December 19, 2022

Ms. Sharon Svitek
Program Manager, Bureau of Waste Management
Pennsylvania Department of Environmental Protection
Bureau of Waste Management
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, Pennsylvania 15222-4745

Dear Ms. Svitek:

Subject: COMMENT RESPONSE - Phase I Application for Hazardous Waste Landfill No. 7
MAX Environmental Technologies, Inc. – Yukon Facility
South Huntingdon Township, Westmoreland County, Pennsylvania
CEC Project 170-822.2240
I.D. No. PAD004835146
APS No. 1071176
AUTH No. 1410078

On behalf of MAX Environmental Technologies, Inc. (MAX), Civil & Environmental Consultants, Inc. (CEC) is submitting an electronic copy via the Pennsylvania Department of Environmental Protection (DEP) OnBase Electronic Forms Upload Tool of the enclosed revisions to the Phase I Application for the proposed Hazardous Waste Landfill No. 7 at MAX's Yukon Facility located in South Huntingdon Township, Westmoreland County, Pennsylvania. Additionally, per DEP's previous request, hard copies of revised drawings are being distributed to the southwest regional and central DEP offices.

CEC notes a Phase I Application was originally submitted to the DEP on July 13, 2022, and was last amended on October 31, 2022. Following a technical review of the Phase I application, the DEP issued a Technical Deficiency Letter dated November 2, 2022. As such, the application has been revised to address the DEP's recent comments. The DEP's comments from the November 2, 2022 Technical Deficiency Letter are provided below verbatim in **bold** type, followed by MAX's response.

1. **The proposed facility site does not qualify under 25 Pa. Code § 269a.1, which defines *Facility site* as, "All contiguous land owned or under the control of an owner or operator of a hazardous waste facility and identified in a permit or permit application". Millbell Road is a township road (T521) bisecting the proposed facility site and occupying a strip of land that is owned by Max Environmental Technologies (Max) but is subject to an easement granted to South Huntingdon Township. The proposed facility site configuration includes a leachate conveyance and an internal access road to the proposed landfill that would cross Millbell Road. In light of the Township's easement, Max neither controls Millbell Road nor owns Millbell Road in an unencumbered manner such that control can be assumed.**

RESPONSE: Please refer to Attachment 1 of this Comment Response Letter for MAX's response to Comment No. 1.

2. **25 Pa. Code § 269a.23 specifies that treatment and disposal facilities may not be sited in wetland areas. *Wetland* is defined in 25 Pa. Code § 269a.1 as "An area inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including swamps, marshes, bogs and similar areas. The term includes, but is not limited to, wetland areas listed in the State Water Plan, the United States Forest Service Wetlands Inventory of Pennsylvania, the Pennsylvania Coastal Zone Management Plan, the United States Fish and Wildlife National Wetland Inventory and wetland areas designated by a river basin commission." As proposed, the facility site boundary includes wetland area north of the existing leachate storage tank within the proposed facility boundary. This wetland area is identified in the application in Exhibit 9.1.1, Figures 2 and 3 and Exhibit 9-2.9, Figure WDR-3A. Inclusion of this wetland within the facility site boundary violates 25 Pa. Code § 269a.23 and cannot be approved. Furthermore, delineation of potential wetland areas at the site is incomplete and additional delineation studies that were committed to by Max in 2019 email correspondence with DEP and the US Army Corps of Engineers have not been completed. [See Attachment 1]**

   RESPONSE: On October 31, 2022, CEC and MAX submitted an Application Amendment that provided a revised "Area Not Subject to Phase 1 Exclusionary Criteria Review." Previously, the existing facility site boundary was incorrectly delineated. This was discovered after reviewing older permit application files for MAX's existing hazardous waste permit. As seen in those documents, it appears the previously permitted facility boundary appears to be concurrent with the property boundary for Parcel 59-04-00-0-004 [see previous submissions; the drawings are also included again with this submittal (see Attachment 3)].

   CEC and MAX acknowledge that this previously permitted facility boundary includes Millbell Road, as well as areas to the south and north of Millbell Road. The area to the north of Millbell Road includes the proposed Hazardous Waste Landfill No. 7 area. The area to the south of Millbell Road includes the existing hazardous waste operations.

   As discussed previously with the DEP, areas included in the new hazardous waste permit boundary, but fall within the existing permitted facility boundary, are not subject to Phase I Exclusionary Criteria Review. However, MAX/CEC are not requesting that this entire area falling within this previously permitted facility boundary be excluded from Phase I Exclusionary Criteria Review. Rather, areas to the north of Millbell Road, which may have been included in the previously permitted facility boundary, but were never subject to hazardous waste activities, are not included in the "Area excluded from Phase I Exclusionary Criteria Review." Instead, MAX is proposing that only areas to the south of Millbell Road be included in the "Area excluded from Phase I Exclusionary Criteria Review", due to

existing permitted hazardous waste operations extending to the south side of Millbell Road (i.e., Pump Station No. 5, a unit which is included in MAX's hazardous waste storage and treatment permit). Therefore, any area to the south of Millbell Road that is within a previously permitted facility boundary and has been subject to ongoing permitted hazardous waste activities for a number of years should be included in the "Area excluded from Phase I Exclusionary Criteria Review." We are resubmitting the pertinent reference drawings (see Attachment 3), reflecting this more accurate delineation of the existing permitted facility site boundary, including the site drawing from MAX's 2014 hazardous waste storage and treatment permit renewal application (which we understand is still under review by DEP).

Also, in Comment No. 2 above, the Department ask if certain "Action Items" identified in a March 15, 2019, email from Tim Mitchell to the Department and US Corps of Engineers were completed. In response to that, CEC provides the following context:

- An additional wetland field evaluation was completed on August 13, 2019 (in the growing season) for specific areas of interest identified during the site visit on March 12, 2019.

- CEC also performed a confirmatory field review on streams and wetlands previously identified during the August 13, 2019, field evaluation.

- CEC issued a revised Wetland and Stream Delineation Report, dated September 24, 2019.

    - CEC notes the Wetland and Stream Delineation Report included in the previous submission [Exhibit 9-2.1] is not the most current version of the Report. As such, CEC is submitting as part of this comment response letter a revised Exhibit 9-2.1 (see Attachment 2 of this Comment Response Letter), which includes the most current Wetland and Stream Delineation Report, revised September 24, 2019.

- Findings of the revised report were verified by Mike Engelhardt (Department of the Army, Pittsburgh District, Corps of Engineers) on October 23, 2019. A letter documenting a preliminary jurisdictional determination was issued by the Corps of Engineers on December 3, 2019 [Correspondence previously included as Exhibit 9-2.7 and included again with this submittal as Attachment 4].

- On December 12, 2019, DEP's wetland biologist, William Brogan, issued an email noting his agreement with the location and size of identified wetlands and watercourses on the site [email correspondence previously included as Exhibit 9-2.8 and included again with this submittal as Attachment 5].

CEC hopes the above sequence provides some additional context to the 2019 email correspondence provided in the November 2, 2020, Technical Deficiency Letter. Per the bullets above, the additional delineation studies that were committed to by MAX in 2019 have been completed.

If you have questions or require additional information, please contact Mr. Carl Spadaro at (412) 445-9789 or us at (724) 327-5200. Also, we would like to offer a virtual or in-person meeting be held to resolve any remaining comments or concerns.

Very truly yours,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Timothy D. Mitchell, P.E.
Senior Project Manager

Eric D. Chiado, P.E.
Principal

TDM:EDC/jg
Enclosures

cc: Carl Spadaro (MAX)
Ken Interval, P.G. (MAX)
Bob Shawver (MAX)
William Mura (DEP) – Hard copy of drawings only
Chad Clancy (DEP) – Hard copy of drawings only

L-170822.2240.D19/P

ATTACHMENT 1

MAX ENVIRONMENTAL TECHNOLOGIES, INC.
RESPONSE TO TECHNICAL DEFICIENCY LETTER
DECEMBER 12, 2022

December 12, 2022

Via Electronic Delivery

Sharon Svitek
Program Manager
Waste Management Program
Pennsylvania Department of Environmental Protection
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

RE: MAX Environmental Technologies, Inc.
Technical Deficiency Letter
Phase 1 Exclusionary Siting Criteria Application
Hazardous Waste Landfill No. 7
I.D. No. PAD004835146
APS No. 1071176
AUTH No.1410078

Dear Ms. Svitek:

This letter is written in response to the November 2, 2022 Technical Deficiency Letter (TDL) issued to MAX Environmental Technologies, Inc. (MAX) by the Pennsylvania Department of Environmental Protection (DEP) relating to MAX's application for the Yukon Hazardous Waste Landfill No. 7 in South Huntingdon Township, Westmoreland County (Site). In particular, this letter responds to two items that DEP has identified as potential grounds for denial of MAX's permit application under the Phase 1 exclusionary siting criteria in Chapter 269a of the DEP's waste regulations, 25 Pa. Code Sections 269a.21-29.

The first item concerns a legal interpretation of terms used in the hazardous waste regulations relating to the presence of a road near the proposed landfill. Although this subject has already been extensively briefed by our lawyers in previous

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correspondence to the DEP, for your convenience, we have summarized below the major points of our analysis showing that Millbell Road is not an impediment to development of our landfill.

The second item primarily relates to technical questions having to do with wetlands in the vicinity of the Site. Our environmental consultant, Civil and Environmental Consultants, Inc. (CEC), is responding to the DEP's questions concerning wetlands. As you will see from CEC's response, the wetlands at issue do not represent conditions subject to Phase 1 exclusionary criteria for a landfill.

Per your request, this is also being submitted to DEP by CEC via the OnBase Portal.

1. Millbell Road

The first item identified in DEP's November 2, 2022 TDL as a potential grounds for denial of MAX's permit application under applicable Phase 1 exclusionary criteria concerns Millbell Road. DEP's comments are provided below verbatim in bold type, followed by MAX's response.

1. The proposed facility site does not qualify under 25 Pa. Code § 269a.1, which defines *Facility site* as, "All contiguous land owned or under the control of an owner or operator of a hazardous waste facility and identified in a permit or permit application". Millbell Road is a township road (T521) bisecting the proposed facility site and occupying a strip of land that is owned by Max Environmental Technologies (Max) but is subject to an easement granted to South Huntingdon Township. The proposed facility site configuration includes a leachate conveyance and an internal access road to the proposed landfill that would cross Millbell Road. In light of the Township's easement, Max neither controls Millbell Road nor owns Millbell Road in an unencumbered manner such that control can be assumed.

As a preliminary matter, MAX would like to point out that the presence of a public road in the vicinity of a proposed hazardous waste landfill is not a Phase 1 exclusionary criterion. MAX understands that the DEP would like assurances that operation of the landfill will not present a risk to the public, and we are prepared to demonstrate that there will be no such risk in the future. However, as a matter of law, safety and transportation issues are covered by the Phase 2 exclusionary criteria, not Phase 1 criteria. See 25 Pa. Code 269a.46 and 269a.47 Nevertheless, it

appears that DEP is trying to make Millbell road a Phase 1 criterion by asserting that MAX's facility does not qualify as a "Facility Site". As the DEP has correctly noted in its deficiency letter, the definition of Facility Site in the regulations turns on whether the location includes "*all contiguous land owned or under the control of an owner or operator of a hazardous waste facility*". However, DEP changes that definition to assert MAX's facility is not a Facility Site by suggesting that MAX must prove it owns and controls the road "in an unencumbered manner". The presence of a public road and the township's easement for that road, is cited as support for the argument MAX does not own its land in an unencumbered manner and therefore our facility is not a Facility Site.

Our previously submitted letters clearly demonstrate that MAX owns title to the property on both sides of Millbell road. Under both the federal and state rules governing hazardous waste facilities, contiguous property divided by a public right of way are considered "on site" (or one site) so long as the entrance and exit between the properties is at a cross road intersection and access is gained by crossing the road, rather than going along the right of way. MAX's facility is designed in accordance with this standard. Our letters cite to examples of hazardous waste facilities that are bisected by a public road, but nevertheless qualify as one site under the federal RCRA program. The DEP's regulations do not say otherwise and incorporate the federal hazardous waste management rules. Pennsylvania law also clearly establishes that title to property abutting a public road extends to the center of the road. Because MAX owns the property on both sides of Millbell road, it owns all of the land under the road.

DEP's letter cites the presence of a roadway easement as being fatal to MAX's permit application on the theory such an easement is evidence that MAX does not own the site in an unencumbered manner. Again, there are no rules requiring MAX to demonstrate it owns the site in an "unencumbered manner", nor is it clear what that demonstration would entail. It is common knowledge that virtually any property in Pennsylvania is subject to a wide variety of easements, such as utility easements or rights of way. If a prospective landfill location is disqualified under Phase 1 exclusionary due to the presence of an easement, it is unlikely that any facility would qualify as a Facility Site. This outcome was clearly not what the legislature intended. Furthermore, as our previously submitted letters have explained, it is a basic principle of U.S. property law that an easement is a "non-

possessory" interest that entitles its holder to a limited use or enjoyment of the land in which it exists. It is also black letter law that the fee simple owner whose property is burdened by the easement *controls* the property at issue. Consequently, under any reasonable interpretation of the law, MAX's facility qualifies as a Facility Site because MAX effectively owns and controls the property at issue.

Despite the fact that MAX strongly believes that the presence of Millbell Road should not be a factor in DEP's decision on the Phase 1 permit application, MAX has taken steps to minimize the road as a concern to DEP. In particular, MAX has met with township officials several times to discuss a host municipality agreement (HMA) that would include vacating the easement for Millbell road if the Landfill 7 permit is issued. MAX has proposed to pay the township more than the statutory minimum host fee and undertake other actions that will benefit the local community. Negotiations with the township are on-going, and it possible that changes to the HMA will be necessary based upon public input. Given the amount of time it is likely to take for the municipality to accept such an HMA or for MAX to otherwise demonstrate that it controls easement rights , MAX cannot commit to provide DEP with an executed agreement or other road easement control demonstration within 60 days of the DEP's issuance of its deficiency letter. Nevertheless, MAX respectfully requests that DEP consider MAX's good faith efforts to secure an HMA in tandem with the legal demonstrations above as a sufficient basis to move our permit application forward to the Phase 2 portion of the permit application process. That will allow time for further discussions on this issue to be considered as MAX's negotiations with the municipality progress.

2. Wetlands

The second issue raised as a concern in the DEP's deficiency letter relates to the presence of wetlands in the vicinity of the Site. In particular, the DEP has asserted that:

2. 25 Pa. Code § 269a.23 specifies that treatment and disposal facilities may not be sited in wetland areas. *Wetland* is defined in 25 Pa. Code § 269a.1 as "An area inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions,

including swamps, marshes, bogs and similar areas. The term includes, but is not limited to, wetland areas listed in the State Water Plan, the United States Forest Service Wetlands Inventory of Pennsylvania, the Pennsylvania Coastal Zone Management Plan, the United States Fish and Wildlife National Wetland Inventory and wetland areas designated by a river basin commission." As proposed, the facility site boundary includes wetland area north of the existing leachate storage tank within the proposed facility boundary. This wetland area is identified in the application in Exhibit 9.1.1, Figures 2 and 3 and Exhibit 9-2.9, Figure WDR-3A. Inclusion of this wetland within the facility site boundary violates 25 Pa. Code § 269a.23 and cannot be approved. Furthermore, delineation of potential wetland areas at the site is incomplete and additional delineation studies that were committed to by Max in 2019 email correspondence with DEP and the US Army Corps of Engineers have not been completed. [See Attachment 1].

DEP acknowledges that, prior to the issuance of its deficiency letter, MAX had already provided DEP with additional information to evaluate Phase 1 exclusionary criteria concerning wetlands. However, at DEP's request, CEC is providing additional information clearly demonstrating that our facility is not subject to Phase 1 exclusionary criteria. It is important to note in viewing this material that under the DEP's hazardous waste regulations, Phase 1 exclusionary criteria do not apply to modifications to a facility within an existing facility site. See 25 Pa. Code 269a.12 The documents provided by CEC show that the wetlands at issue are located within MAX's existing permitted site and have been present for years. Furthermore, the additional wetland delineation studies that we committed to performing were in fact done. CEC is also providing clarification on this matter as well.

We are ready to meet to discuss any outstanding issues DEP has or clarifications needed on this project. If you have any questions, please let us know.

Sincerely,

Robert F. Shawver
President & CEO

ATTACHMENT 2

REVISED EXHIBIT 9-2.1

CIVIL & ENVIRONMENTAL CONSULTANTS INC.
WETLAND AND STREAM DELINEATION REPORT
SEPTEMBER 24, 2019

September 24, 2019

Mr. Mike Engelhardt
Regulatory Division
U.S. Army Corps of Engineers - Pittsburgh District
1000 Liberty Avenue
Pittsburgh, Pennsylvania 15222

Dear Mr. Engelhardt:

Subject: Transmittal
Revised Wetland and Stream Delineation Report
Hazardous Waste Landfill No. 7
MAX Environmental Technologies, Inc. – Yukon Facility
South Huntingdon, Westmoreland County, Pennsylvania
Hazardous Waste Permit No. PAD004835146
CEC Project 170-822.1222

On behalf of MAX Environmental Technologies, Inc. (MAX), Civil & Environmental Consultants, Inc. (CEC) is submitting a revised Wetland and Stream Delineation Report (WSDR) to the United States Army Corps of Engineers (USACE) for the proposed Hazardous Waste Landfill No. 7 at MAX's Yukon Facility located in South Huntingdon Township, Westmoreland County, Pennsylvania. Per the previous onsite meeting with MAX, CEC, the USACE, and the Pennsylvania Department of Environmental Protection (DEP) on March 12, 2019, and through subsequent follow-up email correspondence, MAX had agreed to the following:

1. Perform a field review during the growing season for specific areas of interest identified during the site visit on March 12, 2019, but limited to the areas within the proposed project area/area of concern (see revised figures in the revised WSDR);

2. Perform a confirmatory field review on streams and wetlands during the growing season previously identified in the proposed project area/area of concern (see revised figures in the revised WSDR); and

3. Revised the WSDR with the findings from the additional field review.

As such, this revised WSDR is being submitted following additional onsite wetland and stream delineations performed by CEC on August 13, 2019. As noted in the revised report, CEC has delineated additional wetland areas (Wetlands 10, 11A, 11B, and 12) and stream segments (braided channel of Trib 37643 to Sewickley Creek). CEC trusts the attached is sufficient to allow the USACE to complete their jurisdictional determination of the proposed project area/area of concern. However, if you feel that another onsite meeting is required to complete your review, MAX will

arrange for the meeting to occur. If you have questions or require additional information, please contact Mr. Carl Spadaro at (412) 445-9789 or us at (724) 327-5200.

