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.

Ms. Sharon Svitek CEC Project 170-822.2240 Page 2 December 19, 2022

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

Ms. Sharon Svitek CEC Project 170-822.2240 Page 3 December 19, 2022

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 <u>south</u> 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.
 - o 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].

Ms. Sharon Svitek CEC Project 170-822.2240 Page 4 December 19, 2022

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



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 <u>a limited use</u> 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.

/1. //

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

Mr. Mike Engelhardt CEC Project 170-822.1222 Page 2 September 24, 2019

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

Figure WDR-1 - Site Location Map

Figure WDR-2 - U.S. Department of Agriculture (USDA) Soils and National Wetlands Inventory (NWI) Map

Figure WDR-3 – Wetland and Stream Delineation Map

APPENDICES

Appendix A – Completed Data Forms

Appendix B – Photographs

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. <u>Data Collection</u>: 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
Но	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.

-9-

170-822.1220

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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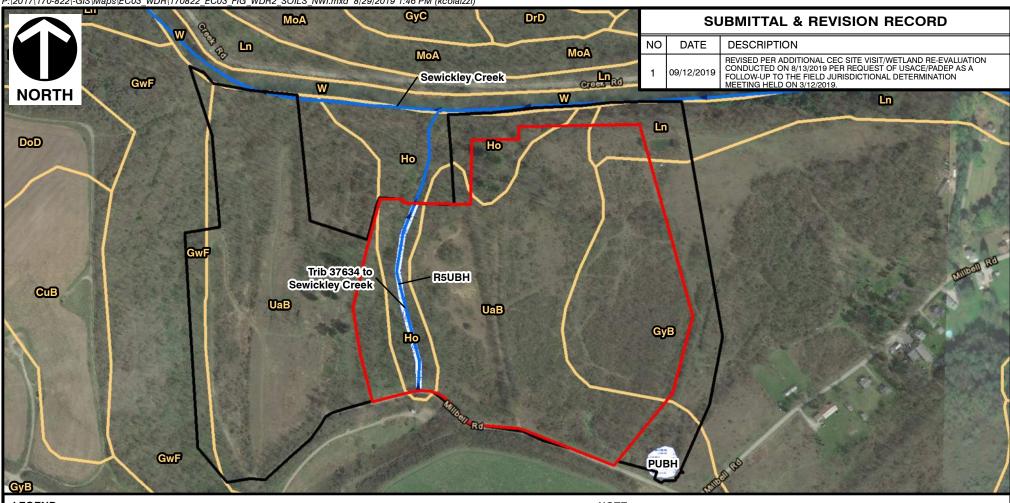
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United States Department of Agriculture Soil Conservation Service (USDA). 1991. *Hydric Soils of the United States*, 1991. In cooperation with the National Technical Committee for Hydric Soils. USDA-SCS, Washington, D.C.



P:\2017\170-822\-G|S\Maps\EC03 WDR\170822 EC03 FIG WDR2 SOILS NWI.mxd 8/29/2019 1:46 PM (kcolaizzi)



LEGEND

PROJECT AREA/AREA OF CONCERN

DELINEATION BOUNDARY

PADEP 305B STREAM

NOTE

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



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.
- AERIAL PHOTOGRAPHY COPYRIGHT GOOGLE EARTH PRO, EXPORTED 03/07/2018 IMAGERY DATE 04/17/2016.



NWI WETLAND

SOIL UNIT

Civil & Environmental Consultants, Inc.

4000 Triangle Lane, Suite 200 - Export, PA 15632 724-327-5200 • 800-899-3610

www.cecinc.com

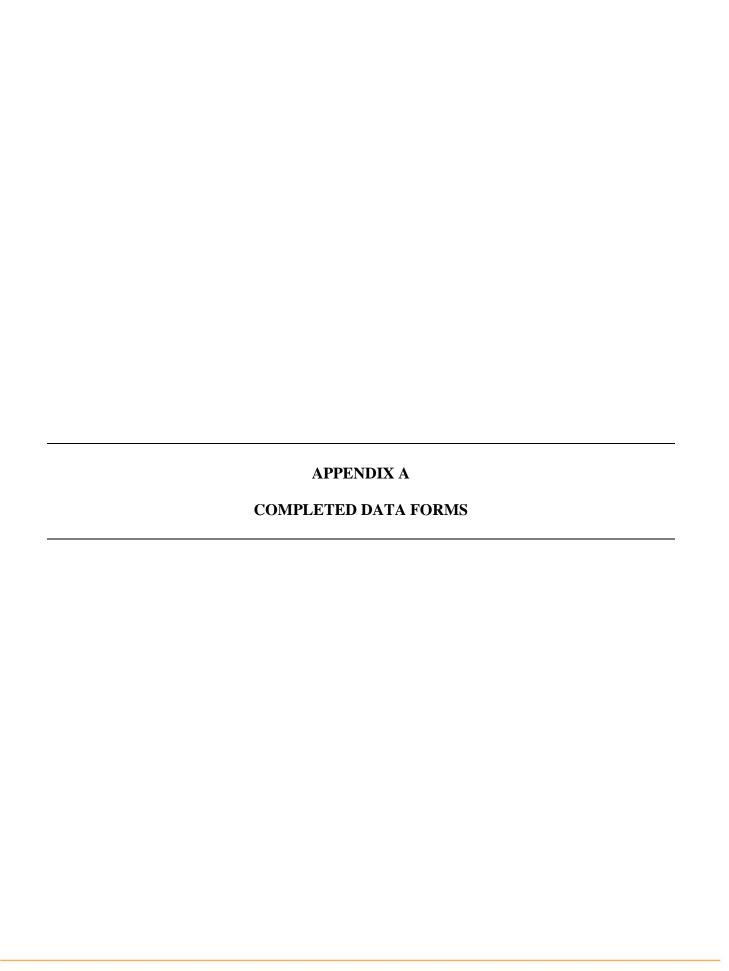
DRAWN BY: KMC CHECKED BY: SVP APPROVED BY: PAK* FIGURE NO: * Hand signature on file on

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

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



* Hand signature on file SHEET 1 OF 1



WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site:	170-822 / \	/ukon Landf	ill No. 7 Expai	nsion	City/County:	Westmore	land Cou	nty		Sampling Date:	: March 8, 2018
Applicant/Owner:		MAX	X Environmen	ital Technolo	gies, Inc.			State:	PA	Sampling Point	: TS-1
Investigator(s):		(CRB, DWL		Se	ection, Towns	hip, Rang	je:	_	South Hunting	don Township
Landform (hillslope, terrace	, etc.):		Terrac	e	Local Re	lief (concave,	convex, no	one):	C	Concave	Slope (%):
Subregion (LRR or MLRA			LRR N	Lat:	40° 13' 0.306	"N Long	1:	79° 41'	55.853" W	Datum	: NAD83
Soil Map Unit Name:			0 to 8 perce		10 10 0.000		,			fication:	-
·							NI.	_			IN/A
Are climatic/hydrologic co			or Hydrology	-	significantly distu	Yes	_			olain in Remarks.) es" present?	
Are Vegetation N	o, Soil	,	or Hydrology	No s	signilicantly distu	ibeu?	Ale IN	Yes	X	No No	
Are Vegetation N	s Soil	No	or Hydrology	No r	naturally problem	atic?	(If need			ers in Remarks.)	_
Are regetation	, 0011		orriyarology	140	naturally problem	auo:	(II IIICCU	си, схріаі	ir arry arrowe	ora in remarks.)	
SUMMARY OF FIND	NGS - At	tach site r	nap showii	ng samplir	ng point locat	ions, trans	ects, in	nportar	nt feature	es, etc.	
Hydrophytic Vegetation F	resent?			Yes X	No						
Hydric Soil Present?				Yes X	No	la tha Camr	olad Araa	Yes	X	No	
Wetland Hydrology Prese	ent?			Yes X	No	within a W	etland?			1 - PEM	_
Remarks:											
Wetland 1 was a disturbe	d field area	with narts a	hutting Pond	1 Wetland	1 was comprised	of 5 parts (1	A 1R 10	: 1D an	d 1F) Par	ts A and B anne	ared to be areas where
equipment entered and e							л, го, го	, 1D, an	u 1L). 1 ai	is A and B appe	area to be areas where
The precipitation in Penn	sylvania wa	s above ave	erage in Febru	uary 2018 an	d March 2018.						
HYDROLOGY											
Wetland Hydrology Indi	cators:								Seconda	ary Indicators (mi	inimum of two required)
Primary Indicators (minimum	of one is rec	uired; check	all that apply)							Surface Soil Crack	ss (B6)
X Surface Water (A1)				True Aquatic	Plants (B14)					Sparsely Vegetate	d Concave Surface (B8)
X High Water Table (A2				Hydrogen Su	lfide Odor (C1)					Drainage Patterns	(B10)
X Saturation (A3)			X	Oxidized Rhiz	zospheres on Living	g Roots (C3)				Moss Trim Lines (E	B16)
Water Marks (B1)			-	Presence of I	Reduced Iron (C4)					Dry-Season Water	Table (C2)
Sediment Deposits (B	2)		-	Recent Iron F	Reduction in Tilled	Soils (C6)				Crayfish Burrows (C8)
Drift Deposits (B3)				Thin Muck Su						Saturation Visible	on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explai	in in Remarks)					Stunted or Stresse	` '
Iron Deposits (B5)										Geomorphic Positi	
X Inundation Visible on	_	y (B7)								Shallow Aquitard (
Water-Stained Leaves	(B9)									Mircotopographic F	` '
Aquatic Fauna (B13)										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	_	Wetlan	d Hydrolo	gy Present?	
Saturation Present? (includes capillary fringe)	Yes	X	No		Depth (inches):	0	_	Yes	Х	No	_
Describe Recorded Data	(stream ga	uge, monito	ring well, aeria	al photos, pre	evious inspection	s), if available	e:	I			
Remarks:											

VEGETATION (Five Strata) - Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species	
1.				That Are OBL, FACW, or FAC: 2	(A)
2.					
3.				Total Number of Dominant	
4.				Species Across All Strata: 2	(B)
E					,
		·		Percent of Dominant Species	
7.				·	(A/B)
	0	= Total Cover			()
Sapling Stratum: (Plot Size: 15)	-			Prevalence Index worksheet:	
				Total % Cover of: Multiply by:	
				OBL species x 1 =	
3				FACW species x 2 =	
					-
				FAC species x 3 = x 4 =	
6					
		·			(B)
7	0	Total Cause		Column Totals:(A)	(B)
Observity Office (Plot Office A.E.)		= Total Cover		Developed Index DIA	
		•		Prevalence Index = B/A =	
1				Hadron hada Wanatadan In dhatana	
2				Hydrophytic Vegetation Indicators:	
3.		·		X 1 - Rapid Test for Hydrophytic Vegetation	
4		· <u></u>		X 2 - Dominance Test is >50%	
5				3 - Prevalence Index is ≤3.0¹	
6		· 		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
7					
	0	= Total Cover	•	Problematic Hydrophytic Vegetation ¹ (Explain)	
Herb Stratum: (Plot size: 5)					
Carex vulpinoidea	40	Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must	
2. <u>Epilobium coloratum</u>	20	Yes	FACW	be present, unless disturbed or problematic.	
Cinna arundinacea	10	No	FACW	Definitions of Four Vegetation Strata:	
Phalaris arundinacea	10	No	FACW	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or	
5. Agrimonia parviflora	5	No	FACW	more in diameter at breast height (DBH), regardless of height.	
6. Lycopus americanus	5	No	OBL	Sapling - Woody plants, excluding woody vines, aproximately	20 ft
7				(6 m) or more in height and less than 3 in. (7.6 cm) DBH.	
8				Shrub - Woody plants, excluding woody vines, aproximately 3	3 to 20
9				ft (1 to 6 m) in height.	
10				Herb - All herbaceous (non-woody) plants, regardless	
11				of size, and woody plants less than 3.28 ft tall.	
12				Woody Vines - All woody vines greater than 3.28 ft in height.	
	90	= Total Cover	•		
Woody Vine Stratum: (Plot size:15)					
1					
2.				Hydrophytic	
3				Vegetation	
4				Present? Yes X No No	•
5					
	0	= Total Cover	•		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)				

Sampling Point:

TS-1

	ription: (Describe to t	he depth				firm the ab	sence of indicator	rs.)
Depth	Matrix			Redox Fea			_	
(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	
							<u> </u>	
	centration, D=Depletion, R	M=Reduce	ed Matrix, MS=Masked S	Sand Grains	S.		² Location: PL= Pore	e Lining, M=Matrix.
Hydric Soil Inc	licators:						Indicators for Prob	lematic Hydric Soils ³ :
Histosol (A	A1)		Dark Surface (S7)				2 cm Muck (A1	0) (MLRA 147)
Histic Epip	pedon (A2)		Polyvalue Below S	Surface (S8) (MLRA 147,1	48)	Coast Prairie R	tedox (A16)
Black Histi	ic (A3)		Thin Dark Surface	(S9) (MLR	RA147, 148)		(MLRA 147, 1	48)
Hydrogen	Sulfide (A4)		Loamy Gleyed Ma	trix (F2)			Piedmont Floor	dplain Soils (F19)
Stratified L	ayers (A5)		X Depleted Matrix (F	3)			(MLRA 136, 1	47)
2 cm Mucl	(A10) (LRR N)		Redox Dark Surface	ce (F6)			Very Shallow D	Park Surface (TF12)
Depleted E	Below Dark Surface (A11)		Depleted Dark Sur	face (F7)			Other (Explain	in Remarks)
Thick Dark	Surface (A12)		Redox Depression	ns (F8)				
Sandy Mu	cky Mineral (S1) (LRR N,		Iron-Manganese M	Masses (F1	2) (LRR N,			
MLRA	147, 148)		MLRA 136)					
Sandy Gle	yed Matrix (S4)		Umbric Surface (F	13) (MLR	A 136, 122)		3Indicators of hydr	ophytic vegetation and
Sandy Red			Piedmont Floodpla			3)		gy must be present,
Stripped N			Red Parent Materi					ed or problematic.
Restrictive Lav	ver (if observed):							
Type:								
_	hoo):						Hydric Soil Presen	t2 Voc V No
Depth (inc	nes).						nyunc son Fresen	t? Yes X No
Remarks:								
1								
1								
1								
1								
I								

WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site:	170-822 / Yuk	on Landfill No. 7 Expar	nsion	City/County:	Westmorela	ınd Coun	ty		Sampling Date:	March 8, 2018
Applicant/Owner:		MAX Environmen	tal Technolo	gies, Inc.			State:	PA	Sampling Point:	TS-2
Investigator(s):		CRB, DWL		Se	ction, Townshi	ip, Range	e:		South Hunting	don Township
Landform (hillslope, terrac	e, etc.):	Terrace	9	Local Re	lief (concave, co	onvex, non	ne):		None	Slope (%):
Subregion (LRR or MLR		LRR N	Lat:	40° 13' 0.392	"N Long:	-	79° 41'	56.134" W	Datum:	NAD83
Soil Map Unit Name:		orthents, 0 to 8 percer							fication:	
Are climatic/hydrologic c					Yes	No			lain in Remarks.)	
· -	o , Soil	No , or Hydrology	-	significantly distu		-			es" present?	
		,,,		g,			Yes	Х	No	
Are Vegetation N	o, Soil	No , or Hydrology	No r	naturally problem	atic?	(If needed	d, explair	n any answe	ers in Remarks.)	-
SUMMARY OF FIND	INGS - Attac	h site map showir	ng samplir	ng point locat	ions, transe	cts, im	portar	nt feature	es, etc.	
Hydrophytic Vegetation I			Yes		I					
Hydric Soil Present?				Na V	la tha Camari		Yes		No X	
Wetland Hydrology Pres	ent?			No X	Is the Sample within a We			Upla	·	-
Remarks:				<u></u>	ļ					
Upland TS-2 paired with	Wetland 1, TS-	1. TS-2 located in an (unmaintaine	d meadow/hayfie	eld.					
The precipitation in Penr	sylvania was al	bove average in Febru	ary 2018 an	d March 2018.						_
HYDROLOGY										
Wetland Hydrology Ind	icators:							Seconda	ry Indicators (min	nimum of two required)
Primary Indicators (minimum	of one is require	11 11							Surface Soil Crack	
Surface Water (A1)		-	True Aquatic	, ,						d Concave Surface (B8)
High Water Table (A2)	-	-	lfide Odor (C1)					Drainage Patterns	
Saturation (A3)				zospheres on Livin	g Roots (C3)				Moss Trim Lines (E	•
Water Marks (B1)				Reduced Iron (C4)					Dry-Season Water	
Sediment Deposits (E	.2)	-		Reduction in Tilled	Soils (C6)				Crayfish Burrows (
Drift Deposits (B3)	4)		Thin Muck Su							on Aerial Imagery (C9)
Algal Mat or Crust (B	+)	-	Other (Explain	n in Remarks)					Stunted or Stresse	` '
Iron Deposits (B5) Inundation Visible on	Aorial Imagon/ (E	7)							Geomorphic Position Shallow Aquitard (I	
Water-Stained Leave	• • •	(1)							Mircotopographic F	
Aquatic Fauna (B13)	3 (00)								FAC-Neutral Test (
Aquatic Fauria (B15)									AO-Neditai Test (53)
Field Observations:										
Surface Water Present?	Yes	No <u>X</u>		Depth (inches):						
Water Table Present?	Yes	NoX		Depth (inches):		.	Wetland	d Hydrolog	gy Present?	
Saturation Present? (includes capillary fringe)	Yes	No <u>X</u>		Depth (inches):			Yes		No X	-
Describe Recorded Data		, monitoring well, aeria	Il photos, pre	evious inspection	s), if available:	_ _				
Remarks:										

VEGETATION (Five Strata) - Use scientific names of plants.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.				That Are OBL, FACW, or FAC: 1 (A)
2.				
3				Total Number of Dominant
A				Species Across All Strata: 3 (B)
				(5)
				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 33% (A/B)
·	0	Total Cover		That Are OBL, FACW, or FAC.
Opening Objectives (Dist Object 45)		= Total Cover		Prevalence Index worksheet:
Sapling Stratum: (Plot Size: 15)				
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3.				FACW species x 2 =
4				FAC species x 3 =
5				FACU speciesx 4 =
6				UPL speciesx 5 =
7				Column Totals: (A) (B)
	0	= Total Cover	r	
Shrub Stratum: (Plot Size: 15)				Prevalence Index = B/A =
Elaeagnus angustifolia	35	Yes	FACU	
2				Hydrophytic Vegetation Indicators:
3				1 - Rapid Test for Hydrophytic Vegetation
4				2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0 ¹
6				4 - Morphological Adaptations ¹ (Provide supporting
7.				data in Remarks or on a separate sheet)
	35	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)				
Herb Stratum: (Plot size: 5) 1. Solidago canadensis	30	Yes	FACU	1 Indicators of hydric soil and watened hydrology must
		Yes Yes	FACU FAC	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Solidago canadensis	30			be present, unless disturbed or problematic.
Solidago canadensis Dichanthelium clandestinum Andropogon virginicus	30 30 5	Yes	FAC	be present, unless disturbed or problematic. Definitions of Four Vegetation Strata:
Solidago canadensis Dichanthelium clandestinum Andropogon virginicus	30 30 5	Yes No	FACU FACU	be present, unless disturbed or problematic.
Solidago canadensis Dichanthelium clandestinum Andropogon virginicus	30 30 5	Yes No	FACU FACU	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.
Solidago canadensis Dichanthelium clandestinum Andropogon virginicus Solidago canadensis Andropogon virginicus	30 30 5	Yes No	FACU FACU	be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Solidago canadensis Dichanthelium clandestinum Andropogon virginicus 6. 7.	30 30 5	Yes No	FACU FACU	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.
Solidago canadensis Dichanthelium clandestinum Andropogon virginicus	30 30 5	Yes No	FACU FACU	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
Solidago canadensis Dichanthelium clandestinum Andropogon virginicus	30 30 5	Yes No	FACU FACU	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.
Solidago canadensis Dichanthelium clandestinum Andropogon virginicus	30 30 5	Yes No	FACU FACU	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
1. Solidago canadensis 2. Dichanthelium clandestinum 3. Andropogon virginicus 4. 5. 6. 7. 8. 9.	30 30 5	Yes No	FACU FACU	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.
Solidago canadensis Dichanthelium clandestinum Andropogon virginicus	30 30 5	Yes No	FACU FACU	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
1. Solidago canadensis 2. Dichanthelium clandestinum 3. Andropogon virginicus 4. 5. 6. 7. 8. 9. 10. 11. 12.	30 30 5	Yes No	FACU FACU	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.
1. Solidago canadensis 2. Dichanthelium clandestinum 3. Andropogon virginicus 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15)	30 30 5	Yes No	FACU FACU	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.
1. Solidago canadensis 2. Dichanthelium clandestinum 3. Andropogon virginicus 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1.	30 30 5	Yes No	FACU FACU	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.
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Sampling Point:

TS-2

SOII	Sampling Point:	TS-2

Profile Desc	ription: (Describe to	the depth	needed to docume	nt the ind	icator or con	firm the al	bsence of indicators.	.)		
Depth Matrix				Redox Fea	tures					
(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			
	-						- ·			
	-									
							<u> </u>			
	centration, D=Depletion, R	RM=Reduce	ed Matrix, MS=Masked	Sand Grains	S.		² Location: PL= Pore Lining, M=Matrix.			
Hydric Soil In	dicators:						Indicators for Problematic Hydric Soils ³ :			
Histosol (A1)		Dark Surface (S7)				2 cm Muck (A10) (MLRA 147)			
Histic Epipedon (A2)			Polyvalue Below Surface (S8) (MLRA 147,148)				Coast Prairie Redox (A16)			
Black Histic (A3)			Thin Dark Surface (S9) (MLRA147, 148)				(MLRA 147, 148	(MLRA 147, 148)		
Hydrogen Sulfide (A4)			Loamy Gleyed Ma	Loamy Gleyed Matrix (F2)				lain Soils (F19)		
Stratified Layers (A5)			Depleted Matrix (Depleted Matrix (F3)				(MLRA 136, 147)		
2 cm Muck (A10) (LRR N)			Redox Dark Surface (F6)				Very Shallow Dar	Very Shallow Dark Surface (TF12)		
Depleted Below Dark Surface (A11)			Depleted Dark Surface (F7)				Other (Explain in Remarks)			
Thick Dark Surface (A12)			Redox Depressio	Redox Depressions (F8)						
Sandy Mu	ucky Mineral (S1) (LRR N,		Iron-Manganese I	Iron-Manganese Masses (F12) (LRR N,						
MLRA 147, 148)		MLRA 136)								
Sandy Gleyed Matrix (S4)			Umbric Surface (F13) (MLRA 136, 122)				³ Indicators of hydrophytic vegetation and			
Sandy Redox (S5)			Piedmont Floodpl	Piedmont Floodplain Soils (F19) (MLRA 148)				wetland hydrology must be present,		
Stripped Matrix (S6)			Red Parent Material (F21) (MLRA 127, 147)				unless disturbed or problematic.			
Restrictive La	yer (if observed):									
	, (
Type:										
Depth (inches):							Hydric Soil Present? Yes No X			
Remarks:							•			
I										

Project/Site:	170-822 / \	/ukon Landfil	ll No. 7 Expar	nsion	City/County:	West	moreland Co	unty		Sampling Date:	March 8, 2018	
Applicant/Owner:		MAX	Environmen	tal Technolo	ogies, Inc.			State:	PA	Sampling Point:	TS-3	
Investigator(s):		C	RB, DWL		Se	ection, To	ownship, Raı	nge:		South Hunting	don Township	
Landform (hillslope, terrac	e, etc.):		Depress	ion	Local Re	elief (cond	cave, convex,	none):		Concave	Slope (%):	
Subregion (LRR or MLR			_RR N	Lat:	40° 13' 2.182	." N	Lona:	79° 41	59.802" W	Datum:		
Soil Map Unit Name:	•	Udorthents,								fication:		
Are climatic/hydrologic of						Voc	N			plain in Remarks.)		
-	lo , Soil		or Hydrology	-	significantly distu	_				es" present?		
7.10 Vogotation	<u>o</u>		or riyarology		oigi iiioaritiy alota	ibou.	7110 1	Yes	X	No		
Are Vegetation	o, Soil	<u>No</u> ,	or Hydrology	No	naturally problem	natic?	(If nee			ers in Remarks.)	-	
SUMMARY OF FINE	INGS - At	tach site n	nap showir	ng samplii	ng point locat	ions, t	ransects, i	importa	nt feature	es, etc.		
Hydrophytic Vegetation	Present?			Yes X	No							
Hydric Soil Present?				Yes X	·	la 41a a 6	Camania d Aua	Yes	X	No		
Wetland Hydrology Pres	ent?			Yes X	No	within	n a Wetland?	a 		2 - PEM		
Remarks:					<u> </u>	-						
Wetland 2 is located in a	depression	up-slope of	Stream 1. W	etland 2 is c	comprised of PEN	//PSS po	ortions. TS-3	3 data wa	s recorded	in the PEM portio	n.	
The precipitation in Pen	ısylvania wə	s above ave	rage in Febru	ıary 2018 an	nd March 2018.							
HYDROLOGY												
Wetland Hydrology Inc	icators:								Seconda	ary Indicators (mir	nimum of two required)	
Primary Indicators (minimus	n of one is rec	uired; check a	ll that apply)							Surface Soil Cracks	s (B6)	
X Surface Water (A1)				True Aquatic	Plants (B14)				Sparsely Vegetated Concave Surface (B8)			
High Water Table (A	<u>?</u>)		-	Hydrogen Su	ılfide Odor (C1)				X Drainage Patterns (B10)			
X Saturation (A3)			X	Oxidized Rhi	zospheres on Livin	g Roots (C3)			Moss Trim Lines (B16)		
Water Marks (B1)				Presence of	Reduced Iron (C4)					Dry-Season Water	Table (C2)	
Sediment Deposits (32)			Recent Iron I	Reduction in Tilled	Soils (C6))		Crayfish Burrows (C8)			
Drift Deposits (B3)				Thin Muck S	urface (C7)					Saturation Visible of	on Aerial Imagery (C9)	
Algal Mat or Crust (E	4)			Other (Explain	in in Remarks)					Stunted or Stresse	d Plants (D1)	
Iron Deposits (B5)										Geomorphic Position	on (D2)	
Inundation Visible on	•	y (B7)							Shallow Aquitard (D3)			
Water-Stained Leave	s (B9)								Mircotopographic Relief (D4)			
Aquatic Fauna (B13)										FAC-Neutral Test (D5)	
Field Observations:												
Surface Water Present?	Yes	X	No		Depth (inches):	0-	-2					
Water Table Present?	Yes		No X		Depth (inches):			Wetlar	nd Hydrolo	gy Present?		
Saturation Present? (includes capillary fringe	Yes	X	No		Depth (inches):)	Yes	X	No	-	
Describe Recorded Data		uge, monitori	ing well, aeria	al photos, pre	evious inspectior	ns), if ava	ailable:	•				
Remarks:												

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.	70 00101			That Are OBL, FACW, or FAC: 3 (A)
				Total Number of Dominant
				Species Across All Strata: 3 (B)
		·		Opecies Across Air Ottala.
				Devent of Deminent Creation
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 100% (A/B)
	0	= Total Cover		Prevalence Index worksheet:
Sapling Stratum: (Plot Size: 15)				
				Total % Cover of: Multiply by:
2.		·		OBL speciesx 1 =
3				FACW speciesx 2 =
4				FAC speciesx 3 =
5		·		FACU speciesx 4 =
6				UPL speciesx 5 =
7				Column Totals: (A)(B)
	0	= Total Cover		
Shrub Stratum: (Plot Size: 15)				Prevalence Index = B/A =
Cornus amomum	10	Yes	FACW	
2.				Hydrophytic Vegetation Indicators:
3.				X 1 - Rapid Test for Hydrophytic Vegetation
4.				X 2 - Dominance Test is >50%
5.				3 - Prevalence Index is ≤3.0 ¹
6.				4 - Morphological Adaptations ¹ (Provide supporting
7.		· 		data in Remarks or on a separate sheet)
	10	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)	-			
1. Scirpus cyperinus	40	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must
Persicaria sagittata	25	Yes	OBL	be present, unless disturbed or problematic.
3. Carex sp.	15	No	_	Definitions of Four Vegetation Strata:
Agrimonia parviflora	10	No	FACW	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Epilobium coloratum	5	No	FACW	more in diameter at breast height (DBH), regardless of height.
Dichanthelium clandestinum	5	No	FAC	Sapling - Woody plants, excluding woody vines, aproximately 20 ft
7.		110	TAO	(6 m) or more in height and less than 3 in. (7.6 cm) DBH.
8				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20
9.		· 		ft (1 to 6 m) in height.
10.		· ———		Harb. All harbassaus (non woods) plants, regardless
				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12	100			Woody Vines - All woody vines greater than 3.28 ft in height.
	100	= Total Cover		
Woody Vine Stratum: (Plot size: 15)				
1				
2				Hydrophytic
3				Vegetation
4				Present?
5				
	0	= Total Cover		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

