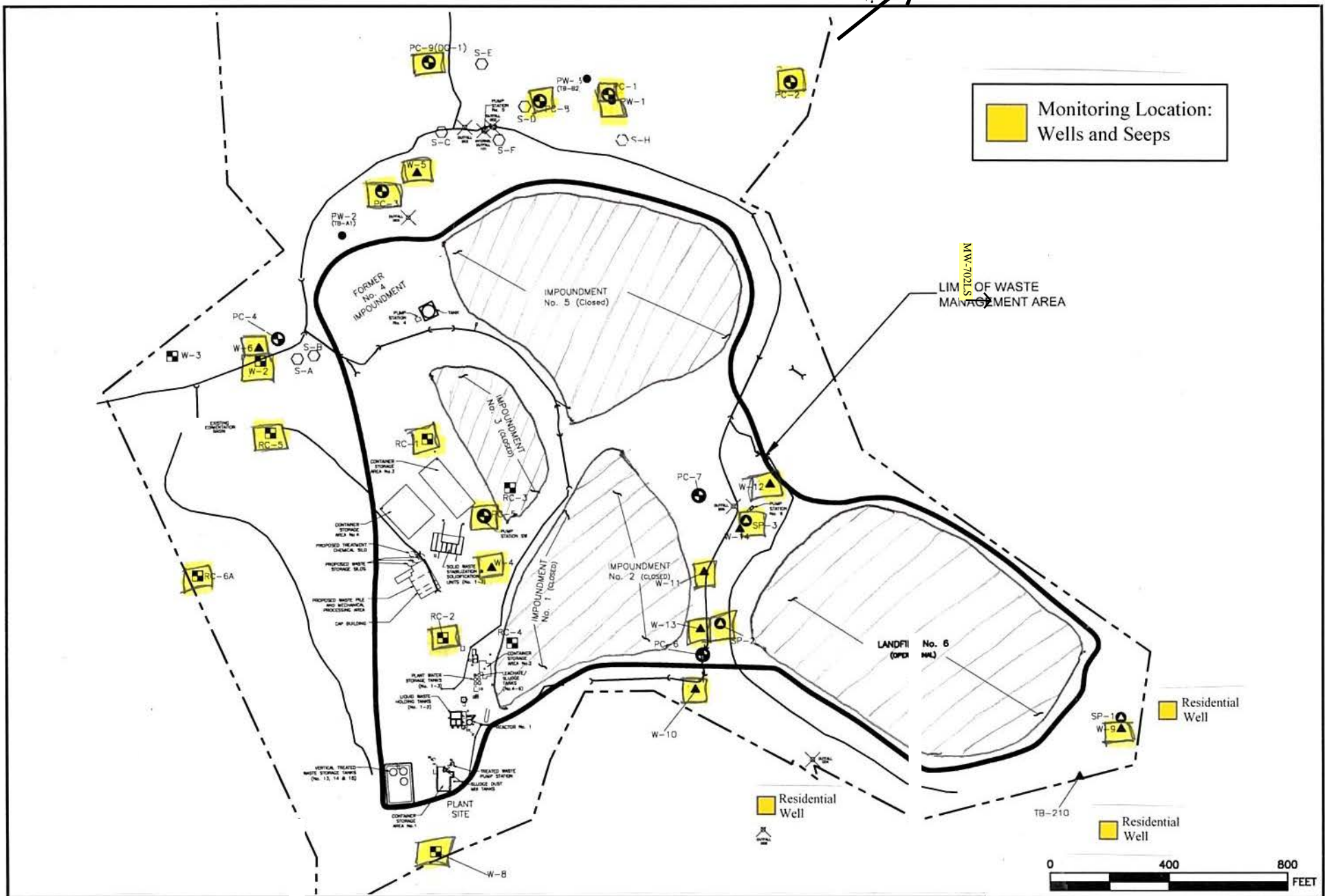
**Statement of Basis**

**MAX Environmental Technologies, Inc. Yukon Facility**

**FIGURE 1**

**Facility Location**





**Statement of Basis**

**MAX Environmental Technologies Yukon Facility**

**FIGURE 2**

**Facility Layout**

MAX ENVIRONMENTAL TECHNOLOGIES, INC.

DRWN: ERM	DATE: 05/10/18
CHKD: RJH	DATE: 05/11/18
APPD: RJH	DATE: 05/11/18
SCALE: AS SHOWN	



**ATTACHMENT B**  
**PUBLIC COMMENTS**



November 19, 2020

**Via Electronic Mail**

Griff Miller  
Project Manager  
EPA Mid-Atlantic Region  
Mail Code: 3LD20  
1650 Arch Street 19103

**Re: Proposed RCRA Corrective Action - Cleanup Proposal and Draft Permit for  
MAX Environmental Technologies, Inc. in Yukon, PA - EPA ID: PAD004835146**

Dear Mr. Miller,

The following comments are submitted on behalf of the Mountain Watershed Association (“MWA”) and on behalf of its over 2,000 members. MWA’s mission is to protect, preserve, and restore the Indian Creek and greater Youghiogheny River Watersheds, of which Sewickley Creek is a critical part. The Max Environmental (“Max”) Yukon site is located on and discharges into Sewickley Creek. For decades, the site has been a concern for the residents and that concern continues to this day. The dangerous hazardous waste that is treated at the site has the potential to cause very serious impacts to human health and the facility has commonly been found out of compliance with its permit standards.

Max Environmental has a long history of noncompliance with its permits. For example:

- From January 2007 to August 2019, MAX’s NPDES permit was out of compliance for 1,846 days. Those exceedances included fecal coliform, ammonia, chlorine, and more.
- In one year, from August 2018 to August 2019, Max exceeded contaminants like hexavalent chromium, zinc, oil & grease, pH, for 124 days.
- Max continues to struggle with compliance and the DEP issued violations in February and June of 2020. In the June violation, that DEP cited Max for:
  - failure to monitor pollutants,
  - failure to properly operate and maintain all facilities,
  - and failure to take necessary measures to prevent pollutants from reaching waters of the Commonwealth

It is not clear that Max has remedied those citations included in the June 2020 violation.



Some of Max's more recent violations have come as a result of complaints filed by residents, as well as from our own Youghiogheny Riverkeeper. The Riverkeeper observed foaming, yellow water from one of MAX's outflows that discharges directly into Sewickley Creek and took water samples, which are attached. Twice, the results of this sampling indicated a number of concerning pollutants, including very high levels of arsenic and strontium. Arsenic was found at levels up to 2.9 mg/l, which is nearly 300 times EPA's Drinking Water Standards of .01 mg/l, and strontium was found at levels up to 25.8 mg/l, which is more than 6 times EPA standards of 4 mg/l. For at least 3 weeks, these discharges flowed directly into Sewickley Creek, which is a popular recreational spot for fishing and swimming.

Arsenic is a known human carcinogen and immediate symptoms from exposure can include a sore throat and irritated lungs. Excess levels of strontium have been linked to leukemia and bone cancers. Strontium is also a strong indicator of oil and gas wastes, which MAX lists as one of their accepted wastes. Oil and gas wastes are known to contain high levels of technologically enhanced naturally occurring radioactive materials (TENORM). Data from USGS studies show that oil- and gas-field produced waters in the northern Appalachian Basin have been found to contain radioactive elements such as radium at levels thousands of times higher than the drinking water standard<sup>1</sup>. Given this information, as well as high levels of strontium in our samples, we believe that MAX should be required to monitor for radiological contaminants such as radium.

When conducting their investigation in response to MWA's and residents' complaints, DEP found that MAX had misrepresented the locations of some on-site outfalls on official maps, which could distort sampling results. They also sampled a culvert near MAX that indicated that the following contaminants were detected above EPA Drinking Water Standards: barium, manganese, nitrate, and fluoride.

Because of Max's egregious history of noncompliance - as well as its continued and ongoing activity that contaminates the environment and community surrounding the site - it is imperative that the CAP adopt additional and more stringent monitoring requirements than the state-level permits require.

### **Statement of Basis Should Require Prevention of Release For All Solid Waste**

Amending the language of the Statement of Basis to include reporting of all solid waste spills, is one way to help increase reporting and could result in better protections for the community. There are solid wastes that are not defined as hazardous waste but nonetheless are hazardous to human health and the environment. For example, the fracking waste that makes up roughly

---

<sup>1</sup> USGS. Rowan et al 2011. <https://pubs.usgs.gov/sir/2011/5135/pdf/sir2011-5135.pdf>



80% of all waste that Max receives, is highly radioactive and known to have severe health impacts, yet this is not yet defined as hazardous.

A release of such waste would pose a very serious threat to the nearby community and so it is critical that it be reported as well.

Section 5 of the Statement of Basis should be amended in order to remedy this. It currently reads:

MAX shall continue to comply with the terms and conditions of the Permits, including reporting to PADEP any releases of hazardous waste from the Facility..

This language should be amended to say:

MAX shall continue to comply with the terms and conditions of the Permits, including reporting to PADEP any releases of hazardous **or solid** waste from the Facility...

### **CAP Should Include Additional Monitoring And Sampling Requirements**

Considering Max's ongoing, as well as egregious history of noncompliance issues, the Corrective Action Plan should institute more stringent standards of monitoring and reporting than are currently included. One important way this should be done is to modify and clarify the Plan's requirement regarding representative sampling.<sup>2</sup>

Without additional clarification, this may lead to a situation where such "representative" samples fail to be fully representative because they are taken randomly - in a way that does not accurately reflect if hazardous waste has been treated properly at all points in the site.

For example, if solid waste is treated by using a backhoe to mix the materials in a pit, this will likely not result in a 100% homogeneous material. Imagine the deep corners and how difficult it would be to get the material in those deep corners thoroughly combined with the chemicals that are added to the waste for treatment. If Max doesn't sample in all sections where there may be treatment problems, they will likely pass a batch that has not been completely treated.

If Max was using a different treatment method, such as pugmills, which mix the waste in a way that creates a homogenous result, then random sampling would be appropriate. In fact, this might be a more effective method and the Corrective Action Plan should require Max to implement the use of such mechanisms.

---

<sup>2</sup> Draft Corrective Action Plan Section B(8)(a).



In order to ensure the sampling accurately reflects conditions at the site, the requirement should be modified so that it makes clear sampling should be representative **of the entire range of potential range of conditions**. For example, section B(8)(a) should be amended to read: Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity, *including sampling at times and/or locations when/where treated wastes or effluent may not meet land disposal restriction requirements*.

In Section 7.0, "Data Interpretation", the problem again arises. The language is so broad that it allows for only one sample to be required, if the sample is less than or equal to 80% of the treatment limit. If Max picks the "right" sample location -- or avoids locations where they might expect treatment doesn't work as well -- they will essentially pass the requirement every time. Regardless of whether the waste has been properly treated.

As was stated earlier, one way to remedy this is by clarifying that representative samples are done from the potential range of conditions.

Another effective measure would be to require that more than one sample per batch is taken. This is one of the best ways to help confirm that treatment has been completed. We strongly suggest that language clarification and additional samples of each batch be adopted into the final Corrective Action Plan in order to assure the site is being run safely.

Thank you for the opportunity to provide comment and please feel free to contact us with any additional questions.

Melissa Marshall, Esq.  
Community Advocate  
Mountain Watershed Association

# Attachment A



**GEOCHEMICAL  
TESTING**  
Environmental and Energy Analysis

2005 N. Center Ave.  
Somerset, PA 15501

814/443-1671  
814/445-6666  
FAX: 814/445-6729

Thursday, June 11, 2020

To Whom It May Concern  
MOUNTAIN WATERSHED ASSOCIATION INC.  
PO BOX 408  
MELCROFT, PA 15462

Order No.: G2006131

Dear To Whom It May Concern:

Geochemical Testing received 1 sample(s) on 6/2/2020 for the analyses presented in the following report.

There were no problems with sample receipt protocols and analyses met the TNI/NELAC, EPA, and laboratory specifications except where noted in the Case Narrative or Laboratory Results.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Timothy W. Bergstresser  
Director of Technical Services





# Geochemical Testing

Date: 11-Jun-20

CLIENT: MOUNTAIN WATERSHED ASSOCIATI  
Project:  
Lab Order: G2006131

## CASE NARRATIVE

No problems were encountered during analysis of this workorder, except if noted in this report.

**Legend:**  
H - Method Hold Time exceeded and is not compliant with 40CFR136 Table II.  
U - The analyte was not detected at or above the listed concentration, which is below the laboratory quantitation limit.  
B - Analyte detected in the associated Method Blank  
Q1 - See case narrative      ND - Not Detected  
MCL - Contaminant Limit      J - Indicates an estimated value.  
Q - Qualifier      QL -Quantitation Limit      DF - Dilution Factor

S - Surrogate Recovery outside accepted recovery limits  
T - Sample received above required temperature and is not compliant with 40CFR136 Table II.  
T1 - Sample received above required temperature  
MDA - Minimum Detectable Activity.  
\*\* - Value exceeds Action Limit  
TICs - Tentatively Identified Compounds.  
E - Value above quantitation range



# Laboratory Results

## Geochemical Testing

Date: 11-Jun-20

<b>CLIENT:</b>	MOUNTAIN WATERSHED ASSOCIATION INC.	<b>Client Sample ID:</b>	Dis
<b>Lab Order:</b>	G2006131		
<b>Project:</b>		<b>Sampled By:</b>	Mountain Watershed Associatio
<b>Lab ID:</b>	G2006131-001	<b>Collection Date:</b>	6/2/2020 9:55:00 AM
<b>Matrix:</b>	SURFACE WATER	<b>Received Date:</b>	6/2/2020 2:35:22 PM

Analyses	Result	QL	Q	Units	DF	Date Prepared	Date Analyzed
<b>INORGANIC NON-METALS</b>		Analyst: <b>MBG</b>			<b>EPA 300.0</b>		<b>EPA 300.0</b>
Bromide	81.2	5.0		mg/L	25	06/05/20 12:15 PM	06/05/20 5:22 PM
Chloride	4170	25.0		mg/L	25	06/05/20 12:15 PM	06/05/20 5:22 PM
Sulfate	5370	50.0		mg/L	25	06/05/20 12:15 PM	06/05/20 5:22 PM
<b>INORGANIC METALS</b>		Analyst: <b>MEG</b>			<b>EPA 200.2</b>		<b>EPA 200.7</b>
Aluminum	0.3	0.1		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Boron	5.74	0.05		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Calcium	874	1.0		mg/L	10	06/04/20 7:20 AM	06/06/20 9:25 AM
Cobalt	0.015	0.005		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Iron	0.29	0.05		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Lithium	0.41	0.01		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Magnesium	81.7	0.1		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Manganese	0.10	0.01		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Molybdenum	8.33	0.02		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Phosphorus	0.82	0.01		mg/L	1	06/04/20 7:20 AM	06/06/20 10:58 AM
Potassium	496	0.5		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Silicon	9.9	0.1		mg/L	1	06/04/20 7:20 AM	06/06/20 10:58 AM
Sodium	4130	4.0		mg/L	20	06/04/20 7:20 AM	06/08/20 7:12 AM
Tin	< 0.10	0.10		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Titanium	< 0.010	0.010		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Vanadium	0.310	0.005		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
Zinc	0.04	0.01		mg/L	1	06/04/20 7:20 AM	06/05/20 10:11 AM
<b>INORGANIC METALS</b>		Analyst: <b>RLR</b>			<b>EPA 200.2</b>		<b>EPA 200.8</b>
Antimony	1230	50.0		µg/L	50	06/04/20 7:20 AM	06/05/20 10:21 AM
Arsenic	2930	50.0		µg/L	50	06/04/20 7:20 AM	06/05/20 10:21 AM
Barium	39.7	5.0		µg/L	1	06/04/20 7:20 AM	06/05/20 9:54 AM
Cadmium	1.5	0.2		µg/L	1	06/04/20 7:20 AM	06/05/20 9:54 AM
Chromium	12.6	1.0		µg/L	1	06/04/20 7:20 AM	06/05/20 9:54 AM
Copper	15.0	1.0		µg/L	1	06/04/20 7:20 AM	06/05/20 9:54 AM
Lead	23.3	1.0		µg/L	1	06/04/20 7:20 AM	06/05/20 9:54 AM
Nickel	333	2.5		µg/L	5	06/04/20 7:20 AM	06/05/20 10:19 AM
Rubidium	815	50.0		µg/L	10	06/06/20 6:20 AM	06/10/20 7:59 AM
Selenium	178	5.0		µg/L	5	06/04/20 7:20 AM	06/05/20 10:19 AM
Silver	< 0.2	0.2		µg/L	1	06/04/20 7:20 AM	06/05/20 9:54 AM
Strontium	25800	2500		µg/L	500	06/04/20 7:20 AM	06/05/20 10:58 AM
Tungsten	160	25.0		µg/L	5	06/04/20 7:20 AM	06/05/20 10:19 AM
Uranium	< 1.0	1.0		µg/L	1	06/04/20 7:20 AM	06/05/20 9:54 AM



July 06, 2020

Eric Harder  
Mountain Watershed  
1414 b Indian Creek Valley Rd  
Melcroft, PA 15462

RE: Project: Sewickley  
Pace Project No.: 30367730

Dear Eric Harder:

Enclosed are the analytical results for sample(s) received by the laboratory on June 12, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Alexis E. Ozoroski  
alexis.ozoroski@pacelabs.com  
(724)850-5600  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## CERTIFICATIONS

Project: Sewickley  
Pace Project No.: 30367730

---

### **Pace Analytical Services Pennsylvania**

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601  
ANAB DOD-ELAP Rad Accreditation #: L2417  
Alabama Certification #: 41590  
Arizona Certification #: AZ0734  
Arkansas Certification  
California Certification #: 04222CA  
Colorado Certification #: PA01547  
Connecticut Certification #: PH-0694  
Delaware Certification  
EPA Region 4 DW Rad  
Florida/TNI Certification #: E87683  
Georgia Certification #: C040  
Florida: Cert E871149 SEKS WET  
Guam Certification  
Hawaii Certification  
Idaho Certification  
Illinois Certification  
Indiana Certification  
Iowa Certification #: 391  
Kansas/TNI Certification #: E-10358  
Kentucky Certification #: KY90133  
KY WW Permit #: KY0098221  
KY WW Permit #: KY0000221  
Louisiana DHH/TNI Certification #: LA180012  
Louisiana DEQ/TNI Certification #: 4086  
Maine Certification #: 2017020  
Maryland Certification #: 308  
Massachusetts Certification #: M-PA1457  
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235  
Montana Certification #: Cert0082  
Nebraska Certification #: NE-OS-29-14  
Nevada Certification #: PA014572018-1  
New Hampshire/TNI Certification #: 297617  
New Jersey/TNI Certification #: PA051  
New Mexico Certification #: PA01457  
New York/TNI Certification #: 10888  
North Carolina Certification #: 42706  
North Dakota Certification #: R-190  
Ohio EPA Rad Approval: #41249  
Oregon/TNI Certification #: PA200002-010  
Pennsylvania/TNI Certification #: 65-00282  
Puerto Rico Certification #: PA01457  
Rhode Island Certification #: 65-00282  
South Dakota Certification  
Tennessee Certification #: 02867  
Texas/TNI Certification #: T104704188-17-3  
Utah/TNI Certification #: PA014572017-9  
USDA Soil Permit #: P330-17-00091  
Vermont Dept. of Health: ID# VT-0282  
Virgin Island/PADEP Certification  
Virginia/VELAP Certification #: 9526  
Washington Certification #: C868  
West Virginia DEP Certification #: 143  
West Virginia DHHR Certification #: 9964C  
Wisconsin Approve List for Rad  
Wyoming Certification #: 8TMS-L

---

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

**SAMPLE ANALYTE COUNT**

Project: Sewickley  
Pace Project No.: 30367730

Lab ID	Sample ID	Method	Analysts	Analytes	
				Reported	Laboratory
30367730001	dismax	EPA 6010B	CTS	28	PASI-PA
		EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		300.0 Rev.2.1, 1993	JWL	3	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## PROJECT NARRATIVE

Project: Sewickley  
Pace Project No.: 30367730

---

**Method:** EPA 6010B  
**Description:** 6010 MET ICP  
**Client:** Mountain Watershed  
**Date:** July 06, 2020

**General Information:**

1 sample was analyzed for EPA 6010B by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Sample Preparation:**

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

**Initial Calibrations (including MS Tune as applicable):**

All criteria were within method requirements with any exceptions noted below.

**Continuing Calibration:**

All criteria were within method requirements with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 401487

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 30367850001,30367853002

ML: Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

- MS (Lab ID: 1943731)
  - Calcium
  - Magnesium
- MS (Lab ID: 1943734)
  - Calcium
  - Sodium
- MSD (Lab ID: 1943732)
  - Calcium
  - Magnesium

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## PROJECT NARRATIVE

Project: Sewickley  
Pace Project No.: 30367730

---

**Method:** EPA 903.1  
**Description:** 903.1 Radium 226  
**Client:** Mountain Watershed  
**Date:** July 06, 2020

**General Information:**

1 sample was analyzed for EPA 903.1 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## PROJECT NARRATIVE

Project: Sewickley  
Pace Project No.: 30367730

---

**Method:** EPA 904.0  
**Description:** 904.0 Radium 228  
**Client:** Mountain Watershed  
**Date:** July 06, 2020

**General Information:**

1 sample was analyzed for EPA 904.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## PROJECT NARRATIVE

Project: Sewickley  
Pace Project No.: 30367730

---

**Method:** 300.0 Rev.2.1, 1993  
**Description:** 300.0 IC Anions 28 Days  
**Client:** Mountain Watershed  
**Date:** July 06, 2020

**General Information:**

1 sample was analyzed for 300.0 Rev.2.1, 1993 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Duplicate Sample:**

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

**Additional Comments:**

Analyte Comments:

QC Batch: 403725

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- dismax (Lab ID: 30367730001)
- Bromide

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## ANALYTICAL RESULTS

Project: Sewickley  
Pace Project No.: 30367730

**Sample: dismax**      **Lab ID: 30367730001**      Collected: 06/12/20 09:20      Received: 06/12/20 10:45      Matrix: Water

Comments: • 6/12/20 - Added 2.5ml HNO<sub>3</sub> to all sample bottles prior to analysis. pH <2.  
• Samples were received at a temperature above 6 degrees C, no ice was present. Samples did not meet the requirement for thermal preservation.