Very truly yours,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Timothy D. Mitchell, P.E.
Project Manager

Eric D. Chiado, P.E.
Vice President

TDM:EDC/jg
Enclosures

cc: Will Brogan (electronic version only)
William Follett (electronic version only)
Ken Interval, P.G. (electronic version only)
Greg Holesh (electronic version only)
Carl Spadaro (electronic version only)
Mike Tomei (electronic version only)

L-170822.1222.S24/P

WETLAND AND STREAM DELINEATION REPORT

HAZARDOUS WASTE LANDFILL NO. 7
MAX ENVIRONMENTAL TECHNOLOGIES, INC.
SOUTH HUNTINGDON TOWNSHIP,
WESTMORELAND COUNTY, PENNSYLVANIA

Prepared For:

MAX ENVIRONMENTAL TECHNOLOGIES, INC.
233 MAX LANE
YUKON, PENNSYLVANIA 15698

Prepared By:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
4000 TRIANGLE LANE, SUITE 200
EXPORT, PENNSYLVANIA 15632

CEC Project 170-822.1220

June 20, 2018
Revised September 24, 2019

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FIGURES

APPENDICES

1.0 INTRODUCTION

This report presents the findings of a wetland and stream delineation completed by Civil & Environmental Consultants, Inc. (CEC) for the Hazardous Waste Landfill No. 7 Project located in South Huntingdon Township, Westmoreland County, Pennsylvania (Figure WDR-1). The project consists of a proposed landfill development to the north of the existing Impoundment No. 5. CEC conducted the wetland and stream delineation at the request of Max Environmental Technologies, Inc. (MAX).

1.1 METHODOLOGY

The wetland and stream delineation was based on CEC's professional judgment and interpretation of technical criteria presented in the 1987 *U.S. Army Corps of Engineers* (Corps) *Wetlands Delineation Manual* (1987 Manual) and the 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region, Version 2.0* (2012 Regional Supplement). CEC completed the following scope of services to identify streams and delineate wetland boundaries at the site:

1. Office Data Review: CEC personnel reviewed U.S. Geological Survey topographic mapping (Figure WDR-1), the U.S. Department of Agriculture (USDA)/Natural Resources Conservation Service (NRCS) Web Soil Survey (http://websoilsurvey.nrcs.usda.gov) (Figure WDR-2), and the U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) Map (Figure WDR-2). These resources were used to establish site characteristics that could aid in the identification of potential wetlands and streams.

2. On-Site Field Review: Qualified CEC biologists performed the delineation at the site on March 8, March 12, and April 9, 2018***; and August 13, 2019***. The delineation boundary comprised approximately 61 acres. CEC delineated wetland boundaries using the routine on-site determination method described in the 1987 Manual supplemented by the 2012 Regional Supplement and the 2016 National Wetland Plant List. First, plant communities present on the site were identified. Dominant plant species within each community were identified and a determination made on whether the plant community was

dominated by hydrophytic (wetland) plants. Next, a representative test site was located within the plant community and soils were sampled using a tile spade to determine if hydric soil indicators were present. Lastly, the test site was reviewed to determine if indicators of wetland hydrology (ponding, soil saturation, etc.) were present. Wetland boundaries and test site locations were georeferenced using a Trimble Geo-XH Global Positioning System unit.

In addition to identifying wetlands, CEC identified streams within the delineation boundary that would likely be considered jurisdictional by state and federal regulatory agencies. Streams were classified as perennial, intermittent, and ephemeral as defined below:

- Perennial Stream - A perennial stream has flowing water year-round during a typical year. The water table is located above the streambed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplementary source of water for stream flow;

- Intermittent Stream - An intermittent stream has flowing water during certain times of the year when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplementary source of water for stream flow; and

- Ephemeral Stream - An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round. Groundwater is not a source for stream flow. Runoff from rainfall is the primary source of water for stream flow.

3. Data Collection: Data forms for the routine on-site determination method were completed for test site locations to record the vegetation, soils, and hydrology observations used in making the wetland determination. Data forms were also completed for streams to record hydrological, flow, water quality, and biological characteristics. Completed data forms are included in Appendix A. Photographs taken during the field work are included in Appendix B.

2.0 FINDINGS

2.1 OFFICE DATA REVIEW

2.1.1 Site Soils

The USDA/NRCS on-line soil mapping tool, *Web Soil Survey*, identified five soil mapping units within the delineation boundary (Figure WDR-2). These soils are summarized in Table 1.

TABLE 1
SOILS INFORMATION[(1)]

Soil Mapping Unit Symbol	Soil Mapping Unit Name	Drainage Class	Hydric Soil List Designation
GwF	Gilpin-Weikert channery silt loams, 25 to 70 percent slopes	Well drained	Not listed
GyB	Guernsey silt loam, 3 to 8 percent slopes	Moderately well drained	Not listed
Ho	Holly silt loam, 0 to 2 percent slopes	Poorly drained	Hydric
Ln	Lindside silt loam, 0 to 3 percent slopes, occasionally flooded	Moderately well drained	Hydric inclusions
UaB	Udorthents, 0 to 8 percent slopes	Well drained	Not Listed

[(1)] Web Soil Survey (http://websoilsurvey.nrcs.usda.gov), accessed ***8/26/2019***.

2.1.2 National Wetlands Inventory (NWI) Map

The NWI mapping prepared for the Smithton, Pennsylvania quadrangle was reviewed to determine if any NWI wetlands are located within the delineation boundary (Figure WDR-2). Two NWI wetlands are shown within the delineation boundary. The eastern NWI wetland is shown as a palustrine, unconsolidated bottom, permanently flooded (PUBH) wetland and corresponds to Wetland 7 identified during the on-site field review. The western NWI wetland shown is a riverine (R5UBH) wetland and corresponds to Trib 37634 to Sewickley Creek.

NWI maps are prepared by the USFWS based on high altitude infrared aerial photography and limited ground truthing. Wetlands and deep-water habitats are identified on these maps and classified according to the system developed by Cowardin and co-workers (1979).

2.2 ON-SITE FIELD REVIEW

2.2.1 Wetlands

CEC identified and delineated ***11*** wetlands within the delineation boundary during the on-site field review (Figure WDR-3). The sizes of the wetlands, corresponding test site and photograph numbers, and CEC's assignments of the USFWS classifications of the wetlands are summarized in Table 2.

TABLE 2
WETLAND CHARACTERISTICS

Wetland Name	On-Site Area (acres)	USFWS Classification[(1)]	Test Site Number(s)	Photograph Number(s) (Appendix B)
Wetland 1 (1A, 1B, 1C, and 1D)	0.072 (0.020, 0.003, 0.006, and 0.043)	PEM	1	1 through 4
Wetland 2	0.295 (0.269/0.026)	PEM/PSS	3 and 5	6 and 8
Wetland 3	0.076	PEM	6	9
Wetland 4 (4A and 4B)	0.136 (0.010 and 0.126)	PEM	8	11 and 12
Wetland 6	0.123	PUB	12	14
Wetland 7	0.283	PEM	14	16
Wetland 8	0.179	PEM	16	18
Wetland 9	0.151	PSS	18	20
Wetland 10	***0.067***	***PEM***	***19***	***21***

TABLE 2
(CONTINUED)

Wetland Name	On-Site Area (acres)	USFWS Classification[(1)]	Test Site Number(s)	Photograph Number(s) (Appendix B)
Wetland 11 (11A and 11B)	***0.074 (0.071 and 0.003)***	***PEM***	***21***	***23 and 24***
Wetland 12	***0.026***	***PFO***	***22***	***25***
Total	***1.482 (1.156 PEM, 0.177 PSS, 0.123 PUB, and 0.026 PFO)***			

[(1)] As interpreted from *Classification of Wetlands and Deep Water Habitats of the United States*. 1979. Cowardin, L. M., V. Carter, and F. C. Golet. USFWS. Palustrine emergent (PEM). Palustrine scrub-shrub (PSS). Palustrine unconsolidated bottom (PUB). ***Palustrine forested (PFO).***

2.2.2 Streams

Five streams were identified within the delineation boundary during the on-site field review (Figure WDR-3). Table 3 presents the approximate on-site lengths and drainage areas of the delineated streams, CEC's assignments of the stream classifications, the Chapter 93 designations, and the corresponding photograph numbers.

TABLE 3
STREAM CHARACTERISTICS

Stream Name	On-Site Length (feet)	Drainage Area (acres)	Stream Classification	Chapter 93 Designation[(1)]	Photograph Number(s) (Appendix B)
Sewickley Creek	1,404	77,158	Perennial	WWF	27
UNT 1 to Sewickley Creek	486	39	Ephemeral/ Intermittent	WWF	28 and 29
Trib 37643 to Sewickley Creek	***1,708***	363	Perennial	WWF	***30***
UNT 2 to Trib 37643 to Sewickley Creek	595	77	Ephemeral/ Perennial	WWF	31 and 32

TABLE 3
(CONTINUED)

Stream Name	On-Site Length (feet)	Drainage Area (acres)	Stream Classification	Chapter 93 Designation[(1)]	Photograph Number(s) (Appendix B)
UNT 3 to Trib 37643 to Sewickley Creek	***64***	2	Ephemeral	WWF	33
Total	***4,257***				

[(1)] From Title 25, PA Code Chapter 93. Warm Water Fishes (WWF)—Maintenance and propagation of fish species and additional flora and fauna which are indigenous to a warm water habitat.

2.2.3 Other Waters

One pond, totaling 0.074 acre, was identified within the delineation boundary (Figure WDR-3). A photograph of the pond is included in Appendix B.

3.0 REGULATORY CONSIDERATIONS

CEC understands that MAX is currently considering several development options for Landfill No. 7. If the selected development option involves a permanent encroachment into streams and/or wetlands, the project will likely require authorization using a Joint Permit Application for a Pennsylvania Water Obstruction and Encroachment Permit and a U.S. Army Corps of Engineers Section 404 Permit (JPA). Mitigation would be required for permanent impacts to streams and wetlands.

4.0 CONCLUSIONS

CEC conducted the wetland and stream delineation on March 8, March 12, and April 9, 2018***; and August 13, 2019***. CEC identified the following resources with the delineation boundary during the on-site field review: ***11*** wetlands, totaling ***1.482*** acres; five streams, totaling ***4,257*** linear feet; and one pond, totaling 0.074 acre. The locations of these features are shown on Figure WDR-3.

5.0 LEVEL OF CARE

The wetland delineation services performed by CEC were conducted in a manner consistent with the criteria contained in the 1987 Manual and the 2012 Regional Supplement, and with the level of care and skill ordinarily exercised by members of the environmental consulting profession practicing contemporaneously under similar conditions in the locality of the project. It must be recognized that the wetland delineation was based on field observations and CEC's professional interpretation of the criteria in the 1987 Manual and the 2012 Regional Supplement at the time of our fieldwork. Wetland determinations may change subsequent to CEC's delineation based on changes in the regulatory criteria, seasonal variations in hydrology, alterations to drainage patterns, and other human activities and/or land disturbances.

6.0 REFERENCES

Cowardin, L. M., V. Carter, and F. C. Golet. 1979. *Classification of Wetlands and Deep Water Habitats of the United States.* U.S. Department of the Interior, Fish and Wildlife Service. Washington D. C. FWS/OBS-79/31.

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Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.

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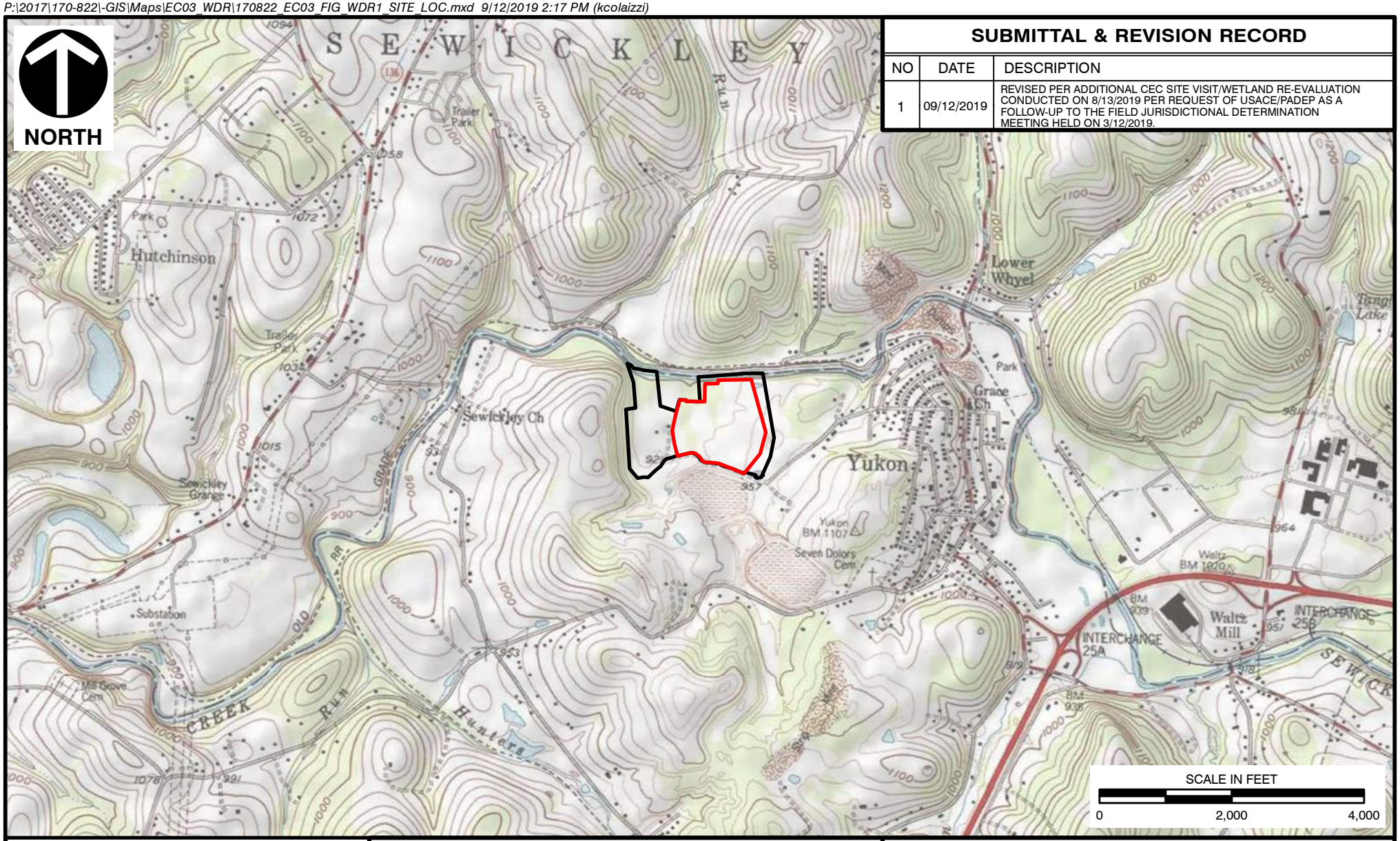
FIGURES

P:\2017\170-822\-GIS\Maps\EC03_WDR\170822_EC03_FIG_WDR1_SITE_LOC.mxd 9/12/2019 2:17 PM (kcolaizzi)



SUBMITTAL & REVISION RECORD

NO	DATE	DESCRIPTION
1	09/12/2019	REVISED PER ADDITIONAL CEC SITE VISIT/WETLAND RE-EVALUATION CONDUCTED ON 8/13/2019 PER REQUEST OF USACE/PADEP AS A FOLLOW-UP TO THE FIELD JURISDICTIONAL DETERMINATION MEETING HELD ON 3/12/2019.