Sampling Point:

Depth	Matrix		_								
(inches)	Color (moist)	%	Color (moist)	Redox Fea	Type ¹	Loc ²	Texture	Remarks			
0-4	2.5 Y 3/2	90	7.5 YR 5/6	10		PL, M	clay loam				
4-16	2.5 Y 3/1	95	7.5 YR 5/6	5	C	M	clay				
						-					
	- 1										
						-					
		· ——									
		· —— ·									
							. ——— —				
¹ Type: C=Co	ncentration, D=Depletion, R	M=Reduce	d Matrix. MS=Masked	Sand Grains	 S.		² Location: PL= Pore	e Lining, M=Matrix,			
Hydric Soil Ir	· · · · · · · · · · · · · · · · · · ·							lematic Hydric Soils ³ :			
Histosol			Dark Surface (S7	1				·			
	ipedon (A2)		Polyvalue Below	•) (MLRA 147.1	148)	2 cm Muck (A10) (MLRA 147)				
Black His			Thin Dark Surface				Coast Prairie Redox (A16) (MLRA 147, 148)				
	n Sulfide (A4)	,	Loamy Gleyed M					dplain Soils (F19)			
Stratified	Layers (A5)	•	Depleted Matrix (F3)			(MLRA 136, 1	47)			
2 cm Mu	ck (A10) (LRR N)		X Redox Dark Surfa	ace (F6)			Very Shallow Dark Surface (TF12)				
Depleted	Below Dark Surface (A11)	,	Depleted Dark Su	urface (F7)			Other (Explain in Remarks)				
	rk Surface (A12)		Redox Depressio								
	ucky Mineral (S1) (LRR N,		Iron-Manganese	Masses (F1:	2) (LRR N,						
	147, 148)		MLRA 136)	E40) (841 D.A	400 400)		3				
	leyed Matrix (S4) edox (S5)	•	Umbric Surface (Piedmont Floodp			p)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,				
_	Matrix (S6)		Red Parent Mate				wetland hydrology must be present, unless disturbed or problematic.				
Опірроц	Wattix (GG)			a. (. 2 . / (,	unicos distars	ed of problematio.			
Restrictive La	ayer (if observed):										
Type:											
Depth (in	iches):						Hydric Soil Present? Yes X No				
, ,											
Remarks:							•				
l tomano.											

Project/Site:	170-822 / Yukon Landfill No.	7 Expansion	City/County:	Westmoreland Cou	nty	Sampling Date:	March 8, 2018		
Applicant/Owner:	MAX Env	ironmental Technolo	ogies, Inc.		State: PA	Sampling Point:	TS-4		
Investigator(s):	CRB,	DWL	Se	ction, Township, Rang	je:	South Huntingdo	n Township		
Landform (hillslope, terrace	, etc.):	Flat plain	Local Re	lief (concave, convex, no	ne):	None	Slope (%):		
Subregion (LRR or MLRA	\): LRR	N Lat:	40° 13' 2.006	" N Long:	79° 41' 59.34	-			
Soil Map Unit Name:	UaB - Udorthents, 0 to	8 percent slopes			NWI c	lassification:	N/A		
Are climatic/hydrologic co	nditions on the site typical for			Yes No	-	o, explain in Remarks.)			
, ,	, Soil No , or Hy	•	significantly distu			tances" present?			
						(No			
Are Vegetation No.	o, SoilNo, or Hy	drology No	naturally problem	atic? (If neede		answers in Remarks.)			
SUMMARY OF FIND	NGS - Attach site map	showing sampli	ng point locat	ions, transects, in	nportant fea	tures, etc.			
Hydrophytic Vegetation F	resent?	Yes	No X						
Hydric Soil Present?		Yes		Is the Sampled Area	Yes	NoX			
Wetland Hydrology Prese	nt?	Yes	No X	within a Wetland?		Upland			
Remarks:				ļ					
Upland TS-4 paired with	Wetland 2, TS-3 and TS-5. T	S-4 was located in a	an unmaintained i	meadow/hayfield.					
The precipitation in Penn	sylvania was above average	in February 2018 ar	nd March 2018.						
HYDROLOGY									
Wetland Hydrology Indi	cators:				Sec	ondary Indicators (minir	num of two required)		
Primary Indicators (minimum	of one is required; check all that	apply)				Surface Soil Cracks (B6)		
Surface Water (A1)		True Aquatio	Plants (B14)			Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2		Hydrogen Su	ılfide Odor (C1)			Drainage Patterns (B10)			
Saturation (A3)		Oxidized Rhi	zospheres on Living	g Roots (C3)		Moss Trim Lines (B16	6)		
Water Marks (B1)		Presence of	Reduced Iron (C4)			Dry-Season Water Table (C2)			
Sediment Deposits (B	2)	Recent Iron	Reduction in Tilled S	Soils (C6)		Crayfish Burrows (C8)			
Drift Deposits (B3)		Thin Muck S	urface (C7)			Saturation Visible on	Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Expla	in in Remarks)			Stunted or Stressed F	Plants (D1)		
Iron Deposits (B5)						Geomorphic Position	(D2)		
Inundation Visible on						Shallow Aquitard (D3))		
Water-Stained Leaves	(B9)					Mircotopographic Rel			
Aquatic Fauna (B13)						FAC-Neutral Test (D5	5)		
Field Observations:									
Surface Water Present?	Yes No	X	Depth (inches):						
Water Table Present?	Yes No	X	Depth (inches):		Wetland Hyd	rology Present?			
Saturation Present? (includes capillary fringe)	Yes No	X	Depth (inches):		Yes	NoX			
	(stream gauge, monitoring w	rell, aerial photos, pr	evious inspection	s), if available:					
Remarks:									

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.	70 00101	Ороской.	Ciarao	That Are OBL, FACW, or FAC: 0 (A)
				That Ald OBE, I NOW, OI I NO.
				Total Number of Deminent
3				Total Number of Dominant
4				Species Across All Strata: 3 (B)
5	-			
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 0% (A/B)
	0	= Total Cove	r	Prevelence Index weeksheets
Sapling Stratum: (Plot Size: 15	1			Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL speciesx 1 =
3				FACW species x 2 =
4				FAC species x 3 =
5			-	FACU species x 4 =
6.	-	<u></u>		UPL speciesx 5 =
7		, <u></u>		Column Totals: (A)(B)
	0	= Total Cove	r	
Shrub Stratum: (Plot Size: 15		•		Prevalence Index = B/A =
Lonicera japonica	30	Yes	FACU	
Rosa multiflora	5	No	FACU	Hydrophytic Vegetation Indicators:
3. Rubus allegheniensis	5	No	FACU	1 - Rapid Test for Hydrophytic Vegetation
4.				2 - Dominance Test is >50%
	-			3 - Prevalence Index is ≤3.0 ¹
-		· 		4 - Morphological Adaptations ¹ (Provide supporting
7.				data in Remarks or on a separate sheet)
· .	40	Tatal Caus		Problematic Hydrophytic Vegetation ¹ (Explain)
Hards Otractions (Distraction 5		= Total Cove	r	Froblematic Hydrophytic Vegetation (Explain)
Herb Stratum: (Plot size: 5		V	FAOLI	
Solidago canadensis	40	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
2. Poa pratensis	20	Yes	FACU	be present, unless disturbed or problematic.
3. <u>Dichanthelium clandestinum</u>	5	No	FAC	Definitions of Four Vegetation Strata:
4. Glechoma hederacea	5	No	FACU	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
5		. ———		
6				Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
7				(6 m) or more in neight and less than 3 in. (7.6 cm) DBH.
8				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20
9				ft (1 to 6 m) in height.
10				Herb - All herbaceous (non-woody) plants, regardless
11			-	of size, and woody plants less than 3.28 ft tall.
12.				Woody Vines - All woody vines greater than 3.28 ft in height.
	70	= Total Cove	r	
Woody Vine Stratum: (Plot size: 15				
1.				
2.				
3.				Hydrophytic Vegetation
4.				Present? Yes No X
5.				
	0	= Total Cove	r	
Remarks: (Include photo numbers here or on a sep	arate sheet)			
Tromano. (moidae priote namboro nore or on a cop	arato orioot.,			

Sampling Point:

	ription: (Describe to	the depth				firm the al	osence of indicators	s.)			
Depth Matrix				Redox Fea			_				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-16	2.5 Y 4/3	100					silt loam				
		- —					- <u></u> -				
¹ Type: C=Cond	centration, D=Depletion, F	RM=Reduce	ed Matrix, MS=Masked S	Sand Grains	š		² Location: PL= Pore	Lining, M=Matrix.			
Hydric Soil Inc	licators:						Indicators for Probl	lematic Hydric Soils ³ :			
Histosol (A	A1)		Dark Surface (S7))			2 cm Muck (A10	0) (MLRA 147)			
Histic Epip	edon (A2)		Polyvalue Below S	Surface (S8) (MLRA 147,1	48)	Coast Prairie Re	edox (A16)			
Black Histi	ic (A3)		Thin Dark Surface	(S9) (MLR	A147, 148)		(MLRA 147, 14	48)			
Hydrogen	Sulfide (A4)		Loamy Gleyed Ma	atrix (F2)			Piedmont Flood	dplain Soils (F19)			
Stratified L	ayers (A5)		Depleted Matrix (F				(MLRA 136, 14	47)			
2 cm Mucl	(A10) (LRR N)		Redox Dark Surfa				Very Shallow Dark Surface (TF12)				
Depleted E	Below Dark Surface (A11)		Depleted Dark Su	rface (F7)			Other (Explain i				
	Surface (A12)		Redox Depression					······································			
	cky Mineral (S1) (LRR N,		Iron-Manganese M		2) (I RR N .						
	147, 148)		MLRA 136)		-/ (=,						
	yed Matrix (S4)		Umbric Surface (F	13) (MI PA	136 122)		3Indicators of hydro	aphytic vagatation and			
							³ Indicators of hydrophytic vegetation and				
Sandy Red			Piedmont Floodpla				wetland hydrology must be present,				
Stripped M	latrix (S6)		Red Parent Mater	iai (F21) (M	LRA 127, 147)		uniess disturbe	ed or problematic.			
Restrictive Lay	yer (if observed):										
Type:											
Depth (inc	hes):						Hydric Soil Present? Yes No _X_				
Remarks:											
Remarks.											
1											
1											
1											
1											

Project/Site:	170-822 / Y	'ukon Landfil	l No. 7 Expar	nsion	City/County:	West	moreland Co	unty		Sampling Date:	March 8, 2018	
Applicant/Owner:		MAX	Environmen	tal Technolo	ogies, Inc.			State:	PA	Sampling Point:	TS-5	
Investigator(s):		С	RB, DWL		Se	ection, T	ownship, Rar	nge:		South Huntingo	don Township	
Landform (hillslope, terrace	e, etc.):		Depress	ion	Local Re	elief (cond	cave, convex, i	none):		Concave	Slope (%):	
Subregion (LRR or MLR/			RR N	Lat:		,		•		Datum:		
Soil Map Unit Name:		Udorthents,			10 10 0.000					ification:		
·						\/	N.			<u>-</u>	N/A	
Are climatic/hydrologic co				-	significantly distu	_		_		olain in Remarks.) es" present?		
Are Vegetation N	o, Soil		or Hydrology	No :	signincarity distu	ibeur	Ale I	Yes	X	No No		
Are Vegetation N	n Soil	No (or Hydrology	No	naturally problem	atic?	(If nee			ers in Remarks.)	•	
7.110 Vogetation	<u>, </u>		o		naturally problem		(aca, cripia		ore in recinamen,		
SUMMARY OF FIND	INGS - Atı	ach site m	nap showii	ng samplii	ng point locat	ions, t	ransects, i	mporta	nt feature	es, etc.		
Hydrophytic Vegetation F	resent?			Yes X	No							
Hydric Soil Present?				Yes X	·	ا ماله ما	Camania d Ana	Yes	Х	No		
Wetland Hydrology Pres	ent?			Yes X	No	withir	n a Wetland?	a 		2 - PSS		
Remarks:												
Wetland 2 is located in a	depression	up-slope of S	Stream 1. W	etland 2 is c	comprised of PEN	//PSS p	ortions. TS-5	data was	s recorded	in the PSS portion	n.	
				0040								
The precipitation in Penn	sylvania was	s above aver	rage in Febru	ary 2018 an	nd March 2018.							
HYDROLOGY											,	
Wetland Hydrology Ind	cators:								Seconda	ary Indicators (mir	nimum of two required)	
Primary Indicators (minimum	of one is req	uired; check al	ll that apply)							Surface Soil Cracks	s (B6)	
X Surface Water (A1)				•	Plants (B14)				Sparsely Vegetated Concave Surface (B8)			
X High Water Table (A2)			Hydrogen Su	ılfide Odor (C1)				X Drainage Patterns (B10)			
X Saturation (A3)				Oxidized Rhi	zospheres on Livin	g Roots (C3)			Moss Trim Lines (B	16)	
Water Marks (B1)				Presence of	Reduced Iron (C4)					Dry-Season Water	Table (C2)	
Sediment Deposits (B	2)			Recent Iron I	Reduction in Tilled	Soils (C6)		Crayfish Burrows (C8)			
Drift Deposits (B3)				Thin Muck S						Saturation Visible o	n Aerial Imagery (C9)	
Algal Mat or Crust (B4	.)			Other (Explai	in in Remarks)					Stunted or Stressed		
Iron Deposits (B5)										Geomorphic Position		
Inundation Visible on		y (B7)							Shallow Aquitard (D3)			
Water-Stained Leaves	; (B9)								Mircotopographic Relief (D4)			
Aquatic Fauna (B13)										FAC-Neutral Test (I	D5)	
Field Observations:												
Surface Water Present?	Yes	Х	No		Depth (inches):	0.	-1					
Water Table Present?	Yes	X	No		Depth (inches):		<u>'</u> 1	Wetlan	d Hvdrolo	gy Present?		
Saturation Present?	Yes	X	No		Depth (inches):		<u> </u>	Yes	•			
(includes capillary fringe)	100				Dopur (monoc).		<u>, </u>	100			•	
Describe Recorded Data	(stream gai	uge, monitori	ng well, aeria	al photos, pre	evious inspectior	ns), if av	ailable:					
Remarks:												