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
------------	---------	-------	--------------	----	----------	----------	---------	------

**6010 MET ICP**

Analytical Method: EPA 6010B      Preparation Method: EPA 3005A  
Pace Analytical Services - Greensburg

Aluminum	<b>386</b>	ug/L	50.0	1	06/18/20 13:58	06/22/20 12:27	7429-90-5	
Antimony	<b>813</b>	ug/L	6.0	1	06/18/20 13:58	06/22/20 12:27	7440-36-0	
Arsenic	<b>2170</b>	ug/L	5.0	1	06/18/20 13:58	06/22/20 12:27	7440-38-2	
Barium	<b>58.6</b>	ug/L	10.0	1	06/18/20 13:58	06/22/20 12:27	7440-39-3	
Boron	<b>3990</b>	ug/L	50.0	1	06/18/20 13:58	06/22/20 12:27	7440-42-8	
Cadmium	<b>8.2</b>	ug/L	3.0	1	06/18/20 13:58	06/22/20 12:27	7440-43-9	
Calcium	<b>874000</b>	ug/L	1000	1	06/18/20 13:58	06/22/20 12:27	7440-70-2	
Chromium	<b>12.2</b>	ug/L	5.0	1	06/18/20 13:58	06/22/20 12:27	7440-47-3	
Cobalt	<b>6.6</b>	ug/L	5.0	1	06/18/20 13:58	06/22/20 12:27	7440-48-4	
Copper	<b>16.0</b>	ug/L	5.0	1	06/18/20 13:58	06/22/20 12:27	7440-50-8	
Iron	<b>628</b>	ug/L	70.0	1	06/18/20 13:58	06/22/20 12:27	7439-89-6	
Lead	<b>41.1</b>	ug/L	5.0	1	06/18/20 13:58	06/22/20 12:27	7439-92-1	
Lithium	<b>300</b>	ug/L	40.0	1	06/18/20 13:58	06/22/20 12:27	7439-93-2	
Magnesium	<b>65200</b>	ug/L	200	1	06/18/20 13:58	06/22/20 12:27	7439-95-4	
Manganese	<b>163</b>	ug/L	5.0	1	06/18/20 13:58	06/22/20 12:27	7439-96-5	
Molybdenum	<b>6060</b>	ug/L	20.0	1	06/18/20 13:58	06/22/20 12:27	7439-98-7	
Nickel	<b>234</b>	ug/L	10.0	1	06/18/20 13:58	06/22/20 12:27	7440-02-0	
Phosphorus	<b>426</b>	ug/L	50.0	1	06/18/20 13:58	06/22/20 12:27	7723-14-0	
Potassium	<b>369000</b>	ug/L	500	1	06/18/20 13:58	06/22/20 12:27	7440-09-7	
Selenium	<b>152</b>	ug/L	8.0	1	06/18/20 13:58	06/22/20 12:27	7782-49-2	
Silicon	<b>5540</b>	ug/L	100	1	06/18/20 13:58	06/22/20 12:27	7440-21-3	
Silver	ND	ug/L	6.0	1	06/18/20 13:58	06/22/20 12:27	7440-22-4	
Sodium	<b>3140000</b>	ug/L	10000	10	06/18/20 13:58	06/22/20 12:38	7440-23-5	
Strontium	<b>33600</b>	ug/L	50.0	10	06/18/20 13:58	06/22/20 12:38	7440-24-6	
Tin	ND	ug/L	50.0	1	06/18/20 13:58	06/22/20 12:27	7440-31-5	
Titanium	ND	ug/L	5.0	1	06/18/20 13:58	06/22/20 12:27	7440-32-6	
Vanadium	<b>164</b>	ug/L	5.0	1	06/18/20 13:58	06/22/20 12:27	7440-62-2	
Zinc	<b>76.4</b>	ug/L	10.0	1	06/18/20 13:58	06/22/20 12:27	7440-66-6	

**300.0 IC Anions 28 Days**

Analytical Method: 300.0 Rev.2.1, 1993  
Pace Analytical Services - Greensburg

Bromide	ND	mg/L	250	500		07/06/20 12:44	24959-67-9	D3
Chloride	<b>4480</b>	mg/L	500	1000		07/06/20 13:00	16887-00-6	
Sulfate	<b>5330</b>	mg/L	500	1000		07/06/20 13:00	14808-79-8	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA

Project: Sewickley  
Pace Project No.: 30367730

QC Batch: 401487      Analysis Method: EPA 6010B  
QC Batch Method: EPA 3005A      Analysis Description: 6010 MET  
Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30367730001

METHOD BLANK: 1943728      Matrix: Water  
Associated Lab Samples: 30367730001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	50.0	06/22/20 11:31	
Antimony	ug/L	ND	6.0	06/22/20 11:31	
Arsenic	ug/L	ND	5.0	06/22/20 11:31	
Barium	ug/L	ND	10.0	06/22/20 11:31	
Boron	ug/L	ND	50.0	06/22/20 11:31	
Cadmium	ug/L	ND	3.0	06/22/20 11:31	
Calcium	ug/L	ND	1000	06/22/20 11:31	
Chromium	ug/L	ND	5.0	06/22/20 11:31	
Cobalt	ug/L	ND	5.0	06/22/20 11:31	
Copper	ug/L	ND	5.0	06/22/20 11:31	
Iron	ug/L	ND	70.0	06/22/20 11:31	
Lead	ug/L	ND	5.0	06/22/20 11:31	
Lithium	ug/L	ND	40.0	06/22/20 11:31	
Magnesium	ug/L	ND	200	06/22/20 11:31	
Manganese	ug/L	ND	5.0	06/22/20 11:31	
Molybdenum	ug/L	ND	20.0	06/22/20 11:31	
Nickel	ug/L	ND	10.0	06/22/20 11:31	
Phosphorus	ug/L	ND	50.0	06/22/20 11:31	
Potassium	ug/L	ND	500	06/22/20 11:31	
Selenium	ug/L	ND	8.0	06/22/20 11:31	
Silicon	ug/L	ND	100	06/22/20 11:31	
Silver	ug/L	ND	6.0	06/22/20 11:31	
Sodium	ug/L	ND	1000	06/22/20 11:31	
Strontium	ug/L	ND	5.0	06/22/20 11:31	
Tin	ug/L	ND	50.0	06/22/20 11:31	
Titanium	ug/L	ND	5.0	06/22/20 11:31	
Vanadium	ug/L	ND	5.0	06/22/20 11:31	
Zinc	ug/L	ND	10.0	06/22/20 11:31	

LABORATORY CONTROL SAMPLE: 1943729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	4640	93	80-120	
Antimony	ug/L	500	479	96	80-120	
Arsenic	ug/L	500	496	99	80-120	
Barium	ug/L	500	462	92	80-120	
Boron	ug/L	500	482	96	80-120	
Cadmium	ug/L	500	486	97	80-120	
Calcium	ug/L	5000	4610	92	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA

Project: Sewickley  
Pace Project No.: 30367730

LABORATORY CONTROL SAMPLE: 1943729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	500	481	96	80-120	
Cobalt	ug/L	500	489	98	80-120	
Copper	ug/L	500	467	93	80-120	
Iron	ug/L	5000	4640	93	80-120	
Lead	ug/L	500	470	94	80-120	
Lithium	ug/L	500	460	92	80-120	
Magnesium	ug/L	5000	4420	88	80-120	
Manganese	ug/L	500	474	95	80-120	
Molybdenum	ug/L	500	491	98	80-120	
Nickel	ug/L	500	496	99	80-120	
Phosphorus	ug/L	500	489	98	80-120	
Potassium	ug/L	5000	4530	91	80-120	
Selenium	ug/L	500	496	99	80-120	
Silicon	ug/L	2500	2200	88	80-120	
Silver	ug/L	250	239	96	80-120	
Sodium	ug/L	5000	4630	93	80-120	
Strontium	ug/L	500	455	91	80-120	
Tin	ug/L	500	478	96	80-120	
Titanium	ug/L	500	473	95	80-120	
Vanadium	ug/L	500	468	94	80-120	
Zinc	ug/L	500	480	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1943731 1943732

Parameter	30367850001		MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.							
Aluminum	ug/L	0.050 U mg/L	5000	5000	4530	4570	90	91	75-125	1	
Antimony	ug/L	6.0 U	500	500	491	486	98	97	75-125	1	
Arsenic	ug/L	5.0 U	500	500	507	493	101	99	75-125	3	
Barium	ug/L	0.048 mg/L	500	500	498	497	90	90	75-125	0	
Boron	ug/L	0.023J mg/L	500	500	523	515	100	98	75-125	1	
Cadmium	ug/L	3.0 U	500	500	494	485	99	97	75-125	2	
Calcium	ug/L	82100	5000	5000	83000	82700	19	12	75-125	0	ML
Chromium	ug/L	0.81J	500	500	474	468	95	93	75-125	1	
Cobalt	ug/L	0.56J	500	500	487	478	97	96	75-125	2	
Copper	ug/L	5.0 U	500	500	457	453	91	90	75-125	1	
Iron	ug/L	0.14 mg/L	5000	5000	4590	4600	89	89	75-125	0	
Lead	ug/L	5.0 U	500	500	467	464	93	92	75-125	1	
Lithium	ug/L	0.0092J mg/L	500	500	466	464	91	91	75-125	0	
Magnesium	ug/L	14200	5000	5000	17700	17700	72	70	75-125	0	ML
Manganese	ug/L	0.11 mg/L	500	500	563	558	90	89	75-125	1	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA

Project: Sewickley  
Pace Project No.: 30367730

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1943731 1943732											
Parameter	Units	30367850001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec Limits	RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec			
Molybdenum	ug/L	0.88J	500	500	505	495	101	99	75-125	2	
Nickel	ug/L	10.0 U	500	500	492	484	98	97	75-125	2	
Phosphorus	ug/L	25.8J	500	500	524	517	100	98	75-125	1	
Potassium	ug/L	1350	5000	5000	5810	5770	89	88	75-125	1	
Selenium	ug/L	0.0080 U mg/L	500	500	503	494	101	99	75-125	2	
Silicon	ug/L	5460	2500	2500	7430	7410	79	78	75-125	0	
Silver	ug/L	6.0 U	250	250	246	241	98	96	75-125	2	
Sodium	ug/L	8870	5000	5000	13000	13000	83	82	75-125	0	
Strontium	ug/L	0.29 mg/L	500	500	721	719	87	86	75-125	0	
Tin	ug/L	50.0 U	500	500	487	477	97	95	75-125	2	
Titanium	ug/L	5.0 U	500	500	480	473	96	94	75-125	2	
Vanadium	ug/L	0.00063 J mg/L	500	500	469	460	94	92	75-125	2	
Zinc	ug/L	0.012 mg/L	500	500	477	469	93	91	75-125	2	

MATRIX SPIKE SAMPLE: 1943734							
Parameter	Units	30367853002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	1.1 mg/L	5000	6040	99	75-125	
Antimony	ug/L	6.0 U	500	463	93	75-125	
Arsenic	ug/L	5.0 U	500	483	97	75-125	
Barium	ug/L	0.098 mg/L	500	540	88	75-125	
Boron	ug/L	0.036J mg/L	500	508	94	75-125	
Cadmium	ug/L	3.0 U	500	471	94	75-125	
Calcium	ug/L	56900	5000	59400	50	75-125	ML
Chromium	ug/L	1.4J	500	457	91	75-125	
Cobalt	ug/L	0.86J	500	469	94	75-125	
Copper	ug/L	5.0 U	500	448	89	75-125	
Iron	ug/L	1.7 mg/L	5000	6160	89	75-125	
Lead	ug/L	5.0 U	500	452	90	75-125	
Lithium	ug/L	0.0063J mg/L	500	454	90	75-125	
Magnesium	ug/L	12300	5000	16000	75	75-125	
Manganese	ug/L	0.21 mg/L	500	650	88	75-125	
Molybdenum	ug/L	20.0 U	500	478	95	75-125	
Nickel	ug/L	1.8J	500	473	94	75-125	
Phosphorus	ug/L	68.6	500	549	96	75-125	
Potassium	ug/L	2190	5000	6560	87	75-125	
Selenium	ug/L	0.0080 U mg/L	500	481	96	75-125	
Silicon	ug/L	5240	2500	7980	110	75-125	
Silver	ug/L	6.0 U	250	231	92	75-125	
Sodium	ug/L	34700	5000	37500	57	75-125	ML
Strontium	ug/L	0.34 mg/L	500	765	85	75-125	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA

Project: Sewickley  
Pace Project No.: 30367730

MATRIX SPIKE SAMPLE: 1943734		30367853002	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Tin	ug/L	50.0 U	500	458	92	75-125	
Titanium	ug/L	16.7	500	468	90	75-125	
Vanadium	ug/L	0.0025J mg/L	500	450	90	75-125	
Zinc	ug/L	0.0059J mg/L	500	452	89	75-125	

SAMPLE DUPLICATE: 1943730

Parameter	Units	30367850001 Result	Dup Result	RPD	Qualifiers
Aluminum	ug/L	0.050 U mg/L	ND		
Antimony	ug/L	6.0 U	ND		
Arsenic	ug/L	5.0 U	ND		
Barium	ug/L	0.048 mg/L	48.4	2	
Boron	ug/L	0.023J mg/L	22.9J		
Cadmium	ug/L	3.0 U	.39J		
Calcium	ug/L	82100	83000	1	
Chromium	ug/L	0.81J	.75J		
Cobalt	ug/L	0.56J	.64J		
Copper	ug/L	5.0 U	ND		
Iron	ug/L	0.14 mg/L	148	6	
Lead	ug/L	5.0 U	ND		
Lithium	ug/L	0.0092J mg/L	8.9J		
Magnesium	ug/L	14200	14300	1	
Manganese	ug/L	0.11 mg/L	112	1	
Molybdenum	ug/L	0.88J	1J		
Nickel	ug/L	10.0 U	ND		
Phosphorus	ug/L	25.8J	24.8J		
Potassium	ug/L	1350	1360	1	
Selenium	ug/L	0.0080 U mg/L	ND		
Silicon	ug/L	5460	5530	1	
Silver	ug/L	6.0 U	ND		
Sodium	ug/L	8870	8960	1	
Strontium	ug/L	0.29 mg/L	291	2	
Tin	ug/L	50.0 U	ND		
Titanium	ug/L	5.0 U	ND		
Vanadium	ug/L	0.00063J mg/L	ND		
Zinc	ug/L	0.012 mg/L	12.0	1	

SAMPLE DUPLICATE: 1943733

Parameter	Units	30367853002 Result	Dup Result	RPD	Qualifiers
Aluminum	ug/L	1.1 mg/L	1040	3	
Antimony	ug/L	6.0 U	ND		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA

Project: Sewickley  
Pace Project No.: 30367730

SAMPLE DUPLICATE: 1943733

Parameter	Units	30367853002 Result	Dup Result	RPD	Qualifiers
Arsenic	ug/L	5.0 U	ND		
Barium	ug/L	0.098 mg/L	95.6	2	
Boron	ug/L	0.036J mg/L	35.6J		
Cadmium	ug/L	3.0 U	ND		
Calcium	ug/L	56900	56000	2	
Chromium	ug/L	1.4J	4.4J		
Cobalt	ug/L	0.86J	.8J		
Copper	ug/L	5.0 U	ND		
Iron	ug/L	1.7 mg/L	1770	2	
Lead	ug/L	5.0 U	ND		
Lithium	ug/L	0.0063J mg/L	5.6J		
Magnesium	ug/L	12300	12100	2	
Manganese	ug/L	0.21 mg/L	207	1	
Molybdenum	ug/L	20.0 U	ND		
Nickel	ug/L	1.8J	1.8J		
Phosphorus	ug/L	68.6	67.8	1	
Potassium	ug/L	2190	2130	3	
Selenium	ug/L	0.0080 U mg/L	ND		
Silicon	ug/L	5240	5110	2	
Silver	ug/L	6.0 U	ND		
Sodium	ug/L	34700	33800	3	
Strontium	ug/L	0.34 mg/L	334	2	
Tin	ug/L	50.0 U	ND		
Titanium	ug/L	16.7	15.0	11	
Vanadium	ug/L	0.0025J mg/L	2.5J		
Zinc	ug/L	0.0059J mg/L	5.9J		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL DATA

Project: Sewickley  
Pace Project No.: 30367730

QC Batch: 403725	Analysis Method: 300.0 Rev.2.1, 1993
QC Batch Method: 300.0 Rev.2.1, 1993	Analysis Description: 300.0 IC Anions 28day
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30367730001

METHOD BLANK: 1953995 Matrix: Water

Associated Lab Samples: 30367730001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	ND	0.50	07/06/20 12:11	
Chloride	mg/L	ND	0.50	07/06/20 12:11	
Sulfate	mg/L	ND	0.50	07/06/20 12:11	

LABORATORY CONTROL SAMPLE: 1953996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	2	2.1	107	90-110	
Chloride	mg/L	2	2.1	107	90-110	
Sulfate	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1953997

Parameter	Units	30369979001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	250 U	1000	1080	108	90-110	
Chloride	mg/L	774	1000	1790	101	90-110	
Sulfate	mg/L	767	1000	1770	100	90-110	

SAMPLE DUPLICATE: 1953998

Parameter	Units	30369979001 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	250 U	ND		
Chloride	mg/L	774	742	4	
Sulfate	mg/L	767	717	7	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Sewickley

Pace Project No.: 30367730

**Sample: dismax**      **Lab ID: 30367730001**      Collected: 06/12/20 09:20      Received: 06/12/20 10:45      Matrix: Water  
PWS:      Site ID:      Sample Type:

Comments: • 6/12/20 - Added 2.5ml HNO<sub>3</sub> to all sample bottles prior to analysis. pH <2.  
• Samples were received at a temperature above 6 degrees C, no ice was present. Samples did not meet the requirement for thermal preservation.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	<b>3.64 ± 7.15 (11.3)</b> <b>C:NA T:90%</b>	pCi/L	06/30/20 11:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	<b>21.1 ± 18.1 (36.7)</b> <b>C:64% T:82%</b>	pCi/L	06/29/20 14:18	15262-20-1	

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL - RADIOCHEMISTRY

Project: Sewickley

Pace Project No.: 30367730

QC Batch: 401247

Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1

Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30367730001

METHOD BLANK: 1942454

Matrix: Water

Associated Lab Samples: 30367730001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.158 ± 0.425 (0.790) C:NA T:82%	pCi/L	06/30/20 11:36	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

### QUALITY CONTROL - RADIOCHEMISTRY

Project: Sewickley

Pace Project No.: 30367730

QC Batch: 401246

Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0

Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30367730001

METHOD BLANK: 1942453

Matrix: Water

Associated Lab Samples: 30367730001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.469 ± 0.457 (0.930) C:63% T:74%	pCi/L	06/29/20 12:16	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

## QUALIFIERS

Project: Sewickley  
Pace Project No.: 30367730

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

ML Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: Sewickley  
Pace Project No.: 30367730

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30367730001	dismax	EPA 3005A	401487	EPA 6010B	401547
30367730001	dismax	EPA 903.1	401247		
30367730001	dismax	EPA 904.0	401246		
30367730001	dismax	300.0 Rev.2.1, 1993	403725		

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

# CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

**Company:** Pace Analytical  
**Address:** Mt. Watershed, 14145 Indian Creek Valley  
**Report To:** Eric Herder  
**Copy To:** Eric Herder  
**Email:** eh@mtwatershed.com  
**Site Collection Info/Address:** Sevoickley, 09:20  
**State:** Yukon County/City: Yukon | PT | MT | CT | ET

**Customer Project Name/Number:** Sevoickley  
**Phone:** 262-716-7151  
**Site/Facility ID #:**  
**Purchase Order #: Quote #:**  
**Turnaround Date Required:**  
**Rush:**  
 Same Day  
 Next Day  
 2 Day  
 3 Day  
 4 Day  
 5 Day  
 (Expedite Charges Apply)  
**Field Filtered (if applicable):**  
 Yes  
 No  
**Analysis:**

\* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start)		Res Cl	# of Ctns
			Date	Time		
dismax		CA	6/10/20	9:20		4

**Customer Remarks / Special Conditions / Possible Hazards:**

<b>Packing Material Used:</b>				<b>Type of Ice Used:</b> Wet Blue Dry None			
Raddchem sample(s) screened (<500 cpm):				Y N NA			
Relinquished by/Company: (Signature)		Date/Time: 6/12 10:45		Received by/Company: (Signature)		Date/Time:	
Relinquished by/Company: (Signature)		Date/Time: 6/20 20:45		Received by/Company: (Signature)		Date/Time:	
Relinquished by/Company: (Signature)		Date/Time: 6/20 20:45		Received by/Company: (Signature)		Date/Time:	

LAB USE ONLY - Affix Workorder/Login Label Here or List Pace Workorder Number or

WO#: 30367730



30367730

Container Preservative: ALL SH

\*\* Preservative Types: (1) nitric acid, (2) (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other

Analyses	Lab Profile/Line:	Lab Sample Receipt Checklist:
Aluminum, Boron, Calcium, Cobalt, Iron, Manganese, Magnesium, Phosphorus, Potassium, Sodium, Strontium, Vanadium, Zinc, Antimony, Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Molybdenum, Nickel, Silver, Strontium, Tantalum, Vanadium, Uranium, Tungsten, Bismuth, Selenium	Bromine, Chloride, Sulfate, Radium, 0701AAB	Custody Seals Present/Intact Custody Signatures Present Collector Signature Present Bottles Intact Correct Bottles Sufficient Volume Samples Received on Ice VOA - Headspace Acceptable USDA Regulated Soils Samples in Holding Time Residual Chlorine Present Cl Strips Sample pH Acceptable pH Strips Sulfide Present Lead Acetate Strips

LAB USE ONLY: Lab Sample # / Comments: *NA/1mg*

**Lab Sample Temperature Info:**  
 Temp Blank Received: *NA*  
 Therm ID#: *NA*  
 Cooler 1 Temp Upon Receipt: *17.9*  
 Cooler 1 Therm Corr. Factor: *-1.50*  
 Cooler 1 Corrected Temp: *17.4*  
 Comments: *NA 012/0200*  
 Trip Blank Received: *Y*  
 HCL MeOH TSP Carrier: *Y*  
 Non Conformance(s): YES *NO* of: *0*



## Sample Receiving Non-Conformance Form (NCF)

Date: <i>11/2/2020</i>	Evaluated by: <i>mg</i>
Client: <i>W. Watershed</i>	

Affix Workorder/Login Label Here or List Pace  
Workorder Number or MTJL Log-in Number  
Here  
**#-30367730**

**1. If Chain-of-Custody (COC) is not received:** contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.

**2. If COC is incomplete, check applicable issues below and add details where appropriate:**

Collection date/time missing or incorrect	Analyses or analytes: missing or clarification needed	Samples listed on COC do not match samples received (missing, additional, etc.)
Sample IDs on COC do not match sample labels	Required trip blanks were not received	Required signatures are missing

**Comments/Details/Other issues not listed above:**

**3. Sample integrity issues: check applicable issues below and add details where appropriate:**

Samples: Past holding time	Samples: Condition needs to be brought to lab personnel's attention (details below)	Preservation: Improper
Samples: Not field filtered	Containers: Broken or compromised	Temperature: not within acceptance criteria (typically 0-6C)
Samples: Insufficient volume received	Containers: Incorrect	Temperature: Samples arrived frozen
Samples: Cooler damaged or compromised	Custody Seals: Missing or compromised on samples, trip blanks or coolers	Vials received with improper headspace
Samples: contain chlorine or sulfides	Packing Material: Insufficient/Improper	Other:

**Comments/Details:** *sample rec'd not on ice-out of temp*

**4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:**

Sample ID: <i>D15max</i>	Date/Time: <i>11/2/2020 1230</i>	Amount/type pres added: <i>2.5 ml of HNO<sub>3</sub></i>
Preserved by: <i>mg</i>	Initial and Final pH: <i>mg pH 12</i>	Lot # of pres added: <i>DL200533</i>
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:

*mg 6/11/20*  
*HNO<sub>3</sub>*  
*TO 3 sample*  
*BOTTLES*

**5. Client Contact: If client is contacted for any issue listed above, fill in details below:**

Client:	Contacted per:
PM Initials:	Date/Time:

**Client Comments/Instructions:**

# Attachment B



PURPLE AIR MONITOR DATA: High Level Air Pollution Dates								
created_at	PM1.0_CF1_ug	PM2.5_CF1_ug	PM10.0_CF1_u	UptimeMinute	RSSI_dbm	Temperature_F	Humidity_%	PM2.5_ATM_ug/m3
2020-06-10 22:	176.31	254.76	273.3	6309	-74.57	89	82.14	172.52
2020-06-11 07:	106.87	183.08	217.23	6819	-72.71	73.29	100	123.42
2020-06-11 07:	196.33	377.74	476.22	6834	-73.38	73	100	251.26
2020-06-11 10:	101.63	153.71	171.98	7014	-73.5	70	100	103.48
2020-06-11 10:	186.36	323.67	373.75	7029	-74	70.29	100	215.55
2020-07-05 03:	142.33	217.76	243.91	1828	-70.62	77	88.62	144.45
2020-07-05 03:	163.19	253.08	284.2	1843	-71.43	76.43	90.14	168.03
2020-07-05 03:	184.85	289.74	321.96	1858	-70	75.38	94.5	192.4
2020-07-05 03:	216.67	347.97	389.32	1873	-71.71	75	97.86	231.19
2020-07-05 04:	251.65	410.37	458.58	1888	-69.12	74.25	98.5	272.69
2020-07-05 04:	243.8	399.83	448.9	1903	-69.29	73.71	100	265.65
2020-07-05 04:	209.42	343.4	386.42	1918	-71.12	72.88	100	228.05
2020-07-05 04:	162.14	262.51	293.21	1933	-70.71	72.71	100	174.18
2020-07-05 05:	153.37	246.77	276.08	1948	-66.88	72.25	100	163.68
2020-07-05 05:	146.39	237.38	265.52	1963	-69	72	100	157.4
2020-07-05 05:	135.19	217.71	242.02	1978	-71.75	71.38	100	144.26
2020-07-05 05:	125.72	202.54	226.53	1993	-72.29	71	100	134.17
2020-07-05 06:	113.81	181.66	201.4	2008	-68.5	71	100	120.21
2020-07-05 06:	108.45	170.77	189.32	2023	-69.14	71	100	113.03
2020-09-05 21:	120.73	158.68	167.79	1697	-66	83	35.71	107.76
2020-10-14 03:	98.24	149.48	175.05	56777	-61.57	48	94.86	102.05
2020-10-18 02:	87.88	157.2	216.49	62462	-63.25	44	70	103.73
2020-11-04 12:	181.19	350.69	505.02	6527	-62.71	38	85.71	232.64
2020-11-06 01:	129.77	188.85	216.05	8747	-67	56	60.14	124.88

## ATTACHMENT C

### RESPONSE TO COMMENTS ON STATEMENT OF BASIS

Ms. Melissa Marshall of the Mountain Watershed Association submitted the following comments on the Statement of Basis via letter to Mr. Griff Miller, EPA, dated November 19, 2020. EPA has carefully reviewed these comments and found that they merited minor modifications to the proposed remedy in the Statement of Basis as detailed below. The following is a summary of Mountain Watershed Association's comments and EPA's responses:

1. Comment: *Data from USGS studies show ... waters in the northern Appalachian Basin ... contain radioactive elements such as radium at levels thousands of times higher than the drinking water standard [footnote omitted]. Given this information, as well as high levels of strontium in our samples... **MAX should be required to monitor for radiological contaminants such as radium.***

EPA Response: This comment refers to a regulated outflow from the Facility, which is permitted by PADEP under its National Pollutant and Discharge Elimination System (NPDES) Program. The NPDES permit sets effluent limitations for that outflow. Therefore, EPA has not added this monitoring requirement to the Final Remedy but has forwarded this comment to PADEP. Please contact Mr. James Stewart at PADEP for questions regarding the NPDES permit at the Facility.