LEGEND

PROJECT AREA/AREA OF CONCERN

DELINEATION BOUNDARY

REFERENCE

1. USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/ USA_TOPO_MAPS, ACCESSED 9/12/2019. SMITHTON, PA QUAD.

Civil & Environmental Consultants, Inc.
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MAX ENVIRONMENTAL TECHNOLOGIES, INC. HAZARDOUS WASTE LANDFILL NO. 7 SOUTH HUNTINGDON TOWNSHIP WESTMORELAND COUNTY, PENNSYLVANIA

SITE LOCATION MAP

DRAWN BY:	KMC	CHECKED BY:	SVP	APPROVED BY:	PAK*	FIGURE NO:	WDR-1
DATE:	06/20/2019	SCALE:	1 " = 2,000 '	PROJECT NO:	170-822	* Hand signature on file	

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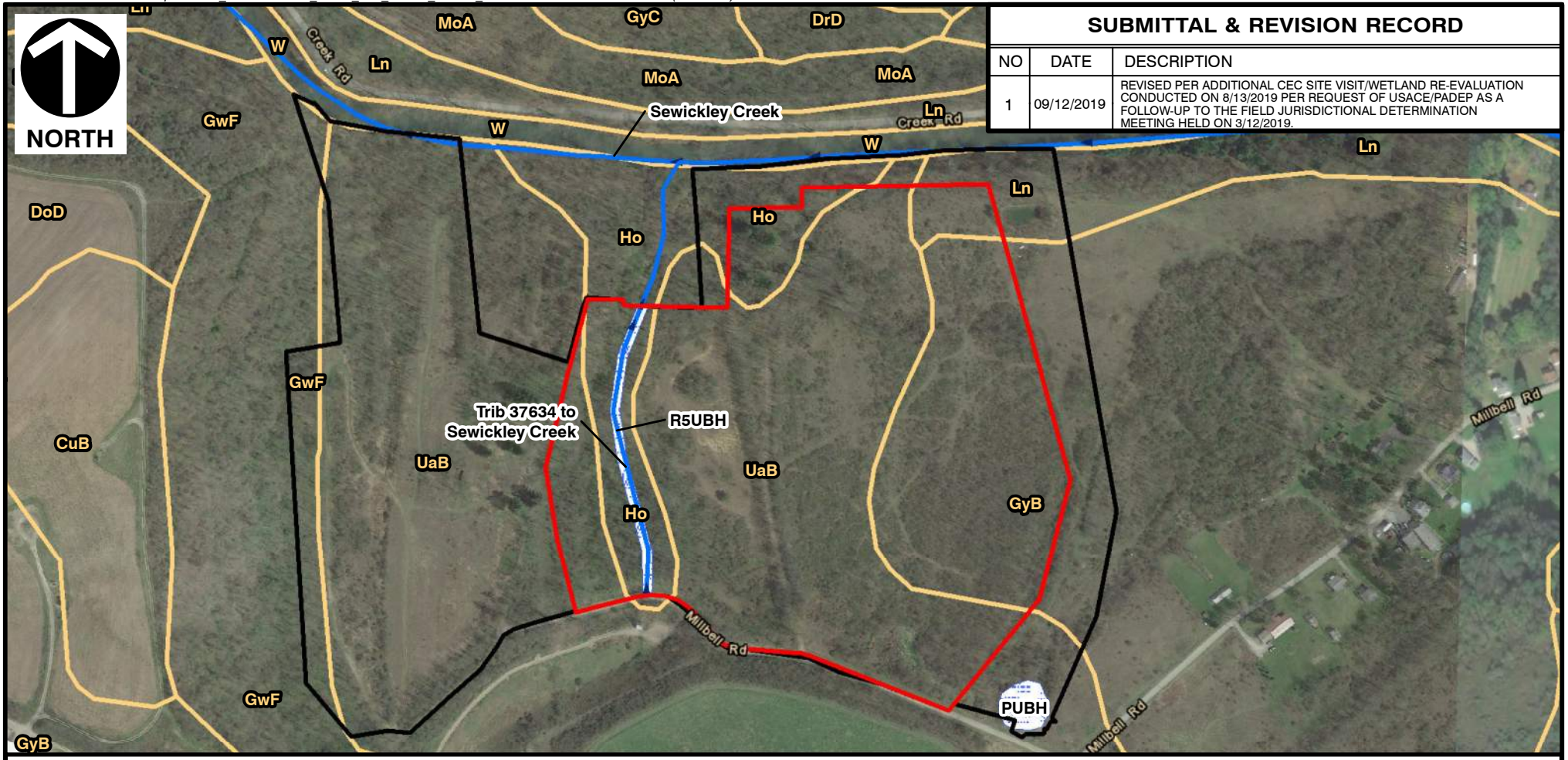

SUBMITTAL & REVISION RECORD

NO	DATE	DESCRIPTION
1	09/12/2019	REVISED PER ADDITIONAL CEC SITE VISIT/WETLAND RE-EVALUATION CONDUCTED ON 8/13/2019 PER REQUEST OF USACE/PADEP AS A FOLLOW-UP TO THE FIELD JURISDICTIONAL DETERMINATION MEETING HELD ON 3/12/2019.

LEGEND

- PROJECT AREA/AREA OF CONCERN
- DELINEATION BOUNDARY
- PADEP 305B STREAM
- NWI WETLAND
- SOIL UNIT

NOTE

1. REFERENCED INFORMATION, INCLUDING PADEP 305B STREAMS AND NWI WETLANDS, IS SHOWN FOR THE AREA WITHIN THE DELINEATION BOUNDARY.

SCALE IN FEET

0 400 800

REFERENCES

1. PA DEPARTMENT OF ENVIRONMENTAL PROTECTION 305B STREAM DATA, 2004.
2. U.S.D.A., N.R.C.S. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR WESTMORELAND COUNTY, PA, 2016.
3. U.S. FISH & WILDLIFE SERVICE NATIONAL WETLANDS INVENTORY (NWI) MAP SMITHTON, PA QUAD, 2016.
4. AERIAL PHOTOGRAPHY COPYRIGHT GOOGLE EARTH PRO, EXPORTED 03/07/2018 IMAGERY DATE 04/17/2016.

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U.S. DEPARTMENT OF AGRICULTURE (USDA) SOILS AND NATIONAL WETLANDS INVENTORY (NWI) MAP

DRAWN BY:	KMC	CHECKED BY:	SVP	APPROVED BY:	PAK*	FIGURE NO:	WDR-2
DATE:	06/20/2019	SCALE:	1 " = 400 '	PROJECT NO:	170-822	* Hand signature on file	

REVISION RECORD

NO	DATE	DESCRIPTION
1	09/12/2019	REVISED PER ADDITIONAL CEC SITE VISIT/WETLAND RE-EVALUATION CONDUCTED ON 8/13/2019 PER REQUEST OF USACE/PADEP AS A FOLLOW-UP TO THE FIELD JURISDICTIONAL DETERMINATION MEETING HELD ON 3/12/2019.

SUBMITTAL RECORD

NO	DATE	DESCRIPTION

LEGEND

- TEST SITE
- EXISTING CULVERT
- EPHEMERAL STREAM
- INTERMITTENT STREAM
- PERENNIAL STREAM
- WETLAND CONTINUES BEYOND DELINEATION BOUNDARY
- POND
- WETLAND - PEM
- WETLAND - PSS
- WETLAND - PUB
- WETLAND - PFO
- PROJECT AREA/AREA OF CONCERN
- DELINEATION BOUNDARY
- INDEX CONTOUR
- INTERMEDIATE CONTOUR

REFERENCES

1. PAMAP PROGRAM LIDAR DATA, 2' INTERVAL, 2006.
2. AERIAL PHOTOGRAPHY COPYRIGHT GOOGLE EARTH PRO, EXPORTED 3/7/2018 IMAGERY DATE 4/17/2016.

NOTES

1. THE WETLAND AND STREAM DELINEATION WAS CONDUCTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC. ON 3/8/2018, 3/12/2018, 4/09/2018, AND 8/13/2019.
2. CIVIL & ENVIRONMENTAL CONSULTANTS, INC. CONDUCTED THE WETLAND DELINEATION IN A MANNER CONSISTENT WITH THE CRITERIA CONTAINED IN THE 1987 U.S. ARMY CORPS OF ENGINEERS WETLANDS DELINEATION MANUAL (1987 MANUAL) AND THE 2012 REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND MANUAL: EASTERN MOUNTAINS AND PIEDMONT REGION, VERSION 2.0 (2012 REGIONAL SUPPLEMENT), AND WITH THE LEVEL OF CARE AND SKILL ORDINARILY EXERCISED BY MEMBERS OF THE ENVIRONMENTAL CONSULTING PROFESSION PRACTICING CONTEMPORANEOUSLY UNDER SIMILAR CONDITIONS IN THE LOCALITY OF THE PROJECT. IT MUST BE RECOGNIZED THE WETLAND DELINEATION WAS BASED ON FIELD OBSERVATIONS AND CIVIL & ENVIRONMENTAL CONSULTANTS' PROFESSIONAL INTERPRETATION OF THE CRITERIA IN THE 1987 MANUAL AND THE 2012 REGIONAL SUPPLEMENT. WETLAND DETERMINATIONS MAY CHANGE SUBSEQUENT TO CIVIL & ENVIRONMENTAL CONSULTANTS' DELINEATION BASED ON CHANGES TO REGULATORY CRITERIA, CHANGES TO DRAINAGE, AND OTHER HUMAN ACTIVITIES AND/OR LAND DISTURBANCES.

SCALE IN FEET

0 100 200 300 400

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SOUTH HUNTINGDON TOWNSHIP
WESTMORELAND COUNTY, PENNSYLVANIA

DRAWN BY:	JDM/KMC	CHECKED BY:	SVP	APPROVED BY:	PAK*
DATE:	06/20/2018	SCALE:	1 " = 100 '	PROJECT NO:	170-822

WETLAND AND STREAM DELINEATION MAP

* Hand signature on file

FIGURE NO: **WDR-3**

SHEET 1 OF 1

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APPENDIX A

COMPLETED DATA FORMS

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-1

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 0.306" N Long: 79° 41' 55.853" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____			
Hydric Soil Present?	Yes X	No ____	Is the Sampled Area within a Wetland?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____		Wetland 1 - PEM	

Remarks:

Wetland 1 was a disturbed field area with parts abutting Pond 1. Wetland 1 was comprised of 5 parts (1A, 1B, 1C, 1D, and 1E). Parts A and B appeared to be areas where equipment entered and exited the pond 1 during excavation. TS-1 data was recorded in part 1A.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	____ True Aquatic Plants (B14)	____ Surface Soil Cracks (B6)
X High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	____ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	X Oxidized Rhizospheres on Living Roots (C3)	____ Drainage Patterns (B10)
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Moss Trim Lines (B16)
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Dry-Season Water Table (C2)
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Crayfish Burrows (C8)
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Saturation Visible on Aerial Imagery (C9)
____ Iron Deposits (B5)		____ Stunted or Stressed Plants (D1)
X Inundation Visible on Aerial Imagery (B7)		____ Geomorphic Position (D2)
____ Water-Stained Leaves (B9)		____ Shallow Aquitard (D3)
____ Aquatic Fauna (B13)		____ Mircotopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches):	0-2	
Water Table Present?	Yes X	No ____	Depth (inches):	8	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches):	0	Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-1

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Carex vulpinoidea*	40	Yes	OBL
2. *Epilobium coloratum*	20	Yes	FACW
3. *Cinna arundinacea*	10	No	FACW
4. *Phalaris arundinacea*	10	No	FACW
5. *Agrimonia parviflora*	5	No	FACW
6. *Lycopus americanus*	5	No	OBL
7.			
8.			
9.			
10.			
11.			
12.			
	90	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5 Y 4/2	90	7.5 YR 5/8	10	C	PL, M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-2

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Terrace Local Relief (concave, convex, none): None Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 0.392" N Long: 79° 41' 56.134" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X			
Hydric Soil Present?	Yes ____	No X	Is the Sampled Area within a Wetland?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X		Upland	

Remarks:

Upland TS-2 paired with Wetland 1, TS-1. TS-2 located in an unmaintained meadow/hayfield.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ True Aquatic Plants (B14)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Mircotopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):		
Water Table Present?	Yes ____	No X	Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches):		

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-2

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Shrub Stratum: (Plot Size: 15)			
1. *Elaeagnus angustifolia*	35	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	35	= Total Cover	
Herb Stratum: (Plot size: 5)			
1. *Solidago canadensis*	30	Yes	FACU
2. *Dichanthelium clandestinum*	30	Yes	FAC
3. *Andropogon virginicus*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	= Total Cover	
Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

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Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5 Y 4/3	100					silt loam	
3-16	2.5 Y 4/2	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-3

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 2.182" N Long: 79° 41' 59.802" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____			
Hydric Soil Present?	Yes X	No ____	Is the Sampled Area within a Wetland?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____		Wetland 2 - PEM	

Remarks:

Wetland 2 is located in a depression up-slope of Stream 1. Wetland 2 is comprised of PEM/PSS portions. TS-3 data was recorded in the PEM portion.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	____ True Aquatic Plants (B14)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	____ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	X Oxidized Rhizospheres on Living Roots (C3)	X Drainage Patterns (B10)
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Moss Trim Lines (B16)
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Dry-Season Water Table (C2)
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Crayfish Burrows (C8)
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Saturation Visible on Aerial Imagery (C9)
____ Iron Deposits (B5)		____ Stunted or Stressed Plants (D1)
____ Inundation Visible on Aerial Imagery (B7)		____ Geomorphic Position (D2)
____ Water-Stained Leaves (B9)		____ Shallow Aquitard (D3)
____ Aquatic Fauna (B13)		____ Mircotopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches):	0-2	
Water Table Present?	Yes ____	No X	Depth (inches):	____	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches):	0	Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-3

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Shrub Stratum: (Plot Size: 15)			
1. *Cornus amomum*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum: (Plot size: 5)			
1. *Scirpus cyperinus*	40	Yes	FACW
2. *Persicaria sagittata*	25	Yes	OBL
3. *Carex sp.*	15	No	-
4. *Agrimonia parviflora*	10	No	FACW
5. *Epilobium coloratum*	5	No	FACW
6. *Dichanthelium clandestinum*	5	No	FAC
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	
Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** __

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5 Y 3/2	90	7.5 YR 5/6	10	C	PL, M	clay loam	
4-16	2.5 Y 3/1	95	7.5 YR 5/6	5	C	M	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-4

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Flat plain Local Relief (concave, convex, none): None Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 2.006" N Long: 79° 41' 59.345" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X			
Hydric Soil Present?	Yes ____	No X	Is the Sampled Area within a Wetland?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X		Upland	

Remarks:

Upland TS-4 paired with Wetland 2, TS-3 and TS-5. TS-4 was located in an unmaintained meadow/hayfield.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ True Aquatic Plants (B14)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Mircotopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	____	
Water Table Present?	Yes ____	No X	Depth (inches):	____	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	____	Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-4

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Shrub Stratum: (Plot Size: 15)			
1. *Lonicera japonica*	30	Yes	FACU
2. *Rosa multiflora*	5	No	FACU
3. *Rubus allegheniensis*	5	No	FACU
4.			
5.			
6.			
7.			
	40	= Total Cover	
Herb Stratum: (Plot size: 5)			
1. *Solidago canadensis*	40	Yes	FACU
2. *Poa pratensis*	20	Yes	FACU
3. *Dichanthelium clandestinum*	5	No	FAC
4. *Glechoma hederacea*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70	= Total Cover	
Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5 Y 4/3	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-5

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 3.989" N Long: 79° 41' 59.375" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____			
Hydric Soil Present?	Yes X	No ____	Is the Sampled Area within a Wetland?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____		Wetland 2 - PSS	

Remarks:

Wetland 2 is located in a depression up-slope of Stream 1. Wetland 2 is comprised of PEM/PSS portions. TS-5 data was recorded in the PSS portion.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	____ True Aquatic Plants (B14)	
X High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	
X Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	
____ Iron Deposits (B5)		
____ Inundation Visible on Aerial Imagery (B7)		
____ Water-Stained Leaves (B9)		
____ Aquatic Fauna (B13)		

Secondary Indicators (minimum of two required)

____ Surface Soil Cracks (B6)
____ Sparsely Vegetated Concave Surface (B8)
X Drainage Patterns (B10)
____ Moss Trim Lines (B16)
____ Dry-Season Water Table (C2)
____ Crayfish Burrows (C8)
____ Saturation Visible on Aerial Imagery (C9)
____ Stunted or Stressed Plants (D1)
____ Geomorphic Position (D2)
____ Shallow Aquitard (D3)
____ Mircotopographic Relief (D4)
____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches):	0-1	
Water Table Present?	Yes X	No ____	Depth (inches):	1	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches):	0	Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-5

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Sapling Stratum: (Plot Size: 15)			
1. *Ulmus americana*	60	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	60	= Total Cover	
Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum: (Plot size: 5)			
1. *Poa palustris*	35	Yes	FACW
2. *Persicaria sagittata*	10	No	OBL
3. *Juncus effusus*	5	No	FACW
4. *Epilobium coloratum*	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	55	= Total Cover	
Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** __

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	2.5 Y 3/1+	100					clay loam	
2-16	2.5 Y 3/2	90	7.5 YR 5/6	10	C	M	clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-6

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 11.140" N Long: 79° 42' 0.722" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____			
Hydric Soil Present?	Yes X	No ____	Is the Sampled Area within a Wetland?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____		Wetland 3 - PEM	

Remarks:

Wetland 3 is located within Stream 1 floodplain. Area appeared to be excavated to make ponded water.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	____ True Aquatic Plants (B14)	____ Surface Soil Cracks (B6)
X High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	____ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Drainage Patterns (B10)
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Moss Trim Lines (B16)
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Dry-Season Water Table (C2)
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Crayfish Burrows (C8)
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Saturation Visible on Aerial Imagery (C9)
____ Iron Deposits (B5)		____ Stunted or Stressed Plants (D1)
____ Inundation Visible on Aerial Imagery (B7)		____ Geomorphic Position (D2)
____ Water-Stained Leaves (B9)		____ Shallow Aquitard (D3)
____ Aquatic Fauna (B13)		____ Mircotopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches):	0-8	
Water Table Present?	Yes X	No ____	Depth (inches):	1	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches):	0	Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-6