Tree Stratum (Plot size: 30)	Absolute	Dominant	Indicator	Dominance Test worksheet:
	% Cover	Species?	Status	Number of Dominant Species
1. Ulmus americana	10	Yes	FACW	That Are OBL, FACW, or FAC: 3 (A)
2.				,,
				Total Number of Dominant
A				Species Across All Strata: 3 (B)
				(5)
				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 100% (A/B)
· .	10	Tatal Cause		That Are OBL, FACW, or FAC. 100% (A/B)
Operline Offstrome (Dist Offstrome 45)	10	= Total Cover		Prevalence Index worksheet:
Sapling Stratum: (Plot Size: 15)		.,		
Ulmus americana	60	Yes	FACW	Total % Cover of: Multiply by:
2				OBL speciesx 1 =
3				FACW speciesx 2 =
4				FAC species x 3 =
5				FACU species x 4 =
6				UPL species x 5 =
7				Column Totals: (A) (B)
	60	= Total Cover	•	
Shrub Stratum: (Plot Size: 15)				Prevalence Index = B/A =
1				
2.				Hydrophytic Vegetation Indicators:
3.				X 1 - Rapid Test for Hydrophytic Vegetation
4.				X 2 - Dominance Test is >50%
5.				3 - Prevalence Index is ≤3.0 ¹
				4 - Morphological Adaptations ¹ (Provide supporting
7.				data in Remarks or on a separate sheet)
	0	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)		= Total Cove		- Troblemano riyaropriyalo vogotalion (Explain)
1. Poa palustris	35	Yes	FACW	
1. I da palastiis	55	103	TAOW	
2 Parsicaria sagittata	10	No	OBL	¹ Indicators of hydric soil and wetland hydrology must
Persicaria sagittata	10	No No	OBL	be present, unless disturbed or problematic.
3. Juncus effusus	5	No	FACW	be present, unless disturbed or problematic. Definitions of Four Vegetation Strata:
Juncus effusus Epilobium coloratum				be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Juncus effusus Epilobium coloratum	5	No	FACW	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.
3. Juncus effusus 4. Epilobium coloratum 5. 6.	5	No	FACW	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
3. Juncus effusus 4. Epilobium coloratum 5. 6	5	No No	FACW	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.
3. Juncus effusus 4. Epilobium coloratum 5. 6	5 5	No No	FACW FACW	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
3. Juncus effusus 4. Epilobium coloratum 5. 6	5 5	No No	FACW FACW	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.
3. Juncus effusus 4. Epilobium coloratum 5. 6. 7. 8. 9. 10.	5 5	No No	FACW FACW	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
3. Juncus effusus 4. Epilobium coloratum 5. 6. 7. 8. 9.	5 5	No No	FACW FACW	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.
3. Juncus effusus 4. Epilobium coloratum 5. 6. 7. 8. 9. 10.	5 5	No No	FACW FACW	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
3. Juncus effusus 4. Epilobium coloratum 5. 6. 7. 8. 9. 10	5 5	No No	FACW	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.
3. Juncus effusus 4. Epilobium coloratum 5. 6. 7. 8. 9. 10	5 5	No No	FACW	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.
3. Juncus effusus 4. Epilobium coloratum 5. 6. 7. 8. 9. 10. 11. 12.	5 5	No No	FACW	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.
3.	5 5	No No	FACW	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.
3.	5 5	No No	FACW	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
3.	5 5	No No	FACW	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.
3.	5 5	No No	FACW	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
3.	5 5	No No	FACW	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
3.	5 5 5 5 0 0	No No Total Cover	FACW	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
3.	5 5 5 5 0 0	No No Total Cover	FACW	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
3.	5 5 5 5 0 0	No No Total Cover	FACW	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
3.	5 5 5 5 0 0	No No Total Cover	FACW	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
3.	5 5 5 5 0 0	No No Total Cover	FACW	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
3.	5 5 5 5 0 0	No No Total Cover	FACW	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

Sampling Point:

	cription: (Describe to	the depth	needed to docume			nfirm the a	bsence of indicators.)	1			
Depth	Matrix			Redox Fea		_					
(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=Cor	ncentration, D=Depletion, I	RM=Reduced	d Matrix, MS=Masked	Sand Grains	 S.		² Location: PL= Pore Li	ning, M=Matrix.			
Hydric Soil In	•		·				Indicators for Problem				
Histosol ((A1)		Dark Surface (S7)				•			
	ipedon (A2)	-	Polyvalue Below) (MLRA 147.1	48)	2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)				
Black His	. , ,	-	Thin Dark Surface	,		,	Coast Prairie Redox (A16) (MLRA 147, 148)				
	n Sulfide (A4)	-	Loamy Gleyed Ma	. , .	, ,		Piedmont Floodpla				
	Layers (A5)	-	Depleted Matrix ((MLRA 136, 147)				
	ck (A10) (LRR N)	-	X Redox Dark Surfa				Very Shallow Dark Surface (TF12)				
Depleted	Below Dark Surface (A11)	Depleted Dark Su				Other (Explain in Remarks)				
Thick Da	rk Surface (A12)		Redox Depressio	ns (F8)				,			
Sandy M	ucky Mineral (S1) (LRR N	,	Iron-Manganese I	Masses (F1	2) (LRR N,						
MLRA	147, 148)		MLRA 136)								
Sandy GI	leyed Matrix (S4)		Umbric Surface (I	F13) (MLR A	136, 122)		³ Indicators of hydrophytic vegetation and				
Sandy Re	edox (S5)		Piedmont Floodpl	ain Soils (F	19) (MLRA 14 8	3)	wetland hydrology must be present,				
Stripped	Matrix (S6)	-	Red Parent Mater	rial (F21) (M	ILRA 127, 147))	unless disturbed or problematic.				
Restrictive La	ayer (if observed):										
Type:											
Depth (in	nches):						Hydric Soil Present?	Yes X No			
Remarks:											

Project/Site:	170-822 / \	′ukon Landfi	ll No. 7 Expar	nsion	City/County:	West	moreland C	County		_ Sampling Date:	: March 8, 2018		
Applicant/Owner:		MAX	(Environmen	tal Technolo	ogies, Inc.			Stat	e: PA	Sampling Point	: TS-6		
Investigator(s):			CRB, DWL		Se	ection, T	ownship, R	ange:		South Hunting	don Township		
Landform (hillslope, terrac	e, etc.):		Floodpla	ain	Local Re	elief (con	cave, conve	k, none):		Concave	Slope (%):		
Subregion (LRR or MLR		-	LRR N	Lat:	40° 13' 11.14	0" N	Long:	79°	42' 0.722" V	V Datum:			
Soil Map Unit Name:	•		0 to 8 percei							sification:			
·						Voc		No v			13/73		
Are climatic/hydrologic c Are Vegetation N	o , Soil		or Hydrology	-	significantly distu	-				xplain in Remarks.) ces" present?			
The vegetation	<u>, co</u>		orriyarology	110	oigimiodiniy diote	ibou.	7110	Yes	Х	•			
Are Vegetation N	o, Soil	<u>No</u> ,	or Hydrology	No	naturally problem	natic?	(If n			wers in Remarks.)	_		
SUMMARY OF FIND	INGS - At	tach site r	nap showii	ng sampli	ng point loca	tions, t	ransects	, import	ant featu	res, etc.			
Hydrophytic Vegetation I				Yes X	No			, ,					
Hydric Soil Present?	rooont.			Yes X		l		Ye	es X	No			
Wetland Hydrology Pres	ent?			Yes X		Is the within	Sampled Al n a Wetland	rea !?	_	d 3 - PEM			
Remarks:											_		
Wetland 3 is located with	in Stream 1	floodplain.	Area appeare	ed to be exca	avated to make p	onded v	water.						
The precipitation in Penr	sylvania wa	s above ave	rage in Febru	ıary 2018 ar	nd March 2018.								
HYDROLOGY													
Wetland Hydrology Ind	icators:								Second	dary Indicators (mi	inimum of two required)		
Primary Indicators (minimun	of one is rec	uired; check a	all that apply)							_Surface Soil Crack	ss (B6)		
X Surface Water (A1)				True Aquatio	Plants (B14)					_Sparsely Vegetate	d Concave Surface (B8)		
X High Water Table (A2)			Hydrogen Su	ulfide Odor (C1)					_ Drainage Patterns	(B10)		
X Saturation (A3)				Oxidized Rhi	izospheres on Livin	g Roots ((C3)			_ Moss Trim Lines (E	B16)		
Water Marks (B1)				Presence of	Reduced Iron (C4)					_ Dry-Season Water	Table (C2)		
Sediment Deposits (E	2)			Recent Iron	Reduction in Tilled	Soils (C6	i)			_ Crayfish Burrows (C8)		
Drift Deposits (B3)				Thin Muck S	Surface (C7)					_Saturation Visible	on Aerial Imagery (C9)		
Algal Mat or Crust (B	1)			Other (Expla	in in Remarks)					_Stunted or Stresse	ed Plants (D1)		
Iron Deposits (B5)										_Geomorphic Positi	on (D2)		
Inundation Visible on	-	y (B7)								_ Shallow Aquitard (D3)		
Water-Stained Leave	s (B9)									Mircotopographic Relief (D4)			
Aquatic Fauna (B13)										_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	Wetl	and Hydrol	ogy Present?			
Saturation Present? (includes capillary fringe)	Yes	X	No		Depth (inches):)	Yes	xX	No	_		
Describe Recorded Data		uge, monitor	ing well, aeria	al photos, pr	evious inspection	ns), if av	ailable:						
Remarks:													

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.	-			That Are OBL, FACW, or FAC: 2 (A)
2.				
2				Total Number of Dominant
A				Species Across All Strata: 2 (B)
				(5)
				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 100% (A/B)
	0	Total Cayor		That Are OBL, FACW, OF FAC.
Openition Official (Dist. Office)		= Total Cover		Prevalence Index worksheet:
Sapling Stratum: (Plot Size: 15)				
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3.				FACW speciesx 2 =
4				FAC species x 3 =
5				FACU species x 4 =
6				UPL speciesx 5 =
7				Column Totals: (A) (B)
	0		•	
Shrub Stratum: (Plot Size: 15)				Prevalence Index = B/A =
1				
2				Hydrophytic Vegetation Indicators:
3				X 1 - Rapid Test for Hydrophytic Vegetation
4			<u> </u>	X 2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0 ¹
6				4 - Morphological Adaptations ¹ (Provide supporting
7.				data in Remarks or on a separate sheet)
	0	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)				
1. Microstegium vimineum	30	Yes	FAC	1 Indicators of hydric soil and wetland hydrology must
		Yes Yes	FAC FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. Microstegium vimineum	30			
Microstegium vimineum Phalaris arundinacea	30 30 5	Yes	FACW	be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Microstegium vimineum Phalaris arundinacea Poa palustris 4.	30 30 5	Yes No	FACW FACW	be present, unless disturbed or problematic. Definitions of Four Vegetation Strata:
Microstegium vimineum Phalaris arundinacea Poa palustris 5	30 30 5	Yes No	FACW FACW	be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Microstegium vimineum Phalaris arundinacea Poa palustris 6	30 30 5	Yes No	FACW FACW	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.
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8	30 30 5	Yes No	FACW FACW	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.
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8.	30 30 5	Yes No	FACW FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9.	30 30 5	Yes No	FACW FACW	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.
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9. 10.	30 30 5	Yes No	FACW FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6	30 30 5	Yes No	FACW FACW	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.
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9. 10.	30 30 5	Yes No	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9. 10. 11. 12.	30 30 5	Yes No	FACW	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.
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15)	30 30 5	Yes No	FACW	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.
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1.	30 30 5	Yes No	FACW	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.
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1. 2.	30 30 5	Yes No	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9. 10. 11. 12.	30 30 5	Yes No	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9. 10. 11. 12.	30 30 5	Yes No	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9. 10. 11. 12.	30 30 5	Yes No Total Cover	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6.	30 30 5 	Yes No	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6. 7. 8. 9. 10. 11. 12.	30 30 5 	Yes No Total Cover	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6.	30 30 5 	Yes No Total Cover	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6.	30 30 5 	Yes No Total Cover	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6.	30 30 5 	Yes No Total Cover	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6.	30 30 5 	Yes No Total Cover	FACW	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
1. Microstegium vimineum 2. Phalaris arundinacea 3. Poa palustris 4. 5. 6.	30 30 5 	Yes No Total Cover	FACW	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

Sampling Point:

	Matrix			Redox Feat	tures		_						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Remarks					
0-16	10 YR 3/2	95	, ,	5	С	M							
0-10	0-10 10 110 3/2		7.5 YR 5/4			М	clay loam						
							 						
							<u> </u>						
							 						
Type: C=Cond	centration, D=Depletion, RI	√=Reduce	d Matrix, MS=Masked	Sand Grains	i.		² Location: PL= Pore	e Lining, M=Matrix.					
Hydric Soil Ind	licators:						Indicators for Prob	lematic Hydric Soils ³ :					
Histosol (A	(1)		Dark Surface (S7))			2 cm Muck (A1						
Histic Epip			Polyvalue Below		(MLRA 147.1	48)	Coast Prairie R						
Black Histi			Thin Dark Surface			-,	(MLRA 147, 1						
	Sulfide (A4)		Loamy Gleyed Ma		, -,			dplain Soils (F19)					
Stratified L	, ,		Depleted Matrix (I				(MLRA 136, 147)						
2 cm Muck	(A10) (LRR N)		X Redox Dark Surfa				Very Shallow Dark Surface (TF12)						
Depleted F	Below Dark Surface (A11)		Depleted Dark Su	rface (F7)		Other (Explain in Remarks)							
Thick Dark	Surface (A12)		Redox Depression	ns (F8)									
Sandy Mud	cky Mineral (S1) (LRR N,		Iron-Manganese I	Masses (F12	2) (LRR N,								
MLRA 1	147, 148)		MLRA 136)										
Sandy Gle	yed Matrix (S4)		Umbric Surface (F	-13) (MLRA	136, 122)	³ Indicators of hydrophytic vegetation and							
Sandy Red			Piedmont Floodpl				wetland hydrology must be present,						
Stripped M	latrix (S6)		Red Parent Mater	rial (F21) (M	LRA 127, 147)		unless disturb	ed or problematic.					
-	er (if observed):												
Type:													
	hes):						Hydric Soil Presen	t? Yes X No					
Depth (incl													
Depth (incl													