2. Comment: *Statement of Basis Should Require Prevention of Release for All Solid Waste – For example, the fracking waste that makes up roughly 80% of all waste MAX receives...is not yet defined as hazardous. ... Section 5 of the Statement of Basis ... should be amended to say “MAX shall continue to comply with the terms and conditions of the Permits, including reporting to PADEP any releases of hazardous **or solid** waste from the Facility...”.*

EPA Response: EPA agrees and has made the suggested revision, so that Section 5, Paragraph 1, reads as follows:

1. Permit Compliance – MAX shall continue to comply with the terms and conditions of the Permits, including reporting to PADEP any releases or potential releases of hazardous or solid waste from the Facility that may endanger public drinking water supplies or otherwise threaten human health or the environment.

**ATTACHMENT B**

**HAZARDOUS WASTE PERMIT NO. PAD 004 835 146**



Pennsylvania Department of Environmental Protection

400 Waterfront Drive  
Pittsburgh, PA 15222-4745  
February 14, 2005

412-442-4000  
Fax 412-442-4194

Southwest Regional Office

CERTIFIED MAIL NO. 7000 1670 0005 1020 2405

Henry A. Springer, Jr., P.E.  
Director of Compliance and Engineering  
MAX Environmental Technologies, Inc.  
233 Max Lane  
Yukon, PA 15698

Re: MAX Environmental Technologies Yukon Facility  
South Huntingdon Township  
Westmoreland County  
I.D. No. PAD004835146  
APS No. 17626  
Authorization No. 366436

Dear Mr. Springer:

Enclosed is Hazardous Waste Permit No. PAD004835146 for the operation of MAX Environmental Technologies, Yukon Hazardous Waste Storage and Treatment Facility issued in accordance with Article V of the Solid Waste Management Act, 35 P.S. Sections 6018.101, et seq. This action renews and modifies MAX's Hazardous Waste and Storage Treatment Permit. The permit is modified to authorize the construction and operation of a new liquid waste management system, expand the capacity of the proposed containment building, construct and operate new solid hazardous waste storage tanks, build and operate Container Storage Area 5 and manage EAF dust (Waste Code K061). The Department of Environmental Protection is also denying MAX Environmental Technologies request to accept mercury containing hazardous waste (Waste Code D009) reactive cyanide and reactive sulfide hazardous wastes (Waste Code D003) and the following listed hazardous wastes: F006-F009, F011, F012, F019, K064-K066, K090, K091 and K100 (electroplating, copper, lead, zinc and chromium production wastes).

Compliance with the terms and conditions set forth in the permit is mandatory. Please note that issuance of this permit does not eliminate the necessity to comply with all federal, state, or local requirements at the permitted facility. You have the right to file an appeal as to the terms and conditions of this permit.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S., Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental

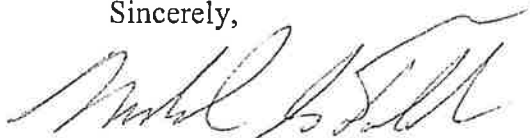
Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions about the enclosed permit or requirements of the Solid Waste Management Act, please contact Carl Spadaro at 412-442-4157.

Sincerely,



Michael G. Forbeck, P.E.  
Regional Manager  
Waste Management

Enclosure

cc: Westmoreland County Dept. of Planning and Community Development (w/enclosure)  
**CERTIFIED MAIL NO. 7000 1670 0005 1020 2399**  
South Huntingdon Township Supervisors (w/enclosure)  
**CERTIFIED MAIL NO. 7000 1670 0005 1020 2382**  
Andrew Clibanoff - US EPA Region III (w/enclosure)

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF LAND RECYCLING AND WASTE MANAGEMENT

**PERMIT  
FOR  
HAZARDOUS WASTE TREATMENT, STORAGE, AND/OR DISPOSAL FACILITY**

Permit No. PAD004835146  
Date Issued FEBRUARY 14, 2005  
Date Expired FEBRUARY 14, 2015

Under the provisions of the Pennsylvania Solid Waste Management Act of July 7, 1980, Act 97, a permit for hazardous waste treatment, storage, and/or disposal facility in (municipality) S. HUNTINGDON in the County of WESTMORELAND is granted to (applicant) MAX ENVIRONMENTAL TECHNOLOGIES, INC (address) 1815 WASHINGTON ROAD  
PITTSBURGH, PA 15241

This permit is applicable to the facility named as MAX ENVIRONMENTAL TECHNOLOGIES, INC  
YUKON PLANT, 233 MAX LANE, YUKON PA 15698 and described as:

HAZARDOUS WASTE STORAGE/TREATMENT FACILITY

NEUTRALIZATION/PRECIPITATION, CHEMICAL REDUCTION/OXIDATION, OIL SEPARATION, SOLIDIFICATION, PHYSICAL STABILIZATION, DEWATERING, SCREENING/CRUSHING USING STORAGE/TREATMENT TANKS, STORAGE CONTAINERS, AND CONTAINMENT BUILDING.

This permit is subject to modification, amendment and supplement by the Department of Environmental Protection and is further subject to revocation or suspension by the Department of Environmental Protection for any violation of the applicable laws or the rules and regulations adopted thereunder, for failure to comply in whole or in part with the conditions of this permit and the provisions set forth in the application no. PAD004835146 which is made a part hereof, or for causing any condition inimical to the public health, safety or welfare.

See attachment for waste limitations and/or special conditions



FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
PERMIT

FOR HAZARDOUS WASTE STORAGE AND TREATMENT

Permittee: MAX Environmental Technologies, Inc. Permit Number: PAD004835146  
Facility: MAX Environmental Technologies, Inc., Yukon Plant, 233 MAX Lane  
Yukon, PA 15698

This permit is issued by the Commonwealth of Pennsylvania, Department of Environmental Protection (DEP) under authority of the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, Act 97, 35 P.S. Section 6018.101 et seq. (the Act) and DEP hazardous waste regulations to MAX Environmental Technologies, Inc. (hereafter called the Permittee), to operate a hazardous waste management facility located in Yukon, PA, at latitude 40°12'53" North and longitude 79°41'46" West.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (Parts I - VI, consisting of pages 1 through 38 and Attachments 1 through 11) and the applicable regulations contained in 25 Pa. Code Chapters 260a - 270a.

This permit is based on the assumption that the information submitted in the Permittee's application for permit renewal dated September 28, 2001 as modified by subsequent amendments dated March 4, 2002, July 31, 2003 and March 12, 2004 is accurate and that the facility will be constructed and/or operated as specified in the application. Any inaccuracies found in this information may be grounds for the revocation or modification of this permit and potential enforcement action. The Permittee must inform DEP of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This permit is conditioned upon full compliance with all applicable provisions of the Act; DEP regulations contained in 25 Pa. Code Chapters 260a -270a; the Clean Streams Law, 35 P.S. § 691.1 et seq.; the Air Pollution Control Act, 35 P.S. § 4001 et seq.; the Dam Safety and Encroachments Act, 32 P.S. § 693.1 et seq.; the Surface Mining Conservation and Reclamation Act, 52 P.S. § 1396.1 et seq.; the Coal Refuse Disposal Control Act, 52 P.S. § 30.51 et seq.; all other Pennsylvania statutes related to the protection of the environment; and all Pennsylvania statutes related to the protection of public health, safety, and welfare. The terms and conditions of Permit No. 301071, as they relate to hazardous waste limitations, waste testing and shipment approvals, are incorporated herein by reference. Nothing in this permit modifies or supersedes the terms and conditions of Permit No. 301071.

This permit is effective as of 02/14/2005 and shall remain in effect until 02/14/2015, unless modified, terminated or revoked in accordance with 25 Pa. Code §§ 270a.41, 270a.42 and 270a.43, continued.

## PART I - STANDARD CONDITIONS

### A. EFFECT OF PERMIT

This permit authorizes only the management of hazardous waste expressly described in this permit and does not authorize any other management of hazardous waste. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local laws or regulations. Compliance with the terms of this permit does not constitute a defense to any action brought under the Act or any other law governing protection of public health or the environment. The terms and conditions of this permit supersede those in any of the attachments to this permit.

### B. PERMIT ACTIONS

This permit may be modified, terminated, revoked for cause as specified in 25 Pa. Code §§ 270a.41, 270a.42 and 270a.43 or suspended in accordance with the Act. The filing of a request for a permit modification, revocation and reissuance, or revocation or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay or supersede the applicability or enforceability of any permit condition.

### C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held to be invalid, the application of such provision to other circumstances and the remaining provisions of this permit shall not be affected thereby.

### D. DEFINITIONS

For the purpose of this permit, terms used herein shall have the same meaning as those in Title 25 of the Pennsylvania Code (25 Pa. Code Chapters 260a - 270a), unless otherwise specifically stated in this permit; where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term. "The Department" is the Department of Environmental Protection of the Commonwealth of Pennsylvania.

### E. REPORTS, NOTIFICATIONS AND SUBMISSIONS TO THE DEPARTMENT

All reports, notifications or other information which are required by this permit to be submitted to the Department should be sent certified mail or given to: Department of Environmental Protection, Waste Management, 400 Waterfront Drive, Pittsburgh, PA 15222-4745, Attention: Regional Manager. Telephone number 412-442-4000.

### F. SIGNATORY REQUIREMENTS

All reports or other information requested by the Department shall be signed and certified as required by 40 CFR § 270.11 (incorporated by reference at 25 Pa. Code § 270a).



## G. DOCUMENTS TO BE MAINTAINED AT THE FACILITY SITE

The Permittee shall maintain at the facility, until closure is completed and certified by an independent registered professional engineer, the following documents and amendments, revisions and modifications to these documents as required by 40 CFR Part 264 (incorporated by reference at 25 Pa. Code Chapter 264a) and this permit:

1. Waste analysis plan.
2. Personnel training documents and records.
3. Contingency plan.
4. Closure plan.
5. Annually adjusted cost estimate(s) for facility closure.
6. Operating record.
7. Inspection schedules and logs.
8. Documents required by Part I, Section H.9, 13 and 15 and Part II, Sections D, E, G, H, J and Q of this permit.

## H. DUTIES AND REQUIREMENTS

1. Duty to Comply. The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and the regulations promulgated thereunder and is grounds for enforcement action; for permit revocation, revocation and reissuance, or modification; or for denial of a permit renewal application.
2. Duty to Reapply. If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must submit a complete application for a new permit at least 180 days before this permit expires.
3. Permit Expiration. This permit and all conditions therein will remain in effect beyond the permit's expiration date if the Permittee has submitted a timely, complete application and through no fault of the Permittee, the Department has not issued a new permit.
4. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the Permittee in an enforcement action to argue that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
5. Duty to Mitigate. In the event of noncompliance with the Act, the regulations, or this permit, the Permittee shall take all necessary steps to prevent and abate any releases to the environment, and shall carry out such measures as are necessary to prevent significant adverse impacts on human health or the environment.

6. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems for storage, treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the Act, the regulations, and the conditions of this permit. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The Permittee shall operate back-up or auxiliary facilities or similar systems if necessary to achieve compliance with the Act, the regulations and the conditions of the permit.
7. Duty to Provide Information. The Permittee shall furnish to the Department within a reasonable time, any relevant information which the Department may request to determine whether cause exists for modifying, terminating, or revoking this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Department, upon request, copies of records required to be kept by the Permittee pursuant to the Act, the regulations, or any permit condition.
8. Inspection and Entry. The Permittee shall allow the Department, its agents and authorized representatives, upon the presentation of credentials and other documents as may be required by law, or without advance notice or a search warrant to:
  - a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records concerning the regulated facility or activity are kept;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the Act, the regulations, or this permit;
  - d. Sample or monitor any substances or parameters at any location for the purposes of assuring permit compliance or as otherwise authorized by the Act or the regulations; and
  - e. Engage in any other activities necessary or appropriate to the documentation of events or conditions at any locations.
9. Monitoring and Records.
  - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Department. Laboratory methods must be those specified in Appendix III of 40 CFR Part 261; Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (U.S. EPA Document SW-846, most recent edition); Standard Methods for Examination of Water and Waste Water; Methods for Chemical Analysis of

Water and Wastes (U.S. EPA-600/4-79-020); or an equivalent method approved by the Department and as specified in the attached waste analysis plan (40 CFR Part 261 is incorporated by reference at 25 Pa. Code Chapter 261a).

- b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by the Act, the regulations, or this permit, and all records of all data used to complete the application for this permit for a period of at least three years from the date of the sample, measurement, report or record, or application. These periods may be extended by request of the Department at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.
- c. The Permittee shall, at a minimum, keep monitoring records which include the following information:
  - (1) The dates, exact location, and times of sampling or measurements;
  - (2) The individuals who performed the sampling or measurements;
  - (3) The dates analyses were performed;
  - (4) The individuals who performed the analyses;
  - (5) The analytical techniques or methods used;
  - (6) The results of such analyses.
- 10. Reporting Planned Changes. The Permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility. This notice must include a description of all incidents of noncompliance reasonably expected to result from the proposed changes. The Permittee shall not modify the facility without first obtaining a permit from the Department.
- 11. Anticipated Noncompliance. The Permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- 12. Transfer of Permits. This permit shall not be transferred or assigned to any other person or municipality.
- 13. Twenty-Four Hour Reporting. The Permittee shall report to the Department any noncompliance with the Act, the regulations or any condition of this permit or any occurrence or event at the facility which may endanger health or the environment.
  - a. Information shall be provided orally within twenty-four (24) hours from the time the Permittee becomes aware of the circumstances. This report shall include the following:

- (1) Information concerning release or potential release of any hazardous waste from the facility that may endanger public drinking water supply sources.
  - (2) Any information of a release, potential release, or discharge of hazardous waste from the facility, or information of a potential or actual fire or explosion at the facility, which may threaten the environment or human health.
- b. The description of the occurrence and its cause shall include:
- (1) Name, address, and telephone number of the owner or operator;
  - (2) Name, address, and telephone number of the facility;
  - (3) Date, time, and type of incident;
  - (4) Name and quantity of material(s) involved;
  - (5) The extent of injuries, if any;
  - (6) An assessment of actual or potential hazards to the environment and human health at or near the facility; and
  - (7) Estimated quantity and disposition of recovered material that resulted from the incident.
- c. A written submission shall also be provided to the Department within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of non-compliance (including exact dates and times); if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Permittee need not comply with the five day written notice requirement if the Department extends it to fifteen days.
14. Other Noncompliance. The Permittee shall report to the Department all other instances of noncompliance not otherwise required to be reported above, at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Condition I.H.13.
15. Other Information. Whenever the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Department, or whenever the Permittee becomes aware of circumstances which require a modification or clarification of any fact or representation made to the Department in connection with a permit application, it shall promptly submit such facts or information to the Department.

## I. CERTIFICATION OF CONSTRUCTION OR MODIFICATION

The Permittee may not manage hazardous waste in a newly constructed storage or treatment unit authorized by this permit unless:

1. The Permittee has submitted to the Department by certified mail or hand delivery a letter signed by the Permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and
2. The Department has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or
3. The Department has either waived the inspection or has not within fifteen days notified the Permittee of its intent to inspect.

## PART II - GENERAL FACILITY CONDITIONS

### A. DESIGN AND OPERATION OF FACILITY

The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or release of hazardous waste or hazardous waste constituents to air, soil, surface water, or groundwater which could threaten human health or the environment.

### B. GENERAL WASTE ANALYSIS

1. The Permittee shall follow the procedures described in the attached Waste Analysis Plan, Attachment 1. The Permittee shall verify its waste analysis as part of its quality assurance program, in accordance with current EPA practices (Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, most recent edition) or equivalent methods approved by the Department in accordance with procedures in 40 CFR § 260.21 (incorporated by reference at 25 Pa. Code Chapter 260a); and at a minimum maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. Treatability studies on hazardous waste conducted by the Permittee shall conform to 40 CFR § 261.4(e) and (f) (incorporated by reference at 25 Pa. Code Chapter 261a), except that the notification of studies to the Department is not necessary.
2. The Permittee shall provide Material Safety Data Sheets, or similar information, for hazardous waste treatment reagents (including those listed in Part III.H) identifying the source of these reagents and for clean coal technology coproducts, coal combustion fly ash and cement kiln dust or any other by-product or coproduct generated reagent, chemical analysis of the material including annual TCLP data for all hazardous waste toxicity criteria and as appropriate, organic parameters, sulfide and cyanide unless the reagent source can certify that organics, sulfides and cyanides are not present. Cement kiln dust from a cement kiln burning hazardous waste as a fuel is subject to 40 CFR 266.112. Treatment reagents that are waste materials shall also undergo quarterly TCLP metals analysis. This information may be submitted with the Module 1 application or separately, but the Module 1 shall identify when this information was submitted.

3. Module 1 applications for hazardous waste solidification or physical stabilization that involves pozzolan or cementing treatment shall be submitted to the Department at least 15 calendar days for approval prior to waste acceptance. The Permittee may petition the Department for a shorter Module 1 submittal time prior to waste acceptance for those stabilization procedures that the Permittee has documented (with treatment verification data from multiple treatment tests) as successfully completed for a specific type of waste. The Module 1 applications for solidification or physical stabilization procedures shall identify the following:
  - a. Treatability study information for the reagents used including the scope of treatment verification testing as well as the required curing time. Factors such as carbon dioxide, ammonia and heat formation shall be considered and reported.
  - b. Data on moisture content, particle grain sizes and optimum unconfined compressive strength, to the extent that these parameters are critical to evaluating the solidification/physical stabilization process. If they are not critical, the Permittee shall explain why.
  - c. Information otherwise required by Module 1 applications.
4. For waste solidification or physical stabilization processes, the Permittee shall obtain and analyze treated waste samples after the appropriate curing time in accordance with the Waste Analysis Plan, Attachment 1.
5. In accordance with the 80/90/100 procedure outlined in the Waste Analysis Plan, referring to percentages of a treatment standard, if three samples are required for analysis, the waste should also be evaluated in accordance with Volume 2, Chapter 9 of SW-846 in which four samples are analyzed and evaluated by the statistical methodologies stated in SW-846.
6. Notwithstanding the timeframes for Module 1 submittal for solidification or physical stabilization proposals stated above, the Permittee may accept hazardous waste covered by the Module 1 application in accordance with the following schedule:
  - a. For any hazardous waste proposed for storage, but no treatment, the Permittee may accept the waste upon proof of Department receipt of the Module 1;
  - b. For aqueous or liquid hazardous wastes proposed for storage and treatment, the Permittee may accept the waste upon proof of Department receipt of the Module 1;
  - c. For solid wastes, including soil remediation or other remediation projects where organic contamination (defined as total volatile and semi-volatile organic compounds) is present at <1%, the Permittee may accept the waste upon proof of Department receipt of the Module 1;
  - d. For soil or wastes from remediation projects with >1% total organic contamination, the Permittee may accept the waste at least 15 calendar days after proof of Department receipt of the Module 1. This time period may be decreased if requested in writing by the Permittee with justification and approved in writing

by the Department, including a demonstration that the average volatile organic concentration in the waste are less than 500 ppmw, as defined in 40 CFR Part 264, Subpart CC, or as further defined by USEPA or in any air quality control plan approval or permit.

7. The Permittee shall demonstrate that waste planned for acceptance at the facility has been sampled in a representative manner in accordance with SW-846 and Department forms FC-1 (for petroleum contaminated soils) and Module 1. This shall include, to the extent practicable, grab sampling for volatile organic analyses. Module 1 analyses shall be performed for all hazardous wastes, consistent with the Waste Analysis Plan, unless the Permittee can demonstrate through waste stream/generation process information that certain parameters are not expected to be present. Treatment data included in the Module 1 form shall, to the extent practicable, represent the waste characterization sample(s) with the greatest concentration of parameters of concern for that particular waste. Before the Permittee accepts waste from a customer, the Permittee must have received from the customer written certification that the waste is not D001, D003, D009 or D012 to D043 characteristically hazardous waste and that the waste does not contain PCBs at 50 ppm or greater and is not a listed hazardous waste using the Generator's Knowledge Letter included in the Waste Analysis Plan.

If a waste is known or suspected to contain greater than 500 ppm TPH, the Permittee shall demonstrate that the average VOC content (as defined in Part II.B.6. of this permit) is less than 500 ppmw.

For wastes other than virgin fuel contaminated soils, that have been sampled in a representative manner and are relatively homogeneous in physical state and chemical contamination, a characterization of the identified constituents of concern shall be made at least at a rate of 1 test per 1000 tons or cubic yards and fraction thereof (this does not apply to process waste streams). Constituents of concern which are not designated as being hazardous for a waste stream shall be sampled in a manner to that described in the instructions for a Form U-CS. (Form 250-PM-LRWM0399).

For wastes from remediation and clean-up projects, the Permittee shall provide information in the Module No. 1 application that covers the areas of concern listed in Permit Conditions 4.K.1 - 6 of Permit No. 301071.

8. The Permittee shall perform a treatability study for each major treatment chemical or waste material proposed for use for waste treatment in a Module No. 1. This would include the waste types used as a treatment chemical stated in Part III.J.2.a. of this permit. When mixtures of major chemicals or wastes are used for treatment, then the primary treatment materials shall be presented for the treatability study. If more than one material is considered primary, then a study shall be performed using each material. The result of the treatability study shall be presented in the Module No. 1. If the treatability study or post-treatment testing or if the analysis of a major treatment material indicates that the leachable concentration of a TCLP metal parameter may increase after waste treatment, that parameter shall be tested for post-treatment waste characterization. All parameters evaluated for post-treatment waste testing (including appropriate underlying hazardous constituents) shall be stated in the Module No. 1.