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Microstegium vimineum*	30	Yes	FAC
2. *Phalaris arundinacea*	30	Yes	FACW
3. *Poa palustris*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 3/2	95	7.5 YR 5/4	5	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-7

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 11.347" N Long: 79° 42' 0.451" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X			
Hydric Soil Present?	Yes ____	No X	Is the Sampled Area within a Wetland?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X		Upland	

Remarks:

Upland TS-7 paired with Wetland 3, TS-6. TS-7 located on forested hillslope.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ True Aquatic Plants (B14)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Mircotopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	____	
Water Table Present?	Yes ____	No X	Depth (inches):	____	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	____	Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-7

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharum*	50	Yes	FACU
2. *Prunus serotina*	5	No	FACU
3.			
4.			
5.			
6.			
7.			
	55	= Total Cover	
Sapling Stratum: (Plot Size: 15)			
1. *Acer saccharum*	35	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	35	= Total Cover	
Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum: (Plot size: 5)			
1. *Alliaria petiolata*	30	Yes	FACU
2. *Allium cernuum*	25	Yes	FACU
3. *Viola sororia*	10	No	FACW
4. *Poa palustris*	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	75	= Total Cover	
Woody Vine Stratum: (Plot size: 15)			
1. Vitis aestivalis	45	Yes	FACU
2.			
3.			
4.			
5.			
	45	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10 YR 3/3	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-8

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 5.155" N Long: 79° 41' 51.999" W Datum: NAD83

Soil Map Unit Name: Ho - Holly silt loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	Is the Sampled Area within a Wetland?	Yes X	No ____
Hydric Soil Present?	Yes X	No ____		Wetland 4 - PEM	
Wetland Hydrology Present?	Yes X	No ____			

Remarks:

Wetland 4 is located in Stream 3 floodplain. Wetland 4 was comprised of two parts (4A and 4B). TS-8 data was recorded in part 4A.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

____ Surface Water (A1)	____ True Aquatic Plants (B14)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	____ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	X Drainage Patterns (B10)
X Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Moss Trim Lines (B16)
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Dry-Season Water Table (C2)
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Crayfish Burrows (C8)
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Saturation Visible on Aerial Imagery (C9)
____ Iron Deposits (B5)		____ Stunted or Stressed Plants (D1)
____ Inundation Visible on Aerial Imagery (B7)		____ Geomorphic Position (D2)
____ Water-Stained Leaves (B9)		____ Shallow Aquitard (D3)
____ Aquatic Fauna (B13)		____ Mircotopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____		
Water Table Present?	Yes ____	No X	Depth (inches): ____	**Wetland Hydrology Present?**	
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0	Yes X	No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-8

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Microstegium vimineum*	25	Yes	FAC
2. *Poa palustris*	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5 Y 4/2	95	7.5 YR 5/8	5	C	M	clay loam	
6-16	2.5 Y 4/2	90	7.5 YR 5/8	5	C	M	clay	
			7.5 YR 4/6	5				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-9

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 5.107" N Long: 79° 41' 51.797" W Datum: NAD83

Soil Map Unit Name: Ho - Holly silt loam, 0 to 2 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X			
Hydric Soil Present?	Yes ____	No X	Is the Sampled Area within a Wetland?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X		Upland	

Remarks:

Upland TS-9 paired with Wetland 4, TS-8. TS-9 is located on a forested hillslope.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ True Aquatic Plants (B14)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Mircotopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	
Water Table Present?	Yes ____	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-9

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	40	Yes	FACU
2. *Acer saccharum*	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	60	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1. *Acer saccharum*	30	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Glechoma hederacea*	20	Yes	FACU
2. *Alliaria petiolata*	15	Yes	FACU
3. *Allium cernuum*	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5 Y 3/3	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-12

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Terrace Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 9.912" N Long: 79° 41' 37.941" W Datum: NAD83

Soil Map Unit Name: Ln - Lindside silt loam, 0 to 3 percent slopes, occasionally flooded NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____			
Hydric Soil Present?	Yes X	No ____	Is the Sampled Area within a Wetland?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____		Wetland 6 - PUB	

Remarks:

Wetland 6 is a man-made depression.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	____ True Aquatic Plants (B14)	____ Surface Soil Cracks (B6)
X High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	____ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Drainage Patterns (B10)
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Moss Trim Lines (B16)
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Dry-Season Water Table (C2)
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Crayfish Burrows (C8)
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Saturation Visible on Aerial Imagery (C9)
____ Iron Deposits (B5)		____ Stunted or Stressed Plants (D1)
X Inundation Visible on Aerial Imagery (B7)		____ Geomorphic Position (D2)
____ Water-Stained Leaves (B9)		____ Shallow Aquitard (D3)
____ Aquatic Fauna (B13)		____ Mircotopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches):	0-20	
Water Table Present?	Yes X	No ____	Depth (inches):	1	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches):	0	Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-12

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Shrub Stratum: (Plot Size: 15)			
1. *Cornus amomum*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum: (Plot size: 5)			
1. *Typha latifolia*	45	Yes	OBL
2. *Juncus effusus*	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65	= Total Cover	
Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5 Y 5/2	90	5 YR 5/8	10	C	M	clay loam	
5-16	2.5 Y 5/2	65	7.5 YR 5/6	25	C	M	sandy clay loam	
			5 YR 5/8	10	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-13

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 9.829" N Long: 79° 41' 37.874" W Datum: NAD83

Soil Map Unit Name: Ln - Lindside silt loam, 0 to 3 percent slopes, occasionally flooded NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X			
Hydric Soil Present?	Yes ____	No X	Is the Sampled Area within a Wetland?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X		Upland	

Remarks:

Upland TS-13 paired with Wetland 6, TS-12. TS-13 located on slope to man-made depression.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- ____ Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ True Aquatic Plants (B14)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres on Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Stunted or Stressed Plants (D1)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- ____ Mircotopographic Relief (D4)
- ____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	____	
Water Table Present?	Yes ____	No X	Depth (inches):	____	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	____	Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-13

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Shrub Stratum: (Plot Size: 15)			
1. *Lonicera japonica*	50	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	50	= Total Cover	
Herb Stratum: (Plot size: 5)			
1. *Solidago altissima*	35	Yes	FACU
2. *Potentilla simplex*	15	No	FACU
3. *Phyllostachys aurea*	10	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	= Total Cover	
Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)

Total Number of Dominant Species Across All Strata: _____ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: #DIV/0! (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5 Y 4/3	100					silt loam	gravelly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-14

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 12' 57.034" N Long: 79° 41' 37.539" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: PUBH

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____			
Hydric Soil Present?	Yes X	No ____	Is the Sampled Area within a Wetland?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____		Wetland 7 - PEM	

Remarks:

Wetland 7 is located in a depression surrounded by scrub/shrub habitat. Area was classified as PUBH on NWI mapping but no longer exhibits PUBH qualities due to loss of inundation.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

____ Surface Water (A1)	____ True Aquatic Plants (B14)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	____ Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	X Oxidized Rhizospheres on Living Roots (C3)	X Drainage Patterns (B10)
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Moss Trim Lines (B16)
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Dry-Season Water Table (C2)
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Crayfish Burrows (C8)
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Saturation Visible on Aerial Imagery (C9)
____ Iron Deposits (B5)		____ Stunted or Stressed Plants (D1)
____ Inundation Visible on Aerial Imagery (B7)		____ Geomorphic Position (D2)
____ Water-Stained Leaves (B9)		____ Shallow Aquitard (D3)
____ Aquatic Fauna (B13)		____ Mircotopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____		
Water Table Present?	Yes ____	No X	Depth (inches): ____	**Wetland Hydrology Present?**	
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0	Yes X	No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-14

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	15	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Phalaris arundinacea*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

__ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

__ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** __

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-14

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5 Y 4/1	80	7.5 YR 4/6	20	C	PL, M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 8, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-15

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): None Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 12' 57.147" N Long: 79° 41' 36.560" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X			
Hydric Soil Present?	Yes ____	No X	Is the Sampled Area within a Wetland?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X		Upland	

Remarks:

Upland TS-15 paired with Wetland 7, TS-14. TS-15 is located on a scrub/shrub hillslope adjacent to Wetland 7.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

____ Surface Water (A1)	____ True Aquatic Plants (B14)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	____ Sparsely Vegetated Concave Surface (B8)
____ Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Drainage Patterns (B10)
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Moss Trim Lines (B16)
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Dry-Season Water Table (C2)
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Crayfish Burrows (C8)
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Saturation Visible on Aerial Imagery (C9)
____ Iron Deposits (B5)		____ Stunted or Stressed Plants (D1)
____ Inundation Visible on Aerial Imagery (B7)		____ Geomorphic Position (D2)
____ Water-Stained Leaves (B9)		____ Shallow Aquitard (D3)
____ Aquatic Fauna (B13)		____ Mircotopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	____	
Water Table Present?	Yes ____	No X	Depth (inches):	____	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	____	Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-15

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	15	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	
Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Shrub Stratum: (Plot Size: 15)			
1. *Lonicera japonica*	45	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	45	= Total Cover	
Herb Stratum: (Plot size: 5)			
1. *Alliaria petiolata*	30	Yes	FACU
2. *Microstegium vimineum*	5	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35	= Total Cover	
Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	2.5 Y 4/3	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 12, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-16

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 12' 58.306" N Long: 79° 41' 41.200" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____			
Hydric Soil Present?	Yes X	No ____	Is the Sampled Area within a Wetland?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____		Wetland 8 - PEM	

Remarks:

Wetland 8 is located in a low-lying floodplain and is fed by flow from Stream 5, which loses channel in the wetland before regaining channel below the wetland.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	____ True Aquatic Plants (B14)	
X High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	
X Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	
____ Iron Deposits (B5)		
____ Inundation Visible on Aerial Imagery (B7)		
____ Water-Stained Leaves (B9)		
____ Aquatic Fauna (B13)		

Secondary Indicators (minimum of two required)

____ Surface Soil Cracks (B6)
____ Sparsely Vegetated Concave Surface (B8)
X Drainage Patterns (B10)
____ Moss Trim Lines (B16)
____ Dry-Season Water Table (C2)
____ Crayfish Burrows (C8)
____ Saturation Visible on Aerial Imagery (C9)
____ Stunted or Stressed Plants (D1)
____ Geomorphic Position (D2)
____ Shallow Aquitard (D3)
____ Mircotopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches):	0-1	
Water Table Present?	Yes X	No ____	Depth (inches):	5	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches):	0	Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-16

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Phalaris arundinacea*	85	Y	FACW
2. *Epilobium coloratum*	10	N	FACW
3. *Impatiens* sp.	5	N	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/2	97	7.5YR 4/4	3	C	M	clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 12, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-17

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): None Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 12' 58.958" N Long: 79° 41' 41.916" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X			
Hydric Soil Present?	Yes ____	No X	Is the Sampled Area within a Wetland?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X		Upland	

Remarks:

Upland test site adjacent to Wetland 8 and Wetland 9, located in a low-lying floodplain adjacent to Stream 6.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

____ Surface Water (A1)	____ True Aquatic Plants (B14)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	____ Sparsely Vegetated Concave Surface (B8)
____ Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	____ Drainage Patterns (B10)
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Moss Trim Lines (B16)
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Dry-Season Water Table (C2)
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Crayfish Burrows (C8)
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Saturation Visible on Aerial Imagery (C9)
____ Iron Deposits (B5)		____ Stunted or Stressed Plants (D1)
____ Inundation Visible on Aerial Imagery (B7)		____ Geomorphic Position (D2)
____ Water-Stained Leaves (B9)		____ Shallow Aquitard (D3)
____ Aquatic Fauna (B13)		____ Mircotopographic Relief (D4)
		____ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches):	____	
Water Table Present?	Yes ____	No X	Depth (inches):	____	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches):	____	Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-17

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Herb Stratum: (Plot size: 5)			
1. *Rubus allegheniensis*	40	Y	FACU
2. *Rubus occidentalis*	5	N	UPL
3. *Solidago canadensis*	25	Y	FACU
4. *Allium schoenoprasum*	5	N	FACU
5. *Lamium purpureum*	10	N	UPL
6. *Glechoma hederacea*	5	N	FACU
7. *Agrimonia parviflora*	5	N	FACW
8.			
9.			
10.			
11.			
12.			
	95	= Total Cover	
Woody Vine Stratum: (Plot size: 15)			
1. *Vitis vulpina*	60	Y	FAC
2.			
3.			
4.			
5.			
	60	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3	100					silt loam	
4-16	10YR 4/3	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: March 12, 2018

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-18

Investigator(s): CRB, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 12' 58.759" N Long: 79° 41' 43.019" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____			
Hydric Soil Present?	Yes X	No ____	Is the Sampled Area within a Wetland?	Yes X	No ____
Wetland Hydrology Present?	Yes X	No ____		Wetland 9 - PSS	

Remarks:

Wetland 9 is located in a low-lying floodplain area and is fed by flow from Stream 5 and Stream 6. Both streams lose channel and disperse in the wetland.

The precipitation in Pennsylvania was above average in February 2018 and March 2018.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	____ True Aquatic Plants (B14)	____ Surface Soil Cracks (B6)	
X High Water Table (A2)	____ Hydrogen Sulfide Odor (C1)	____ Sparsely Vegetated Concave Surface (B8)	
X Saturation (A3)	____ Oxidized Rhizospheres on Living Roots (C3)	X Drainage Patterns (B10)	
____ Water Marks (B1)	____ Presence of Reduced Iron (C4)	____ Moss Trim Lines (B16)	
____ Sediment Deposits (B2)	____ Recent Iron Reduction in Tilled Soils (C6)	____ Dry-Season Water Table (C2)	
____ Drift Deposits (B3)	____ Thin Muck Surface (C7)	____ Crayfish Burrows (C8)	
____ Algal Mat or Crust (B4)	____ Other (Explain in Remarks)	____ Saturation Visible on Aerial Imagery (C9)	
____ Iron Deposits (B5)		____ Stunted or Stressed Plants (D1)	
____ Inundation Visible on Aerial Imagery (B7)		____ Geomorphic Position (D2)	
X Water-Stained Leaves (B9)		____ Shallow Aquitard (D3)	
____ Aquatic Fauna (B13)		____ Mircotopographic Relief (D4)	
		X FAC-Neutral Test (D5)	

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches):	0-1	
Water Table Present?	Yes X	No ____	Depth (inches):	2	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches):	0	Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-18

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Shrub Stratum: (Plot Size: 15)			
1. *Cornus amomum*	50	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	50	= Total Cover	
Herb Stratum: (Plot size: 5)			
1. *Verbesina alternifolia*	10	N	FAC
2. *Poa palustris*	25	Y	FACW
3. *Impatiens* sp.	15	Y	FACW
4. *Phalaris arundinacea*	10	N	FACW
5. *Rosa multiflora*	5	N	FACU
6. *Alliaria petiolata*	5	N	FACU
7. *Rumex crispus*	5	N	FAC
8.			
9.			
10.			
11.			
12.			
	75	= Total Cover	
Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	98	7.5YR 4/6	2	C	M	sandy clay loam	
4-16	10YR 4/4	100					clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: August 13, 2019

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-19

Investigator(s): PAK, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 0.017" N Long: 79° 41' 44.432" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No	Is the Sampled Area within a Wetland?	Yes X	No
Hydric Soil Present?	Yes X	No		Wetland 10 - PEM	
Wetland Hydrology Present?	Yes X	No			

Remarks:

Wetland 10 is a depressional area, possibly formed by subsidence.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

X Surface Water (A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
X High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
X Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
X Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water-Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Mircotopographic Relief (D4)
		X FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes X	No	Depth (inches):	0-3	
Water Table Present?	Yes X	No	Depth (inches):	0	**Wetland Hydrology Present?**
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches):	0	Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-19

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1. *Rosa multiflora*	5	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Penthorum sedoides*	35	Y	OBL
2. *Polygonum pensylvanicum*	10	Y	FACW
3. *Leersia oryzoides*	10	Y	OBL
4. *Scirpus atrovirens*	10	Y	OBL
5. *Rumex crispus*	10	Y	FAC
6. *Rosa multiflora*	5	N	FACU
7. *Typha angustifolia*	2	N	OBL
8.			
9.			
10.			
11.			
12.			
	82	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1							algal mat	
1-2	10YR 2/1	100					muck	
2-6	10YR 4/2	100					silt loam	
6-16	10YR 4/3	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: August 13, 2019

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-20

Investigator(s): PAK, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Flat plain Local Relief (concave, convex, none): None Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 4.519" N Long: 79° 41' 49.282" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes	No X			
Hydric Soil Present?	Yes	No X	Is the Sampled Area within a Wetland?	Yes	No X
Wetland Hydrology Present?	Yes	No X			

Remarks:

Upland test site adjacent to Wetland 11, located in a successional field.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

Surface Water (A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water-Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Mircotopographic Relief (D4)
		FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):		
Water Table Present?	Yes	No X	Depth (inches):	**Wetland Hydrology Present?**	
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):	Yes	No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-20

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Euthamia graminifolia*	30	Y	FAC
2. *Solidago altissima*	15	Y	FACU
3. *Toxicodendron radicans*	10	N	FAC
4. *Ambrosia artemisiifolia*	10	N	FACU
5. *Potentilla simplex*	10	N	FACU
6. *Daucus carota*	5	N	UPL
7. *Eupatorium perfoliatum*	5	N	FACW
8.			
9.			
10.			
11.			
12.			
	85	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 5/3	100					silt loam	w/ roots
1-16	10YR 5/4	100					silt loam	w/ gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Disturbed soil.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: August 13, 2019

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-21

Investigator(s): PAK, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Depression Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 5.049" N Long: 79° 41' 49.815" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No		
Hydric Soil Present?	Yes X	No	Is the Sampled Area within a Wetland?	Yes X No
Wetland Hydrology Present?	Yes X	No	Wetland 11 - PEM	

Remarks:

PEM wetland located in a successional field, possibly formed by subsidence.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

Surface Water (A1)	True Aquatic Plants (B14)	
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	
Saturation (A3)	X Oxidized Rhizospheres on Living Roots (C3)	
Water Marks (B1)	Presence of Reduced Iron (C4)	
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	
Drift Deposits (B3)	Thin Muck Surface (C7)	
Algal Mat or Crust (B4)	Other (Explain in Remarks)	
Iron Deposits (B5)		
Inundation Visible on Aerial Imagery (B7)		
Water-Stained Leaves (B9)		
Aquatic Fauna (B13)		

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)
Sparsely Vegetated Concave Surface (B8)
Drainage Patterns (B10)
Moss Trim Lines (B16)
Dry-Season Water Table (C2)
Crayfish Burrows (C8)
Saturation Visible on Aerial Imagery (C9)
Stunted or Stressed Plants (D1)
Geomorphic Position (D2)
Shallow Aquitard (D3)
Mircotopographic Relief (D4)
X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):	
Water Table Present?	Yes	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):	

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-21

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Scirpus cyperinus*	35	Y	FACW
2. *Juncus tenuis*	10	N	FACW
3. *Solidago rugosa*	20	Y	FAC
4. *Scirpus atrovirens*	10	N	OBL
5. *Potentilla simplex*	10	N	FACU
6. *Euthamia graminifolia*	10	N	FAC
7. *Typha angustifolia*	5	N	OBL
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/4	100					clay loam	w/ gravel
8-16	10YR 4/1	95	7.5YR 4/6	5	C	M/PL	clay loam	w/ gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Disturbed soil.