Project/Site:	170-822 / Yul	on Landfill No. 7 Expar	nsion	City/County:	Westm	oreland Cour	nty		Sampling Date:	March 8, 2018
Applicant/Owner:		MAX Environmen	tal Technolog	gies, Inc.			State:	PA	Sampling Point:	TS-7
Investigator(s):		CRB, DWL		S	ection, Tov	vnship, Rang	e:		South Huntingd	on Township
Landform (hillslope, terrace	e, etc.):	Hillslop	e	Local R	elief (conca	ve, convex, no	ne):		None	Slope (%):
Subregion (LRR or MLR	_	LRR N	Lat:	40° 13' 11.34	7" N L	ona:	79° 42' (0.451" W	Datum:	
Soil Map Unit Name:	· _	dorthents, 0 to 8 percer							fication:	
Are climatic/hydrologic co					Yes	No			lain in Remarks.)	
	o , Soil	No , or Hydrology	-	ignificantly distu					es" present?	
	,	, ,					Yes	X	No	
Are Vegetation N	o, Soil	No , or Hydrology	<u>No</u> n	aturally problen	natic?	(If neede	ed, explain	any answe	ers in Remarks.)	
SUMMARY OF FIND	INGS - Atta	ch site map showir	ng samplin	g point loca	tions, tra	ınsects, im	portant	t feature	s, etc.	
Hydrophytic Vegetation I		· · · · · · · · · · · · · · · · · · ·	Yes			<u> </u>	•			
Hydric Soil Present?				No X	la tha Ca		Yes		No X	
Wetland Hydrology Pres	ent?		Yes	No X	within a	mpled Area a Wetland?		Upla		
Remarks:					<u> </u>					
Upland TS-7 paired with	Wetland 3, TS	-6. TS-7 located on for	ested hillslop	e.						
The precipitation in Penr	ısylvania was a	above average in Febru	ary 2018 and	d March 2018.						
HYDROLOGY										
Wetland Hydrology Ind	icators:							Seconda	ry Indicators (min	imum of two required)
Primary Indicators (minimun	of one is requir	ed; check all that apply)							Surface Soil Cracks	
Surface Water (A1)			True Aquatic I	, ,						Concave Surface (B8)
High Water Table (A2	.)		Hydrogen Sulf						Drainage Patterns (E	•
Saturation (A3)		-	•	ospheres on Livir	-	3)			Moss Trim Lines (B1	
Water Marks (B1)	,		•	Reduced Iron (C4)					Dry-Season Water T	
Sediment Deposits (E	52)		_!	eduction in Tilled	Soils (C6)				Crayfish Burrows (C	
Drift Deposits (B3)			Thin Muck Su							Aerial Imagery (C9)
Algal Mat or Crust (B	1)		Other (Explain	n in Remarks)					Stunted or Stressed	` '
Iron Deposits (B5)	A a sia	0.7)							Geomorphic Position	
Inundation Visible on	• • •	B7)							Shallow Aquitard (D:	
Water-Stained Leave	s (B9)								Mircotopographic Re FAC-Neutral Test (D	
Aquatic Fauna (B13)									FAC-Neutral Test (L	15)
Field Observations:										
Surface Water Present?	Yes	No <u>X</u>		Depth (inches):						
Water Table Present?	Yes	NoX		Depth (inches):	-		Wetland	Hydrolog	gy Present?	
Saturation Present? (includes capillary fringe)	Yes _	No X		Depth (inches):			Yes _		No X	
Describe Recorded Data		e, monitoring well, aeria	al photos, pre	vious inspection	ns), if avail	able:				
Remarks:										

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1. Acer saccharum	50	Yes	FACU	That Are OBL, FACW, or FAC: 0 (A)
2. Prunus serotina	5	No	FACU	
3.				Total Number of Dominant
4		. <u></u> .		Species Across All Strata: 5 (B)
5		· .		
6		. <u></u>		Percent of Dominant Species
7		. <u></u> .		That Are OBL, FACW, or FAC: 0% (A/B)
	55	= Total Cover		
Sapling Stratum: (Plot Size:15)			Prevalence Index worksheet:
1. Acer saccharum	35	Yes	FACU	Total % Cover of: Multiply by:
2				OBL speciesx 1 =
3				FACW speciesx 2 =
4				FAC species x 3 =
5				FACU species x 4 =
6		·		UPL speciesx 5 =
7				Column Totals:(A)(B)
	35	= Total Cover		
Shrub Stratum: (Plot Size: 15)			Prevalence Index = B/A =
1				
2.				Hydrophytic Vegetation Indicators:
3				1 - Rapid Test for Hydrophytic Vegetation
4				2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0¹
6		·		4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7				
	0	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5	,	.,	E4.011	
1. Alliaria petiolata	30	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
2. Allium cernuum	25	Yes	FACU	be present, unless disturbed or problematic.
3. Viola sororia	10	No No	FACW	Definitions of Four Vegetation Strata:
4. Poa palustris	10	No	FACW	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
5		· ——		
6				Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
7				
8				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.
9.				
10		· ——		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11 12.		· ——		Woody Vines - All woody vines greater than 3.28 ft in height.
12.	75	= Total Cover		Woody vines - All woody vines greater than 5.20 it in neight.
Woody Vine Stratum: (Plot size: 15	-	= Total Cover		
Vitis aestivalis) 45	Yes	FACU	
2.	45	163	1 700	
3.				Hydrophytic
4.		. ———		Vegetation Present? Yes No _ X _
5.	-	. ———		103 NOX_
·	45	= Total Cover		
Remarks: (Include photo numbers here or on a se	parate sheet)			<u> </u>
remarks. (include prote numbers here of on a sep	Darate Sricet.)			

Sampling Point:

Profile Desc Depth	cription: (Describe to Matrix	the depth	needed to docume	nt the ind Redox Fea		firm the at	sence of indicators	š.)			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Remarks			
, ,	· · · · · · · · · · · · · · · · · · ·		Color (Inoist)		Турс	LOC		Remarks			
0-16	10 YR 3/3	100					silt loam				
	-						·				
							· 				
					·		-				
							·				
							· · · · · · · · · · · · · · · · · · ·				
¹ Type: C=Cor	ncentration, D=Depletion, F	RM=Reduce	d Matrix, MS=Masked	Sand Grains	s.		² Location: PL= Pore	Lining, M=Matrix.			
Hydric Soil In	ndicators:						Indicators for Proble	ematic Hydric Soils ³ :			
Histosol ((A1)		Dark Surface (S7))			2 cm Muck (A10) (MLRA 147)			
Histic Epi	ipedon (A2)		Polyvalue Below	Surface (S8) (MLRA 147,14	48)	Coast Prairie Re	edox (A16)			
Black His	stic (A3)		Thin Dark Surface	e (S9) (MLR	(A147, 148)		(MLRA 147, 14	18)			
Hydroger	n Sulfide (A4)		Loamy Gleyed Ma	atrix (F2)			Piedmont Flood	plain Soils (F19)			
Stratified	Layers (A5)		Depleted Matrix (I				(MLRA 136, 14	[7)			
	ck (A10) (LRR N)		Redox Dark Surfa	,				ark Surface (TF12)			
	Below Dark Surface (A11)		Depleted Dark Su				Other (Explain in Remarks)				
	rk Surface (A12)		Redox Depression				Other (Explain ii	Tremarks)			
	, ,				0) // DD N						
_	ucky Mineral (S1) (LRR N,		Iron-Manganese I	viasses (F1)	2) (LRR N,						
	147, 148)		MLRA 136)								
Sandy Gl	leyed Matrix (S4)		Umbric Surface (F	F13) (MLRA	1 136, 122)		³ Indicators of hydrophytic vegetation and				
Sandy Re	edox (S5)		Piedmont Floodpl	ain Soils (F	19) (MLRA 148))	wetland hydrology must be present,				
Stripped	Matrix (S6)		Red Parent Mater	rial (F21) (M	ILRA 127, 147)		unless disturbed or problematic.				
Restrictive La	ayer (if observed):										
Type:											
Depth (in	ches).						Hydric Soil Present	? Yes No X			
Dopui (iii							Try and con trecent	. 105 <u></u> 110 <u></u>			
Remarks:											

Project/Site:	170-822 / `	Yukon Landfill N	No. 7 Expai	nsion	City/County:	West	tmoreland C	County		_ Sampling Da	te: March 8, 2018
Applicant/Owner:		MAX E	Environmen	tal Technolo	ogies, Inc.			Sta	te: PA	Sampling Poi	int: TS-8
Investigator(s):		CR	B, DWL		Se	ection, T	ownship, R	ange:		 South Huntii	ngdon Township
Landform (hillslope, terrac	e, etc.):		Floodpla	ain	Local Re	lief (con	cave, convex	k, none):		Concave	Slope (%):
Subregion (LRR or MLR		LR	RR N	Lat:	40° 13' 5.155	" N	Long:	79°	41' 51.999" '	W Datu	
Soil Map Unit Name:		Holly silt loam,								sification:	
Are climatic/hydrologic o						Voc		No v		xplain in Remarks.	
· -	lo , Soil			-	significantly distu	-				ces" present?	•)
			,					Yes	Х	No	
Are Vegetation N	o, Soil	<u>No</u> , or	Hydrology	No	naturally problem	atic?	(If ne	eeded, ex	plain any ans	wers in Remarks.)	
SUMMARY OF FINE	INGS - At	tach site ma	ap showii	ng sampli	ng point locat	ions, t	transects,	, impor	tant featu	res, etc.	
Hydrophytic Vegetation			<u> </u>	Yes X	No	T		<u> </u>			
Hydric Soil Present?				Yes X		lo tho	Compled A	Y	es X	No	
Wetland Hydrology Pres	ent?			Yes X	No	within	n a Wetland	iea i?		d 4 - PEM	<u> </u>
Remarks:											
Wetland 4 is located in S				·		d 4B). T	ΓS-8 data wa	as recor	ded in part 4	A.	
The precipitation in Peni	sylvania wa	s above avera	ge in Febru	ıary 2018 ar	nd March 2018.						
HYDROLOGY											
Wetland Hydrology Ind	icators:								Secon	dary Indicators (minimum of two required)
Primary Indicators (minimur	n of one is red	quired; check all t	that apply)							_ Surface Soil Cra	icks (B6)
Surface Water (A1)				•	Plants (B14)						ated Concave Surface (B8)
High Water Table (A2	:)			Hydrogen Su	ulfide Odor (C1)				X	_ Drainage Patter	ns (B10)
X Saturation (A3)			-	-	zospheres on Livin	g Roots ((C3)			_ Moss Trim Lines	
X Water Marks (B1)				-	Reduced Iron (C4)					_ Dry-Season Wa	
Sediment Deposits (I	·2)			•	Reduction in Tilled	Soils (C6	5)			_ Crayfish Burrow	
Drift Deposits (B3)				Thin Muck S							le on Aerial Imagery (C9)
Algal Mat or Crust (B	1)			Other (Expla	in in Remarks)				-	_Stunted or Stres	, ,
Iron Deposits (B5)	A	- (D7)							-	_ Geomorphic Pos	
Inundation Visible on		y (B7)							-	_ Shallow Aquitaro	
Water-Stained Leave	s (B9)									_ Mircotopographi	
Aquatic Fauna (B13)										_ FAC-Neutral Tes	st (D5)
Field Observations:											
Surface Water Present?	Yes		No X		Depth (inches):						
Water Table Present?	Yes		No X		Depth (inches):			Wet	land Hydrol	ogy Present?	
Saturation Present? (includes capillary fringe	Yes	X	No		Depth (inches):	(0	Ye	s <u>X</u>	No	_
Describe Recorded Data	(stream ga	uge, monitorin	g well, aeria	al photos, pr	evious inspection	ıs), if av	ailable:				
Remarks:											

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1. Acer negundo	15	Yes	FAC	That Are OBL, FACW, or FAC: 3 (A)
2.	-			
3.				Total Number of Dominant
4.				Species Across All Strata: 3 (B)
				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 100% (A/B)
· ·	15	= Total Cover		
Sapling Stratum: (Plot Size: 15)			Prevalence Index worksheet:
4	,			Total % Cover of: Multiply by:
3				OBL species x 1 =
3				FACW species x 2 =
4				FAC species
5				FACU species x 4 =
-				UPL species
7.				Column Totals: (A) (B)
	0	= Total Cover		
Shrub Stratum: (Plot Size: 15)			Prevalence Index = B/A =
1				Trotalonio instituti and
2.				Hydrophytic Vegetation Indicators:
3				X 1 - Rapid Test for Hydrophytic Vegetation
4				X 2 - Dominance Test is >50%
-				3 - Prevalence Index is ≤3.0¹
-				4 - Morphological Adaptations ¹ (Provide supporting
7.				data in Remarks or on a separate sheet)
··	0	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5		= 10(a) 00(5)		Trobonium Trydrophym Togotamor. (224500.)
1 Migrostogium viminoum	25	Yes	FAC	
Poa palustris	20	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
			IACT	Definitions of Four Vegetation Strata:
A				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of height.
6				Sapling - Woody plants, excluding woody vines, aproximately 20 ft
7				(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
9.				ft (1 to 6 m) in height.
9				
				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11.				Woody Vines - All woody vines greater than 3.28 ft in height.
12	45	Tatal Cover		Woody vines - All woody vines greater than 3.20 it in neight.
(Diet eize) 45		= Total Cover	•	
Woody Vine Stratum: (Plot size: 15)			
1				
2				Hydrophytic
3				Vegetation
4	-			Present?
5	0	= Total Cover		
		= 10(a) 0070.		
Remarks: (Include photo numbers here or on a se	parate sheet.)			