9. Shipments of waste known or suspected to contain reactive sulfide greater than 250 ppm shall be temporarily labeled, and shipments of waste known or suspected to contain total amendable cyanide greater than 125 ppm shall be temporarily labeled, and otherwise comply with Appendix B to Attachment 1.
10. The Permittee shall not mix different treated wastes for the purposes of post-treatment testing except for lime stabilized spent pickle liquor and other lime-treated aqueous wastes.
11. The Department may allow alternate procedures for sampling/testing other than the procedures stated in Attachment 1 provided that the need for a specific procedure is demonstrated along with sufficient QA/QC for the procedure. Such an alternate procedure must be approved by the Department.
12. The Permittee shall list all parameters and frequency of pre-and post-treatment testing in the Module No. 1.
13. The Permittee shall submit revisions to Attachment 1 to the Department within 30 days from the effective date of this permit clarifying that grab sampling will be performed to obtain samples of treated solid hazardous waste for treatment verification testing to meet the Land Disposal Restriction regulations at 40 CFR §§ 268.40(b) and 268.48(a), incorporated by reference at 25 Pa. Code Chapter 268a.

C. SECURITY

The Permittee shall comply with the security provisions of 40 CFR § 264.14 (incorporated by reference at 25 Pa. Code Chapter 264a).

D. GENERAL INSPECTION REQUIREMENTS

The Permittee shall follow the inspection plan set out in the inspection schedule, Attachment 2. The Permittee shall remedy any deterioration or malfunction discovered by an inspection and maintain records of inspections as required by 40 CFR § 264.15 (incorporated by reference at 25 Pa. Code Chapter 264a).

E. PERSONNEL TRAINING

The Permittee shall conduct personnel training as required by 40 CFR § 264.16 (incorporated by reference at 25 Pa. Code Chapter 264a). This training program shall follow Attachment 3. The Permittee shall maintain training documents and records.

F. PREPAREDNESS AND PREVENTION

1. Required Equipment. At a minimum, the Permittee shall equip the facility with the equipment set forth in the PPC plan, Attachment 4.
2. Testing and Maintenance of Equipment. The Permittee shall test and maintain the equipment specified in the previous permit condition and in Attachment 4 as necessary to assure its proper operation in time of emergency.



3. Access to Communications or Alarm System. The Permittee shall maintain access to the communications or alarm system as required by 40 CFR § 264.34 (incorporated by reference at 25 Pa. Code Chapter 264a).
4. Required Aisle Space. At a minimum, the Permittee shall maintain aisle space as required by 40 CFR § 264.35 (incorporated by reference at 25 Pa. Code Chapter 264a) and as shown on the plans and specifications, Attachments 4-7.
5. Arrangements with Local Authorities. The Permittee shall maintain arrangements with State and local authorities as required by 40 CFR § 264.37 (incorporated by reference at 25 Pa. Code Chapter 264a). If State or local officials refuse to enter into or renew existing preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

#### G. PREPAREDNESS, PREVENTION AND CONTINGENCY (PPC) PLAN

1. Implementation of PPC Plan. The Permittee shall immediately carry out the provisions of the PPC plan, Attachment 4, whenever there is a fire, explosion, emission or discharge of hazardous waste or hazardous waste constituents which could threaten human health or the environment.
2. Copies of Plan. The Permittee shall comply with the requirements of 40 CFR § 264.53 (incorporated by reference at 25 Pa. Code Chapter 264a).
3. Amendments to Plan. The Permittee shall review and immediately amend, if necessary, the PPC plan, as required by 40 CFR § 264.54 (incorporated by reference at 25 Pa. Code Chapter 264a).
4. Emergency Coordinator. The Permittee shall comply with the requirements of 40 CFR § 264.55 (incorporated by reference at 25 Pa. Code Chapter 264a).
5. Emergency Procedures. The Permittee shall comply with the requirements of 40 CFR § 264.56 (incorporated by reference at 25 Pa. Code Chapter 264a) and 25 Pa. Code § 264a.56.

#### H. RECORDKEEPING AND REPORTING

1. Operating Record. The Permittee shall maintain a written operating record at the facility in accordance with 40 CFR § 264.73 (incorporated by reference at 25 Pa. Code Chapter 264a).
2. Biennial Facility Report. The Permittee shall comply with all applicable biennial facility report requirements of 40 CFR § 264.75 (incorporated by reference at 25 Pa. Code Chapter 264a).
3. Required Reports. The Permittee shall comply with all applicable reporting requirements as described in Part I, Sections E, F, H, and I and Part II, Sections G, H, I, and M of this permit.

## I. CLOSURE

1. Performance Standard. The Permittee shall close the facility as required by 40 CFR § 264.111 (incorporated by reference at 25 Pa. Code Chapter 264a) and in accordance with the closure plan, Attachment 9.
2. Amendment to Closure Plan. The Permittee shall amend the closure plan in accordance with 40 CFR § 264.112(c) (incorporated by reference at 25 Pa. Code Chapter 264a) whenever necessary.
3. Notification of Closure. The Permittee shall notify the Department in writing at least 45 days prior to the date he expects to begin final closure of the facility.
4. Time Allowed for Closure. After receiving the final volume of hazardous waste, the Permittee shall remove from the site all hazardous waste and shall complete closure activities in accordance with the schedules specified in the closure plan, Attachment 9.
5. Disposal or Decontamination of Equipment. The Permittee shall decontaminate and/or dispose of all facility equipment and structures as required by the closure plan, Attachment 9. Units used to manage K061 EAF dust shall be decontaminated to meet K061 universal treatment standards or Impoundment 6 permit disposal limits, whichever is more stringent, for all K061 parameters at 40 CFR § 268.40 (incorporated by reference at 25 Pa. Code Chapter 268a).
6. Certification of Closure. The Permittee shall certify that the facility has been closed in accordance with the specifications in the closure plan as required by 40 CFR § 264.115 (incorporated by reference at 25 Pa. Code Chapter 264a), and 25 Pa. Code § 264a.115.

## J. COST ESTIMATE FOR FACILITY CLOSURE

1. Annual Adjustment. The Permittee shall adjust the closure cost estimate for inflation within 60 days after each anniversary of the date on which the most recent previous cost estimate was submitted to the Department as required by 40 CFR § 264.142(b) (incorporated by reference at 25 Pa. Code Chapter 264a).
2. Adjustment for Changed Conditions. The Permittee shall revise the cost estimate whenever there is a change in the facility's closure plan or in the measures necessary to prevent adverse effects upon the environment as required by 40 CFR § 264.142(c) (incorporated by reference at 25 Pa. Code Chapter 264a). The Permittee shall submit a revised closure cost estimate to the Department within thirty (30) days after first receiving EAF dust for treatment, to account for any increase in EAF dust inventory treatment (including amount of lime needed for treatment). The Permittee shall submit a revised closure cost estimate to the Department within six (6) years from the effective date of this permit calculating waste inventory removal costs based on off-site disposal, unless the Permittee demonstrates that sufficient on-site disposal capacity remains for the duration of this permit.
3. Availability. The Permittee must keep at the facility the latest cost estimate as required by 40 CFR § 264.142(d) (incorporated by reference at 25 Pa. Code Chapter 264a).

4. Incapacity of Permittee or Financial Institutions. The Permittee shall comply with 40 CFR § 264.148 (incorporated by reference at 25 Pa. Code Chapter 264a) and 25 Pa. Code § 264a.148 whenever necessary.

K. BONDING REQUIREMENT

The Permittee shall maintain the bond submitted to and approved by the Department. The Permittee shall comply with all applicable bond replacement requirements of 25 Pa. Code § 264a.158. Bond increases shall be submitted and approved prior to the permittee using Container Area No. 5, the Containment Building or storing untreated hazardous waste in Container Storage Areas 1 and 4. Bond reductions associated with the cessation of use of any of the old liquid waste and leachate management units for hazardous waste service may only be considered after Department receipt of closure certification and applicable public notice.

L. LIABILITY INSURANCE

The Permittee shall comply with the liability insurance requirements of 40 CFR § 264.147(a) (incorporated by reference at 25 Pa. Code Chapter 264a). These include the requirements to have and maintain liability coverage for sudden pollutional occurrences in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million, exclusive of legal defense costs. The Permittee shall submit new certificates of liability insurance 60 days prior to the expiration of the current certificate.

M. REQUIRED NOTICES

1. Notice to The Department. The Permittee shall notify the Department in writing at least four weeks in advance of the date the Permittee expects to receive hazardous waste from a foreign source. Notice of subsequent shipments of the same waste from the same foreign source is not required.
2. Notice to Generator. When the Permittee plans to receive hazardous waste from an off-site source (except where the Permittee is also the generator), he must inform the generator in writing that he has the appropriate permits for, and will accept, the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the operating record. (See Permit Condition II.H.1).

N. GENERAL REQUIREMENTS FOR INCOMPATIBLE WASTE

The Permittee shall comply with the requirements of 40 CFR § 264.17 (incorporated by reference at 25 Pa. Code Chapter 264a).

O. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements of 40 CFR §§ 264.70 - 264.72 (incorporated by reference at 25 Pa. Code Chapter 264a) and 25 Pa. Code § 264a.71.

P. AIR RELEASES

1. The Permittee shall comply with the fugitive emission standards adopted under 25 Pa. Code Chapter 123 regulations (Standards for Contaminants) issued under the Air Pollution Control Act, 35 P.S. § 4001 et seq.
2. The Permittee shall operate the facility so that air contaminants emitted into the atmosphere do not cause or contribute to an exceedance outside the Permittee's property line of any Ambient Air Quality Standard pursuant to 25 Pa. Code § 131.3, or any Air Toxic Standard established under the Federal Clean Air Act of 1990. Any units processing nitric acid containing waste shall be operated to prevent the release of nitrogen oxides to the extent that the opacity of the emission is either of the following:
  - a) Equal to or greater than 10% for a period or periods aggregating more than 3 minutes in any 1 hour.
  - b) Equal to or greater than 40% at any time.

While nitrogen oxide monitors are being calibrated, but not to exceed a period of thirty (30) calendar days, emissions may be equal to or greater than 20% for a period or periods aggregating no more than three minutes in any hour. Once the monitors calibration is established or the thirty (30) day limit has expired, whichever is shorter, the limit returns to the standard set forth in a) and b) above.

3. The Permittee shall inspect the units treating nitric acid waste continuously during treatment. Inspection records and indications of opacity exceedances shall be included in the facility operating record.
4. Hydrogen sulfide monitors shall be set to alarm at 20ppm H<sub>2</sub>S. Hydrogen cyanide monitors, to be installed if the Permittee intends to treat wastes containing total amenable cyanide at concentrations greater than 125 ppm, shall alarm at 10ppm HCN.

Q. SITING CRITERIA

The Permittee is not subject to any Phase I Exclusionary Criteria at 25 Pa. Code §§ 269a.21 through 269a.29, for the purposes of this permit. With respect to the Phase II Criteria, the Permittee must comply with the following conditions in order to be deemed in compliance with the Phase II Criteria and this permit:

1. The Permittee shall not engage in any mining activities at the facility that would cause a risk to the structural integrity of the units covered by this permit in accordance with 25 Pa. Code § 269a.44(b).
2. Upon request of the Pennsylvania Department of Transportation, the permittee shall, to the extent required by law (including but not limited to § 4902 of the Vehicle Code and 67 Pa. Code Chapter 189), enter into and maintain an agreement with the Pennsylvania Department of Transportation to accept financial responsibility for excess maintenance of any posted highway or portion thereof used as an access route by vehicles transporting waste between Interstate 70 and the Yukon facility.

3. The Permittee shall maintain, implement and update as necessary an off-site emergency response plan with the Westmoreland County Department of Emergency Management in accordance with 25 Pa. Code § 269a.47. This plan shall be amended whenever there is a change in the number or type of structures (as defined at 25 Pa. Code § 269a.48) along the facility access route.
  
4. The Permittee shall comply with certain provisions of the Hazardous Sites Cleanup Act of 1988, Act 108, as noted below to meet the economic criteria at 25 Pa. Code § 269a.49.
  - a. The Permittee shall submit copies of all air and water quality monitoring data for the facility conducted by the Permittee to the South Huntingdon Township Supervisors as required by § 304(a)(2) of Act 108.
  - b. The Permittee shall sample and analyze private drinking water supplies as required by § 304(c)(1) of Act 108.
  - c. The Permittee shall pay a benefit fee to the South Huntingdon Township Supervisors in the amount specified in § 306(b) of Act 108.
  - d. The Permittee shall make payments of the benefit fee in accordance with the timing established in § 307 of Act 108.
  - e. The Permittee is subject to the benefit fee collection and enforcement provisions of § 308 of Act 108.
  
5. The Permittee shall reimburse local emergency response organizations for expenses incurred when requested for services rendered in response to a release of hazardous wastes or hazardous substances at the Yukon facility or from vehicles owned or operated by the Permittee transporting waste to and from the facility. Such reimbursements shall be considered separate from the fee established in § 306(b) of Act 108.

The Permittee shall notify all persons transporting hazardous waste to or from the facility that such person is liable, under 40 CFR Part 263 (incorporated by reference at 25 Pa. Code Chapter 263a) for the cost of any clean-up necessitated by a release of hazardous wastes or hazardous substances from such transporter's vehicle. The notice should also indicate that the Permittee may be required by the Department to cease accepting waste from such transporter until such costs are reimbursed.

In the event of a release of hazardous wastes or hazardous substances in South Huntingdon Township from a vehicle owned and operated by a person other than Permittee, which is transporting waste from the facility or is transporting a shipment of waste to the facility for which the Permittee has provided authorization, if any local response organization is unable, after exhausting all legal remedies available to recover from the responsible transporter all costs reasonably incurred in providing emergency response service (i.e. costs incurred until the immediate threat to public health and safety has been abated), the Permittee shall reimburse the local emergency response organization for such costs.

The Permittee shall test roadside soils after every spill or release of waste from any vehicle transporting waste to the facility if the spill or release and/or subsequent clean-up results in drainage of wastes to the soils. Testing and any removal activities shall be done in accordance with Department approved plans.

6. The Permittee shall limit the amount of waste received at the facility to a maximum of 55 truck loads of hazardous waste per day, not to exceed a monthly average of 37 truck loads of hazardous waste per day for each month. The Permittee shall maintain records demonstrating compliance with these limits. Trucks may not be stacked or queued outside of the facility entrance.
7. The Permittee shall implement its Transportation Compliance/Driver Safety Plan for all waste shipments to and from the Yukon facility.

#### R. CONTRACTORS

1. Independent contractors and agents who are to operate under this permit shall be subject to the provisions of the Solid Waste Management Act and the Clean Streams Law. Such independent contractors, agents and the Permittee shall be jointly and severably liable without regard to fault, for violations of the Solid Waste Management Act and the Clean Streams Law which occurred during the course of the operations.
2. Any independent contractors or agents retained by the Permittee to construct or operate this site shall be subject to prior compliance history review by the Department as specified in Section 503 of the Solid Waste Management Act.

#### S. LAND DISPOSAL RESTRICTIONS

The Permittee shall comply with standards under 40 CFR Part 268 (incorporated by reference at 25 Pa. Code Chapter 268a, except where stated at 25 Pa. Code § 268a.1) applicable to hazardous waste storage and treatment facilities.

#### T. HOURS OF OPERATION

The Permittee shall maintain at the entrance to the facility a sign displaying hours of operation. The lettering shall be a minimum of four inches in height and of a color contrasting with its background.

#### U. ACCESS ROADS

The Permittee shall construct and/or maintain access roads as described in the plans and drawings referenced in this permit.

V. BUFFER ZONE

The Permittee shall establish and maintain a buffer zone of 50 feet between the property line and the permitted facility within which no solid waste treatment, storage or disposal activities shall occur, except for the leachate collection and pumping units associated with the closed surface impoundments.

W. APPROVED DRAWINGS

The following drawings are approved for the purposes of this Permit and are incorporated herein:

- MAX Environmental Drawing HP-1R, Location Map, March 5, 2004
- Key Environmental Drawing HP-2A and 2B, Site Location Map, September 20, 2001
- Key Environmental Drawing HP-2B, Site Location Map, August 29, 2001
- Key Environmental Site Drawing HP-3, Plant Operation Plan, September 20, 2001.
- ESC Figure 2B, Plan of Hydrologic and Geologic Features, rev. September 30, 1988 (shown on Key Environmental Drawing AD-02, September 20, 2001)
- ESC Figure 2C, Plan of Previous Mining, rev. September 30, 1988 (shown on Key Environmental Drawing AD-02, September 20, 2001)
- Key Environmental Drawing HP-12, Stormwater Diversion, September 20, 2001
- Key Environmental Drawing HP-7A, Chemical Process Diagrams (Liquids) September 20, 2001.
- Key Environmental Drawing HP-7B, Chemical Process Diagrams (Solids) September 20, 2001
- MAX Environmental Drawing HP-9A, Liquid Hazardous Waste Treatment System Piping and Instrumentation Diagram, March 5, 2004
- Mill Service Figure 7, Oil Handling Process, September, 1988 (shown on Key Environmental Drawing AD-04, September 20, 2001)
- Mill Service Figure 9, Stabilization/Solidification Process, December, 1994
- Key Environmental Drawing HP-8, NPDES Piping & Instrumentation Diagram, September 20, 2001
- Key Environmental Drawing HP-10, Proposed Liquid Waste System Plan, September 20, 2001
- Key Environmental Drawing HP-15, Erosion and Sediment Control Details, January 25, 2002

- Key Environmental Figure 1, Detailed Site Plan, September 20, 2001
- Key Environmental Drawing HP-4, Hazardous Waste Unit Plan, September 20, 2001
- Key Environmental Drawing HP-5, Existing Liquid Waste System, September 20, 2001
- Mill Service Drawing Y-103, Pump Station and Mixer Area General Arrangement and Sections for Treated Waste Storage Area, rev. March 1992
- Mill Service Drawing Y-104, Treated Waste Storage Area Plan and Sections, rev. March 1992
- Mill Service Drawing SKY-109, Treated Waste Storage Area Berm Detail, May 3, 1991
- Mill Service Drawing SKY-116, Container Storage Area Plan View, rev. April, 1993 (shown on Key Environmental Drawing AD-07, September 20, 2001)
- Mill Service Drawing SKY-117, Container Storage Area Liner Details, rev. February 27, 1995 (shown on Key Environmental Drawing AD-07, September 20, 2001)
- Mill Service Drawing SKY-138, Container Storage Area No. 4 Plan/Sump Detail, March 1, 1995
- Mill Service Drawing SKY-140, Storage Plans for Maximum Boxes and Trailers, March 7, 1995 (shown on Key Environmental Drawing AD-07, September 20, 2001)
- Mill Service Drawing Y-137, Inter-Unit Piping Plan, rev. March 31, 1995
- Mill Service Drawing Y-138, Vertical Waste Storage Tank Containment Plan and Section, rev. March 31, 1995
- Mill Service Drawing SKY-120, Mixing Pit Plan View, rev. February, 1996
- Mill Service Drawing SKY-121, Mixing Pit Section, rev. January, 1996
- Mill Service Drawing SKY-122, Mixing Pit Details, June 1, 1992 (SKY-120 through 122 shown on Key Environmental Drawing AD-08, September 20, 2001)
- Mill Service/DL Drawing Y-140, Mixing Pit Plan View, rev. April 5, 1993
- Mill Service/DL Drawing Y-141, Mixing Pit Section, rev. April 5, 1993
- Mill Service/DL Drawing Y-142, Mixing Pit Leak Detection System Details, rev. April 5, 1993



- MAX Environmental Drawing Y-146, SWSS As-built Details, March 5, 2004
- Mill Service Drawing SKY-150, Plan View of Rolloff Box with 30 Drums Stored, May 27, 1996
- Key Environmental Drawing HP-14, Container Storage Area No. 5 Plan, January 30, 2002
- Crouse & Co. Drawing CEO996, Storage Area Plan and Cross Sections, rev. February 17, 2000
- Crouse & Co. Drawing CE1260, SWSS Unit Load-Out Pad Expansion, revised January 25, 2000
- CE Consultants Drawing CE1261, Detail Sheet Proposed Pump Station SW, July 20, 1998 (CE0996, CE1260, CE1261 shown on Key Environmental Drawing AD-11)
- Mill Service Drawing 4120-E4, Pump Station No. 5, October 10, 1988

PART III - STORAGE/TREATMENT IN TANKS

A. WASTE IDENTIFICATION

The Permittee may store/treat the following hazardous waste in tanks, subject to the terms of this permit:

a.	<u>Tank</u>	<u>Hazardous Waste Code No.</u>	<u>Operating Capacity</u>
	Liquid Waste Holding Tanks Nos. 1-8	D002, K062 (corrosive liquid waste and spent pickle liquor [sulfuric, hydrochloric, hydrofluoric, nitric, and phosphoric acid] and D004-D008, D010, D011 (arsenic, barium, cadmium, chromium, lead, selenium and silver containing wastes) may be stored in any Liquid Waste Holding Tank as specified in the Waste Analysis Plan and Incompatible Waste Management Plan attachments to this Permit. Hazardous waste coded as D002 and K062 which are nitric acid-based may not be stored in a tank holding (or designated as holding) sulfuric acid waste. A tank holding nitric acid-based waste shall be labeled as such in accordance with the Incompatible Waste Management Plan.	30,000 gallons each
	Silos Nos. 1-3	Solid arsenic, barium, cadmium, chromium, lead, selenium and silver bearing wastes; electric arc furnace dust; spent pickle liquor for use as a treatment chemical) D004 – D008, D010, D011, K061, K062	100 cubic yards each
	Reactor Nos. 1 & 2	D002, K062, D004 through D008, D010, D011 (liquid corrosive waste; spent pickle liquor sludges and scales, and arsenic, barium, cadmium, chromium, lead, selenium and silver bearing wastes)	6000 gallons each
	Polishing/Thickening Tank	Same as Reactors Nos. 1 and 2, after reactor treatment	6800 gallons each
	Vertical Treated Waste Storage Tanks Nos. 1 through 9	Same as Reactors Nos. 1 and 2, after treatment pending TCLP analysis	88,400 gallons each

<u>Tank</u>	<u>Hazardous Waste Code No.</u>	<u>Operating Capacity</u>
Treated Waste Pump Station	Same as Reactors Nos. 1 and 2, after treatment for pumping to treated waste storage tanks	11,000 gallons
Sludge Dryer	Same as Reactors Nos. 1 and 2 after polishing/thickening tank treatment	100 tons/hour
Solid waste stabilization & solidification (SWSS) units – compartments 1-3	D002, D004 – D008, D010, D0011, K061, K062 solid and semi-solid corrosive waste; arsenic, barium, cadmium, chromium, lead, selenium and silver waste; electric arc furnace dust, spent pickle liquor solids	133 cubic yards storage capacity per compartment
Containment Building Blending Units 1 and 2	Same as SWSS units	50 tons/hour

#### Leachate Management Units

Pump Station No. 5	2,550 gallons
Pump Station SW	2,115 gallons

Nitric acid waste may only be stored in a liquid waste tank labeled for nitric acid and treated in Reactors 1 and 2 (for nitric acid waste containing >20% free liquids). Wastes that generate nitrogen oxides, sulfur oxides and/or hydrogen chloride during treatability studies may only be treated in units with DEP-approved gas monitoring and control equipment. No ignitable or reactive wastes may be stored or treated. Waste that exhibits total amenable cyanide and/or reactive sulfide levels of <250 ppm and <500 ppm, respectively, may be stored and treated. Waste greater than or equal to a total amenable cyanide level of 250 ppm or a reactive sulfide level of 500 ppm or greater shall not be stored or treated.