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: August 13, 2019

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-22

Investigator(s): PAK, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): Concave Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 0.580" N Long: 79° 41' 51.537" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No		
Hydric Soil Present?	Yes X	No	Is the Sampled Area within a Wetland?	Yes X No
Wetland Hydrology Present?	Yes X	No		Wetland 12 - PFO

Remarks:

PFO wetland located along Trib 37643 to Sewickley Creek. Stream has visibly moved since the original delineation. As such, the stream has low, poorly defined banks that are overtopping frequently and have created this wetland area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

Surface Water (A1)	True Aquatic Plants (B14)	
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	X
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	X
Water Marks (B1)	Presence of Reduced Iron (C4)	
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	
Drift Deposits (B3)	Thin Muck Surface (C7)	
Algal Mat or Crust (B4)	Other (Explain in Remarks)	
Iron Deposits (B5)		
Inundation Visible on Aerial Imagery (B7)		
Water-Stained Leaves (B9)		
Aquatic Fauna (B13)		

Secondary Indicators (minimum of two required)

	Surface Soil Cracks (B6)
X	Sparsely Vegetated Concave Surface (B8)
X	Drainage Patterns (B10)
	Moss Trim Lines (B16)
	Dry-Season Water Table (C2)
	Crayfish Burrows (C8)
	Saturation Visible on Aerial Imagery (C9)
	Stunted or Stressed Plants (D1)
X	Geomorphic Position (D2)
	Shallow Aquitard (D3)
	Mircotopographic Relief (D4)
X	FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No X Depth (inches):

Water Table Present? Yes No X Depth (inches):

Saturation Present? (includes capillary fringe) Yes No X Depth (inches):

Wetland Hydrology Present? Yes X No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-22

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	40	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	40	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Impatiens sp.*	35	Y	FACW
2. *Leersia oryzoides*	20	Y	OBL
3. *Microstegium vimineum*	20	Y	FAC
4. *Persicaria longiseta*	15	N	FAC
5. *Pilea pumila*	5	N	FACW
6. *Echinochloa muricata*	5	N	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	100	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	2.5Y 3/2	95	7.5YR 4/6	5	C	PL	silty clay loam	
6-16	10YR 4/3	100					silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: 170-822 / Yukon Landfill No. 7 Expansion City/County: Westmoreland County Sampling Date: August 13, 2019

Applicant/Owner: MAX Environmental Technologies, Inc. State: PA Sampling Point: TS-23

Investigator(s): PAK, DWL Section, Township, Range: South Huntingdon Township

Landform (hillslope, terrace, etc.): Floodplain Local Relief (concave, convex, none): None Slope (%):

Subregion (LRR or MLRA): LRR N Lat: 40° 13' 0.642" N Long: 79° 41' 51.835" W Datum: NAD83

Soil Map Unit Name: UaB - Udorthents, 0 to 8 percent slopes NWI classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No		
Hydric Soil Present?	Yes	No X	Is the Sampled Area within a Wetland?	Yes No X
Wetland Hydrology Present?	Yes	No X		

Remarks:

Upland test site adjacent to Wetland 12 and Trib 37643 to Sewickley Creek..

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

Surface Water (A1)	True Aquatic Plants (B14)	Surface Soil Cracks (B6)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2)
Drift Deposits (B3)	Thin Muck Surface (C7)	Crayfish Burrows (C8)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)
Iron Deposits (B5)		Stunted or Stressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2)
Water-Stained Leaves (B9)		Shallow Aquitard (D3)
Aquatic Fauna (B13)		Mircotopographic Relief (D4)
		X FAC-Neutral Test (D5)

Secondary Indicators (minimum of two required)

Field Observations:

Surface Water Present?	Yes	No X	Depth (inches):	
Water Table Present?	Yes	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes	No X	Depth (inches):	

Wetland Hydrology Present? Yes No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Five Strata) - Use scientific names of plants. Sampling Point: TS-23

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	30	Y	FACU
2. *Acer saccharinum*	40	Y	FACW
3. *Juglans nigra*	10	N	FACU
4.			
5.			
6.			
7.			
	80	= Total Cover	

Sapling Stratum: (Plot Size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

Shrub Stratum: (Plot Size: 15)			
1. *Acer negundo*	30	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	30	= Total Cover	

Herb Stratum: (Plot size: 5)			
1. *Verbesina alternifolia*	80	Y	FAC
2. *Viola sp.*	10	N	-
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	90	= Total Cover	

Woody Vine Stratum: (Plot size: 15)			
1. *Vitis vulpina*	10	Y	FAC
2.			
3.			
4.			
5.			
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody Vines - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: TS-23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 2/2	100					silt loam	
2-16	10YR 4/2	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL= Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10) **(LRR N)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(MLRA 147,148)**
- ___ Thin Dark Surface (S9) **(MLRA147, 148)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ___ Umbric Surface (F13) **(MLRA 136, 122)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ___ Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(MLRA 147)**
- ___ Coast Prairie Redox (A16) **(MLRA 147, 148)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Yukon Landfill No. 7

STREAM SURVEY DATA COLLECTION FORM

PROJECT 170-822
DATE 3-8-2018
STREAM FIELD ID STREAM 2
STREAM NAME Sewickley Creek
REVIEWER(S) CAB, DWL

Weather Conditions: ☐ Sunny ☒ Partly Cloudy ☐ Cloudy ☐ Rain
Any precipitation in the last 5 days? ☒ Yes ☐ No

Stream Type: ☒ Perennial ☐ Intermittent ☐ Ephemeral

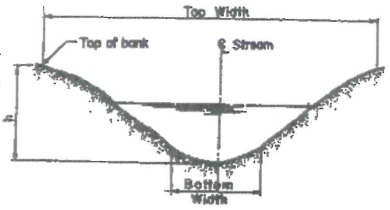
☒ Photographs taken Photograph numbers: 25 upstream 26 downstream ___ crossing
☒ Flagged (_____ total flags)
☒ GPS coordinates collected

Stream crossed/encroached by centerline or limit of disturbance:
☐ Yes ☒ No Crossing length _____ feet
Road crossing and type:
☐ Bridge ☐ Ford crossing ☐ Culvert (Diameter: ___)

Hydrological Characteristics:

Tributary is: ☒ Natural.
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
Average top of bank width (feet): ≈ 45 - 80 At centerline: —
Average top of bank depth (feet): ≈ 2 - 6.5 At centerline: —
Wetted width (feet): ≈ 50 - 60' At centerline: —
Wetted depth (feet): ≈ 10 - > 36 At centerline: —
Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):

X Silt	X Gravel (0.25" to 2")	_____ Bedrock
X Sand	X Cobble (2" to 10")	_____ Vegetation (_____%)
_____ Clay	X Boulder (>10")	_____ Other. Explain:

Flow Characteristics:

Water present: ☐ No water, streambed dry ☐ Streambed moist ☐ Standing water ☒ Flowing water
If flow present, estimate stage at time of survey: ☐ High ☒ Normal ☐ Low
Bank erosion: ☐ Extensive ☒ Moderate ☐ Little / None

Tributary has (check all that apply): ☒ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
☒ forested ☐ open field ☐ farmland ☐ wetland ☐ mixed use ☐ industrial ☐ mining ☐ residential

Stream Shading: ☐ 75 - 100% ☒ 50 - 74% ☐ 25 - 49% ☐ 0 - 24%
Wetland fringe: ☐ Yes (☐ Abutting or ☐ Adjacent) ☒ No
Wetland ID:

Biological Characteristics:

Macroinvertebrates observed? ☐ Yes ☒ No Describe:
Fish or wildlife observed? ☐ Yes ☒ No Describe:

Other Observations and Comments:
Only LDB GPSed, continues above and below DB.

STREAM SURVEY DATA COLLECTION FORM

Yukon Landfill No.7
PROJECT 170-822
DATE 3-8-2018
STREAM FIELD ID STREAM 1
STREAM NAME UNT 1 To Sawickley Creek
REVIEWER(S) CRB, DWL

Weather Conditions: ☐ Sunny ☒ Partly Cloudy ☐ Cloudy ☐ Rain
Any precipitation in the last 5 days? ☒ Yes ☐ No

Stream Type: ☐ Perennial ☐ Intermittent ☒ Ephemeral

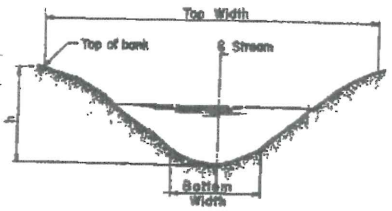
☒ Photographs taken Photograph numbers: 20 upstream 21 downstream ___ crossing
☒ Flagged (_____ total flags)
☒ GPS coordinates collected

Stream crossed/encroached by centerline or limit of disturbance:
☐ Yes ☒ No Crossing length _____ feet
Road crossing and type:
☐ Bridge ☐ Ford crossing ☐ Culvert (Diameter: ___)

Hydrological Characteristics:

Tributary is: ☒ Natural.
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
Average top of bank width (feet): 1.5 - 3.5 At centerline: —
Average top of bank depth (feet): 0.2 - 0.8 At centerline: —
Wetted width (feet): — At centerline: —
Wetted depth (feet): — At centerline: —
Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):

X Silt	X Gravel (0.25" to 2")	_____ Bedrock
X Sand	X Cobble (2" to 10")	_____ Vegetation (_____%)
_____ Clay	_____ Boulder (>10")	_____ Other. Explain:

Flow Characteristics:

Water present: ☒ No water, streambed dry ☐ Streambed moist ☐ Standing water ☐ Flowing water
If flow present, estimate stage at time of survey: ☐ High ☐ Normal ☐ Low
Bank erosion: ☐ Extensive ☒ Moderate ☐ Little / None

Tributary has (check all that apply): ☒ Defined bed and banks ☒ Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
☒ forested ☐ open field ☐ farmland ☒ wetland ☐ mixed use ☐ industrial ☐ mining ☐ residential

Stream Shading: ☒ 75 - 100% ☐ 50 - 74% ☐ 25 - 49% ☐ 0 - 24%
Wetland fringe: ☒ Yes (☒ Abutting or ☐ Adjacent) ☐ No
Wetland ID: wetland 3

Biological Characteristics:

Macroinvertebrates observed? ☐ Yes ☒ No Describe:
Fish or wildlife observed? ☐ Yes ☒ No Describe:

Other Observations and Comments:

Dry channel starts below intermittent portion. Confluence with Sawickley Creek.

Yukon Landfill NO,7

STREAM SURVEY DATA COLLECTION FORM

PROJECT 170-822
DATE 3-8-2018
STREAM FIELD ID STREAM 1
STREAM NAME UNT 1 to Sewickley Creek
REVIEWER(S) CRB, DWL

Weather Conditions: ☐ Sunny ☒ Partly Cloudy ☐ Cloudy ☐ Rain
Any precipitation in the last 5 days? ☒ Yes ☐ No

Stream Type: ☐ Perennial ☒ Intermittent ☐ Ephemeral

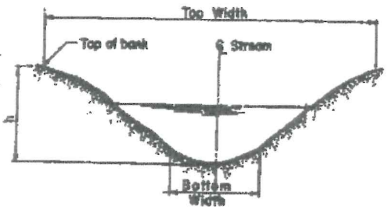
☒ Photographs taken Photograph numbers: 16 upstream 17 downstream ___ crossing
☒ Flagged (_____ total flags)
☒ GPS coordinates collected

Stream crossed/encroached by centerline or limit of disturbance:
☐ Yes ☒ No Crossing length _____ feet
Road crossing and type:
☐ Bridge ☐ Ford crossing ☐ Culvert (Diameter: ___)

Hydrological Characteristics:

Tributary is: ☒ Natural.
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
Average top of bank width (feet): 0.2 - 0.8 At centerline: ___
Average top of bank depth (feet): 1.5 - 2.5 At centerline: ___
Wetted width (feet): 0.5 - 1" At centerline: ___
Wetted depth (feet): 0.5 - 1.5 At centerline: ___
Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):

☒ Silt	☒ Gravel (0.25" to 2")	☐ Bedrock
☒ Sand	☒ Cobble (2" to 10")	☐ Vegetation (_____%)
☒ Clay	☐ Boulder (>10")	☐ Other. Explain:

Flow Characteristics:

Water present: ☐ No water, streambed dry ☐ Streambed moist ☐ Standing water ☒ Flowing water
If flow present, estimate stage at time of survey: ☐ High ☐ Normal ☒ Low
Bank erosion: ☐ Extensive ☒ Moderate ☐ Little / None

Tributary has (check all that apply): ☒ Defined bed and banks ☒ Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
☒ forested ☐ open field ☐ farmland ☒ wetland ☐ mixed use ☐ industrial ☐ mining ☐ residential

Stream Shading: ☒ 75 - 100% ☐ 50 - 74% ☐ 25 - 49% ☐ 0 - 24%
Wetland fringe: ☒ Yes (☒ Abutting or ☐ Adjacent) ☐ No
Wetland ID: wetland 2

Biological Characteristics:

Macroinvertebrates observed? ☒ Yes ☐ No Describe: flat worms
Fish or wildlife observed? ☐ Yes ☒ No Describe:

Other Observations and Comments:

stream 1 originates from wetland 2
Drainage pattern

Yukon Landfill No. 7

STREAM SURVEY DATA COLLECTION FORM

PROJECT 170-822
DATE 3-8-2018
STREAM FIELD ID Stream 3
STREAM NAME Trib 37643 to Sewickley Creek
REVIEWER(S) CMB, DWL

Weather Conditions: ☐ Sunny ☒ Partly Cloudy ☐ Cloudy ☐ Rain
Any precipitation in the last 5 days? ☒ Yes ☐ No

Stream Type: ☒ Perennial ☐ Intermittent ☐ Ephemeral

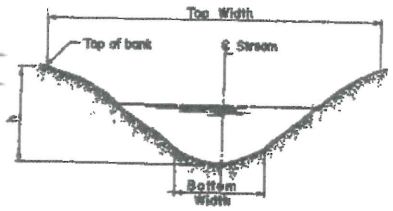
☒ Photographs taken Photograph numbers: 30 upstream 31 downstream ___ crossing
☒ Flagged (_____ total flags)
☒ GPS coordinates collected

Stream crossed/encroached by centerline or limit of disturbance:
☒ Yes ☐ No Crossing length _____ feet
Road crossing and type:
☐ Bridge ☐ Ford crossing ☐ Culvert (Diameter: ___)

Hydrological Characteristics:

Tributary is: ☒ Natural.
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
Average top of bank width (feet): 4-7' At centerline: ___
Average top of bank depth (feet): 0.5-1.5' At centerline: ___
Wetted width (feet): 3-5' At centerline: ___
Wetted depth (feet): 1-3" At centerline: ___
Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):

X Silt	X Gravel (0.25" to 2")	_____ Bedrock
X Sand	X Cobble (2" to 10")	_____ Vegetation (_____%)
X Clay	_____ Boulder (>10")	_____ Other. Explain:

Flow Characteristics:

Water present: ☐ No water, streambed dry ☐ Streambed moist ☐ Standing water ☒ Flowing water
If flow present, estimate stage at time of survey: ☐ High ☒ Normal ☐ Low
Bank erosion: ☐ Extensive ☒ Moderate ☐ Little / None

Tributary has (check all that apply): ☒ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
☒ forested ☐ open field ☐ farmland ☒ wetland ☐ mixed use ☐ industrial ☐ mining ☐ residential

Stream Shading: ☒ 75 - 100% ☐ 50 - 74% ☐ 25 - 49% ☐ 0 - 24%
Wetland fringe: ☒ Yes (☒ Abutting or ☐ Adjacent) ☐ No
Wetland ID: Wetland 4

Biological Characteristics:

Macroinvertebrates observed? ☒ Yes ☐ No Describe: pouched snail, tipulidae, caddis flies
Fish or wildlife observed? ☐ Yes ☒ No Describe:

Other Observations and Comments:

Stream flows through a wooded valley and into Wetland 4.