Sampling Point:

	cription: (Describe to	the depth	needed to docume			nfirm the a	bsence of indicators.)			
Depth	Matrix	0/	0-1 (Redox Fea		Loc ²		Demode			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	-	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											
	ncentration, D=Depletion, F	RM=Reduce	d Matrix, MS=Masked	Sand Grains	S.		² Location: PL= Pore L				
Hydric Soil In							Indicators for Problem	matic Hydric Soils ³ :			
Histosol (,		Dark Surface (S7				2 cm Muck (A10)				
	ipedon (A2)		Polyvalue Below	•		48)	Coast Prairie Red	` '			
Black His			Thin Dark Surface		(A147, 148)		(MLRA 147, 148				
	n Sulfide (A4) Layers (A5)		Loamy Gleyed Ma X Depleted Matrix (Piedmont Floodpl	, ,			
	ck (A10) (LRR N)		Redox Dark Surfa				(MLRA 136, 147) Very Shallow Dark Surface (TF12)				
	Below Dark Surface (A11))	Depleted Dark Su	. ,			Other (Explain in Remarks)				
	rk Surface (A12)		Redox Depressio	, ,				,			
Sandy M	ucky Mineral (S1) (LRR N,		Iron-Manganese I	Masses (F1	2) (LRR N,						
MLRA	147, 148)		MLRA 136)				³ Indicators of hydrophytic vegetation and wetland hydrology must be present,				
Sandy GI	leyed Matrix (S4)		Umbric Surface (I	F13) (MLR<i>A</i>	A 136, 122)						
_	edox (S5)		Piedmont Floodpl								
Stripped	Matrix (S6)		Red Parent Mater	rial (F21) (M	ILRA 127, 147))	unless disturbed	or problematic.			
Restrictive La	ayer (if observed):										
Type:											
Depth (in	ches):						Hydric Soil Present?	Yes X No			
											
Remarks:							•				

Project/Site:	170-822 / Yuk	on Landfill No. 7 Expar	sion	City/County:	Westm	oreland Cour	nty		Sampling Date:	March 8, 2018
Applicant/Owner:		MAX Environmen	tal Technolog	gies, Inc.			State:	PA	Sampling Point:	TS-9
Investigator(s):		CRB, DWL		S	ection, Tov	vnship, Rang	e:		South Huntingd	on Township
Landform (hillslope, terrace	e, etc.):	Hillslop	e	Local R	elief (conca	ve, convex, no	ne):		None	Slope (%):
Subregion (LRR or MLR)		LRR N	Lat:	,	,					
Soil Map Unit Name:		y silt loam, 0 to 2 perce		10 10 0.10		ong			fication:	
·						NI-			<u></u>	IN/A
Are climatic/hydrologic co			-	ignificantly dist	Yes				lain in Remarks.)	
Are Vegetation N	o, Soil	No , or Hydrology	<u>No</u> si	ignincantly dist	irbea?		Yes	X	No No	
Are Vegetation N	o, Soil	No , or Hydrology	No n	aturally probler	natic?				ers in Remarks.)	
SUMMARY OF FIND	INGS - Attac	h site map showir	ng samplin	g point loca	tions, tra	ınsects, im	portar	nt feature	s, etc.	
Hydrophytic Vegetation F	resent?		Yes	No X						
Hydric Soil Present?			Yes	No <u>X</u>	Is the Sa	ampled Area	Yes		No X	
Wetland Hydrology Pres	ent?		Yes	No X	within a	Wetland?		Upla	nd	
Remarks:										
Upland TS-9 paired with	Wetland 4, TS-	8. TS-9 is located on a	a forested hill	slope.						
The precipitation in Penn	sylvania was a	bove average in Febru	ary 2018 and	d March 2018.						
HYDROLOGY										
Wetland Hydrology Ind	icators:							Seconda	ry Indicators (min	imum of two required)
Primary Indicators (minimum	of one is require	ed; check all that apply)							Surface Soil Cracks	(B6)
Surface Water (A1)			True Aquatic F	Plants (B14)					Sparsely Vegetated	Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulf	fide Odor (C1)					Drainage Patterns (310)
Saturation (A3)			Oxidized Rhizo	ospheres on Livir	ng Roots (C	3)			Moss Trim Lines (B	16)
Water Marks (B1)				Reduced Iron (C4)					Dry-Season Water	
Sediment Deposits (B	.2)			eduction in Tilled	Soils (C6)				Crayfish Burrows (C	
Drift Deposits (B3)			Thin Muck Su							n Aerial Imagery (C9)
Algal Mat or Crust (B4	1)		Other (Explain	in Remarks)					Stunted or Stressed	` '
Iron Deposits (B5)									Geomorphic Positio	
Inundation Visible on		37)							Shallow Aquitard (D	
Water-Stained Leave	s (B9)								Mircotopographic R	
Aquatic Fauna (B13)									FAC-Neutral Test ([05)
Field Observations:										
Surface Water Present?	Yes	No X	D	epth (inches):						
Water Table Present?	Yes	NoX	D	epth (inches):			Wetlan	d Hydrolog	gy Present?	
Saturation Present? (includes capillary fringe)	Yes	No X	D	epth (inches):			Yes	_	No X	
Describe Recorded Data	(stream gauge	e, monitoring well, aeria	I photos, pre	vious inspectio	ns), if avail	able:				
Remarks:										

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1. Prunus serotina	40	Yes	FACU	That Are OBL, FACW, or FAC: 0 (A)
Acer saccharum	20	Yes	FACU	
3.	_			Total Number of Dominant
4.				Species Across All Strata: 5 (B)
5.				
6.				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 0% (A/B)
	60	= Total Cover		, , ,
Sapling Stratum: (Plot Size: 15)			Prevalence Index worksheet:
Acer saccharum	- ′ 30	Yes	FACU	Total % Cover of: Multiply by:
2				OBL species
2				FACW species x 2 =
-			-	· — — — — — — — — — — — — — — — — — — —
•				UPL species x 5 =
7				Column Totals:(A)(B)
	30	= Total Cover	i	
Shrub Stratum: (Plot Size: 15	_)			Prevalence Index = B/A =
1				
2.				Hydrophytic Vegetation Indicators:
3				1 - Rapid Test for Hydrophytic Vegetation
4				2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0¹
6				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7				uata in Keniarks of on a separate sheet)
	0	= Total Cover	ſ	Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5	_)			
Glechoma hederacea	20	Yes	FACU	1, , , , , , , , , , , , , , , , , , ,
				¹ Indicators of hydric soil and wetland hydrology must
2. Alliaria petiolata	15	Yes	FACU	be present, unless disturbed or problematic.
			FACU FACU	
2. Alliaria petiolata	15	Yes		be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Alliaria petiolata Allium cernuum	15 5	Yes No	FACU	be present, unless disturbed or problematic. Definitions of Four Vegetation Strata:
2. Alliaria petiolata 3. Allium cernuum 4. 5.	15 5	Yes No	FACU	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
2. Alliaria petiolata 3. Allium cernuum 4. 5.	15 5	Yes No	FACU	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.
2. Alliaria petiolata 3. Allium cernuum 4. 5. 6.	15 5	Yes No	FACU	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
2. Alliaria petiolata 3. Allium cernuum 4. 5. 6. 7.	15 5	Yes No	FACU	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.
2. Alliaria petiolata 3. Allium cernuum 4. 5. 6. 7. 8.	15 5	Yes No	FACU	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
2. Alliaria petiolata 3. Allium cernuum 4. 5. 6. 7. 8. 9. 10.	15 5	Yes No	FACU	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.
2. Alliaria petiolata 3. Allium cernuum 4. 5. 6. 7. 8. 9. 10.	15 5	Yes No	FACU	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
2. Alliaria petiolata 3. Allium cernuum 4. 5. 6. 7. 8. 9. 10. 11.	15 5	Yes No	FACU	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.
2. Alliaria petiolata 3. Allium cernuum 4. 5. 6. 7. 8. 9. 10. 11. 12.	15 5	Yes No	FACU	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.
2. Alliaria petiolata 3. Allium cernuum 4. 5. 6. 7. 8. 9. 10. 11.	15 5	Yes No	FACU	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.
2. Alliaria petiolata 3. Allium cernuum 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15 1.	15 5	Yes No	FACU	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.
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Sampling Point:

SOIL	Sampling Point:	TS-9

Profile Desc Depth	cription: (Describe to Matrix	the depth		nt the ind Redox Fea		firm the al	osence of indicators)
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Remarks
,			Color (Inoist)		Турс	LOC		Remains
0-16	2.5 Y 3/3	100					silt loam	
							-	
							- <u> </u>	
							.	_
					·		<u> </u>	
								
	-							
							<u> </u>	
¹ Type: C=Cor	ncentration, D=Depletion, F	RM=Reduce	d Matrix, MS=Masked	Sand Grains	S.		² Location: PL= Pore	Lining, M=Matrix.
Hydric Soil In	dicators:						Indicators for Proble	ematic Hydric Soils ³ :
Histosol ((A1)		Dark Surface (S7))			2 cm Muck (A10) (MLRA 147)
Histic Epi	ipedon (A2)		Polyvalue Below S	Surface (S8) (MLRA 147,14	48)	Coast Prairie Re	dox (A16)
Black His	tic (A3)		Thin Dark Surface	e (S9) (MLR	RA147, 148)		(MLRA 147, 14	8)
_	Sulfide (A4)		Loamy Gleyed Ma	atrix (F2)			Piedmont Floodp	
Stratified	Layers (A5)		Depleted Matrix (F				(MLRA 136, 14	
	ck (A10) (LRR N)		Redox Dark Surfa	,				rk Surface (TF12)
	Below Dark Surface (A11)		Depleted Dark Su				Other (Explain in	
	rk Surface (A12)		Redox Depression					,
	ucky Mineral (S1) (LRR N,		Iron-Manganese N		2) (LRR N.			
	. 147, 148)		MLRA 136)		_, (,			
	eyed Matrix (S4)		Umbric Surface (F	F13) (MI R.A	4 136, 122)		³ Indicators of hydro	ohytic vegetation and
Sandy Re			Piedmont Floodpla			`		y must be present,
	Matrix (S6)		Red Parent Mater			,	-	d or problematic.
Postrictive I	ayer (if observed):						1	_
	ayer (ii observed).							
Type:								
Depth (in	ches):						Hydric Soil Present	? Yes No_X_
Remarks:							1	
l								