#### B. DURATION OF STORAGE

The Permittee shall not continuously store hazardous wastes in tanks at this facility in excess of one year.

#### C. DESIGN AND CONSTRUCTION OF TANKS

The Permittee shall construct, modify, and maintain all tanks in accordance with the plans and specifications in Attachment 5 and those approved in any Water Quality Part II Permit as well as in conformance with the applicable provisions of the design standards noted below. Equivalent designs may be substituted with prior written approval from the Department.

<u>Tank</u>	<u>Design Standard</u>
Liquid Waste Storage Tanks 1-8	AWWA D-100; AWWA D-103; ASTM D3299; API650
Silos 1-3	AWWA D-100; AWWA D-103; API650
Reactors 1 and 2	AWWA D-10; AWWA D-103; API620, API650
Polishing/Thickening Tank	AWWA D-100
Vertical Treated Waste Storage Tanks Nos. 1 through 9	API12B; AWWA D-100; AWWA D-103; API650
Solid Waste Stabilization and Solidification Units	ACI350R
Containment Building Blending Units 1 and 2	AWWA D-100; AWWA D-103; API650

The Permittee shall maintain the minimum shell thickness specified below at all times to ensure sufficient structural strength. Tanks shall conform to the appropriate approved drawings. No new piping changes may be made without notifying the Department. All tanks and associated piping shall be labeled according to content/function.

<u>Tank</u>	<u>Minimum Thickness</u>
a. Liquid Waste Holding Tanks Nos. 1 –8	0.25" steel shell or 0.375" FRP, lower course
b. Silos 1-3	0.187" steel shell
c. Reactor Nos. 1 and 2	0.25" steel shell or pressure vessel minimum requirements, whichever is greater.
d. Polishing/Thickening Tank	0.25" steel shell
e. Vertical Treated Waste Storage Tanks Nos. 1 through 9	0.1345" steel shell
f. Treated Waste Pump Station	0.3125" steel inner shell 12" reinforced concrete outer shell

<u>Tank</u>	<u>Minimum Thickness</u>
g. Solid Waste Stabilization and Solidification Units	18" concrete outer shell 0.50" steel inner shell for bottom plates and north wall and 0.340" steel inner shell for other walls.
h. Containment Building Blending Units 1 and 2	0.25" steel shell
i. Pump Station No. 5	4" concrete shall; 6" concrete floor
j. Pump Station SW	7" concrete outer shell; 80 mil inner flexible membrane liner

D. PROTECTION FROM OVERFILLING

The Permittee shall prevent overfilling of tanks by the methods specified in Attachment 5 and those approved in any Water Quality Part II Permit and summarized below.

<u>Tank</u>	<u>Type of Control</u>
a. Liquid Waste Holding Tanks Nos. 1 –8	High level alarm to maintain 2' freeboard on each tank
b. Treated Waste Pump Station	High level alarm
c. Reactor Nos. 1 and 2	High level alarm to maintain 2' freeboard; valves on lines from liquid waste holding tanks; feed meter on feed pump from treatment reagent tanks
d. Polishing/Thickening Tank	High level alarm; valve on line from Reactors 1 and 2 and meter or feed pump from treatment reagent tanks
e. Sludge Dryer	Meter on feed pump from treatment reagent tanks
f. Silos 1-3	High level alarm
g. Vertical Treated Waste Storage Tanks Nos. 1 - 9	High level alarm connected to level controls on each tank; valves on 6" line from treated waste pump station

<u>Tank</u>	<u>Type of Control</u>
h. Treated Waste Pump Station	High level alarm; valves on 8" lines from sludge/dust mixers
i. Solid Waste Stabilization and Solidification Units	2' freeboard elevation marker, operator/vehicle bed height controls
j. Containment Building Mechanical Blending Units	Manual operator controls
k. Pump Station No. 5	2,000 gallon overflow tank; high level alarm; level control sensor to stop or start pumps; valve on 4" line from overflow tank; valve on two 4" lines from surface impoundment No. 5 leachate collection system
l. Pump Station SW	High level alarm

#### E. SECONDARY CONTAINMENT

The Permittee shall construct and/or maintain containment structures as required by 40 CFR § 264.193 (incorporated by reference at 25 Pa. Code Chapter 264a) and the attached plans and specifications, Attachment 5 and as required by any Water Quality Part II Permit. All liquids shall be removed from the secondary containment areas as soon as practicable.

#### F. EMERGENCY REPAIRS; CONTINGENCY PLAN

In accordance with the requirements of 40 CFR § 264.196 (incorporated by reference at 25 Pa. Code Chapter 264a), the Permittee shall:

1. Inspect the tanks whenever there is any indication of a possible failure.
2. Remove the tank from service whenever there is evidence of tank failure and implement the procedures specified in the PPC Plan, Attachment 4. This shall also apply to tank piping.
3. Repair the tank and obtain a certification from a registered professional engineer that it meets the design specifications approved in this permit prior to restoring it to service. This shall also apply to tank piping.
4. Close a tank if it has been removed from service due to failure and is not being repaired.

## G. EQUIPMENT

1. Equipment Maintenance. The Permittee shall maintain tank operating equipment in operable condition and adequate in size and performance capability to assure that the facility operation will not be interrupted during normal working periods and that the facility operation is in accordance with this permit.
2. Standby Equipment. The Permittee shall maintain standby equipment on-site or readily available for use in the event of a major equipment breakdown. High pressure water hoses equipped with fogging nozzles shall be maintained at the Liquid Waste Storage Tanks and Reactors 1 and 2 in operable condition.

## H. TREATMENT OF WASTES IN TANKS

1. The Permittee shall conduct all treatment operations in accordance with the procedures in Attachments 1 and 5. Hazardous wastes or treatment reagents may not be placed in the treatment process or equipment if they could cause the treatment process or equipment to rupture, leak, corrode or otherwise fail before the end of its intended life. The Permittee may not accept for treatment hazardous wastes with greater than or equal to 1.0% total organic contamination (except for acid wastes undergoing separate oil removal or wastes with up to 10% oil and grease content where the non-oil and grease organic content is less than 1.0%), unless the Permittee can demonstrate in the Module 1 application that the waste can be properly treated and receives written Department approval to accept this waste on-site. The only types of treatment authorized by this permit are neutralization/precipitation, chemical reduction, chemical oxidation, solidification/physical stabilization, oil removal, and mechanical processing. Solidification/physical stabilization is limited to sorption and microencapsulation using pozzolanic (cementing) agents. Free oil in the liquid waste storage tanks shall be removed to the extent practicable. Liquids from corrosive wastes that break into a separate phase in the Solid Waste Stabilization and Solidification Units shall be removed to the extent practicable. Treatment shall be conducted so as to prevent the release of fumes or vapors other than steam from the heat of reaction.
2. a. Hazardous wastes may be physically stabilized or solidified using the following treatment reagents:
  - Clean coal technology coproducts (calcium and silica based residue from coal fluidized bed combustors and coal boiler spray dry scrubbers)
  - Flyash from coal-fired power plants
  - Type I Portland Cement
  - Cement kiln dust
  - Magnesium oxide
  - Magnesium hydroxide
  - Calcium phosphate
  - Pozzolonic silicates
  - Clays (crystalline quartz)
  - Non-hazardous scrubber sludge (Exide)

Any mixture of these reagents, provided they are compatible, is permissible. No other treatment reagents proposed for hazardous waste solidification or physical stabilization may be used without prior written Department approval (minor permit modification).

- b. All treatment reagents used for waste solidification or physical stabilization shall be stored in contained units, protected from precipitation and wind dispersal. Open stockpiles of such treatment reagents is prohibited.
  - c. The only units authorized for hazardous waste physical stabilization or solidification are the Solid Waste Stabilization and Solidification Units and Containment Building Blending Units.
  - d. The Permittee shall prevent waste from completely solidifying in a treatment or storage unit that would require mechanical means (e.g., crushing) to remove the waste.
  - e. Treatment reagents (other than incoming hazardous wastes used for treatment) shall not exhibit a hazardous waste leaching characteristic.
3. The Permittee can combine chemically compatible hazardous waste for treatment provided the waste can be effectively mixed together and with the treatment chemicals. The combined treated waste shall be tested for all parameters for which each waste stream is TCLP hazardous or where there may be a possibility of being hazardous considering the waste combination. K062 wastes may only be mixed with other iron and steel industry wastes. The Permittee shall identify waste that may be mixed in the Module 1 application.
4. Waste treatment tanks shall be managed in such a way so as to prevent precipitation from hindering effective and efficient treatment operations.

Treatment shall be conducted to ensure that the following performance standards are met:

#### Performance Standards for Treated Hazardous Waste

- a. Metals level less than the TCLP Toxicity metal limit and Universal Treatment Standard limit (as applicable) for all wastes as further qualified in the Waste Analysis Plan, Attachment 1.
- b. pH equal to or greater than 8.0 but less than 12.5
- c. Solidified, physically stabilized, or dewatered wastes shall not contain free liquids, as determined by SW-846 Method 9095, if the wastes are to be landfilled.
- d. Metals levels for treated EAF Dust (K061) waste shall conform to any approved delisting petition limits (which are automatically incorporated by reference into this permit).



Waste not meeting these standards shall be re-treated or disposed off-site. The Permittee shall maintain documentation in the facility operating record regarding wastes that have been re-treated or disposed off-site. Waste testing protocols for determining effective treatment shall conform to the procedures detailed in the Waste Analysis Plan, Attachment 1.

Where leachate or liquid wastes or the liquid residue of wastes stored or treated in units covered by this permit are directly conveyed into the NPDES system, the Permittee shall manage such discharge so as to comply with applicable provisions of NPDES Permit No. PA0027715.

I. PROTECTION FROM CORROSION

The Permittee shall protect all tanks and associated piping from accelerated corrosion, erosion, and abrasion as specified in Attachment 5 and summarized below for certain tanks.

<u>Tank No(s).</u>	<u>Type of Protection</u>
a. Liquid Waste Holding Tanks Nos. 1 –8	Polymeric or epoxy coated steel; glass coated FRP; HDPE or PVC liner
b. Reactors Nos. 1 and 2	Polymeric or epoxy coated steel
c. Silos Nos. 1-3	Stainless steel
d. Polishing/Thickening Tank	Polymeric or epoxy coated steel
e. Solid Waste Stabilization and Solidification Units	Steel liner on floor and wall plates
f. Containment Building Blending Units	Teflon liner

J. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTE

1. Incompatible Waste Precautions. The Permittee shall not place incompatible wastes in the same tank or place hazardous waste in an unwashed tank that previously held an incompatible waste or material unless the procedures specified in Attachments 5 and 8 are followed. Caustic and acidic wastes may not be stored together. A caustic waste may not be stored in a tank that held acidic waste unless the tank has been washed. Wastes containing residual sulfides and cyanides shall not be placed in the sludge/dust mixers or Reactors Nos. 1 and 2 unless those tanks have been washed. For waste received for treatment which contains or is suspected to contain reactive sulfide at 200 ppm or greater or total cyanide at 250 ppm or greater, the Permittee shall place appropriate warning labels on the treatment unit receiving the waste before transfer of the waste from the transport vehicle.

Replaced by  
DE P 3/31/05

Waste not meeting these standards shall be re-treated or disposed off-site. The Permittee shall maintain documentation in the facility operating record regarding wastes that have been re-treated or disposed off-site. Waste testing protocols for determining effective treatment shall conform to the procedures detailed in the Waste Analysis Plan, Attachment 1.

Where leachate or liquid wastes or the liquid residue of wastes stored or treated in units covered by this permit are directly conveyed into the NPDES system, the Permittee shall manage such discharge so as to comply with applicable provisions of NPDES Permit No. PA0027715.

I. PROTECTION FROM CORROSION

The Permittee shall protect all tanks and associated piping from accelerated corrosion, erosion, and abrasion as specified in Attachment 5 and summarized below for certain tanks.

<u>Tank No(s).</u>	<u>Type of Protection</u>
a. Liquid Waste Holding Tanks Nos. 1 –8	Polymeric or epoxy coated steel; glass coated FRP; HDPE or PVC liner
b. Reactors Nos. 1 and 2	Polymeric or epoxy coated steel
c. Silos Nos. 1-3	Stainless steel
d. Polishing/Thickening Tank	Polymeric or epoxy coated steel
e. Solid Waste Stabilization and Solidification Units	Steel liner on floor and wall plates
f. Containment Building Blending Units	Teflon liner

J. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTE

1. Incompatible Waste Precautions. The Permittee shall not place incompatible wastes in the same tank or place hazardous waste in an unwashed tank that previously held an incompatible waste or material unless the procedures specified in Attachments 5 and 8 are followed. Caustic and acidic wastes may not be stored together. A caustic waste may not be stored in a tank that held acidic waste unless the tank has been washed. Wastes containing residual sulfides and cyanides shall not be placed in the sludge/dust mixers or Reactors Nos. 1 and 2 unless those tanks have been washed. For waste received for treatment which contains or is suspected to contain reactive sulfide at 200 ppm or greater or total amendable cyanide greater than 125 ppm, the Permittee shall place appropriate warning labels on the treatment unit receiving the waste before transfer of the waste from the transport vehicle.

PADEP REVISION  
MARCH 31, 2005

2. Documentation. The Permittee shall document compliance with the above permit condition as required by 40 CFR § 264.17(c) (incorporated by reference at 25 Pa. Code Chapter 264a) and place this documentation in the operating record (Permit Condition II.H.1). Documentation shall include disposition of any tank wash water generated.

#### K. WASTE ANALYSIS

1. The Permittee shall conduct waste analyses as required by the Waste Analysis Plan, Attachment 1, before chemically treating or storing a hazardous waste which is substantially different from waste previously treated or stored in a tank or before chemically treating hazardous waste with a substantially different process than previously used in a tank. The analyses, tests, and information shall be placed in the operating record (Permit Condition II.H.1). Hazardous wastes containing residual cyanides shall undergo treatability studies as required in the Waste Analysis Plan and the Permittee shall determine the formation and concentration of any cyanogen chloride from initial chlorination and hydrogen cyanide from pH adjustment. This information shall be included in the Module 1 application. The Permittee shall estimate actual treatment conditions and detail treatment monitoring activities for these wastes in the application.
2. At a minimum, for each 1000 tons of waste from a specific source expected or known to exceed 100 ppm reactive sulfide and with a total sulfide concentration greater than 500 ppm, the Permittee shall test such waste for reactive sulfide in accordance with the procedures identified in Permit No. 301071, Permit Condition 4.E.6.
3. Untreated hazardous waste streams that contain a TCLP RCRA regulated parameter at a concentration of 80% or greater than a RCRA regulated limit shall have the parameter evaluated by a statistical determination if the waste is not classified as hazardous for that parameter. The statistical determination shall be performed by using a minimum of four samples and shall be the 90 percent one-tailed confidence interval of the mean. A normal distribution should be used if four samples are used for the determination. The RCRA Waste Sampling Draft Technical Guidance Planning, Implementation, and Assessment – EPA530-D-02-002, should be consulted for further details.

#### L. TANK CONSTRUCTION, MODIFICATION OR INSTALLATION

1. Inspections. The Permittee shall inspect each tank for uniformity, damage and imperfections during construction, modification or installation.
2. Construction Practices. The Permittee shall use best engineering construction practices during all phases of installation and construction. Each new tank construction or structural modification shall include hydrostatic testing, and shall include other appropriate testing as specified in the industry standard for the respective type of tank and material.
3. Quality Control Measures. The Permittee shall use appropriate quality control measures and tests to insure that installation and construction conform to the design materials and construction specifications approved in this permit.

4. Professional Engineer Certification. The Permittee shall obtain a written certification from an independent registered professional engineer for each phase of installation or construction as required by 40 CFR § 264.192(a) (incorporated by reference at 25 Pa. Code Chapter 264a). Each certification shall be submitted to the Department in accordance with Permit Condition Part I.J. The certification shall identify the appropriate design standard followed.

M. SURFACE WATER MANAGEMENT

1. Design Standards. The Permittee shall manage surface water on the site as required by 25 Pa. Code Chapter 102 and 40 CFR § 264.192 (incorporated by reference at 25 Pa. Code Chapter 264a.) and as described in the Erosion and Sedimentation Control Plan, Attachment 10.

N. DUST CONTROL

The Permittee shall prevent dust from hampering site operations or from causing health or safety hazards or nuisances. Dust shall be controlled on facility roadways, lime and chemical storage areas, and waste storage and treatment tanks.

O. WASTE TRACKING

The Permittee shall minimize or eliminate the tracking of waste within or outside the site and the immediate waste unloading/loading areas.

P. UNLOADING AREAS

1. The Permittee shall maintain unloading areas to permit vehicles to unload promptly. During the unloading of waste into the liquid waste storage tanks, the Permittee shall immediately control any fumes or vapors that are emitted to the extent practicable including, but not limited to, applying a water mist to the storage tank and waste transport vehicle and/or ceasing the unloading of the waste. Trucks holding waste nitric acid that are opened for sampling shall be closed if fumes are emitted and shall not be reopened for sampling until fuming has ceased.
2. The loading and unloading areas of the Solid Waste Solidification and Stabilization Units shall be sized to contain spills of waste and treatment chemicals.

Q. INSPECTIONS

The Permittee shall inspect all tanks in accordance with 40 CFR § 264.195 (incorporated by reference at 25 Pa. Code Chapter 264a), 25 Pa. Code § 264a.195 and Attachment 2. Every five (5) years, the Permittee shall take Vertical Treated Waste Storage Tank No. 1 (also known as Tank 13) out of service to ultrasonically check the bottom wedge plates to confirm they still meet the minimum shell thickness noted in condition III.C. along the length of each plate. Results of such testing shall be submitted to the Department for review within 30 days of availability.

PART IV – CONTAINMENT BUILDING

A. WASTE IDENTIFICATION

The Permittee may store and process the following hazardous wastes in the 1600 cubic yard capacity containment building subject to the terms of this permit.

<u>Waste Code</u>	<u>Description</u>
K061	Electric arc furnace dust
K062	Spent pickle liquor for use as a treatment chemical (non-nitric)
D004 through D008, D010, D011	TCLP characteristically toxic solid waste containing arsenic, barium, cadmium, chromium, lead, selenium and silver

No ignitable or reactive wastes may be stored. Waste that exhibits total amenable cyanide and/or reactive sulfide levels < 250 ppm and < 500 ppm, respectively, may be stored. Waste greater than or equal to a total amenable cyanide level of 250 ppm or a reactive sulfide level of 500 ppm or greater shall not be stored or treated.

B. DURATION OF STORAGE

The Permittee shall not store hazardous waste in the containment building at this facility in excess of one year.

C. DESIGN AND OPERATING REQUIREMENTS

1. The Permittee shall maintain a 10 inch thick reinforced concrete base for Pad 4 free from cracks. The concrete base shall be underlain by the leachate detection and 40 mil thick liner system as specified in the attached plans and specifications, Attachment 6 and Crouse & Co. Drawing CE0996, rev. February 17, 2000 and as shown on Key Environmental Drawing AD-11.
2. The Permittee shall construct and maintain the containment building with structures that provide protection from precipitation.
3. The Permittee shall not place in the containment building any waste with free liquids, as measured by the Paint Filter Test. Water sprays used for dust control shall only be applied to the screening/crushing operations portion of Pad 4, which is to be separated from the lower portion of Pad 4 by a minimum 18 inch high curb.
4. The Permittee shall operate and maintain a surface water run-off and run-on control system, as specified in Attachment 6.
5. The Permittee shall operate and maintain collection and holding facilities associated with run-on and run-off control systems as specified in Attachment 6.

6. The Permittee shall provide surface water management measures that conform to the provisions of 25 Pa. Code Chapter 102, and as described in the Erosion and Sedimentation Control Plan, Attachment 10.
7. The Permittee shall construct, operate, and maintain the containment building in a manner which prevents surface water percolation and precipitation entry into stored hazardous waste, as specified in Attachment 6.
8. The Permittee shall construct, operate and maintain a leachate collection and removal system according to the plans and specifications in Attachment 6 and as shown on Crouse & Co. Drawing CE0996 rev. February 17, 2000 and CE Consultants Drawing CE1261, July 20, 1998, and as shown on Key Environmental Drawing AD-11.
9. The Permittee shall operate the containment building to control wind dispersal of particulate matter and dust, as required by 40 CFR § 264.110(c)(iv) (incorporated by reference at 25 Pa. Code Chapter 264a) using the methods specified in Attachment 6.
10. The containment building walls (interior and exterior) that serve as structural support walls shall be sufficiently reinforced to prevent failure.
11. The Permittee may treat waste in the containment building as shown on Crouse & Co. Drawing CE0996, rev. February 17, 2000, using a vibrating screen, jaw-type crusher and cone-type crusher and blending tanks referenced in Part III of this permit (or equivalent equipment) subject to the provisions in Attachment 6.
12. The Permittee shall operate the waste processing equipment within the enclosed containment building Pad 4 in a manner that prevents noise nuisance (noise above a U.S. Department of Housing and Urban Development accepted decibel level for residential areas) at the property boundary. The Permittee shall use additional noise attenuating devices as necessary to ensure that this condition is met.
13. The Permittee shall maintain a setback of 6 feet between waste storage and processing areas of the containment building and building access doors.

#### D. EQUIPMENT

The Permittee shall maintain containment building operating equipment (including water sprays and dust collection devices) in operable condition and adequate in size and performance capability to assure that the facility operation will not be interrupted during normal working periods and that the facility operation is in accordance with this permit.

#### E. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES

1. The Permittee shall not place incompatible wastes or incompatible wastes and materials in the areas/units unless the procedures specified in Attachment 8 are followed as required by 40 CFR §§ 264.1101(a)(3) (incorporated by reference at 25 Pa. Code Chapter 264a). Further, waste shall be separated from any nearby incompatible material.

2. The Permittee shall document compliance with the above permit condition as required by 40 CFR § 264.17(c) (incorporated by reference at 25 Pa. Code Chapter 264a) and place this documentation in the operating record.
3. The Permittee shall not place hazardous wastes in the same areas/units where incompatible wastes or materials were previously placed, as required by 40 CFR § 264.1101(a)(3) (incorporated by reference at 25 Pa. Code Chapter 264a).

F. TREATMENT FACILITIES RECEIVING LEACHATE AND RUN-OFF FOR STORAGE

1. The Permittee shall design, construct, operate, and maintain the treatment facilities for receiving leachate and run-off from storage, as specified in Attachment 6.
2. The Permittee shall operate and maintain treatment facilities that are compatible with and capable of treating the waste constituents expected to be present in the leachate and run-off, and the anticipated volumes of waste.

G. UNLOADING AREAS

The Permittee shall operate and maintain unloading areas, as specified in Attachment 6 and as shown on Crouse & Co. Drawing CE0996, rev. February 17, 2000. Unloading areas shall permit vehicles to unload promptly. The unloading areas shall be kept free of obstruction, and waste off-loaded onto the unloading area shall be promptly moved to avoid obstruction of the unloading area.

H. MONITORING AND INSPECTION

1. The Permittee shall inspect the containment building daily when waste is being stored or treated and weekly when the building is not in use to detect evidence of deterioration, malfunctions or improper operation of run-on/run-off controls, wind dispersal controls, leachate collection/detection systems and liner condition. The Permittee shall also conduct annual structural inspections of the secondary containment system and containment building base.
2. The Permittee shall record the amount of liquids removed from the leachate detection zone at least weekly, in accordance with 40 CFR § 264.1101(c)(4) (incorporated by reference at 25 Pa. Code Chapter 264a).
3. If there is liquid detected in the leachate detection zone or other major impact to the containment building that could lead to the release of waste or chemicals, the Permittee shall follow the action and notification requirements of 40 CFR § 264.1101(c)(3).

I. WASTE TRACKING

The Permittee shall prevent the tracking of waste outside of the containment building.