STREAM SURVEY DATA COLLECTION FORM

PROJECT 170-822
DATE 4-9-18
STREAM FIELD ID STREAM 5
STREAM NAME UNT 2 to Trib 37634 to Sewickley creek
REVIEWER(S) CWB, DWL

Weather Conditions: ☐ Sunny ☒ Partly Cloudy ☐ Cloudy ☐ Rain
Any precipitation in the last 5 days? ☒ Yes ☐ No

Stream Type: ☐ Perennial ☐ Intermittent ☒ Ephemeral

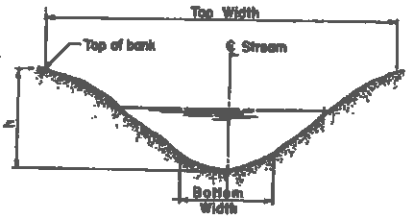
☒ Photographs taken Photograph numbers: 49 upstream 50 downstream ___ crossing
☒ Flagged (_____ total flags)
☒ GPS coordinates collected

Stream crossed/encroached by centerline or limit of disturbance:
☐ Yes ☒ No Crossing length _____ feet
Road crossing and type:
☐ Bridge ☐ Ford crossing ☒ Culvert (Diameter: 30')

Hydrological Characteristics:

Tributary is: ☐ Natural.
☐ Artificial (man-made). Explain:
☒ Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
Average top of bank width (feet): 1.5-3' At centerline: —
Average top of bank depth (feet): 0.2-0.8' At centerline: —
Wetted width (feet): 0.5-1' At centerline: —
Wetted depth (feet): 0.5-1.5" At centerline: —
Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):

X Silt	X Gravel (0.25" to 2")	_____ Bedrock
X Sand	_____ Cobble (2" to 10")	_____ Vegetation (_____%)
X Clay	_____ Boulder (>10")	_____ Other. Explain:

Flow Characteristics:

Water present: ☐ No water, streambed dry ☐ Streambed moist ☐ Standing water ☒ Flowing water
If flow present, estimate stage at time of survey: ☐ High ☐ Normal ☒ Low
Bank erosion: ☐ Extensive ☐ Moderate ☒ Little / None

Tributary has (check all that apply): ☒ Defined bed and banks ☒ Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
☐ forested ☐ open field ☐ farmland ☐ wetland ☒ mixed use ☐ industrial ☐ mining ☐ residential

Stream Shading: ☐ 75 - 100% ☐ 50 - 74% ☒ 25 - 49% ☐ 0 - 24%
Wetland fringe: ☐ Yes (☐ Abutting or ☐ Adjacent) ☒ No
Wetland ID:

Biological Characteristics:

Macroinvertebrates observed? ☐ Yes ☒ No Describe:
Fish or wildlife observed? ☐ Yes ☒ No Describe:

Other Observations and Comments: Stream did not confluence with Stream 3, Trib 37634 To Sewickley creek.

Yukon Landfill No.7

STREAM SURVEY DATA COLLECTION FORM

PROJECT 170-822
DATE 3/12/18
STREAM FIELD ID Stream 5
STREAM NAME UNT 2 to Trib 37643 to Sewickley Creek
REVIEWER(S) CRB, DWL

Weather Conditions: ☐ Sunny ☐ Partly Cloudy ☒ Cloudy ☐ Rain
Any precipitation in the last 5 days? ☒ Yes ☐ No

Stream Type: ☒ Perennial ☐ Intermittent ☐ Ephemeral

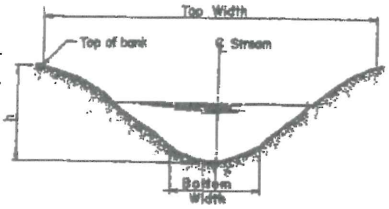
☒ Photographs taken Photograph numbers: ___ upstream ___ downstream ___ crossing
☒ Flagged (_____ total flags)
☒ GPS coordinates collected

Stream crossed/encroached by centerline or limit of disturbance:
☐ Yes ☒ No Crossing length _____ feet
Road crossing and type:
☐ Bridge ☐ Ford crossing ☒ Culvert (Diameter: 30") (Concrete)

Hydrological Characteristics:

Tributary is: ☒ Natural.
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
Average top of bank width (feet): 2.5-5.5' At centerline: ____
Average top of bank depth (feet): 0.5-1.3' At centerline: ____
Wetted width (feet): 2-5' At centerline: ____
Wetted depth (feet): 3-6" At centerline: ____
Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):
☒ Silt ____ Gravel (0.25" to 2") ____ Bedrock
☒ Sand ____ Cobble (2" to 10") ____ Vegetation (____%)
☒ Clay ____ Boulder (>10") ☒ Other. Explain: Leaf litter

Flow Characteristics:

Water present: ☐ No water, streambed dry ☐ Streambed moist ☐ Standing water ☒ Flowing water
If flow present, estimate stage at time of survey: ☐ High ☒ Normal ☐ Low
Bank erosion: ☐ Extensive ☐ Moderate ☒ Little / None

Tributary has (check all that apply): ☒ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics: (Roadside)
☐ forested ☐ open field ☐ farmland ☒ wetland ☒ mixed use ☐ industrial ☐ mining ☐ residential

Stream Shading: ☐ 75 - 100% ☐ 50 - 74% ☐ 25 - 49% ☒ 0 - 24%
Wetland fringe: ☒ Yes (☒ Abutting or ☐ Adjacent) ☐ No
Wetland ID: Wetland 8, Wetland 9

Biological Characteristics:

Macroinvertebrates observed? ☒ Yes ☐ No Describe: Caddisflies, chironomids, isopods,
Fish or wildlife observed? ☐ Yes ☒ No Describe: Corixidae

Other Observations and Comments:

Stream flows under Millbell Rd through a 30" concrete culvert from offsite. It feeds Wetland 8 and Wetland 9.

STREAM SURVEY DATA COLLECTION FORM

Yukon Landfill No. 7
PROJECT 170-822
DATE 3/12/18
STREAM FIELD ID Stream 6
STREAM NAME UNT 3 to Trib 37643 to Sewickley Creek
REVIEWER(S) CRB, DWL

Weather Conditions: ☐ Sunny ☐ Partly Cloudy ☒ Cloudy ☐ Rain
Any precipitation in the last 5 days? ☒ Yes ☐ No

Stream Type: ☐ Perennial ☐ Intermittent ☒ Ephemeral

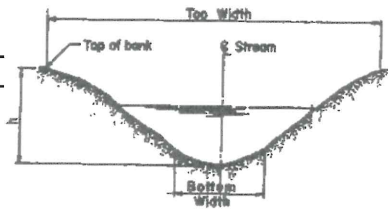
☒ Photographs taken Photograph numbers: ___ upstream ___ downstream ___ crossing
☒ Flagged (_____ total flags)
☒ GPS coordinates collected

Stream crossed/encroached by centerline or limit of disturbance:
☐ Yes ☒ No Crossing length _____ feet
Road crossing and type:
☐ Bridge ☐ Ford crossing ☐ Culvert (Diameter: ___)

Hydrological Characteristics:

Tributary is: ☒ Natural.
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain (rip/rap, gabions, stream channelized, filled, or truncated):

Stream channel properties with respect to top of bank (estimate):
Average top of bank width (feet): 2-3.5' At centerline: ___
Average top of bank depth (feet): 0.7-1.4' At centerline: ___
Wetted width (feet): 0 At centerline: ___
Wetted depth (feet): 0 At centerline: ___
Average side slopes: Vertical (1:1 or less); 2:1; 3:1; 4:1 or more
Ordinary High Water Mark (OHWM), if observed:



Primary tributary substrate composition (check all that apply):

_____ Silt	X Gravel (0.25" to 2")	_____ Bedrock
_____ Sand	_____ Cobble (2" to 10")	_____ Vegetation (_____%)
X Clay	_____ Boulder (>10")	_____ Other. Explain:

Flow Characteristics:

Water present: ☐ No water, streambed dry ☒ Streambed moist ☐ Standing water ☐ Flowing water
If flow present, estimate stage at time of survey: ☐ High ☐ Normal ☐ Low
Bank erosion: ☐ Extensive ☒ Moderate ☐ Little / None

Tributary has (check all that apply): ☒ Defined bed and banks ☐ Poorly defined bed and banks

Water Quality Characteristics

General watershed or riparian area characteristics:
☒ forested ☐ open field ☐ farmland ☒ wetland ☐ mixed use ☐ industrial ☐ mining ☐ residential

Stream Shading: ☐ 75 - 100% ☐ 50 - 74% ☒ 25 - 49% ☐ 0 - 24%
Wetland fringe: ☒ Yes (☒ Abutting or ☐ Adjacent) ☐ No
Wetland ID: Wetland 8

Biological Characteristics:

Macroinvertebrates observed? ☐ Yes ☒ No Describe:
Fish or wildlife observed? ☐ Yes ☒ No Describe:

Other Observations and Comments:
Stream flows out of Wetland 8 and loses channel before reaching Wetland 9.

APPENDIX B

PHOTOGRAPHS

PHOTOGRAPHS
HAZARDOUS WASTE LANDFILL NO. 7
MAX ENVIRONMENTAL TECHNOLOGIES, INC.

Photo 1: Test Site 1, Wetland 1A.
Facing southwest - March 8, 2018

Photo 2: Wetland 1B.
Facing north - March 8, 2018

Photo 3: Wetland 1C.
Facing southwest - March 8, 2018

Photo 4: Wetland 1D.
Facing north - March 8, 2018

Photo 5: Test Site 2, non-wetland.
Facing west - March 8, 2018

Photo 6: Test Site 3, Wetland 2, PEM portion.
Facing south - March 8, 2018

PHOTOGRAPHS
HAZARDOUS WASTE LANDFILL NO. 7
MAX ENVIRONMENTAL TECHNOLOGIES, INC.

Photo 7: Test Site 4, non-wetland.
Facing east - March 8, 2018

Photo 8: Test Site 5, Wetland 2, PSS portion.
Facing north - March 8, 2018

Photo 9: Test Site 6, Wetland 3.
Facing south - March 8, 2018

Photo 10: Test Site 7, non-wetland.
Facing northeast - March 8, 2018

Photo 11: Test Site 8, Wetland 4A.
Facing north - March 8, 2018

Photo 12: Wetland 4B.
Facing south - March 8, 2018

PHOTOGRAPHS
HAZARDOUS WASTE LANDFILL NO. 7
MAX ENVIRONMENTAL TECHNOLOGIES, INC.

Photo 13: Test Site 9, non-wetland.
Facing east - March 8, 2018

Photo 14: Test Site 12, Wetland 6.
Facing northeast - March 8, 2018

Photo 15: Test Site 13, non-wetland.
Facing east - March 8, 2018

Photo 16: Test Site 14, Wetland 7.
Facing west - March 8, 2018

Photo 17: Test Site 15, non-wetland.
Facing east - March 8, 2018

Photo 18: Test Site 16, Wetland 8.
Facing west - March 12, 2018

PHOTOGRAPHS
HAZARDOUS WASTE LANDFILL NO. 7
MAX ENVIRONMENTAL TECHNOLOGIES, INC.

Photo 19: Test Site 17, non-wetland.
Facing south - March 12, 2018

Photo 20: Test Site 18, Wetland 9.
Facing north - March 12, 2018

Photo 21: Test Site 19, Wetland 10.
Facing southwest - August 13, 2019

Photo 22: Test Site 20, non-wetland.
Facing southeast - August 13, 2019

Photo 23: Test Site 21, Wetland 11A.
Facing northwest - August 13, 2019

Photo 24: Wetland 11B
Facing south - August 13, 2019

PHOTOGRAPHS
HAZARDOUS WASTE LANDFILL NO. 7
MAX ENVIRONMENTAL TECHNOLOGIES, INC.

Photo 25: Test Site 22, Wetland 12. Facing south - August 13, 2019

Photo 26: Test Site 23, non-wetland. Facing northwest - August 13, 2019

Photo 27: Sewickley Creek. Facing upstream - March 8, 2018

Photo 28: UNT 1 to Sewickley Creek, ephemeral portion. Facing downstream - March 8, 2018

Photo 29: UNT 1 to Sewickley Creek, intermittent portion. Facing downstream - March 8, 2018

Photo 30: Trib 37643 to Sewickley Creek. ***Facing upstream - August 13, 2019***

Photo 31: UNT 2 to Trib 37643 to Sewickley Creek, perennial portion. Facing downstream - March 12, 2018

Photo 32: UNT 2 to Trib 37643 to Sewickley Creek, ephemeral portion. Facing upstream - April 9, 2018

Photo 33: UNT 3 to Trib 37643 to Sewickley Creek. Facing downstream - March 12, 2018

Photo 34: Pond 1. Facing northeast - March 8, 2018

ATTACHMENT 3

REFERENCE DRAWINGS

HAZARDOUS WASTE MANAGEMENT FACILITY
PERMIT APPLICATION DRAWINGS
(1983)

MILL SERVICE INC.

YUKON PLANT

SOUTH HUNTINGDON TOWNSHIP

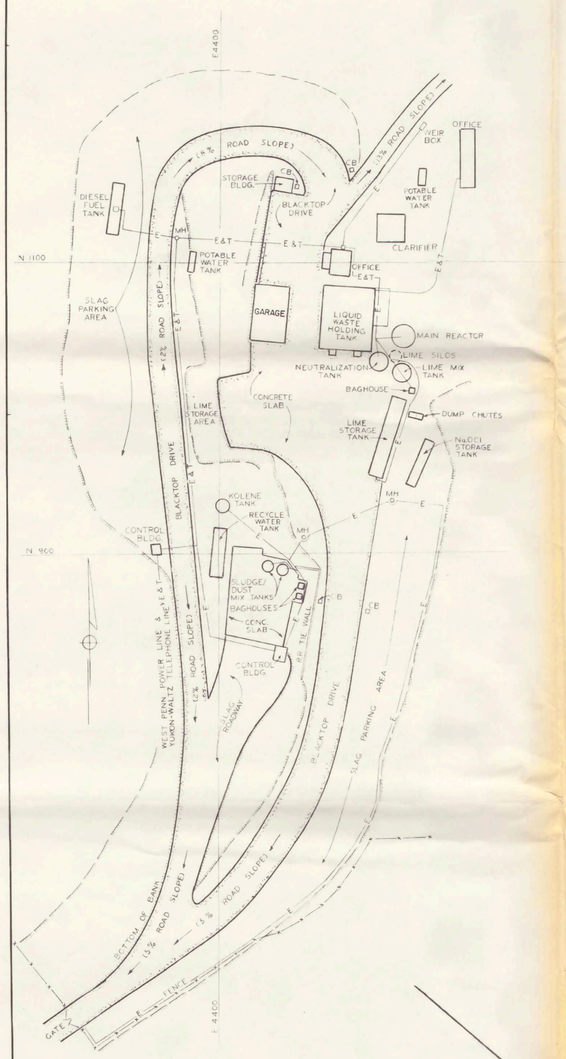
WESTMORELAND COUNTY, PENNSYLVANIA

HAZARDOUS WASTE MANAGEMENT

FACILITY PERMIT APPLICATION

PART B APRIL 20, 1983

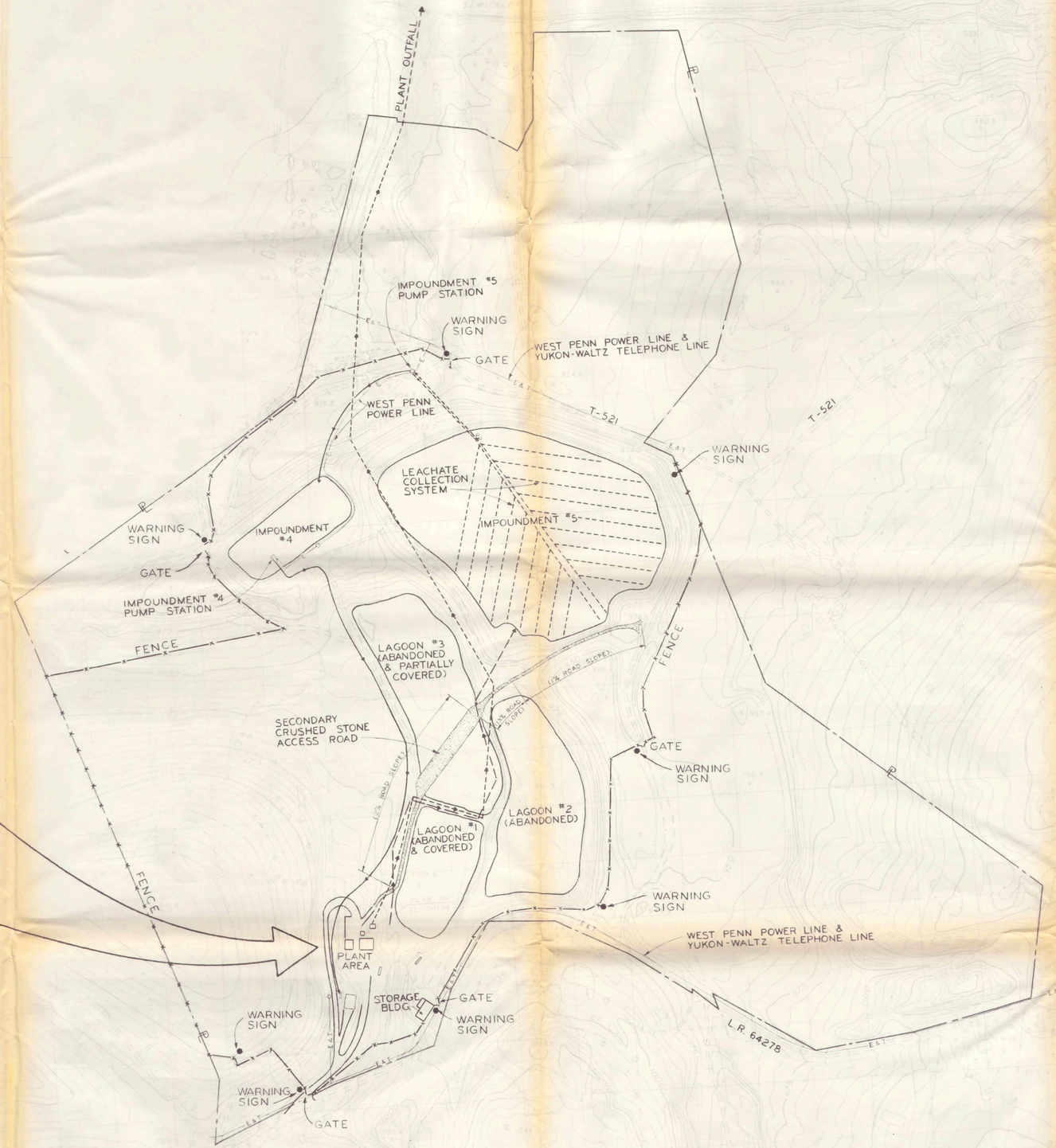
DUNCAN, LAGNESE AND ASSOCIATES, INC.
ENGINEERS PITTSBURGH PA.