Applicant/Owner	Project/Site:	170-822 / \	∕ukon Landf	ill No. 7 Expa	nsion	City/County:	Westmoreland	d County			Sampling Date:	March 8, 2018
Landform (hillsbys, terrace, etc.): Terrace	Applicant/Owner:		MA	X Environmer	ital Technolo	gies, Inc.		Sta	ate: I	PA	Sampling Point:	TS-12
Sold Map Unit Name: Line Line Liter N	Investigator(s):			CRB, DWL		Se	ction, Township,	Range:			South Huntingo	on Township
Sold Map Unit Name: Line Line Liter N	Landform (hillslope, terrac	e, etc.):		Terrac	e	Local Re	lief (concave, conv	vex, none):	_	Co	oncave	Slope (%):
Sol Map Unit Name: Ln - Lindside silt loam, 0 to 3 percent slopes, occasionally flooded Are dimatichydrologic conditions on the site typical for this time of year? Yes				LRR N	Lat:	40° 13' 9.912	"N Long:	79°	41' 37	7.941" W	Datum:	
Are climatic/hydrologic conditions on the site typical for this time of year? Are Vegetation No Sol No or Hydrology No significantly disturbed? Are Normal Circumstances* present? Yes X No Yes X No Yes X No No No Yes X No												
Are Vegetation No Sol No Order Private (19) No Sol No Order Phydrology Present? Wetsand Hydrology Indicators: Present Present Present Resolution Resoluti	•					, cocacionally no		No. 3				
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. Hydrolytic Vegetation Present? Yes X No Stroke	-				-	significantly distu						
Are Vegetation No. Soll 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 6 - PUB Remarks: Wetland Hydrology Present? Yes X No. Is the Sampled Area within a Wetland 6 - PUB Wetland 6 is a man-made depression. The precipitation in Pennsylvania was above average in February 2018 and March 2018. HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concare Surface (B8) X. Sufface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concare Surface (B8) X. Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trin Lines (B16) Water Marks (B1) Presence of Reduced Inn (C4) Opt-Season Water Table (C2) Sediment Deposts (B2) Roam Intendectation in Tilled Sols (C6) Stutied or Stressed Plants (C1) Drift Deposits (B3) Thin Muck Surface (C7) Stutied or Stressed Plants (C1) Wetland Hydrology Present? Yes X No Depth (inches): Urst Method Present? Wetland Hydrology Present? Yes X No Depth (inches): Urst Method (Date (C1)) Present (D3) Water Table Present? Yes X No Depth (inches): Depth (inches): Urst Method (D3) Water Table Present? Yes X No Depth (inches): Urst Method (D4) Present? Yes X No Depth (inches): Urst Method (D4) Present? Yes X No Depth (inches): Urst Method (D4) Present? Yes X No Depth (inches): Urst Method (D4) Present? Yes X No Depth (inches): Urst Method (D4) Present? Yes X No Depth (inches): Urst Method (D4) Present?	7.10 Togotation	, 00	,	o , a. o.og,		ng mioanty alota					'	
Hydriophytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Wetland Hydrology Present? Wetland G is a man-made depression. The precipitation in Pennsylvania was above average in February 2018 and March 2018. HYDROLOGY Wetland Hydrology Indicators: Wetland Hydrology Indicators: Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Surface Soil Cracks (BB) X Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) X High Water Table (A2) Hydrogen Sulfide Odor (C1) Sedment Deposits (B2) Resent fron Reduction in Tilled Soils (C6) Drift Deposits (B3) Thin Muck Surface (C7) Apal Mai or Crust (B4) Iron Deposits (B5) X Indicators (minimum of two required) Sparsely Vegetated Concave Surface (B8) Thin Muck Surface (C7) Dry-Season Water Table (C2) Crayfish Burrows (C8) Drift Deposits (B5) X Indicators (Minimum of two required) Field Observations: Surface Water (R1) Field Observations: Surface Water Fresent? Yes X No Depth (inches): 0-20 Water Table Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Constitution (Favailable):	Are Vegetation	lo, Soil	No ,	or Hydrology	<u>No</u> r	naturally problem	atic? (II		_			
Hydric Soil Present? Wetland Hydrology Present? Wetland 6 is a man-made depression. The precipitation in Pennsylvania was above average in February 2018 and March 2018. HYDROLOGY Wetland Hydrology Indicators: Pinnary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface Water (A1) Surface Water (A1) Sustration (A3) Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) Sedoment Deposits (B2) Sedoment Deposits (B2) Sedoment Deposits (B2) Thin Muck Surface (C7) Agal Mater Crust (B4) Thin Muck Surface (C7) Agal Mater Crust (B4) Thin Muck Surface (C7) Agal Mater Crust (B4) Water Marie (B1) Agal Mater Crust (B4) Water Marie (B1) Agal Mater Crust (B4) Water Marie (B1) Agal Mater (Crust (B4) Agal Mater (SUMMARY OF FINE	DINGS - At	tach site	map showi	ng samplin	ng point locat	ions, transect	ts, impo	rtant	feature	s, etc.	
Hydric Soil Present? Wetland Hydrology Present? Wetland 6 is a man-made depression. The precipitation in Pennsylvania was above average in February 2018 and March 2018. HYDROLOGY Wetland Hydrology Indicators: Pinnary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface Water (A1) Surface Water (A1) Sustration (A3) Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) Sedoment Deposits (B2) Sedoment Deposits (B2) Sedoment Deposits (B2) Thin Muck Surface (C7) Agal Mater Crust (B4) Thin Muck Surface (C7) Agal Mater Crust (B4) Thin Muck Surface (C7) Agal Mater Crust (B4) Water Marie (B1) Agal Mater Crust (B4) Water Marie (B1) Agal Mater Crust (B4) Water Marie (B1) Agal Mater (Crust (B4) Agal Mater (Hydrophytic Vegetation	Present?			Yes X	No						
Wetland Hydrology Present? Yes X No within a Wetland? Wetland 6 - PUB							la tha Camplad	٨٠٥٥	Yes	Χ	No	
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) X High Water Table (A2) Hydrogen Sulfide Odor (C1) Water Marks (B1) Presence of Reduced Iron (C4) Sedment Deposits (B2) Recent Iron Reduction in Titled Soils (C6) Algal Mor Crust (B4) Iron Represente Mydro Reduction in Remarks) Water (B4) Water Advise (B9) Algal Mor Crust (B4) Uther (Explain in Remarks) Water (B7) Water Water (B7) Sturtation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquatic Fauna (B13) Depth (inches): Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drin Lope, Passente (B1) Dry Season Water Table (C2) Crayfish Burrows (C8) Geomorphic Position (D2) Sturtation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquatic Fauna (B13) Wetland Hydrology Present? Yes X No Depth (inches): O Yes X No Depth (inches): O Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Wetland Hydrology Pres	ent?			Yes X	No	within a Wetla	ind?				
Wetland 6 is a man-made depression. The precipitation in Pennsylvania was above average in February 2018 and March 2018. ### Wetland Hydrology Indicators: Wetland Hydrology Indicators:	Remarks:						<u> </u>					
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) X High Water Table (A2) X High Water Table (A2) X Saturation (A3) X High Water Table (A2) X Saturation (B16) X Sparsely Vegetated Concave Surface (B8) X High Water Table (A2) X Indicator (C4) X Sparsely Vegetated Concave Surface (B8) X High Water Table (A2) X Houndard (C4) X Sparsely Vegetated Concave Surface (B8) X High Water Table (A2) X Houndard (C4) X Sparsely Vegetated Concave Surface (B8) X High Water Table (A2) X Houndard (C4) X Sparsely Vegetated Concave Surface (B8) X High Water Table (A2) X Houndard (C4) X Sparsely Vegetated Concave Surface (B8) X High Water Table (A2) X Houndard (C4) X Sparsely Vegetated Concave Surface (B8) X High Water Table (A2) X Indicator (B16) X Sparsely Vegetated Concave Surface (B8) X High Water (B16) X Sparsely Vegetated Concave Surface (B8) X High Water (B16) X Hi		de depressio	n.									
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) X High Water Table (A2) Water Marks (B1) Drainage Patterns (B10) Water Marks (B11) Presence of Reduced Iron (C4) Drift Deposits (B2) Algal Mat or Crust (B4) Iron Deposits (B3) Water-Stained Leaves (B9) Aquatic Fauna (B13) Water Fasined Leaves (B9) Aquatic Farent? Yes X No Depth (inches): Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Moss Trim Lines (B16) Drainage Patterns (B10) Moss Trim Lines (B16) Dry: Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Sturted or Stressed Plants (D1) Geomorphic Position (D2) X Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes X No Depth (inches): 0-20 Water Table Present? Yes X No Depth (inches): 0 Yes X No Depth (inches): 0 Yes X No Depth (inches): 0 Yes X No Depth (inches): 1 Yes X No Depth (inches): 0 Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	The precipitation in Pen	nsylvania wa	s above ave	erage in Febru	uary 2018 and	d March 2018.						
Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) X High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) X Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) X Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Mircotopographic Relief (D4) Aquatic Fauna (B13) 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? Yes X No Depth (inches): 0 Yes X No Depth (inches): 1 Yes X No Depth (inches): 3 Yes X No Depth (inches): 4 Yes X No Depth (inches): 3 Yes X No Depth (inches): 4 Yes X No De	HYDROLOGY											
Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) X High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) X Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) X Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Mircotopographic Relief (D4) Aquatic Fauna (B13) 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? Yes X No Depth (inches): 0 Yes X No Depth (inches): 1 Yes X No Depth (inches): 3 Yes X No Depth (inches): 4 Yes X No Depth (inches): 3 Yes X No Depth (inches): 4 Yes X No De		licators:								Secondar	v Indicators (min	imum of two required)
X Surface Water (A1)			uired: check	all that apply)					-		•	• •
X High Water Table (A2)					True Aquatic	Plants (B14)						
X Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) X Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) 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): 0 Yes		2)			•	, ,			_			
Water Marks (B1)		,			•		g Roots (C3)		_			•
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) X Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) 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? Yes X No Depth (inches): 0 Yes X No Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					-		. ,		_			·
Algal Mat or Crust (B4)Other (Explain in Remarks)Stunted or Stressed Plants (D1)		32)			_		Soils (C6)		_			
Iron Deposits (B5) X Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes X No Depth (inches): 0-20 Water Table Present? Yes X No Depth (inches): 1 Saturation Present? Yes X No Depth (inches): 0 Staturation Present? Yes X No Depth (inches): 0 Wetland Hydrology Present? Yes X No Depth (inches): 1 Wetland Hydrology Present? Yes X No Depth (inches): 1 Wetland Hydrology Present? Yes X No Depth (inches): 1 Wetland Hydrology Present? Yes X No Depth (inches): 1 Wetland Hydrology Present?	Drift Deposits (B3)				Thin Muck Su	ırface (C7)			_		Saturation Visible o	n Aerial Imagery (C9)
X Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3)	Algal Mat or Crust (B	.4)			Other (Explain	n in Remarks)				5	Stunted or Stressed	Plants (D1)
Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes X No Depth (inches): 0-20 Water Table Present? Yes X No Depth (inches): 1 Saturation Present? Yes X No Depth (inches): 0 Gincludes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Iron Deposits (B5)				-						Seomorphic Positio	n (D2)
Aquatic Fauna (B13) 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 Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	X Inundation Visible on	Aerial Imager	y (B7)							s	Shallow Aquitard (D	3)
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? Yes X No Depth (inches): 0 Yes X No Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Water-Stained Leave	s (B9)							_		Mircotopographic R	elief (D4)
Surface Water Present? Yes X No Depth (inches): 0-20 Water Table Present? Yes X No Depth (inches): 1 Wetland Hydrology Present? Saturation Present? Yes X No Depth (inches): 0 Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Aquatic Fauna (B13)								_	F	AC-Neutral Test (I	05)
Water Table Present? Yes X No Depth (inches): 1 Wetland Hydrology Present? Saturation Present? Yes X No Depth (inches): 0 Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Field Observations:											
Saturation Present? Yes X No Depth (inches): 0 Yes X No Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Surface Water Present?	Yes	X	No	Г	Depth (inches):	0-20					
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	Water Table Present?	Yes	X	No		Depth (inches):	1	We	tland H	Hydrolog	y Present?	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			X	No		Depth (inches):	0	Y	es	Х	No	
			uge, monito	ring well, aeria	al photos, pre	evious inspection	s), if available:	l				
Remarks:	Remarks:											

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.	70 00101	<u> </u>		That Are OBL, FACW, or FAC: 3 (A)
			<u> </u>	Total Number of Dominant
				Species Across All Strata: 3 (B)
				Opecies Across Air Otrata.
		. ——		Descript of Descript Opening
6				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 100% (A/B)
	0	= Total Cover	•	Prevalence Index worksheet:
Sapling Stratum: (Plot Size: 15)				
				Total % Cover of: Multiply by:
2				OBL speciesx 1 =
3				FACW speciesx 2 =
4.				FAC species x 3 =
5				FACU species x 4 =
6.				UPL speciesx 5 =
7				Column Totals: (A)(B)
	0	= Total Cover		
Shrub Stratum: (Plot Size: 15)		<u>.</u>		Prevalence Index = B/A =
1. Cornus amomum	10	Yes	FACW	
2.				Hydrophytic Vegetation Indicators:
3.				X 1 - Rapid Test for Hydrophytic Vegetation
4.				X 2 - Dominance Test is >50%
5.				3 - Prevalence Index is ≤3.0 ¹
-		· 		4 - Morphological Adaptations ¹ (Provide supporting
7.				data in Remarks or on a separate sheet)
	10	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)		_ Total Cover		Troblematio rigarophytic vegetation (Explain)
1. Typha latifolia	45	Yes	OBL	
Juncus effusus	20	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
			PACW	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.
5		· 		
6		· 		Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
7.				
8		. ———		Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.
9				. , , ,
10				Herb - All herbaceous (non-woody) plants, regardless
11				of size, and woody plants less than 3.28 ft tall.
12				Woody Vines - All woody vines greater than 3.28 ft in height.
	65	= Total Cover	•	
Woody Vine Stratum: (Plot size:15)				
1				
2				Hydrophytia
3				Hydrophytic Vegetation
4				Present? Yes X No No
5.				
_	0	= Total Cover	-	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			
, ,	,			

TS-12

Sampling Point:

SOIL Sampling Point: TS-12

Depth Matrix Redox Features (inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-5 2.5 Y 5/2 90 5 YR 5/8 10 C M clay loam	
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: Indicators for Problematic Hydric Soils ³ :	
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147,148) Coast Prairie Redox (A16)	
Black Histic (A3) Thin Dark Surface (S9) (MLRA147, 148) (MLRA 147, 148)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)	
Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147)	
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12)	
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks)	
Thick Dark Surface (A12) Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N,	
MLRA 147, 148) MLRA 136)	
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) 3Indicators of hydrophytic vegetation and	
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present,	
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic.	
Restrictive Layer (if observed):	
Type:	
Depth (inches): Hydric Soil Present? Yes X No	
Remarks:	

Project/Site: 1	70-822 / Yukon Landfill No. 7 Ex	pansion City/Co	ounty: We	stmoreland Cou	inty	Sampling Date:	March 8, 2018
Applicant/Owner:	MAX Environn	nental Technologies, Inc	c		State:	PA Sampling Point:	TS-13
Investigator(s):	CRB, DWL	-	Section,	Township, Rang	ge:	South Huntingd	on Township
Landform (hillslope, terrace, e	etc.): Hills	slope	Local Relief (co	ncave, convex, no	one):	None	Slope (%):
Subregion (LRR or MLRA):	•		,		_	7.874" W Datum:	· · · · ·
,				_ Long		<u> </u>	
Soil Map Unit Name:	Ln - Lindside silt loam, 0 to 3				='	WI classification:	N/A
, ,	ditions on the site typical for this	•				(If no, explain in Remarks.)	
Are Vegetation No	, Soil <u>No</u> , or Hydrok	ogy <u>No</u> significa	ntly disturbed?	Are No	Yes	umstances" present? X No	
Are Vegetation No	, Soil <u>No</u> , or Hydrold	ogy No naturally	problematic?	(If need	-	any answers in Remarks.)	
	GS - Attach site map sho			transects in	nnortant	features etc	
	-			transcots, in	проглант	reatures, etc.	
Hydrophytic Vegetation Pre Hydric Soil Present?	esent?		X		Voo	No. V	
Wetland Hydrology Presen	12			e Sampled Area nin a Wetland?	Yes	No <u>X</u> Upland	
-		103105_	X With	iii a wellana:		Оріана	
Remarks:							
Upland TS-13 paired with V	Vetland 6, TS-12. TS-13 located	d on slope to man-made	e depression.				
The precipitation in Pennsy	Ivania was above average in Fe	bruary 2018 and March	2018.				
HYDROLOGY							
Wetland Hydrology Indica	ntors:					Secondary Indicators (min	imum of two required)
Primary Indicators (minimum o	one is required; check all that apply	/)				Surface Soil Cracks	(B6)
Surface Water (A1)		True Aquatic Plants (E	314)		-	Sparsely Vegetated	Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Odd	or (C1)		-	Drainage Patterns (I	B10)
Saturation (A3)		Oxidized Rhizosphere	s on Living Root	s (C3)	_	Moss Trim Lines (B	16)
Water Marks (B1)		Presence of Reduced	Iron (C4)		_	Dry-Season Water 1	Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction	n in Tilled Soils (0	26)	_	Crayfish Burrows (C	8)
Drift Deposits (B3)		Thin Muck Surface (C	7)		-	Saturation Visible or	n Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rem	arks)		-	Stunted or Stressed	Plants (D1)
Iron Deposits (B5)					-	Geomorphic Position	n (D2)
Inundation Visible on Ae	rial Imagery (B7)				-	Shallow Aquitard (D	3)
Water-Stained Leaves (I	39)				-	Mircotopographic Re	elief (D4)
Aquatic Fauna (B13)					-	FAC-Neutral Test (D	05)
Field Observations:							
Surface Water Present?	Yes No	X Depth (ii	nches):				
Water Table Present?	Yes No	X Depth (ii	nches):		Wetland	Hydrology Present?	
Saturation Present?	Yes No	X Depth (in	nches):		Yes	NoX	
(includes capillary fringe)	tream gauge, monitoring well, a	arial photos, pravious ir	nenactions) if s	vailable:	<u> </u>		
Describe Recorded Data (s	aream gauge, mornioning wen, a	chai photos, previous ii	13000110113), 11 6	valiable.			
Remarks:							
Remarks.							