J. CONSTRUCTION, MODIFICATION OR INSTALLATION

1. The Permittee shall inspect the liner system for uniformity, damage, and imperfections during construction or installation. Manufactured liner materials (such as membranes, sheets, and coatings) shall be inspected to ensure tight seams and joints and the absence of tears or blisters.
2. The Permittee shall use best engineering construction practices during all phases of installation and construction.
3. The Permittee shall use quality control measures and tests, as specified in the CQA Plan in Attachment 6.
4. The Permittee shall submit a written certification from an independent registered professional engineer for each phase of installation or construction including subgrade, secondary liner, leachate detection zone and concrete slab and support walls as well as submit a final independent professional registered engineer certification of facility construction.
5. The CQA Plan in Attachment 6 is hereby modified as follows:
  - a. Subgrade density shall be determined at a rate of 3 tests per lift.
  - b. Secondary liner shall be a minimum 40 mil thick HDPE or PVC geomembrane.
  - c. Geotextile fabric mass shall be a minimum 8 oz/yd<sup>2</sup>.
  - d. Manufacturer certification of transmissivity values shall be based on laboratory tests at loads and gradients equivalent to conditions to be experienced at the containment building.



## PART V - STORAGE IN CONTAINERS

### A. WASTE IDENTIFICATION

The Permittee may store the following wastes in containers at the facility, subject to the terms of this permit:

<u>Waste Code</u>	<u>Description</u>
K061	Electric arc furnace dust
K062	Spent pickle liquor
D002	Corrosive waste
D004 through D008, D010, D011	TCLP characteristically toxic waste containing arsenic, barium, cadmium, chromium, lead, selenium and silver

No ignitable or reactive wastes may be stored. Waste that exhibits total amendable cyanide and/or reactive sulfide levels <250 ppm and < 500 ppm, respectively, may be stored. Waste greater than or equal to a total amendable cyanide level of 250 ppm or a reactive sulfide level of 500 ppm or greater shall not be stored.

### B. DURATION OF STORAGE

The Permittee shall not store containers of hazardous waste at this facility in excess of one year. At closure, all hazardous waste, residue, containers and liners must be removed.

### C. CONDITION OF CONTAINERS

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this permit.

### D. PLACEMENT REQUIREMENTS

The permittee shall store all hazardous waste containers in accordance with the following volume and location requirements:

1. Area #1 (see Attachment 7)
  - (a) Location: Sludge/Dust Mix Tank Area (treated and untreated hazardous waste)
  - (b) Maximum Volume of Waste Allowed: 180 cu. yd.
  - (c) Maximum Number of Containers Allowed: 6-30 cu. yd. roll-off boxes

PADEP REVISION  
MARCH 31, 2005

PART V - STORAGE IN CONTAINERS

A. WASTE IDENTIFICATION

The Permittee may store the following wastes in containers at the facility, subject to the terms of this permit:

<u>Waste Code</u>	<u>Description</u>
K061	Electric arc furnace dust
K062	Spent pickle liquor
D002	Corrosive waste
D004 through D008, D010, D011	TCLP characteristically toxic waste containing arsenic, barium, cadmium, chromium, lead, selenium and silver

No ignitable or reactive wastes may be stored. Waste that exhibits reactive cyanide and/or reactive sulfide levels <250 ppm and < 500 ppm, respectively, may be stored. Waste greater than or equal to a total amenable cyanide level of 250 ppm or a reactive sulfide level of 500 ppm or greater shall not be stored.

B. DURATION OF STORAGE

The Permittee shall not store containers of hazardous waste at this facility in excess of one year. At closure, all hazardous waste, residue, containers and liners must be removed.

C. CONDITION OF CONTAINERS

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this permit.

D. PLACEMENT REQUIREMENTS

The permittee shall store all hazardous waste containers in accordance with the following volume and location requirements:

1. Area #1 (see Attachment 7)
  - (a) Location: Sludge/Dust Mix Tank Area (treated and untreated hazardous waste)
  - (b) Maximum Volume of Waste Allowed: 180 cu. yd.
  - (c) Maximum Number of Containers Allowed: 6-30 cu. yd. roll-off boxes

Replaced by PA DEP  
3/31/05

2. Area #2 (see Attachment 7)
  - (a) Location: NPDES Sludge Dewatering Pad (treated or untreated hazardous waste)
  - (b) Maximum Volume of Waste Allowed: 120 cu. yd.
  - (c) Maximum Number of Containers Allowed: 4 30-cu. yd. or 6 - 20 cu. yd. roll-off boxes. Up to 30-55 gal. drums may be stored in each rolloff box.
  
3. Area #3 (see Attachment 7)
  - (a) Location: South of Lagoon #3 (treated or untreated hazardous waste)
  - (b) Maximum Volume of Waste Allowed: 900 cu. yd. or 160,000 gal.\*
  - (c) Maximum Number of Containers Allowed: 33 - 5000 gal. tank trucks, 36 - 80 cu. yd. dump trailers or 45 - 30 cu. yd. roll-off boxes or any combination of these provided that the Permittee can document that the maximum volumes are not exceeded. Up to 30-55 gal. drums may be stored in each rolloff box.

\* The Permittee may store up to 1100 cubic yards/55 roll off boxes, as authorized on November 24, 2003 until the Department authorizes Area #5
  
4. Area #4 (see Attachment 7)
  - (a) Location: West of Area #3 (treated and untreated hazardous waste)
  - (b) Maximum Volume of Waste Allowed: 900 cu. yd. or 165,000 gallons\*
  - (c) Maximum Number of Containers Allowed: 33 - 5000 gal. tank trucks, 36 - 80 cu. yd. dump trailers or 45 - 30 cu. yd. roll-off boxes or any combination of these provided that the Permittee can document that the maximum volumes are not exceeded.

\* The Permittee may store up to 1100 cubic yards/54 roll off boxes, as authorized on November 24, 2003 until the Department authorizes Area #5 for use.
  
5. Area #5 (see Attachment 7)
  - (a) Location: Impoundment No. 6 (treated hazardous waste)
  - (b) Maximum Volume of Waste Allowed: 2000 cu. yd.
  - (c) Maximum Number of Containers Allowed: 100 - 20 cu. yd. Roll-off boxes or 80 - 25 cu. yd. dump trailers or any combination of the two provided that the Permittee can document that the maximum volumes are not exceeded. Area #5 may only be located on sections of Impoundment 6 that offer a stable foundation.

Prior to using Area #5, the Permittee shall submit to the Department an independent professional engineering certification that the subgrade is structurally sound to support Area #5 operation. Such a certification shall be submitted each time Area #5 is proposed to be relocated.

Prior to using Area #5, the Permittee shall conduct baseline sound level measurements along the property line east of Impoundment No. 6, based on a plan submitted by the Permittee and approved by the Department. Thereafter, the Permittee shall measure sound levels as needed or required by the Department to determine if sound levels exceed baseline or some established residential standard.

PADEP Revision  
March 31, 2005

2. Area #2 (see Attachment 7)
  - (a) Location: NPDES Sludge Dewatering Pad (treated or untreated hazardous waste)
  - (b) Maximum Volume of Waste Allowed: 120 cu. yd.
  - (c) Maximum Number of Containers Allowed: 4 30-cu. yd. or 6 - 20 cu. yd. roll-off boxes. Up to 30-55 gal. drums may be stored in each rolloff box.
  
3. Area #3 (see Attachment 7)
  - (a) Location: South of Lagoon #3 (treated or untreated hazardous waste)
  - (b) Maximum Volume of Waste Allowed: 900 cu. yd. or 150,000 gal.\*
  - (c) Maximum Number of Containers Allowed: 33 - 5000 gal. tank trucks, 36 - 80 cu. yd. dump trailers or 45 - 30 cu. yd. roll-off boxes or any combination of these provided that the Permittee can document that the maximum volumes are not exceeded. Up to 30-55 gal. drums may be stored in each rolloff box.

\* The Permittee may store up to 1100 cubic yards/55 roll off boxes, as authorized on November 24, 2003 until the Department authorizes Area #5
  
4. Area #4 (see Attachment 7)
  - (a) Location: West of Area #3 (treated and untreated hazardous waste)
  - (b) Maximum Volume of Waste Allowed: 900 cu. yd. or 165,000 gallons\*
  - (c) Maximum Number of Containers Allowed: 33 - 5000 gal. tank trucks, 36 - 80 cu. yd. dump trailers or 45 - 30 cu. yd. roll-off boxes or any combination of these provided that the Permittee can document that the maximum volumes are not exceeded.

\* The Permittee may store up to 1100 cubic yards/54 roll off boxes, as authorized on November 24, 2003 until the Department authorizes Area #5 for use.
  
5. Area #5 (see Attachment 7)
  - (a) Location: Impoundment No. 6 (treated hazardous waste)
  - (b) Maximum Volume of Waste Allowed: 2000 cu. yd.
  - (c) Maximum Number of Containers Allowed: 100 - 20 cu. yd. Roll-off boxes or 80 - 25 cu. yd. dump trailers or any combination of the two provided that the Permittee can document that the maximum volumes are not exceeded. Area #5 may only be located on sections of Impoundment 6 that offer a stable foundation.

Prior to using Area #5, the Permittee shall submit to the Department an independent professional engineering certification that the subgrade is structurally sound to support Area #5 operation. Such a certification shall be submitted each time Area #5 is proposed to be relocated.

Prior to using Area #5, the Permittee shall conduct baseline sound level measurements along the property line east of Impoundment No. 6, based on a plan submitted by the Permittee and approved by the Department. Thereafter, the Permittee shall measure sound levels as needed or required by the Department to determine if sound levels exceed baseline or some established residential standard.

Replaced by PADEP  
3/31/05

E. COMPATIBILITY OF WASTES WITH CONTAINERS

The Permittee shall assure that the ability of the container to contain the waste is not impaired as required by 40 CFR § 264.172 (incorporated by reference at 25 Pa. Code Chapter 264a).

F. MANAGEMENT OF CONTAINERS

The Permittee shall manage containers as required by 40 CFR § 264.173 (incorporated by reference at 25 Pa. Code Chapter 264a) and 25 Pa. Code § 264a.173. Containers holding treated hazardous wastes shall be completely emptied before reusing to store treated hazardous wastes.

G. CONTAINMENT

Each container shall be constructed of, or shall be lined or coated with, a material compatible with the waste and shall be covered with a tarp or similar device to prevent precipitation contact with the waste. Each container shall be stored on an impervious base designed to prevent run-on and contain spills. The Permittee shall manage Areas 1-5 in accordance with 40 CFR § 264.175 (incorporated by reference at 25 Pa. Code Chapter 264a.). Accumulated precipitation shall be promptly removed from these areas. If untreated K061 or K062 waste is released in any container storage area, accumulated liquid in the areas shall be managed as K061 and K062 waste.

H. CONTAINER STORAGE ARRANGEMENT

The Permittee shall not stack any container and must maintain sufficient space between containers to allow easy inspection. Containers shall be stored in Areas #3 and #4 in accordance with Mill Service Drawing SKY-140, with respect to aisle space and set back.

I. INSPECTIONS

The Permittee shall inspect the container storage areas at least weekly when hazardous waste is being stored in them, in accordance with 40 CFR § 264.174 (incorporated by reference at 25 Pa. Code Chapter 264a).

## LIST OF ATTACHMENTS

1. Waste Analysis Plan
2. Inspection Plan
3. Training Plan
4. PPC Plan
5. Tank System Management Plan
6. Containment Building Management Plan
7. Container Storage Management Plan
8. Incompatible Wastes Management Plan
9. Closure Plan
10. Erosion and Sedimentation Control Plan
11. Transportation Compliance Plan

**ATTACHMENT C**

**SOLID WASTE PERMIT NO. 301071**



September 21, 2016

**CERTIFIED MAIL NO. 7015 1660 0000 8961 1658**

Carl Spadaro  
MAX Environmental Technologies, Inc.  
1815 Washington Road  
Pittsburgh, PA 15241

Re: MAX Environmental Technologies, Inc.  
Residual Waste Disposal Permit  
Yukon Facility  
South Huntingdon Township  
Westmoreland County  
I.D. No. 301071  
APS No. 26744  
Authorization No. 940650

Dear Mr. Spadaro:

Enclosed is a major modification to Solid Waste Permit No. 301071 for the operation of MAX Environmental Technologies, Inc. Yukon Facility, issued in accordance with Article V of the Solid Waste Management Act, 35 P.S. Sections 6018.101, et seq.

This modification approves the vertical expansion of Disposal Area No. 6.

Compliance with the terms and conditions set forth in the permit is mandatory. You have the right to file an appeal as to the modified terms and conditions.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717.787.3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800.654.5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717.787.3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

**IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.**



IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717.787.3483) FOR MORE INFORMATION.

If you have any questions about the enclosed permit or requirements of the Solid Waste Management Act, please contact Chris Lovgren at 412.442.4151.

Sincerely,



Michael G. Forbeck, P.E.  
Regional Manager  
Waste Management

Enclosure

cc: Westmoreland County Planning Commission  
**CERTIFIED MAIL NO. 7015 1660 0000 8961 1726**  
South Huntingdon Township  
**CERTIFIED MAIL NO. 7015 1660 0000 8961 1733**  
Tim Mitchell, P.E. – Civil & Environmental Consultants, Inc.

bcc: Regional (w/enclosure)  
Chron (w/enclosure)  
BLRWM - M&R Waste Division (w/enclosure)  
Permit Binder File (w/enclosure)  
D. McDaniel (w/enclosure)  
C. Lovgren (w/enclosure)  
K. Lee (w/enclosure)  
M. Planinsek (w/enclosure)

MGF:CRL:fet

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT**

FORM NO. 13-A  
MODIFICATION TO SOLID WASTE DISPOSAL AND/OR PROCESSING PERMIT

Under the provisions of Act 97, the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, 35 P.S. §§ 6018.101, *et seq.*, Solid Waste Permit Number 301071 issued on August 6, 1986 to MAX Environmental Technologies, Inc. for the operation of Residual Waste Disposal Area No. 6 (formerly Impoundment No. 6) located in South Huntingdon Township, Westmoreland County is hereby modified as follows:

1. This permit modifies Solid Waste Permit No. 301071 originally issued on August 6, 1986. It is issued in response to Solid Waste Management Permit Application No. 301071 designated as Authorization Request No. 940650 dated August 29, 2012 for the vertical expansion of Disposal Area No. 6. Subsequent revisions and addendums submitted to the initial application are approved by the Department and are a part of this permit amendment.

This permit is issued based on the assumption that the information submitted in the referenced application and defined in Permit Condition No. 2, is accurate. Any inaccuracies found in this information may be grounds for the revocation or modification of this permit and potential enforcement action.

2. This approved application consists of the following documents:

Form No./Letter	Form Title	Date (Revision)
Form GIF	General Information Form	8/12
Form A	Application For Municipal or Residual Waste Permit	8/12 (7/16)
Form B	Professional Certification	8/12 (11/14)
Form B1	Application Form Certification	8/12 (11/14)
Form D	Environmental Assessment	8/12 (5/16)
Form HW-C	Compliance History	7/12
Form I	Soil Erosion and Sedimentation Control	8/12(12/15)
Form Q	Equivalency Review Request	8/12 (3/14)
Form 1R	Facility Plan	8/12 (12/15)
Form 3R	Map Requirement – Phase II	8/12 (3/14)
Form 12R	Operation Plan	8/12 (12/15)
Form 16R	Liner System	8/12 (12/15)
Form 17R	Leachate Management	3/14 (7/16)
Form 18R	Closure/Post Closure Land Use Plan	8/12 (12/15)
Form 24R	Residual Waste Disposal Impoundments	8/12
N/A	Bonding Worksheets	8/12 (7/16)
Correspondence	12/4/12 H/B Review Letter Response	4/13
Correspondence	8/29/13 H/B Review Letter Response	3/14
Correspondence	9/11/14 H/B Review Letter Response	12/14

This modification shall be attached to the existing Solid Waste Permit described above and shall become a part thereof effective on September 21, 2016.

  
\_\_\_\_\_  
FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
 Permit No. 301071

Correspondence	5/6/15 H/B Review Letter Response	6/15
Correspondence	10/20/15 H/B and Technical Review Letter Response	12/15
Correspondence	4/11/16 H/B Review Letter Response	6/16
Correspondence	6/8/16 Technical Review Letter Response	7/16

Drawing No.	Title	Date (Revision)
P-000	Title Sheet	8/12 (12/15)
P-090	General Site Arrangement	8/12(11/14)
P-100	Existing Conditions and Subsurface Investigation	8/12(11/14)
P-101	Permitted Base Grades	8/12 (11/14)
P-102	Permitted Final Grading	8/12 (11/14)
P-103	Previously Permitted Leachate Detection Zone	3/14 (11/14)
P-104	Previously Permitted Leachate Collection Zone	3/14 (11/14)
P-105	Previously Permitted Details	3/14 (11/14)
P-200	Proposed Final Grading	8/12 (12/15)
P-201	Phasing (Sheet 1 of 2)	8/12(12/15)
P-202	Phasing (Sheet 2 of 2)	8/12(12/15)
P-203	Site Improvements to be performed Prior to Phase I Waste Acceptance	11/14
P-300	Erosion, Sedimentation, and Stormwater Control Plan	8/12(12/15)
P-400	Engineering Cross-Sections	8/12(12/15)
P-500	Details (Sheet 1 of 5)	8/12(12/15)
P-501	Details (Sheet 2 of 5)	8/12(12/15)
P-502	Details (Sheet 3 of 5)	8/12(12/15)
P-503	Details (Sheet 4 of 5)	12/15
P-504	Details (Sheet 5 of 5)	12/15
P-600	Alternative Sludge Dewatering Plan	8/12(11/14)
P-700	Leachate Transmission Line and Above Ground Storage Tank Plan	2/14(12/15)
P-701	Above Ground Storage Tank Typical Foundation Details	2/14(12/15)
P-702	Leachate Storage Tank Mine Grouting Plan	12/15

3. This permit is issued in accordance with the Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, 35 P.S. Section 6018.101 et seq.; Municipal Waste Planning, Recycling and Waste Reduction Act of 1988, 53 P.S. Sections 4000.101-4000.1904; Air Pollution Control Act of June 8, 1960, P.L. 2119, 35 P.S. Sections 4001-4015 et seq.; the Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended and the regulations promulgated pursuant to these acts.
  
4. This permit authorizes the vertical expansion of Disposal Area No. 6 as described in the approved application. This permit is issued in accordance with 25 Pa. Code Chapters 287 and 288 for the operation of a residual waste landfill on a 137 acre permit area as shown on Drawing No. P-090 dated July 2012 and revised November 2014 and described as "General Site Arrangement". The site consists of approximately 16.5 acres permitted for disposal as shown on Drawing P-200 dated July 2012 and revised December 2015 and described as "Proposed Final Grading."

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

5. The permittee is authorized to accept for disposal at this facility solid waste such as those described in this permit and in the approved Form R – Waste Analysis and Classification Plan (WACP) of the approved permit. Any additional waste types will require written notification to the Department and subsequent written approval prior to processing the new waste. The permittee shall maintain current records of all waste types accepted at this facility and include their parameters.
6. Disposal of hazardous waste in Disposal Area No. 6, as defined by 40 CFR 261, Subparts C and D as incorporated by reference at 25 Pa Code 261a.1 is prohibited. Radioactive material controlled under specific license or order authorized by any Federal, State, or other government agency is also prohibited.
7. Residual waste accepted at this facility shall not contain or be mixed with any hazardous waste as defined in 25 Pa. Code §261.3 or any unapproved residual or special handling waste except as specifically authorized herein or through written approval or permit modification from the Department.
8. All previously approved waste acceptance criteria remain valid for this modification.
9. This permit does not authorize processing of residual wastes. Except for residual waste processing authorized under Hazardous Waste Permit No. PAD004835146, the permittee shall not process residual wastes at the facility, unless approved by the Department in a permit modification.
10. Within forty-five (45) days of the issuance date of this permit, the permittee shall submit additional bond to the Department in the amount of \$500,000, thereby increasing the total bond liability for the facility to \$5,083,294. Additional bond may be required in accordance with the terms and conditions of the Consent Order and Agreement (COA) executed between the Department and MAX on September 21, 2016.

The Department's approval of financial assurances in the aggregate amount above shall not be construed as approval of any particular cost item appearing in the Bonding Worksheets contained in Form 18R of the approved application. The Department reserves the right to question or reject any individual cost item, or documentary basis for that item, contained in the current cost estimate should that information be reproduced in a future cost estimate.

11. This permit requires that the Operation Plan be implemented as described in DEP Form 12R of the approved application, and subject to the following conditions:
  - A. Waste may be accepted at the facility 24 hours per day, 7 days per week, or as otherwise required by local ordinance.
  - B. No more than an average of 600 tons of residual waste may be received at this facility per day during the standard calendar year quarter except for a Department written approved exceedance. Compliance with this provision shall be calculated by dividing the total tons of solid waste received for disposal at this facility during a standard calendar year quarter, divided by the number of days during that quarter that the facility was permitted to operate, including partial days. Compliance with this provision during the quarter in which this permit modification is issued shall be calculated by dividing the total tons of solid waste received for disposal at this facility during the partial quarter by the number of permitted operating days within that partial quarter.
  - C. No more than 1,300 tons of residual waste may be received at this facility for disposal on any single operating day.

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

- D. A uniform application of approved daily cover material shall be placed on exposed solid waste at the end of every operating day. Placement of daily cover materials shall be subject to the following conditions:
- i. Daily cover materials shall meet the performance standards set forth in 25 Pa. Code 288.232(c) and may consist of tarps, soil, or waste materials as approved by the Department in a minor permit modification.
  - ii. A 5-day stockpile of approved daily cover material shall be maintained on-site at all times. Stockpiles of waste materials used as alternate daily cover (ADC) shall be within the lined limits of Disposal Area No. 6.
  - iii. Whenever the working face is to be idled for more than 18 hours, a uniform application of approved daily cover material shall be applied.
  - iv. Wastes triggering the radiation monitoring detection equipment shall not be used as ADC.
  - v. The approval to use approved wastes as alternate daily cover shall not be construed as a beneficial use approval or co-product determination and all waste acceptance, recordkeeping, fees and reporting requirements applicable to wastes accepted for disposal apply to those wastes used as cover.
  - vi. If the approved ADC materials fail to meet the performance standards for daily cover as specified in 25 Pa. Code Section 288.232(c) at any time and for any reason, the permittee shall cease using the material and place an approved daily cover meeting the performance standards for daily cover in 25 Pa. Code Section 288.232(c).
  - vii. Use of ADC materials which do not possess physical and chemical characteristics similar to previously approved wastes will require the submission of a permit modification to revise the Form 12R, Operation Plan, and may require a demonstration to verify the use of the waste will meet the daily cover performance standards of 25 Pa. Code Section 288.232(c).
- E. A uniform intermediate cover shall be placed within 7 days of waste disposal on a partial lift for which the operator intends to place no additional waste for 6 months, or a partial or completed lift that represents final permitted elevations for that part of the facility. Intermediate cover shall comply with the requirements of 25 Pa. Code Section 288.233(c).
- F. A record including quantities of all wastes approved and used as alternate daily cover or intermediate cover shall be maintained on-site and be available for inspection by the Department upon request. A summary shall be included with each year's Annual Operation Report. Only waste that is approved and used as daily cover in accordance with 25 Pa. Code Section 288.232(b) shall be considered alternate daily cover. All remaining shall be considered as waste received and disposed.
- G. The permittee shall implement the Nuisance Minimization Control Plan (NMCP) described in Exhibit 12-1.2 and subject to the following conditions:
- i. The permittee shall conduct odor surveys twice per operating day in each of the following areas:
    - a) Spring Street at the entrance to the Yukon Facility.
    - b) Spring Street across from Disposal Area No. 6
    - c) The cemetery across from Spring Street

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

- d) The top of Dietz Lane.
  - e) Millbell Road north of Disposal Area No. 6; and
  - f) Additional locations as may become the subject of citizen complaints.
- ii. The results of the monitoring conducted under Permit Condition No. 4.G.i. shall be recorded on the form titled "Twice Daily Odor Inspection Form, Yukon Facility" presented as Appendix A to the NMCP. Such records shall be retained for three (3) years, and made available to the Department upon request.
- iii. Waste placement shall be conducted in accordance with Figures 1-5 attached to the NMCP relating to the waste disposal sequencing grids.
- iv. The active disposal area where waste is spread and compacted daily shall not exceed 1.5 acres.
- H. The facility shall implement the background meteorological and meteorological data collection plan as described in Appendix B to Exhibit 12R-1.2.
- I. Waste filling shall commence in a phased manner as shown on Drawing Nos. P-201 and P-202.
- J. Waste shall not be placed above the elevations shown on Drawing P-200 titled "Proposed Final Grades" under any circumstances.
12. This permit requires that leachate generated at the facility be managed as described in the DEP Form 17R-1 and subject to the following conditions:
- A. In accordance with the approved plans and the terms and conditions of the COA executed between the Department and MAX on September 21, 2016, the permittee shall construct and certify in accordance with Permit Condition No. 42, the following leachate management equipment:
- i. The additional 1,237,990 gallons of leachate storage capacity in accordance with the following requirements:
    - a) The tank shall be constructed in accordance with the manufacturer's recommendations and the Permastore Tanks and Silos drawings titled "Primary Tank – MAX Env. Yukon, PA" and "Primary Tank – MAX Env. Yukon, PA" dated July 20, 2016.
    - b) The tank subbase shall be constructed and mine void stabilization shall be completed in accordance with the Geotechnical Report prepared by Civil and Environmental Consultants, Inc. dated July 2016 and corresponding Figures 1 and 2 titled "Boring Location and Proposed Grading Plan" and "Preliminary Deep Mine Stabilization Plan", respectively.
    - c) The tank shall be hydrostatically tested with non-waste water. Results of the hydrostatic test shall be submitted with the certification.
    - d) Leachate may not be stored in the tank until the Department has given written approval.
  - ii. The perimeter leachate trench in accordance with Drawing P-500 and Attachment 17R-3 of the approved Form 17R.