PLANT AREA DETAIL

SCALE: 1"=50'

L.R. 64180



DRAWING Nº 1

MILL SERVICE, INC.

YUKON PLANT

GENERAL ARRANGEMENT

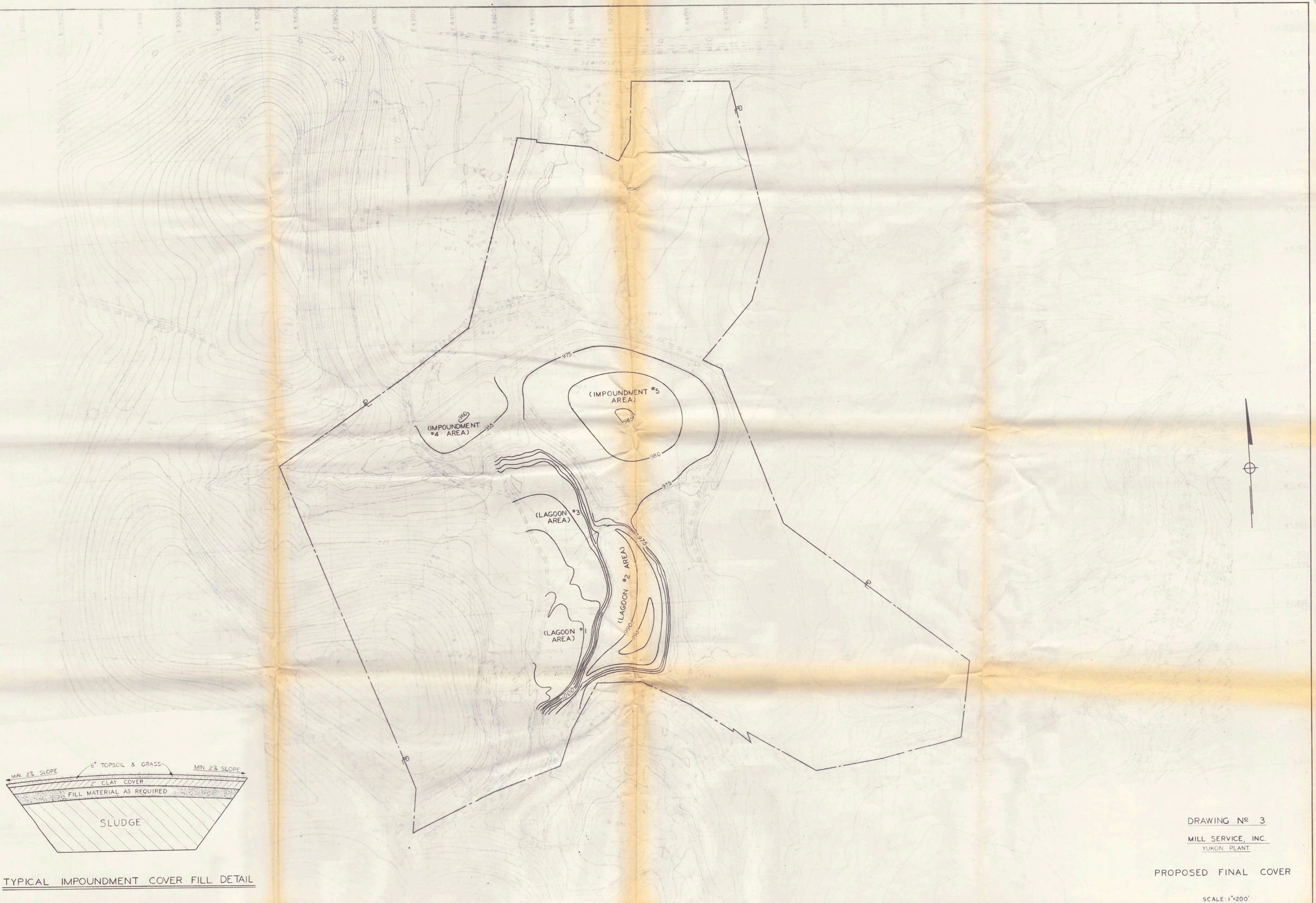
SCALE: 1"=200'

DRAWING Nº 2

MILL SERVICE, INC.
YUKON PLANT

SURFACE WATER MANAGEMENT
EROSION CONTROL & BORROW AREAS

SCALE: 1"=200'



TYPICAL IMPOUNDMENT COVER FILL DETAIL

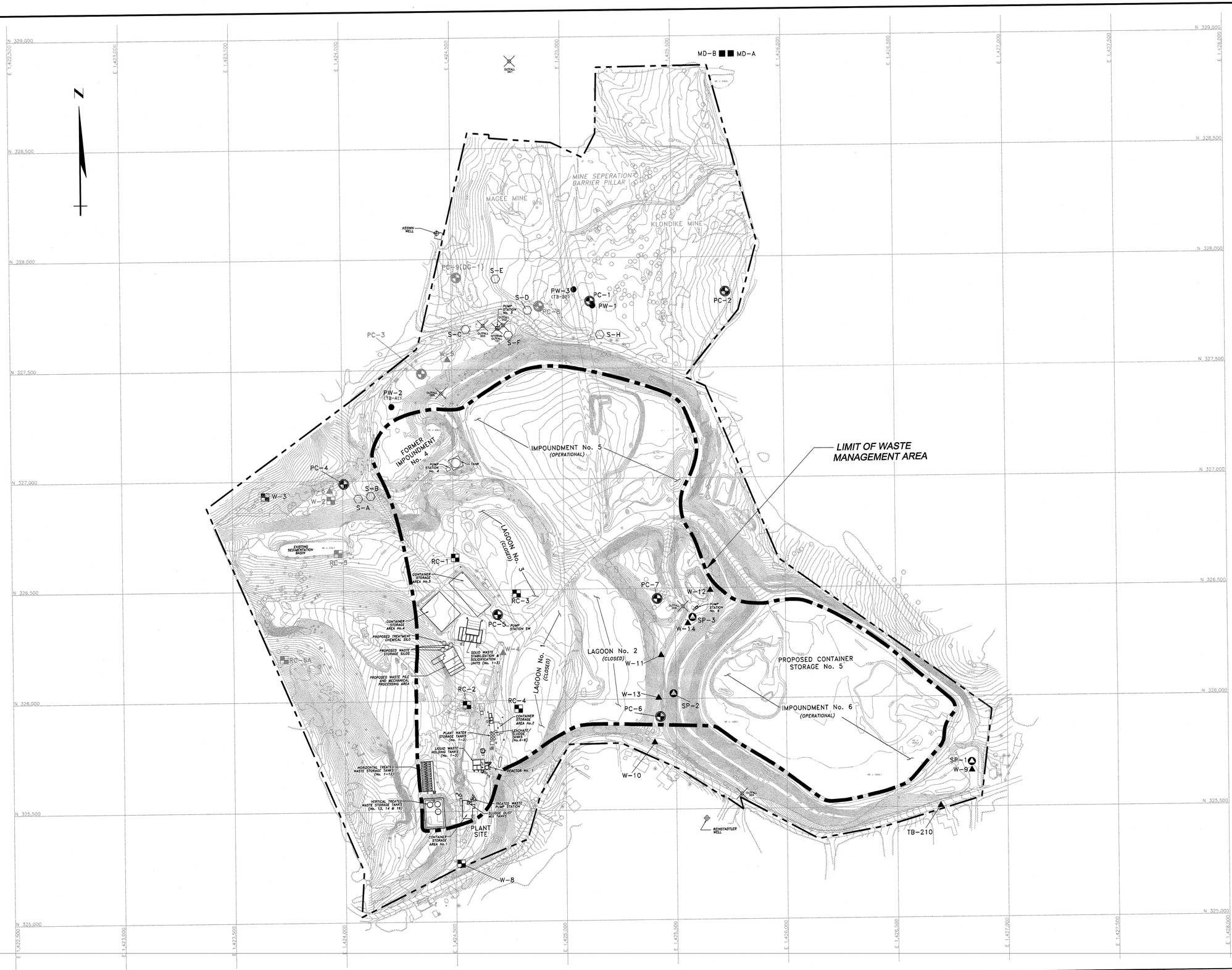
DRAWING Nº 3

MILL SERVICE, INC.
YUKON PLANT

PROPOSED FINAL COVER

SCALE: 1"=200'

HAZARDOUS WASTE PERMIT RENEWAL APPLICATION DETAILED SITE PLAN (2001)



LEGEND

- FACILITY BOUNDARY
- EXISTING BUILDING
- EXISTING WATER
- EXISTING TREE
- EXISTING TREELINE
- EXISTING TANK
- EXISTING UNPAVED ROAD
- EXISTING PAVED ROAD
- EXISTING SURFACE CONTOUR ELEVATION *(FEET – MSL)*
- EXISTING SUFACE WATER *BOUNDARIES*
- EXISTING FENCE LOCATION
- EXISTING GATE LOCATION
- EXISTING UTILITY POLE LOCATION
- EXISTING LIGHT POLE LOCATION
- PW-3 — PITTSBURGH MINE POOL PUMPING WELL (PW-1, PW-2, PW-3)
- RC-6A — REDSTONE COAL HORIZON MONITORING WELL (W-2, W-3, W-8, RC-1 THROUGH RC-6A)
- PC-1 — PITTSBURGH COAL MINE MONITORING WELL (PC-1 THROUGH PC-9)
- S-E — SURFACE WATER MONITORING LOCATION (S-A, S-B, S-C S-D, S-C, S-E, S-F & S-H)
- MD-A — MINE DISCHARGE MONITORING LOCATION (MD-A, MD-B)
- SP-3 — PITTSBURGH COAL/MINE SPOIL HORIZON MONITORING WELL (SP-1 THROUGH SP-3)
- W-11 — PITTSBURGH LIMESTONE HORIZON MONITORING WELL (W-4 THROUGH W-6, W-9 THROUGH W-14 AND TB-210)
- RESIDENTIAL WELL LOCATION
- COLOR INDICATES COMPLIANCE WELLS FOR EACH ZONE
- EXISTING NPDES OUTFALL LOCATION
- LIMIT OF WASTE MANAGEMENT AREA

0 200 400 800 FEET

MAX ENVIRONMENTAL TECHNOLOGIES, INC.
YUKON, PENNSYLVANIA

DRWN:	ETF	DATE:	9/20/01
CHKD:	JAB	DATE:	9/20/01
APPD:	DRF	DATE:	9/20/01
SCALE:	AS SHOWN		

KEY ENVIRONMENTAL INCORPORATED

HAZARDOUS WASTE PERMIT RENEWAL APPLICATION
YUKON, PA FACILITY
MAX ENVIRONMENTAL TECHNOLOGIES, INC.
YUKON, PENNSYLVANIA

DETAILED SITE PLAN

DRAWING 01-294 FIGURE 1

REV #	DATE	DESCRIPTION	APPD
1			
2			
3			

REFERENCES: – TOPOGRAPHIC AND PLANIMETRIC FEATURES DEPICTED ON THIS MAP WERE PREPARED BY NOR EAST MAPPING, INC. KYLESTOWN, PENNSYLVANIA, JULY 2, 2001
– SURVEY BY DEADLINE, WAYNESBURG, PENNSYLVANIA, JULY 2, 2001
– ADDITIONAL FEATURES OBTAINED FROM ARCHIVED DRAWINGS AND BEST FIT TO MOST RECENT TOPOGRAPHIC INFORMATION.

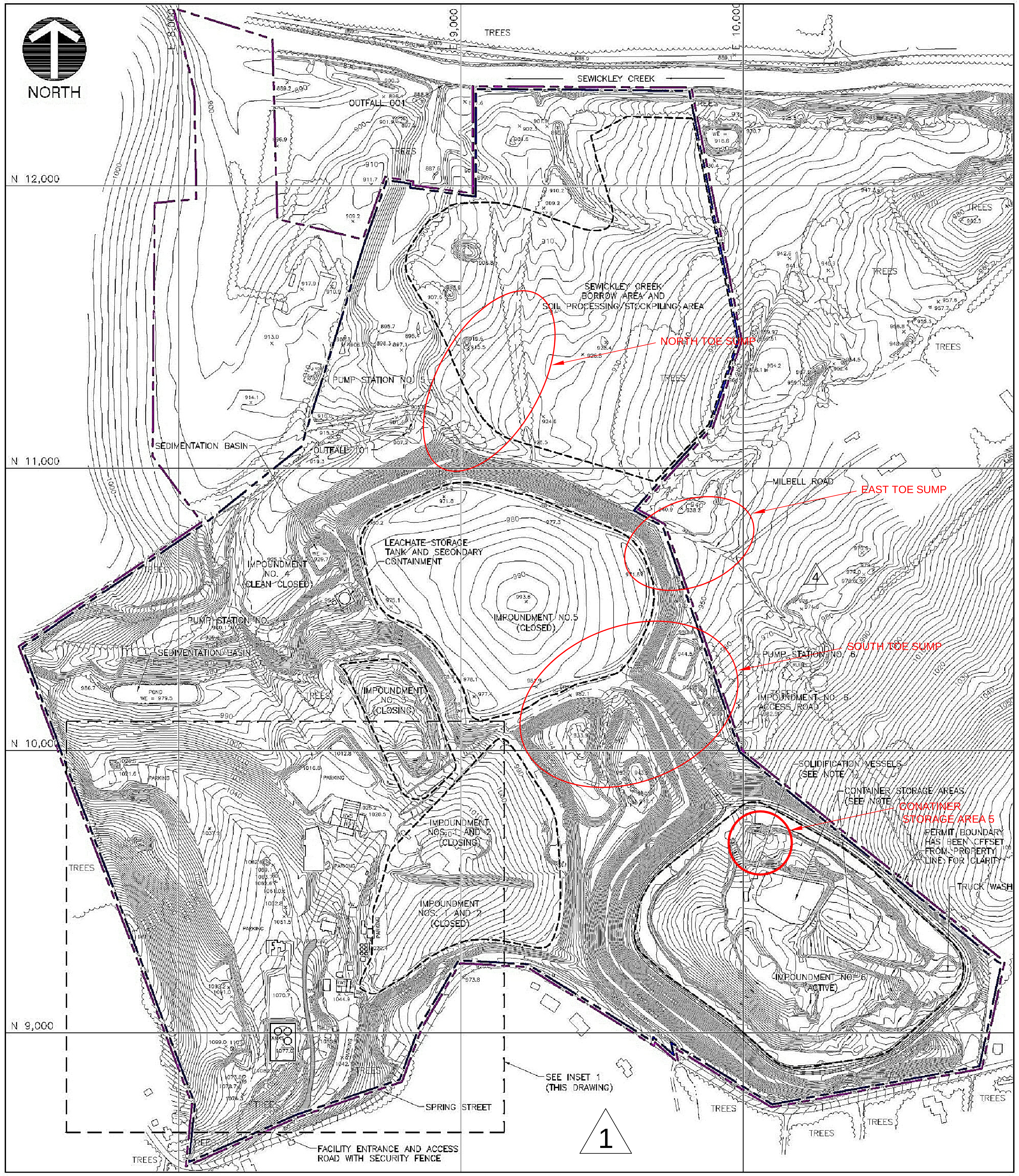
NOTES: HORIZONTAL REFERENCE DATUM PENNSYLVANIA STATE PLANE SOUTH (N.A.D. 1983).
VERTICAL REFERENCE DATUM BASED ON PLANT MONUMENT.