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

- iii. All new leachate transmission lines, the proposed leachate forcemain and related components in accordance with approved plans.
  - iv. The permittee shall develop the site and leachate management features in general accordance with the construction schedule presented as Attachment 12R-3 of the approved Form 12R and drawing P-203 titled "Site Improvements to be performed Prior to Phase I Waste Acceptance", unless otherwise approved by the Department in writing.
- B. The disposal area leachate detection zones shall be monitored on a weekly basis to determine whether liquid is flowing within the detection zones as required by 25 Pa. Code Section 288.435(c). If liquid is detected to be flowing from the detection zones, the permittee shall implement the provisions of 25 Pa. Code Section 288.435 (d). Detection zone flow rate and chemical analyses shall be incorporated into the quarterly report package required by Permit Condition No. 25. If it appears that the primary liner has been breached or an increase in the amount of liquid previously detected in the leachate detection zone occurs, or if the flow exceeds 100 gallons per acre per day for any week, the permittee shall immediately notify the Department by telephone and follow up in writing. The permittee shall submit to the Department for review and approval, a plan to locate and remediate the source of the flow as set forth in 25 Pa Code Section 288.435 (e).
13. The cap and final cover systems at this facility shall be constructed and installed in conformance with the revised slope stability requirements set forth in the approved DEP Form 16R, subject to the following considerations:
- A. The cap and final cover system shall be constructed in accordance with the Construction Quality Assurance/Quality Control (CQA/QC).
  - B. Generic approval is granted for the geosynthetic materials described in the QA/QC Plan. Specific material authorization requires, prior to the initiation of cap or final cover system construction, that documentation be submitted to the Department demonstrating that the specific materials to be deployed satisfy the material specifications of the QA/QC Plan and design requirements for slope stability.
  - C. Slope stability shall be established on the basis of interface shear strength meeting or exceeding the values specified in the Form 16R and corresponding attachments.
  - D. Final slopes shall not exceed 3:1 and intermediate slopes may not exceed 2.5:1.
  - E. No solid waste may be disposed over areas that do not have liner systems in compliance with 25 Pa. Code §§288.432 - 288.460. The area where disposal is prohibited shall be clearly marked to prevent the accidental disposal of solid waste or disturbance by future construction activities.
14. This permit requires that the Soil Erosion and Sedimentation Control Plan be implemented as described in DEP Form I of the approved application. This authorization is subject to the following conditions:

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
WASTE MANAGEMENT  
Permit No. 301071

---

- A. The permittee shall construct, implement and maintain the erosion and sediment control structures in accordance with the approved plan prior to any earth disturbance activities in the areas tributary to those structures.
- B. The permittee shall maintain all erosion and sedimentation control channels to ensure that the required design dimensions and protective linings are available at all times. Damaged channel linings shall be repaired or replaced immediately. Accumulations of sediment or debris shall be removed immediately.
15. This permit requires that the Closure and Postclosure Land Use Plan be implemented as described in DEP Form 18R of the approved application. Phased closure of the permitted Area 6 disposal area shall be conducted in accordance with the following sequence or within one year of reaching final elevation, whichever is sooner, unless otherwise approved by the Department in writing under the provisions of Permit Condition 15.D:
  - A. Phase 1 consisting of approximately 7.3 acres shall be capped by October 31, 2018.
  - B. Phase 2 consisting of approximately 4.4 acres shall be capped by October 31, 2020.
  - C. Phase 3 consisting of approximately 4.4 acres shall be capped within 1 year of final waste placement.
  - D. The Department may approve revisions to the capping schedule defined in Permit Condition No. 15 provided that the permittee submits a written request providing justification as to why modifications are required.
16. All final cover placement and seeding shall be completed each year to permit the establishment of successful vegetation and minimize erosion potential.
17. Final and intermediate cover soil shall be tested for lime and fertilizer application rates. Test results, lime and fertilizer receipts and any required soil quality assurance test results for, intermediate and final cover soils will be maintained on-site for a minimum of 3 years and be available for inspection by the Department upon request. Lime and fertilizer weight receipts shall be made available if requested by the Department.
18. Any changes from the approved sources of soils proposed for use as structural fill, daily cover, intermediate cover or final cover must be approved by the Department through a permit modification, prior to use, in accordance with 25 Pa Code §287.222.
19. If a soil processing operation fails to achieve the predicted or the demonstrated recovery rates or fails to achieve the necessary quality to the extent that additional soil borrow areas must be sought, then a permit modification shall be required for the additional borrow areas.
20. The permittee shall comply with the fugitive emission standards adopted under the Chapter 123 (Standards for Contaminants) regulations issued under the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, 35 P.S. Section 4005 and shall be required to comply with all the applicable sections of the Fugitive Emissions Sections 123.1 and 123.2.
  - A. All roadways must be maintained as specified in the approved DEP Form 12R. Paved roadways must be flushed with a pressurized water truck or similar vehicle. If this method of control is deemed to be inadequate, the Department reserves the right to require the use of a vacuum type road sweeper to further control fugitive emissions. Paved roadways must be maintained so that dust control measures can be



**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

effectively applied or operated. Unpaved roadways must be treated on an as needed basis using dust suppressants and/or water to minimize fugitive dust generation.

- B. For paved roadways, the following records must be maintained on site and available for Department inspection:
- i. Daily log of time and location of any water flushing or vacuum sweeping conducted.
  - ii. Identification, time, and location of any maintenance repairs, patching, or repaving of roads.
  - iii. A log explaining why any water flushing or vacuum sweeping was not performed.
- C. For unpaved roadways, the following records must be maintained on-site and available for Department inspection:
- i. A daily log of time and location of treated areas.
  - ii. An identification of dust suppressants used.
  - iii. A log of dilution ratios of dust suppressants and diluent used if chemical suppressants are used.
  - iv. A purchase record of all dust suppressants used.
- D. A pressurized water truck or similar vehicle must be available on site to minimize the generation of fugitive dust during facility construction and operation.
- E. Vehicle traffic operating within the facility shall be restricted to speed limits of 15 mph on paved roadways and 5 mph on unpaved roadways at the facility. These limits shall be clearly posted and easily legible along all access routes and be strictly enforced by facility personnel.
- F. All vehicles utilizing the facility which contact unpaved roadways or Disposal Area No. 6 shall pass through an operating truck and tire wash prior to exiting the facility and prevent tracking of any waste, mud, or debris from the facility.
- G. Nothing contained herein shall relieve the permittee's obligation to comply with all provisions of the Pennsylvania Clean Air Act and/or the Department's Air Quality Regulations. These include, but are not limited to, fugitive emission regulations contained in 25 Pa. Code Sections 123.1-2, the Department's odor regulations contained in 25 Pa. Code Section 123.31, and the ambient air quality standards specified in 25 Pa. Code Chapter 131.
21. A Form 14R Residual Waste Landfill Quarterly and Annual Water Quality Analyses report must be submitted to the Department on a calendar quarterly basis for the 25 ground water monitoring wells described in document titled "MAX Environmental Technologies Yukon Facility Groundwater Monitoring Analytical Program" prepared by Cribbs and Associates, Inc. last revised November 2003. The report shall contain an analysis of the data and shall specify if changes have occurred since the last analysis.
- The permittee shall monitor groundwater wells in accordance with the sampling frequencies and analytical requirements specified in Appendix A (pages i through xviii) to this permit.
22. A Form 14R Residual Waste Landfill Quarterly and Annual Water Quality Analyses report must be submitted to the Department on a calendar quarterly basis for the 3 private ground water monitoring wells described in document titled "MAX Environmental Technologies Yukon Facility Groundwater Monitoring Analytical

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

Program” prepared by Cribbs and Associates, Inc. last revised November 2003. The report shall contain an analysis of the data and shall specify if changes have occurred since the last analysis.

The permittee shall monitor the private groundwater monitoring wells in accordance with the sampling frequencies and analytical requirements specified in Appendix A (pages i through xviii) to this permit.

23. A Form 14R Residual Waste Landfill Quarterly and Annual Water Quality Analyses report must be submitted to the Department on a calendar quarterly basis for the 22 surface monitoring points described in document titled “MAX Environmental Technologies Yukon Facility Groundwater Monitoring Analytical Program” prepared by Cribbs and Associates, Inc. last revised November 2003. The report shall contain an analysis of the data and shall specify if changes have occurred since the last analysis.

The permittee shall monitor surface water monitoring points in accordance with the sampling frequencies and analytical requirements specified in Appendix A to this permit.

24. The permittee shall submit to the Department an annual evaluation of all groundwater and surface water sampling and analyses reports. This evaluation shall be performed using appropriate statistical or mathematical methods. This report shall include time series analysis, and may include approved methods such as those described in the EPA publication of April 1989, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance. The report shall include a summary of the statistically significant differences in groundwater quality and, if present, a statement identifying the existence of degradation and shall be submitted by a licensed professional geologist.
25. If changes in concentrations of parameters for upgradient wells are indicated, the permittee shall re-evaluate the groundwater flow to assure proper location of wells. If the upgradient wells show degradation, the permittee shall conduct a groundwater investigation to define background quality and flow characteristics.
26. Copies of all required quarterly reports shall be submitted to the Department as indicated in 25 Pa. Code §288.255 on forms approved by the Department. The submission shall include two volumes to be divided as follows:
- A. Volume 1 – Groundwater and surface water sampling results.
  - B. Volume 2 – Leachate sampling and monitoring results, dustfall monitoring and other required reporting as specified in this permit.
  - C. One copy of Volume 1 must be sent to:

Department of Environmental Protection  
Hydrogeologist, Waste Management – Compliance and Monitoring  
14<sup>th</sup> Floor, Rachel Carson State Office Building  
Harrisburg, PA 17101-2301

27. This permit modification approves, pursuant to 25 Pa. Code Sections 287.231 and 288.435(b), the request for equivalency review providing for the use of synthetic drainage materials for the leachate detection zone in the liner system as described in DEP Form Q of the approved application.

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

28. The facility shall not accept waste or allow access to the facility unless an operator is on duty to control access to the facility pursuant to 25 Pa. Code 288.212(a)(3).
29. All waste accepted at the facility shall be weighed prior to processing by an operator conforming to the requirements of 25 Pa. Code 288.214. Wherein the operator shall be a licensed public weighmaster under 3 Pa. C.S. Chapter 41 and 70 of Pa Code Part I, as required under 25 Pa Code 288.214(a)(1) for waste that is received at the facility.
30. As required by 25 Pa. Code Sections 288.211(c) and 288.432(g), the permittee shall maintain markers clearly identifying the perimeter of the permit area and the lined limits of Disposal Area No. 6.
31. As required by 25 Pa. Code Section 288.211(d), the facility shall identify the operation for the duration of residual waste operations by posting and maintaining a sign which is clearly visible and can be easily seen and read at the junction of each access road and public road unless otherwise approved by the Department. The sign shall be constructed of a durable, weather-resistant material. The sign shall show the name, business address and telephone number of the person or municipality operating the facility, the operating hours of the facility and the number of the current permit authorizing operations at the facility.
32. All waste generated by the facility shall be managed in accordance with the Solid Waste Management Act, Pa Code title 25 Chapters 287-299 and the Federal Resource Conservation and Recovery Act (RCRA).
33. Emissions from the facility shall be consistent with the Air Pollution Control Act (35 P.S. § § 4001-4015), Article III (relating to air resources), the terms and conditions of this permit and, if applicable, the most recent edition of the Department's criteria for best available technology, and other applicable Departmental guidelines.
- The facility may not cause or contribute to an exceedance of any ambient air quality standard under § 131.3 (relating to ambient air quality standards).
34. This permit is issued based on the assumption that the benefits to the Commonwealth of Pennsylvania deriving from the operation of the MAX Environmental Technologies, Inc. Yukon Facility outweigh the harms related thereto. On an annual basis, the permittee shall prepare a detailed status report analyzing the specific harm mitigation activities conducted and corresponding benefits of the facility's operation in terms of the assertions made in this regard in the Form D- Environmental Assessment and corresponding attachments dated August 29, 2012, and all revisions and addendums thereto. That report shall be included with each year's Annual Operation Report submitted in accordance with Permit Condition No. 43 below. Failure of the facility's operation to perform in a manner assuring that the benefits exceed the harms may be grounds for the revocation or modification of this permit.
35. Daily operation records as required in 25 Pa. Code Section 288.281 shall be maintained. These records shall be maintained on the premises for a period of at least 10 years and shall be made available to the Department or the Department's designated representative upon request. Daily operational records must include the following information:
- A. The types or classifications of residual waste accepted.
  - B. The weight and Form U EC# of the types of wastes accepted.
  - C. The name, mailing address, telephone number, county and state of each generator of waste.

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

- D. The name and location of any transfer facility that has received, or will receive, the waste.
  - E. The name and location of the solid waste processing or disposal facility where the waste will be ultimately disposed or processed.
  - F. A description of handling problems or emergency activities.
  - G. The name and address of the waste transporter.
  - H. A record of rejected waste load and the reasons for rejecting the loads.
  - I. For each incident in which radioactive material is detected in waste the record shall include:
    - i. The date time and location of the occurrence.
    - ii. A brief narrative description of the occurrence.
    - iii. Specific information on the generator and origin of the material
    - iv. The name, address and telephone number of the supplier or handler of the radioactive material and the name of the driver and transportation company.
36. Bond maintenance requirements are as follows:
- A. An updated bond determination, prepared in accordance with the requirements in 25 Pa Code §287.332(b)(2), shall be included with every permit renewal pursuant to 25 Pa Code §287.332(b)(2) and each Annual Operations Report.
  - B. Upon receipt of written notification from the Department, the approved bond must be updated within 90 days of that notice, in accordance with 25 Pa Code §287.333 of the Regulations.
  - C. Failure to maintain an adequate bond in the appropriate amount is subject to the penalties and conditions stipulated in 25 Pa Code §287.333.
37. A commercial liability insurance policy covering third part claims for property damage and personal injury in the amounts of \$500,000 per occurrence with a \$1,000,000 annual aggregate shall be maintained in force until the Department certifies final closure of the facility. Documentation of such insurance shall be provided to the Department prior to commencing operation or construction activities.
38. Written notice requirements with regard to maintaining adequate commercial insurance coverage in accordance with 25 Pa Code §287.374(a)(1) with permit renewal and by 25 Pa Code §287.375(a) until final closure certification is approved by the Department, are as follows:
- A. Written notice shall be given by the Insurer to the Department and the permittee sixty (60) days, or other period as required by the Insurance Department, before cancellation, termination or expiration of the policy, if upon expiration of the policy the policy will not be renewed, in accordance with 25 Pa Code §287.375(c).
  - B. Written notice to the Department and the Permittee shall also be given of any substantive change in insurance policy coverage, in adherence with 25 Pa Code §287.372.

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

C. Permittee shall submit proof of insurance to the Department thirty (30) days prior to expiration of current coverage, in accordance with 25 Pa Code §287.375.

39. This permit should not be construed as approval to construct and operate without having obtained any necessary authorizations or waivers from Federal, State, County and Local government, including the Department's Bureaus of Air Quality, Clean Water, Storage Tank, or other programs.
40. Unless amended by this permit modification or a previously approved permit modification, all design and operational requirements set forth in Solid Waste Permit No. 301071, originally issued on August 6, 1986 remain valid for this permit modification.
41. If there is a conflict between the application, its supporting documents and/or amendments and the terms and conditions of this permit, the terms and conditions of this permit shall apply.
42. This permit shall not be construed to supersede, amend, or authorize a violation of any of the provisions of any valid and applicable local law, ordinance, or regulations, providing that said local law, ordinance, or regulation is not preempted by the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. §§ 6018.101, et seq.
43. Any final operational, design or other plan developed subsequent to permit issuance which exhibit changes in structure, location, specification or other changes of substance shall be submitted to the Department for subsequent permit action. Any deviation from the plans herein approved shall not be implemented before first obtaining a permit amendment or written approval from the Department.
44. Certification of each component of this facility design and construction shall be submitted to the Department by a professional engineer, registered in the Commonwealth of Pennsylvania, upon completion of each phase of construction, as specified by 25 Pa. Code Section 288.203(a). The permittee must notify the Department in writing, within seventy-two (72) hours, before commencing construction of major phases as defined in 25 Pa. Code Section 288.203(a). The permittee shall submit one original and one copy of as-built drawings and the construction certification report document to the Department upon completion of the construction activity

A registered Pennsylvania professional engineer shall certify in writing on Form 19R, provided by the Department, for each phase of the construction under penalty of law respecting unsworn falsification to authority (18 Pa. C.S. § 4904), indicating that he/she has personally examined the construction of said phase and it is constructed and prepared in accordance with the documents, statements, design, and plans submitted as part of the application as approved by the Department.

45. An Annual Operation Report as required in 25 Pa. Code Section 288.283 shall be submitted to the Department on or before June 30 of each year. The Annual Operation Report shall be submitted on forms for landfill disposal operations provided by the Department. An original and one copy of the Annual Operation Report shall be submitted to:

Department of Environmental Protection  
Regional Manager, Waste Management  
400 Waterfront Drive  
Pittsburgh, PA 15222-4745

One copy of each volume shall be submitted to:

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

Department of Environmental Protection  
Bureau of Land Recycling and Waste Management  
Division of Waste Minimization and Planning  
PO Box 8472  
Harrisburg, PA 17105-8472

46. This permit shall not be construed to authorize the removal of minerals by surface mining without the permittee first obtaining all necessary permits and authorizations pursuant to the Surface Mining Conservation and Reclamation Act, 52 P.S. Sections 1396.1, et seq., and the Clean Streams Law, 35 P.S. Sections 691.1 et seq.
47. Any independent contractors or agents retained by the permittee to construct or operate this site shall be subject to prior compliance history review by the Department as specified by the Pennsylvania Solid Waste Management Act, the Act of July 7, 1980, P.L. 380, No. 97, 35 P.S. 6018.101 et seq.
48. As a condition of this permit and of the permittee's authority to conduct the activities authorized by this permit, the permittee hereby authorizes and consents to allow authorized employees or agents of the Department, without advance notice or search warrant, upon presentation of appropriate credentials and without delay, to have access and to inspect all areas or permittee controlled adjacent areas where solid waste management activities are being or will be conducted. This authorization and consent shall include consent to collect samples of waste, water, or gases; to take photographs; to perform measurements, surveys, and other tests; to inspect any monitoring equipment; to inspect the methods of operation; and to inspect and/or copy documents, books, and papers required by the Department. This permit condition is referenced in accordance with Sections 608 and 610.7 of the Solid Waste Management Act and 25 Pa. Code Section 287.123.
49. This permit does not authorize nor shall be construed as an approval to discharge industrial waste, including without limitation, any leachate or stormwater discharge from the permitted area without first obtaining necessary permits required by the Clean Streams Law.
50. This permit shall not be construed to supersede, amend, or authorize a violation of any valid industrial waste pretreatment permit or otherwise authorize the facility to cause or contribute to the violation of a discharge limitation established in any permit required by the Clean Streams Law for the treatment and disposal of leachate or stormwater generated at the facility.
51. Approval of this permit does not guarantee site stability or operational effectiveness. Failure of this site to perform as intended or designed according to the application documents herein approved for any reason shall be sufficient grounds for revocation or suspension of this permit.
52. This approval does not supersede conformance with previously approved design and operational requirements except to modification(s) authorized herein. This approval may be rescinded by the Department if any of the following conditions exist:
- A. The waste characteristics or substances are different in any way from the documentation submitted with the request.
  - B. The waste is not handled or disposed of in an environmentally sound manner.

**PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**WASTE MANAGEMENT**  
Permit No. 301071

---

- C. The acceptance or disposal of a waste stream, alone or in conjunction with other waste stream(s), a nuisance, environmental harm, or hazard to the public.
  - D. The Federal RCRA regulations or regulations promulgated in the Pennsylvania Solid Waste Management Act of 1980 conflict with any of the conditions of this approval.
  - E. This solid waste management facility is operated contrary to the Solid Waste Management Act of 1980; Air Pollution Control Act, Act of January 8, 1960, P.L. 2119, as amended; the Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended; or the rules and regulations promulgated thereunder; or any Orders of the Department; or any term or any condition of any applicable permit issued by the Department for this facility.
53. The facility shall be operated in compliance with all applicable safety and emergency procedures requirements in 25 Pa. Code §287.271 (hazard prevention), in §287.272 (emergency equipment); and implemented according to §287.273 (implementation of contingency plan), that have been approved for this landfill facility and shall be revised as it becomes necessary. Additional safety and/or emergency controls necessary for the operation of this facility shall be added to the approved Preparedness, Prevention and Contingency Plan provided under the approved Form L as they are developed.
54. As required by 25 Pa. Code Section 287.212(4), the permittee shall notify the Department within 45 days, on a form prepared by the Department, after the transfer has occurred of a controlling interest in the owner or operator, if the transfer does not require a permit modification under Section 287.154 (relating to public notice and public hearings for permit modifications) or a permit reissuance under Section 287.221 (relating to permit reissuance). The notification shall contain the same information relating to the person who obtained the controlling interest as is required of a permit applicant in a permit application under Sections 287.124 and 287.125 (relating to identification of interest; and compliance information). A "controlling interest" means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting securities, by contract or otherwise.

**APPENDIX A**

**MAX ENVIRONMENTAL TECHNOLOGIES, INC**

**YUKON FACILITY**



**Table 1A**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Redstone Coal Horizon Wells**

Monitoring wells: RC-6A, W-2, W-8

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Water Elevation	Q		Q	
Arsenic (Dissolved)	Q		Q	
Barium (Dissolved)	Q		Q	
Cadmium (Dissolved)	Q		Q	
Chromium (Dissolved)	Q		Q	
Lead (Dissolved)	Q		Q	
Chloride	Q		Q	
Nitrate - Nitrogen	Q		Q	
Ammonia-Nitrogen	Q		Q	
Cyanide, Total	Q		Q	
pH	Q		Q	
Specific Conductance	Q		Q	

**Notes:**

Q = One samples/measurement must be collected during each quarter

M = One samples/measurement must be collected during each month

W = One samples/measurement must be collected during each week

D = One samples/measurement must be collected during each day

**Table 1B**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Redstone Coal Horizon Wells**

Monitoring Wells: RC-1, RC-2, RC-5

Parameter	Qtr 1	Qtr2	Qtr3	Qtr4
Water Elevation	Q	Q	Q	Q
Arsenic (Dissolved)	Q	Q	Q	Q
Barium (Dissolved)	Q	Q	Q	Q
Cadmium (Dissolved)	Q	Q	Q	Q
Chromium (Dissolved)	Q	Q	Q	Q
Lead (Dissolved)	Q	Q	Q	Q
Chloride	Q	Q	Q	Q
Nitrate - Nitrogen	Q	Q	Q	Q
Ammonia-Nitrogen	Q	Q	Q	Q
Cyanide, Total	Q	Q	Q	Q
pH	Q	Q	Q	Q
Specific Conductance	Q	Q	Q	Q

**Notes:**

Q = One samples/measurement must be collected during each quarter

M = One samples/measurement must be collected during each month

W = One samples/measurement must be collected during each week

D = One samples/measurement must be collected during each day

**Table 2A**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Pittsburgh Coal Horizon Wells**

Monitoring Wells: PC-1, PC- 2, PC- 3, PC- 5, PC- 8, PC- 9

Parameter	Qtr 1	Qtr2	Qtr3	Qtr4
Water Elevation	Q	Q	Q	Q
Arsenic (Dissolved)	Q	Q	Q	Q
Barium (Dissolved)	Q	Q	Q	Q
Cadmium (Dissolved)	Q	Q	Q	Q
Chromium (Dissolved)	Q	Q	Q	Q
Lead (Dissolved)	Q	Q	Q	Q
Chloride	Q	Q	Q	Q
Nitrate-Nitrogen	Q	Q	Q	Q
Ammonia-Nitrogen	Q	Q	Q	Q
Specific Conductance	Q	Q	Q	Q
Total Cyanide	Q	Q	Q	Q
pH	Q	Q	Q	Q
Phenols		Q		
Total Organic Halogens		Q		
Total Organic Carbon		Q		
Sulfate		Q		

**Notes:**

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day

**Table 2B**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Pittsburgh Coal Horizon Wells**

Monitoring Well: PC-7

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Chloride	M	M	M	M
Nitrate-Nitrogen	M	M	M	M
pH	M	M	M	M
Specific Conductance	M	M	M	M

**Notes:**

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day

**Table 2C**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Pittsburgh Coal Horizon Wells**

Monitoring Wells: PW1, PW2, PW3

Parameter	Qtr 1	Qtr2	Qtr3	Qtr4
Water Elevation	M	M	M	M
Flowrate (GPM)	D	D	D	D
Chloride	M	M	M	M
Nitrate-Nitrogen	M	M	M	M
pH	M	M	M	M
Specific Conductance	M	M	M	M

**Notes:**

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day

**Table 2D**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Pittsburgh Coal Horizon Wells**

**Monitoring Well: SP-2 and SP-3**

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Chloride	Q		Q	
Nitrate-Nitrogen	Q		Q	
pH	Q		Q	
Specific Conductance	Q		Q	

**Notes:**

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day

**Table 3B**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Pittsburgh Limestone Horizon Wells**

Monitoring Wells: W4, W5, W13

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Arsenic (Dissolved)	Q	Q	Q	Q
Barium (Dissolved)	Q	Q	Q	Q
Cadmium (Dissolved)	Q	Q	Q	Q
Chromium (Dissolved)	Q	Q	Q	Q
Iron (Dissolved)	Q	Q	Q	Q
Lead (Dissolved)	Q	Q	Q	Q
Manganese (Dissolved)		Q		
Selenium (Dissolved)		Q		
Silver (Dissolved)		Q		
Sodium (Dissolved)	Q	Q	Q	Q
Nickel (Dissolved)		Q		
Sulfate		Q		
Chloride	Q	Q	Q	Q
Nitrate -Nitrogen	Q	Q	Q	Q
Total Cyanide	Q	Q	Q	Q
Ammonia-Nitrogen	Q	Q	Q	Q
pH	Q	Q	Q	Q
Specific Conductance	Q	Q	Q	Q
Phenolics		Q		
Total Organic Carbon		Q		
Total Organic Halogen		Q		

**Notes:**

Q = One samples/measurement must be collected during each quarter

M = One samples/measurement must be collected during each month

W = One samples/measurement must be collected during each week

D = One samples/measurement must be collected during each day

**Table 3D**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Pittsburgh Limestone Horizon Wells**

Monitoring Well: W-6

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Arsenic (Dissolved)	Q	Q	Q	Q
Barium (Dissolved)	Q	Q	Q	Q
Cadmium (Dissolved)	Q	Q	Q	Q
Chromium (Dissolved)	Q	Q	Q	Q
Iron (Dissolved)	Q	Q	Q	Q
Lead (Dissolved)	Q	Q	Q	Q
Manganese (Dissolved)	Q	Q	Q	Q
Selenium (Dissolved)	Q	Q	Q	Q
Silver (Dissolved)	Q	Q	Q	Q
Sodium (Dissolved)	Q	Q	Q	Q
Nickel (Dissolved)	Q	Q	Q	Q
Chloride	Q	Q	Q	Q
Nitrate -Nitrogen	Q	Q	Q	Q
Total Cyanide	Q	Q	Q	Q
Ammonia-Nitrogen	Q	Q	Q	Q
pH	Q	Q	Q	Q
Specific Conductance	Q	Q	Q	Q
Phenolics		Q		
Total Organic Carbon	Q	Q	Q	Q
Total Organic Halogen	Q	Q	Q	Q
Fluoride		Q		
Sulfate		Q		

**Notes:**

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day



**Table 4**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Pittsburgh Coal Surface Discharges**

Monitoring Points: MDA, MDB and MSS1

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Flowrate (GPM)	Q		Q	
Chloride	Q		Q	
Natrate-Nitrogen	Q		Q	
pH	Q		Q	
Specific Conductance	Q		Q	

**Notes:**

Q = One samples/measurement must be collected during each quarter

M = One samples/measurement must be collected during each month

W = One samples/measurement must be collected during each week

D = One samples/measurement must be collected during each day

**Table 5**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Residential Water Supply Wells**

Residential Water Supply Wells: Reinstadtler, Gardner (Jones), Kiselich

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Chloride	Q	Q	Q	Q
Nitrate -Nitrogen	Q	Q	Q	Q
Total Dissolved Solids	Q	Q	Q	Q
pH	Q	Q	Q	Q
Specific Conductance	Q	Q	Q	Q
Total Organic Carbon	Q	Q	Q	Q
Total Organic Halogen	Q	Q	Q	Q
Benzene	Q	Q	Q	Q
1,2-Dibromoethane	Q	Q	Q	Q
1,1-Dichloroethane	Q	Q	Q	Q
1,1-Dichloroethene	Q	Q	Q	Q
1,2-Dichloroethane	Q	Q	Q	Q
Cis 1,2-Dichloroethene	Q	Q	Q	Q
Trans 1,2-Dichloroethene	Q	Q	Q	Q
Ethylbenzene	Q	Q	Q	Q
Methylene Chloride	Q	Q	Q	Q
Tetrachloroethene	Q	Q	Q	Q
Toluene	Q	Q	Q	Q
1,1,1-Trichloroethane	Q	Q	Q	Q
Trichloroethene	Q	Q	Q	Q
Vinyl Chloride	Q	Q	Q	Q
Xylene	Q	Q	Q	Q

**Notes:**

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day

**Table 6A**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Surface Water and Leachate Samples**

**Impoundment #5 Stream Samples: S-A, S-B, S-C, S-D, S-E, S-F, S-H**

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Flowrate (GPM)		Q		
Chloride		Q		
Natrate-Nitrogen		Q		
pH		Q		
Specific Conductance		Q		

**Notes:**

Q = One samples/measurement must be collected during each quarter

M = One samples/measurement must be collected during each month

W = One samples/measurement must be collected during each week

D = One samples/measurement must be collected during each day

**Table 6B**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Surface Water and Leachate Samples**

Impoundment #6 Samples: Blanket, LDZ and LCS

Page 1 of 2

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Arsenic (Total)		Q		
Barium (Total)		Q		
Cadmium (Total)		Q		
Calcium (Total)	Q	Q	Q	Q
Chromium (Total)		Q		
Copper (Total)		Q		
Iron (Total)	Q	Q	Q	Q
Lead (Total)		Q		
Magnesium (Total)		Q		
Manganese (Total)	Q	Q	Q	Q
Mercury (Total)		Q		
Potassium (Total)	Q	Q	Q	Q
Selenium (Total)		Q		
Silver (Total)		Q		
Sodium (Total)	Q	Q	Q	Q
Nickel (Total)		Q		
Zinc (Total)		Q		
Alkalinity, Total	Q	Q	Q	Q
Alkalinity, Bicarbonate	Q	Q	Q	Q
Chloride	Q	Q	Q	Q
Fluoride	Q	Q	Q	Q
Nitrate -Nitrogen	Q	Q	Q	Q
Sulfate	Q	Q	Q	Q
Ammonia-Nitrogen	Q	Q	Q	Q
Turbidity		Q		
Total Dissolved Solids	Q	Q	Q	Q
pH	Q	Q	Q	Q
Specific Conductance	Q	Q	Q	Q
Chemical Oxygen Demand	Q	Q	Q	Q
Total Organic Carbon		Q		
Naphthalene		Q		
TPH (GRO & GRO)		Q		

**Table 6B**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Surface Water and Leachate Samples**

Impoundment #6 Samples: Blanket, LDZ and LCS

Page 2 of 2

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Benzene		Q		
1,2-Dibromoethane		Q		
1,1-Dichloroethane		Q		
1,1-Dichloroethene		Q		
1,2-Dichloroethane		Q		
Cis 1,2-Dichloroethene		Q		
Trans 1,2-Dichloroethene		Q		
Ethylbenzene		Q		
Methylene Chloride		Q		
Tetrachloroethene		Q		
Toluene		Q		
1,1,1-Trichloroethane		Q		
Trichloroethene		Q		
Vinyl Chloride		Q		
Xylene		Q		

**Notes:**

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day

**Table 6C**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Surface Water and Leachate Samples**

Imp. #3 Seep, Imp. #5 Blanket Drain, Imp. # 5 Bench Drain,  
 Township Road Drain, Township Road Tank Drain,  
 North Toe Tank, East Toe Tank, South Toe Tank,

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Flowrate (GPM)		Q		
Chloride		Q		
Natrate-Nitrogen		Q		
pH		Q		
Specific Conductance		Q		

**Notes:**

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day

**Table 6D**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Surface Water and Leachate Samples**

Impoundment #5 Piezometers: P-1S, P-1D and P-3

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Groundwater Elevation	Q	Qtr 2	Q	Qtr 4

**Notes:**

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day

**Table 7A**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Quality Assurance/Quality Control Samples**

QA/QC Sample: Field Blank

Page 1 of 2

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Arsenic (Dissolved)	Q	Q	Q	Q
Barium (Dissolved)	Q	Q	Q	Q
Cadmium (Dissolved)	Q	Q	Q	Q
Calcium (Dissolved)	Q	Q	Q	Q
Chromium (Dissolved)	Q	Q	Q	Q
Copper (Dissolved)		Q		
Iron (Dissolved)	Q	Q	Q	Q
Lead (Dissolved)	Q	Q	Q	Q
Magnesium (Dissolved)		Q		
Manganese (Dissolved)	Q	Q	Q	Q
Mercury (Dissolved)		Q		
Potassium (Dissolved)		Q		
Selenium (Dissolved)		Q		
Silver (Dissolved)		Q		
Sodium (Dissolved)	Q	Q	Q	Q
Nickel (Dissolved)		Q		
Zinc (Dissolved)		Q		
Alkalinity, Total	Q	Q	Q	Q
Alkalinity, Bicarbonate	Q	Q	Q	Q
Fluoride				
Chloride	Q	Q	Q	Q
Nitrate -Nitrogen	Q	Q	Q	Q
Sulfate	Q	Q	Q	Q
Ammonia-Nitrogen	Q	Q	Q	Q
Turbidity	Q	Q	Q	Q
Total Dissolved Solids	Q	Q	Q	Q
pH	Q	Q	Q	Q
Specific Conductance	Q	Q	Q	Q
Phenolics		Q		
Chemical Oxygen Demand	Q	Q	Q	Q
Total Organic Carbon	Q	Q	Q	Q
Total Organic Halogen	Q	Q	Q	Q
Naphthalene		Q		
TPH (GRO & GRO)		Q		



**Table 7A**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

**Monitoring Frequencies and Parameters**

**Quality Assurance/Quality Control Samples**

QA/QC Sample: Field Blank

Page 2 of 2

Benzene		Q		
1,2-Dibromoethane		Q		
1,1-Dichloroethane		Q		
1,1-Dichloroethene		Q		
1,2-Dichloroethane		Q		
Cis 1,2-Dichloroethene		Q		
Trans 1,2-Dichloroethene		Q		
Ethylbenzene		Q		
Methylene Chloride		Q		
Tetrachloroethene		Q		
Toluene		Q		
1,1,1-Trichloroethane		Q		
Trichloroethene		Q		
Vinyl Chloride		Q		
Xylene		Q		

**Notes:**

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day

**Table 7B**  
**MAX Environmental Technologies, Inc.**  
**Yukon Facility**

Monitoring Frequencies and Parameters

Quality Assurance/Quality Control Samples

QA/QC Sample: Trip Blank

Parameter	Qtr 1	Qtr 2	Qtr 3	Qtr 4
Benzene		Q		
1,2-Dibromoethane		Q		
1,1-Dichloroethane		Q		
1,1-Dichloroethene		Q		
1,2-Dichloroethane		Q		
Cis 1,2-Dichloroethene		Q		
Trans 1,2-Dichloroethene		Q		
Ethylbenzene		Q		
Methylene Chloride		Q		
Tetrachloroethene		Q		
Toluene		Q		
1,1,1-Trichloroethane		Q		
Trichloroethene		Q		
Vinyl Chloride		Q		
Xylene		Q		

Notes:

- Q = One samples/measurement must be collected during each quarter
- M = One samples/measurement must be collected during each month
- W = One samples/measurement must be collected during each week
- D = One samples/measurement must be collected during each day

**OPERATE WASTE PROCESSING OR DISPOSAL AREA OR SITE**

---

**Permit issued, under the Solid Waste Management Act of July 7, 1980, P.L. 35 P.S. §§6018.101- 6018.1003, the Municipal Waste Planning, Recycling and Waste Reduction Act 53 P.S. §§4000.101-4000.1904 and regulations to operate a Solid Waste Processing or Disposal Area or Site.**

---

**Southwest Region:** Regional Solid Waste Manager, 400 Waterfront Drive, Pittsburgh, PA 15222-4745. Telephone 412-442-4000.

**Permit ID No. 301071. MAX Environmental Technologies, Inc.** 1815 Washington Road, Pittsburgh, PA 15241-1498. MAX Environmental Technologies, Inc., Yukon Facility, 233 MAX Lane, Yukon, PA 15698. A major modification authorizing the vertical expansion of the residual waste landfill located in South Huntingdon Township, **Westmoreland County**, was issued by the Southwest Regional Office on September 21, 2016.

bc:    Region  
          Chron  
          C. Lovgren

Transmitted electronically on September 21, 2016.

**ATTACHMENT D**  
**PUBLIC COMMENTS**



[Sent via email]

October 6, 2020

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

**Re: MAX Environmental Technologies - Yukon Facility  
Draft RCRA Corrective Action Permit**

Dear Mr. Gotthold and Mr. Miller,

We have reviewed the draft RCRA corrective action permit and associated statement of basis received on August 26, 2020. We do not have any comments on the statement of basis. We have the following comments on the draft permit:

1. The draft permit is titled as being for hazardous waste facility post-closure care as opposed to corrective action. Is this correct, especially since the facility is still active?
2. Referring to conditions Part I.A, Part I.B.2, and Part I.G.2 regarding renewal of the permit, can EPA advise us what a corrective action permit renewal application would entail? Would this be something like a RCRA post-closure permit application? Would this be sent to EPA and PADEP or just EPA?
3. In condition Part I.B.11, there are several reporting requirements. Many of these are the same as or similar to the standard reporting requirements in our PADEP-issued hazardous waste storage and treatment permit. We would prefer not to have to provide dual notifications to both agencies if possible. Would we be in compliance with this permit if we reported only to PADEP? Also, conditions relating to twenty-four-hour reporting, manifest reporting and biennial reporting seem out of place in this kind of permit (because these conditions are not associated with RCRA corrective action). We request that they be removed from the final permit.



4. In Condition Part I.D.1, "MDE" should be replaced with "PADEP".
5. Condition Part II.C relates to emergency response and release reporting. We believe this refers to the identification of a solid waste management unit not previously thought to exist and/or to a major new release of hazardous waste or hazardous constituents. Please clarify that this condition does not apply to de minimus spills that do not pose a threat to human health or the environment.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Carl Spadaro". The signature is written in a cursive, flowing style.

Carl Spadaro  
Environmental General Manager

**ATTACHMENT E**

**RESPONSE TO COMMENTS ON DRAFT PERMIT**

On August 17, 2020, the U.S. Environmental Protection Agency (EPA) issued a draft Corrective Action Permit (Permit) in which it announced its proposed enforcement conditions for the MAX Environmental Technologies, Inc. (MAX) facility (the Facility), located at 233 Max Lane in Yukon, Pennsylvania.

Consistent with public participation requirements under RCRA, EPA requested comments from the public on the draft Permit. The commencement of a forty-five (45)-day public comment period was announced in the *Trib Total Media* on August 26, 2020 and on the EPA Region III website. The public comment period was subsequently extended to November 19, 2020 via an additional announcement on the EPA website and in the *Trib Total Media* on October 10, 2020. The public comment period ended on November 19, 2020.

EPA's response to significant public comments is provided below. The public comments in their entirety are provided in Attachment D.

A. Comments submitted by MAX Environmental

Mr. Carl Spadaro of MAX Environmental submitted the following comments on the draft Permit in a letter to Mr. Griff Miller, EPA, dated October 6, 2020. EPA has carefully reviewed these comments and found that, in several instances, they merited minor modifications to the draft Permit as detailed below.

1. Comment: *Referring to conditions Part I.A, Part I.B.2, and Part I.G.2 regarding renewal of the permit, can EPA advise us what a corrective action permit renewal application would entail? Would this be something like a RCRA post-closure permit application? Would this be sent to EPA and PADEP or just EPA?*

EPA Response: As stated in condition Part I.G.2, “[i]f the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, the Permittee must submit a complete application for a new permit at least 180 days before this Permit expires, unless permission for a later date has been granted by the [EPA] Regional Administrator (40 C.F.R. §§ 270.10(h) and 270.30(b)).” The Permit will remain in effect as long as the Permittee has submitted a timely and complete application for a new permit to EPA (*See* Part I.G.1). The application for a new permit should meet the Part A requirements in 40 C.F.R. § 270.13 and the Part B requirements in 40 C.F.R. § 270.14.

2. Comment: *In condition Part I.B.11, there are several reporting requirements. Many of these are the same as or similar to the standard reporting requirements in our PADEP-issued hazardous waste storage and treatment permit. We would prefer not to have to provide dual notifications to both agencies if possible. Would we be in compliance with this permit if we reported only to PADEP? Also, conditions relating to twenty-four-hour reporting, manifest reporting and biennial reporting seem out of place in this kind of permit (because these*

*conditions are not associated with RCRA corrective action). We request that they be removed from the final permit.*

EPA Response: The reporting conditions included in the Corrective Action Permit are required by 40 C.F.R § 270.30(l). To the extent that these reporting requirements overlap with the PADEP-issued permit (Hazardous Waste Permit No. PAD004835146), one notification may be addressed to both agencies if this lessens the administrative burden of providing dual notifications. With respect to the twenty-four-hour reporting, manifest reporting, and biennial reporting requirements, these conditions are also required by the 40 C.F.R § 270.30(l), and therefore, are included in corrective action permits regardless of the selected remedy. Therefore, EPA has not modified the draft permit language.

3. Comment: *Condition Part II.C relates to emergency response and release reporting. We believe this refers to the identification of a solid waste management unit not previously thought to exist and/or to a major new release of hazardous waste or hazardous constituents. Please clarify that this condition does not apply to de minimus spills that do not pose a threat to human health or the environment.*

EPA Response: EPA agrees that the releases requiring notification to EPA per Part II.C. are releases that pose a threat to human health and the environment. The notification provisions in this section specifically require an explanation of “the potential for the migration or release of hazardous wastes, solid wastes and/or hazardous constituents at and/or from the Facility and the immediacy and magnitude of the potential threat(s) to human health and/or the environment.” Therefore, EPA has not modified the draft Permit language.

4. Additional Comments: MAX Environmental provided two additional comments pointing out typographical errors by EPA in the title and Part I.D.1.

EPA Response: EPA agrees and has made these corrections in the title and Part I.D.1 accordingly.

#### B. Comments submitted by Mountain Watershed Association

Ms. Melissa Marshall of the Mountain Watershed Association submitted the following comment on the draft permit via letter to Griff Miller, EPA, dated November 19, 2020. EPA has carefully reviewed this comment and has determined that no changes to the permit were necessary.

1. Comment: *CAP Should Include Additional Monitoring and Sampling Requirements – ...the Corrective Action Plan should institute more stringent standards of monitoring and reporting than are currently included. One important way this should be done is to modify and clarify the Plan’s requirement regarding representative sampling. ... If Max was using a different treatment method, such as pugmills, which mix the waste in a way that creates a homogenous result, then random sampling would be appropriate. In fact, this might be a more effective method and the Corrective Action Plan should require Max to implement the use of such mechanisms. In order to ensure the sampling accurately reflects conditions at the site, the requirement should be modified so that it makes clear sampling should be representative **of the entire range of potential range of conditions**. For example, Section B(8)a should be amended to read: “Samples and measurements taken for the purpose of monitoring shall be*



*representative of the monitored activity, including sampling at times and/or locations when/where treated wastes or effluent may not meet land disposal restriction requirements. In Section 7.0., "Data Interpretation," the ... language is so broad that it allows for only one sample to be required, if the sample is less than or equal to 80% of the treatment limit. ... We strongly suggest that language clarification and additional samples of each batch be adopted into the final Corrective Action Plan in order to assure the site is being run safely.*

EPA Response: EPA disagrees with this comment. Part I.B.8.a. of the draft Permit requires that "All sampling and analyses shall be of adequate quality, scientifically valid, of known precision and accuracy, and of acceptable completeness, representativeness and comparability. Laboratory analysis of each sample must be performed using an appropriate method for testing the parameter(s) of interest taking into account the sample matrix." In addition, this same section specifies EPA-developed test methods for the analysis of various environmental media. These test methods can be found in the EPA publication, Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, also known as SW-846, available at: <https://www.epa.gov/hw-sw846/sw-846-compendium>. Therefore, EPA has not revised the draft Permit language in response to this comment.

Finally, EPA has delegated authority to PADEP for hazardous waste treatment, storage, and/or disposal permitting, which establishes the monitoring and sampling requirements at the Facility. EPA's draft Permit does not contain the referenced "Section 7.0 Data Interpretation," but EPA believes this reference may pertain to the Waste Analysis Plan attached to the PADEP Permit. EPA has forwarded this comment to PADEP and suggests the commenter contact Mr. Matthew Barch with questions regarding the operational monitoring and sampling required under the PADEP Permit at the Facility.