ISSUE DATE:

ROSSLYN FARMS
INDUSTRIAL PARK
1200 ARCH ST., SUITE 200
CARNEGIE, PA 15106

EDITED BY: | DATE: | MACH: ETF | VERSION: ACAD 14 | FILE D: YUKON/BASE/YDBSE2001.DWG

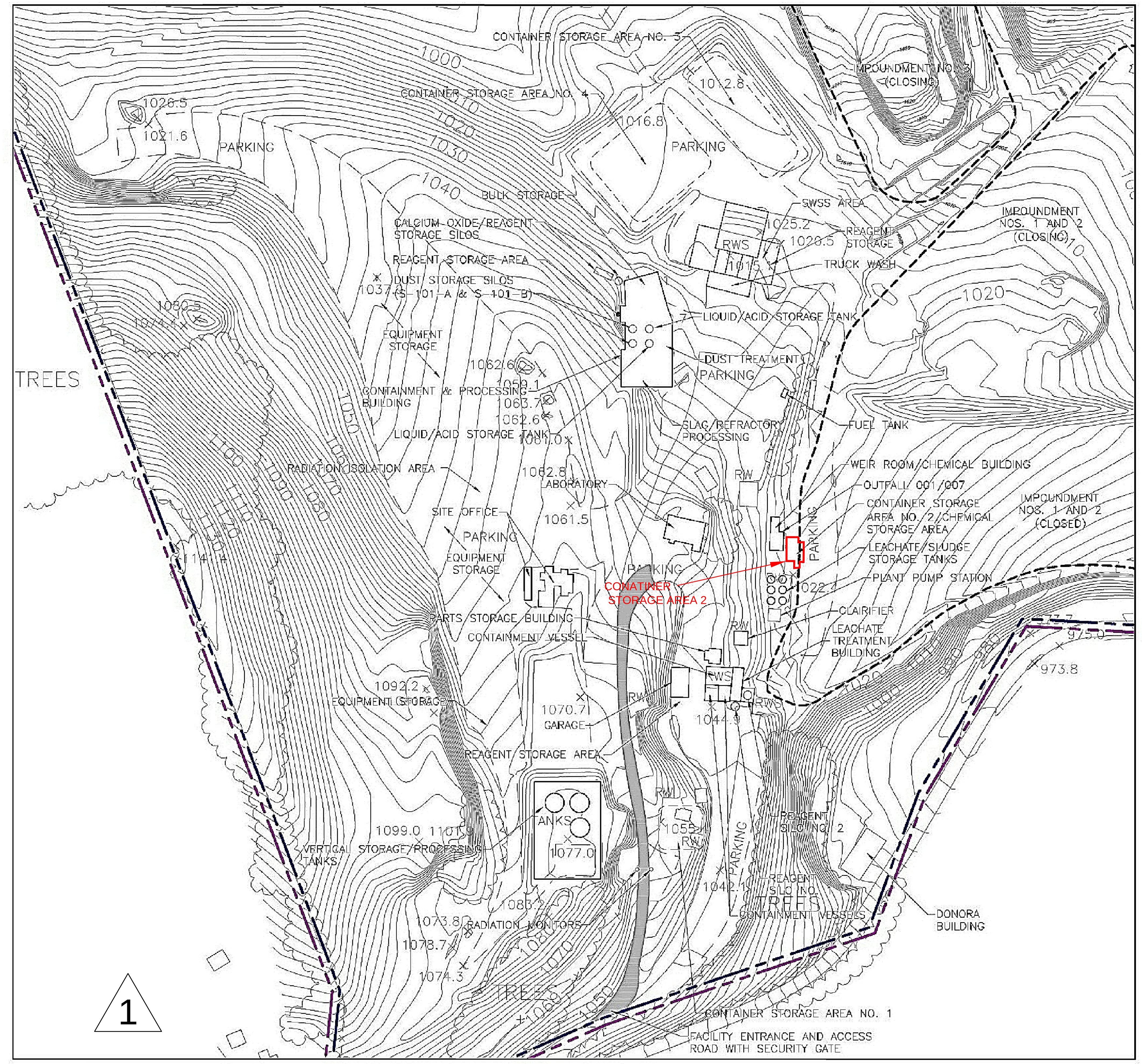
HAZARDOUS WASTE PERMIT RENEWAL APPLICATION SITE LOCATION MAP (ORIGINALLY SUBMITTED 12/12/12; LAST REVISED 10/31/18)



2

FACILITY SITE PLAN

SCALE IN FEET
0 200 400



INSET 1

SCALE IN FEET
0 100 200

REFERENCE

1. PROPERTY LIMIT TAKEN FROM MILL SERVICE SITE TOPOGRAPHIC MAP, JANUARY 1992.
2. IMPOUNDMENT NO. 6 SURVEY CONDUCTED BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC., ON JANUARY 25, 2012.

NOTES

1. LOCATIONS SUBJECT TO CHANGE.

LEGEND

—1040—	EXISTING INDEX CONTOUR
———	EXISTING INTERMEDIATE CONTOUR
— — — (purple)	APPROXIMATE PROPERTY LINE
— — —	EXISTING PERMIT BOUNDARY

NOTE: REFERENCE ENVIRONMENTAL CONSULTANTS INCORPORATED DRAWING CEC-E4 DATED JULY 23, 2012.

REV #	DESCRIPTION	DATE
4	Added Location of Sumps and Container Storage Area 5	10/31/18
3	UPDATE UNIT STATUS	10/29/18
2	ADD CONTAINER AREA 5 TO LOCATION MAP	8/12/15
1	REPLACED PRIOR KEY ENVIRONMENTAL INCORPORATED DRAWINGS HP-2A, HP-2B, AND HP-3 DATED 9/20/01 AND 8/29/01, RESPECTIVELY, WITH UPDATED SITE LOCATION MAP.	12/12/12

GARY R. BROWN, P.E.
PA LIC. # 27358-E

DATE: 11/1/18

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
GARY R. BROWN
ENGINEER
27358-E

PREPARED BY:
RT ENVIRONMENTAL SERVICES, INC.
591 EAST MAIDEN STREET
WASHINGTON, PA 15301

SITE LOCATION MAP
(DRAWING HAS LOCATION INFORMATION) 3
HAZARDOUS WASTE PERMIT RENEWAL APPLICATION
YUKON FACILITY
MAX ENVIRONMENTAL TECHNOLOGIES, INC.
233 MAX LANE
YUKON, PA 15698

CHARGE	AUTOCAD FILE	ENGINEER	DESIGNER	DRAFTSPERSON
5182-03		GRB		KMW

SCALE	DRAWING NUMBER	DRAWING
AS NOTED	Y:\RT Projects\5100 series\5182-09\Drawings\Drawings Revised.dwg	HP-2
DATE 12/12/12		

ATTACHMENT 4

EXHIBIT 9-2.7 FROM
PHASE I APPLICATION FOR HAZARDOUS WASTE LANDFILL NO. 7
EXCLUSIONARY SITING CRITERIA REVIEW SUBMITTAL

DEPARTMENT OF THE ARMY
PITTSBURGH DISTRICT, CORPS OF ENGINEERS
WILLIAM S. MOORHEAD FEDERAL BUILDING
1000 LIBERTY AVENUE
PITTSBURGH, PA 15222-4186

December 3, 2019

Regulatory Division
LRP-2018-1571

MAX Environmental Technologies, Inc.
c/o William Follett
233 MAX Lane
Yukon, PA 156698

Dear Mr. Follett:

This letter is in response to your request for a preliminary jurisdictional determination (PJD), received on December 17, 2018, prepared by Civil & Environmental Consultants, Inc. A delineation of the Yukon Landfill No. 7, located in the City of Yukon, South Huntingdon Township, Westmoreland County was verified by Mike Engelhardt on October 23, 2019.

You have requested a preliminary jurisdictional determination (PJD) for the proposed Area of Interest (61 acres). The waters listed below are potentially waters of the United States.

Wetland 1A	0.02 acre
Wetland 1B	0.003 acre
Wetland 1C	0.006 acre
Wetland 1D	0.043 acre
Wetland 2 (PEM)	0.269 acre
Wetland 2 (PSS)	0.026 acre
Wetland 3	0.076 acre
Wetland 4A	0.01 acre
Wetland 4B	0.126 acre
Wetland 6	0.123 acre
Wetland 7	0.283 acre
wetland 8	0.179 acre
Wetland 9	0.151 acre
Wetland 10	0.067 acre
Wetland 11A	0.071 acre

Wetland 11B	0.003 acre
Wetland 12	0.026 acre
Sewickley Creek	1404 LF
UNT 1 to Sewickley Creek	339 LF
UNT 1 to Sewickley Creek	160 LF
Trib 37643 to Sewickley Creek	1708 LF
UNT 2 to Trib 37643 to Sewickley Creek	356 LF
UNT 2 to Trib 37643 to Sewickley Creek	239 LF
UNT 3 to Trib 37643 to Sewickley Creek	64 LF

The U.S. Army Corps of Engineers authority to regulate waters of the U.S. is based, in part, on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (CWA) requires that a Department of the Army (DA) permit be obtained prior to the discharge of dredged or fill material into waters of the U.S., including wetlands.

Based on a review of the information provided, 17 wetlands totaling 1.482 acres and 7 streams totaling 4270 linear feet are located within the proposed review area. The streams flow into Sewickley Creek until the waters reach the Youghiogheny River, a section 10 Traditional Navigable Waterway. This office has determined that these waters **may** be jurisdictional waters of the United States in accordance with the Regulatory Guidance Letter for Jurisdictional Determinations issued by the U.S. Army Corps of Engineers in October 2016 (RGL No. 16-01). As indicated in the guidance, this **PJD is non-binding and** cannot be appealed (33 C.F.R. 331.2) and only provides a written indication that waters of the U.S, including wetlands, may be present on-site.

At this time you have requested a Preliminary Jurisdictional Determination with an option to request an approved JD later. However, for the purposes of the determination of impacts, compensatory mitigation, and other resource protection measures for activities that require authorization from this office, the streams and wetlands identified above will be evaluated as if they are jurisdictional waters of the United States.

If you have any questions, please contact Mike Engelhardt by phone at 412-395-7141 or email at Michael.D.Engelhardt@usace.army.mil. Please complete our customer survey online and provide us with feedback at http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0

Sincerely,

\\SIGNED\\

Jon T. Coleman
Chief, South Branch
Regulatory Division

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: 10/23/2019

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: MAX Environmental Technologies, Inc. c/o William Follett, 233 MAX Lane, Yukon, PA 15698

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRP-2018-1571

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: PA County/parish/borough: Westmoreland County/South HuntingdonTwp. City: Yukon

Center coordinates of site (lat/long in degree decimal format):

Lat.: 40.218134 Long.: -79.696649

Universal Transverse Mercator:

Name of nearest waterbody: Sewickley Creek

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: 10/23/2019

☒ Field Determination. Date(s): 3/12/2019

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
		See	Attached	Table	

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- [x] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: See attached Wetland and Stream Delineation Report, revised 12/2018.
- [x] Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - [x] Office concurs with data sheets/delineation report.
  - [ ] Office does not concur with data sheets/delineation report. Rationale: _____.
- [ ] Data sheets prepared by the Corps: _____.
- [ ] Corps navigable waters' study: _____.
- [ ] U.S. Geological Survey Hydrologic Atlas: _____.
  - [ ] USGS NHD data.
  - [ ] USGS 8 and 12 digit HUC maps.
- [x] U.S. Geological Survey map(s). Cite scale & quad name: See attached Wetland and Stream Delineation Report, revised 12/2018.
- [x] Natural Resources Conservation Service Soil Survey. Citation: See attached Wetland and Stream Delineation Report, revised 12/2018.
- [x] National wetlands inventory map(s). Cite name: See attached Wetland and Stream Delineation Report, revised 12/2018.
- [ ] State/local wetland inventory map(s): _____.
- [ ] FEMA/FIRM maps: _____.
- [ ] 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- [ ] Photographs: [ ] Aerial (Name & Date): _____.
  or [ ] Other (Name & Date): _____.
- [ ] Previous determination(s). File no. and date of response letter: _____.
- [ ] Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

_____	_____
Signature and date of Regulatory staff member completing PJD	Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

RGL 16-01: TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION					
Site number	**Latitude (decimal degrees)**	**Longitude (decimal degrees)**	**Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)**	**Type of aquatic resource (i.e., wetland vs. non-wetland waters)**	**Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)**
Wetland 1A	40.21675528	-79.69884023	0.02 acre	Wetland	Section 404
Wetland 1B	40.21674987	-79.69865576	0.003 acre	Wetland	Section 404
Wetland 1C	40.21643415	-79.69900168	0.006 acre	Wetland	Section 404
Wetland 1D	40.21644497	-79.69932955	0.043 acre	Wetland	Section 404
Wetland 2 (PEM)	40.21738949	-79.69990906	0.269 acre	Wetland	Section 404
Wetland 2 (PSS)	40.21778355	-79.69981069	0.026 acre	Wetland	Section 404
Wetland 3	40.21969869	-79.70016523	0.076 acre	Wetland	Section 404
Wetland 4A	40.21808461	-79.69777943	0.01 acre	Wetland	Section 404
Wetland 4B	40.21836348	-79.69778006	0.126 acre	Wetland	Section 404
Wetland 6	40.21950876	-79.69377259	0.123 acre	Wetland	Section 404
Wetland 7	40.21585766	-79.69362458	0.283 acre	Wetland	Section 404
wetland 8	40.21621607	-79.6946972	0.179 acre	Wetland	Section 404
Wetland 9	40.21634472	-79.69539388	0.151 acre	Wetland	Section 404
Wetland 10	40.21662375	-79.69568108	0.067 acre	Wetland	Section 404
Wetland 11A	40.21809276	-79.69722657	0.071 acre	Wetland	Section 404
Wetland 11B	40.21797229	-79.69705709	0.003 acre	Wetland	Section 404
Wetland 12	40.2168825	-79.69765507	0.026 acre	Wetland	Section 404
Sewickley Creek	40.2199009	-79.69523382	1404 LF	Non-wetland	Section 404
UNT 1 to Sewickley Creek	40.2191644	-79.69991411	339 LF	Non-wetland	Section 404
UNT 1 to Sewickley Creek	40.21807516	-79.69975793	160 LF	Non-wetland	Section 404
Trib 37643 to Sewickley Creek	40.21756477	-79.69758688	1708 LF	Non-wetland	Section 404

UNT 2 to Trib 37643 to Sewickley Creek	40.21667693	-79.69706587	356 LF	Non-wetland	Section 404
UNT 2 to Trib 37643 to Sewickley Creek	40.2160048	-79.69447806	239 LF	Non-wetland	Section 404
UNT 3 to Trib 37643 to Sewickley Creek	40.21646568	-79.69495597	64 LF	Non-wetland	Section 404

ATTACHMENT 5

EXHIBIT 9-2.8 FROM
PHASE I APPLICATION FOR HAZARDOUS WASTE LANDFILL NO. 7
EXCLUSIONARY SITING CRITERIA REVIEW SUBMITTAL

Mitchell, Tim

From: Brogan, William <wbrogan@pa.gov>
Sent: Thursday, December 12, 2019 11:13 AM
To: Mitchell, Tim; Tomei, Michael; Holesh, Gregory
Cc: Ken Interval; 'Carl Spadaro'; William Follett; Chiado, Eric; Matthews, Mallory; Snyder, Joseph
Subject: RE: [External] MAX Environmental; Landfill No. 7 – Wetlands

Good morning Tim,

The DEP does not have a formal approval process for a regulated wetland and watercourse delineation prior to the issuance of the permit as a whole. That said, I am happy to offer my informal opinion to our waste program that, based upon my previous site visit, I am in agreement with the location and size of identified wetlands and watercourses on the site.

However, it should be noted that the DEP also regulates floodways (50' from top-of-bank), which are not identified in the provided delineation. If fill associated with the proposed landfill will encroach upon regulated floodways, it is recommended that the applicant consult with the DEP Waterways and Wetlands Permitting Program to determine whether a permit waiver is applicable, or if a Chapter 105 permit would be required. I have cc'ed Joe Snyder from the permitting program for further consultation if needed.

Please let me know if you have any questions.

Thanks,
Will

Dr. William R. Brogan III, Ph.D.
Aquatic Biologist
Conservation, Restorations, and Inspections Division
Waterways and Wetlands Program
Pittsburgh, PA 15222
P. 412-442-4338

From: Mitchell, Tim <tmitchell@cecinc.com>
Sent: Thursday, December 12, 2019 8:21 AM
To: Brogan, William <wbrogan@pa.gov>; Tomei, Michael <mtomei@pa.gov>; Holesh, Gregory <gholesh@pa.gov>
Cc: Ken Interval <kinterval@maxenvironmental.com>; 'Carl Spadaro' <cspadaro@maxenvironmental.com>; William Follett <wlfollett@maxenvironmental.com>; Chiado, Eric <echiado@cecinc.com>; Matthews, Mallory <mmatthews@cecinc.com>
Subject: [External] MAX Environmental; Landfill No. 7 – Wetlands

Hi Will, Mike, and Greg.

Recently, the Army Corps of Engineers issued a Preliminary Jurisdictional Determination (PJD) letter for the wetland and stream boundaries delineated near the proposed Landfill No. 7 area at MAX Environmental's Yukon Facility. A copy of the PJD letter is attached to this email.

During the Jurisdictional Determination process, the DEP was invited to participate. Representatives from the DEP (Will Brogan and Mike Tomei) participated in the field visit associated with the PJD held on March 12, 2019. As such, the purpose of this email is to verify the DEP is in concurrence with the outcome of the PJD.

Please let us know.

Thanks

Timothy D. Mitchell, P.E. / Project Manager
Civil & Environmental Consultants, Inc.
4350 Northern Pike Suite 141 Monroeville, PA 15146 *
Toll-Free: (800) 899-3610 · Direct: (724) 387-6316 · Fax: (724) 327-5280
Mobile: (724) 678-5293 · http://www.cecinc.com
Senior Leadership · Integrated Services · Personal Business Relationships

* Please note our office has moved. A new address is shown above.