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.				That Are OBL, FACW, or FAC: (A)
2.				(,
3				Total Number of Dominant
1		. ———		Species Across All Strata: (B)
				(5)
6				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: #DIV/0! (A/B)
·	0	. —————		That Are OBL, FACW, OF FAC. #DIV/O! (A/B)
Operlies Obstante		= Total Cover		Prevalence Index worksheet:
Sapling Stratum: (Plot Size: 15)				
1				Total % Cover of: Multiply by:
2				OBL speciesx 1 =
3.				FACW speciesx 2 =
4				FAC speciesx 3 =
5				FACU speciesx 4 =
6				UPL speciesx 5 =
7				Column Totals:(A)(B)
	0	= Total Cover		
Shrub Stratum: (Plot Size: 15)		-		Prevalence Index = B/A =
1. Lonicera japonica	50	Yes	FACU	
2				Hydrophytic Vegetation Indicators:
3				1 - Rapid Test for Hydrophytic Vegetation
4				2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0 ¹
6				4 - Morphological Adaptations ¹ (Provide supporting
7.				data in Remarks or on a separate sheet)
	50	= Total Cover	r	Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)		•		
Solidago altissima	35	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
Potentilla simplex	15	No	FACU	be present, unless disturbed or problematic.
3. Phyllostachys aurea	10	No	UPL	Definitions of Four Vegetation Strata:
4.		. ———		Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
5.		. ———		more in diameter at breast height (DBH), regardless of height.
6				Sapling - Woody plants, excluding woody vines, aproximately 20 ft
7		. ———		(6 m) or more in height and less than 3 in. (7.6 cm) DBH.
Ω				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20
9.		·		ft (1 to 6 m) in height.
10.				Herb - All herbaceous (non-woody) plants, regardless
				of size, and woody plants less than 3.28 ft tall.
11				Woody Vines - All woody vines greater than 3.28 ft in height.
12.		= Total Cover		Woody vines - All woody vines greater than 3.20 it in neight.
Marcha Visco Otestano (Districtor	60	= Total Cover		
Woody Vine Stratum: (Plot size: 15)				
1				
2.				Hydrophytic
3				Vegetation
4				Present?
5				
	0	= Total Cover		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			

Sampling Point:

SOIL Sampling Point: TS-13

Profile Desc	ription: (Describe to	the depth	needed to docume	nt the ind	icator or con	firm the al	bsence of indicators	s.)
Depth	Matrix			Redox Fea	tures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	2.5 Y 4/3	100					silt loam	gravelly
0 10	2.0 1 4/0	100					- Oile Iodini	gravony
	-						- 	
		· -					- 	
		· ——						
	-		-				- 	
_		· ——						
							- <u> </u>	
¹ Type: C=Con	centration, D=Depletion, R	M=Reduce	ed Matrix, MS=Masked	Sand Grains	S.		² Location: PL= Pore	Lining, M=Matrix.
Hydric Soil In	dicators:						Indicators for Probl	ematic Hydric Soils ³ :
Histosol (A1)		Dark Surface (S7)			2 cm Muck (A10) (MLRA 147)
Histic Epi	pedon (A2)		Polyvalue Below	Surface (S8) (MLRA 147,1	48)	Coast Prairie Re	edox (A16)
Black Hist	tic (A3)		Thin Dark Surface	e (S9) (MLR	(A147, 148)		(MLRA 147, 14	48)
Hydrogen	Sulfide (A4)		Loamy Gleyed Ma	atrix (F2)			Piedmont Flood	plain Soils (F19)
Stratified	Layers (A5)		Depleted Matrix (F3)			(MLRA 136, 14	1 7)
2 cm Muc	k (A10) (LRR N)		Redox Dark Surfa	ace (F6)			Very Shallow Da	ark Surface (TF12)
Depleted	Below Dark Surface (A11)		Depleted Dark Su	ırface (F7)			Other (Explain in	n Remarks)
	k Surface (A12)		Redox Depressio	ns (F8)				,
	ucky Mineral (S1) (LRR N,		Iron-Manganese	. ,	2) (LRR N,			
	147, 148)		MLRA 136)	,	,			
	eyed Matrix (S4)		Umbric Surface (F13) (MLR	A 136, 122)		³ Indicators of hydro	phytic vegetation and
Sandy Re			Piedmont Floodpl			3		gy must be present,
	Matrix (S6)		Red Parent Mater					ed or problematic.
							1	
	yer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil Present	? Yes No X
Remarks:							1	
]								
]								
]								
]								
]								

Project/Site:	170-822 /	Yukon Landfill	No. 7 Expa	nsion	City/County:	West	tmoreland	l Coun	ty		Sampling Date	e: March 8, 2018
Applicant/Owner:		MAX	Environme	ntal Technolo	ogies, Inc.				State:	PA	Sampling Point	t: TS-14
Investigator(s):		CI	RB, DWL		Se	ection, T	ownship,	Range): :		South Hunting	gdon Township
Landform (hillslope, terrac	e, etc.):		Depress	sion	Local Re	lief (con	cave, conv	ex, non	ie):	C	oncave	Slope (%):
Subregion (LRR or MLR		1	RR N		40° 12' 57.034	,						
Soil Map Unit Name:	,	Udorthents,			10 12 01.00						fication:	-
·								NI -				
Are climatic/hydrologic c					significantly distu	-		_			lain in Remarks.)	
Are Vegetation N	lo, Soil	, C	r Hydrology	INU	significantly distu	ibeu:	AI		rnai Cii Yes	X	No No	
Are Vegetation N	<u>o</u> , Soil	<u>No</u> , c	r Hydrology	No No	naturally problem	atic?	(If				ers in Remarks.)	_
SUMMARY OF FINE	INGS - Af	tach site m	ap showi	ng sampli	ng point locat	ions, t	transect	s, im	portar	nt feature	es, etc.	
Hydrophytic Vegetation				Yes X	No	T		,				
Hydric Soil Present?				Yes X		la tha	Camaniad	۸	Yes	X	No	
Wetland Hydrology Pres	ent?			Yes X	No	within	sampied n a Wetlai	nd? _		Wetland		_
Remarks:				<u> </u>								
	depression	surrounded b	oy scrub/shr	ub habitat. /	Area was classifie	ed as Pl	JBH on N	IWI ma	pping b	out no long	er exhibits PUBI	H qualities due to loss of
The precipitation in Peni	ısylvania wa	as above aver	age in Febr	uary 2018 ar	nd March 2018.							
HYDROLOGY												
Wetland Hydrology Ind	icators:									Seconda	ry Indicators (m	inimum of two required)
Primary Indicators (minimur	n of one is re	quired; check al	that apply)								Surface Soil Cracl	ks (B6)
Surface Water (A1)				_True Aquatio	Plants (B14)						Sparsely Vegetate	ed Concave Surface (B8)
High Water Table (A	?)			_Hydrogen St	ulfide Odor (C1)					X	Drainage Patterns	; (B10)
X Saturation (A3)			X	Oxidized Rhi	izospheres on Livin	g Roots	(C3)				Moss Trim Lines ((B16)
Water Marks (B1)				_Presence of	Reduced Iron (C4)						Dry-Season Wate	r Table (C2)
Sediment Deposits (E	32)			Recent Iron	Reduction in Tilled	Soils (C6	6)				Crayfish Burrows	(C8)
Drift Deposits (B3)				_Thin Muck S	Surface (C7)						Saturation Visible	on Aerial Imagery (C9)
Algal Mat or Crust (B	4)			Other (Expla	in in Remarks)						Stunted or Stress	ed Plants (D1)
Iron Deposits (B5)											Geomorphic Posit	ion (D2)
Inundation Visible on	Aerial Image	ry (B7)									Shallow Aquitard ((D3)
Water-Stained Leave	s (B9)										Mircotopographic	
Aquatic Fauna (B13)											FAC-Neutral Test	(D5)
Field Observations:												
Surface Water Present?	Yes		No X	(Depth (inches):							
Water Table Present?	Yes		No X	<u> </u>	Depth (inches):			١	Netlan	d Hydrolo	gy Present?	
Saturation Present? (includes capillary fringe	Yes	X	No		Depth (inches):		0		Yes	Х	No	_
Describe Recorded Data		iuge, monitorii	ng well, aeri	al photos, pr	evious inspection	ıs), if av	ailable:					
Remarks:												

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1. Salix nigra	15	Yes	OBL	That Are OBL, FACW, or FAC: 2 (A)
2.				(,,
3.				Total Number of Dominant
4.				Species Across All Strata: 2 (B)
				(-)
-				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 100% (A/B)
· · ·	15	= Total Cover		
Sapling Stratum: (Plot Size: 15)		- 10tal 0010l		Prevalence Index worksheet:
				Total % Cover of: Multiply by:
3				OBL species x 1 =
2				FACW species
A				FAC species
				FACU species x 4 =
7		Tatal Cause		Column Totals: (A) (B)
Shrub Stratum: (Plot Size: 15)	0			Dravalance Index - D/A
1				Prevalence Index = B/A =
				Understantis Variation Indicators
2				Hydrophytic Vegetation Indicators:
3.				X 1 - Rapid Test for Hydrophytic Vegetation
4				X 2 - Dominance Test is >50%
5.				3 - Prevalence Index is ≤3.0¹ A Marsh eleminal Adoptations 1 (Previde supporting
6				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7				
	0	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5				
Phalaris arundinacea	400	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must
Phalaris arundinacea 2.	400	Yes	FACW	be present, unless disturbed or problematic.
Phalaris arundinacea 2. 3.	100			be present, unless disturbed or problematic. Definitions of Four Vegetation Strata:
Phalaris arundinacea 2. 3. 4.	100			be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
1. Phalaris arundinacea 2. 3. 4. 5.	100			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.
1. Phalaris arundinacea 2. 3. 4.	100			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
1. Phalaris arundinacea 2. 3. 4. 5.	100			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.
1. Phalaris arundinacea 2. 3. 4. 5. 6	100			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
1. Phalaris arundinacea 2. 3. 4. 5. 6. 7.	100			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.
1. Phalaris arundinacea 2. 3. 4. 5. 6. 7. 8.	100			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
1. Phalaris arundinacea 2.	100			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.
1. Phalaris arundinacea 2. 3. 4. 5. 6. 7. 8. 9. 10.	100			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
1. Phalaris arundinacea 2. 3. 4. 5. 6. 7. 8. 9. 10	100			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.
1. Phalaris arundinacea 2. 3. 4. 5. 6. 7. 8. 9. 10	100			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.
1. Phalaris arundinacea 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.	100			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.
1. Phalaris arundinacea 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15)	100			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.
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1. Phalaris arundinacea 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1. 2. 3. 4. 5. 5. 6. 15)	100	= Total Cover		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
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TS-14

Sampling Point:

SOIL Sampling Point: TS-14

Profile Desc Depth	cription: (Describe to Matrix	the depth		nt the ind Redox Fea		ifirm the at	sence of indicato	rs.)	
·	-	0/			Type ¹	Loc ²	- Texture	Domonico	
(inches)	Color (moist)	%	Color (moist)	%		LOC	rexture	Remarks	
0-16	2.5 Y 4/1	80	7.5 YR 4/6	20	C	PL, M	clay loam		
									
							- <u> </u>		
									
¹ Type: C=Co	ncentration, D=Depletion, F	RM=Reduce	ed Matrix, MS=Masked S	Sand Grains			² Location: PL= Por	e Lining, M=Matrix.	
Hydric Soil Ir			,					plematic Hydric Soils ³ :	
Histosol			Dark Surface (S7)					•	
	pipedon (A2)		Polyvalue Below S) (MI RA 147.1	48)	2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)		
Black His			Thin Dark Surface			-10)	(MLRA 147, 148)		
	n Sulfide (A4)		Loamy Gleyed Ma	. , .	7111, 110,		(MLRA 147, 148) Piedmont Floodplain Soils (F19)		
	Layers (A5)		Depleted Matrix (F				(MLRA 136, 147)		
	ick (A10) (LRR N)		Redox Dark Surfa	,			Very Shallow Dark Surface (TF12)		
	Below Dark Surface (A11)		Depleted Dark Sur				Other (Explain in Remarks)		
	ark Surface (A12)		Redox Depression				Other (Explain	in romano,	
	lucky Mineral (S1) (LRR N,		Iron-Manganese N		2) (I RR N.				
	A 147, 148)		MLRA 136)		-/ (=,				
	leyed Matrix (S4)		Umbric Surface (F	13) (MI R A	136 122)		3Indicators of hydi	conhytic vegetation and	
	edox (S5)		Piedmont Floodpla			۵	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,		
_	Matrix (S6)		Red Parent Materi				wetiand nydrology must be present, unless disturbed or problematic.		
опірроц	Wattix (50)			iai (i 2 i / (iii			unicos distant	od of problematio.	
Restrictive La	ayer (if observed):								
Type:									
Depth (in	nches):						Hydric Soil Present? Yes X No		
Remarks:									
ixemaiks.									
1									

Project/Site:	170-822 / Yı	ıkon Landfill No. 7 Expa	nsion	City/County:	Westmo	reland Cour	nty		Sampling Date:	March 8, 2018	
Applicant/Owner:	cant/Owner: MAX Environmental Technolo					gies, Inc. State:				TS-15	
Investigator(s):		CRB, DWL		Section, Township, Range:					South Huntingdon Township		
Landform (hillslope, terrac	e, etc.):	Hillslop	ре	Local R	elief (concav	e, convex, no	ne):		None	Slope (%):	
Subregion (LRR or MLR	_	LRR N		40° 12' 57.14	,		-		,		
Soil Map Unit Name:	_	Idorthents, 0 to 8 perce		10 12 07.11	7 11 20	g			fication:		
·						NI-				IN/A	
Are climatic/hydrologic c		* *		significantly distu	Yes				lain in Remarks.) es" present?		
Are Vegetation N	lo, Soil	No , or Hydrology	No s	agrillicarity dist	iibeu?		Yes	X	No No		
Are Vegetation N	o, Soil _	No , or Hydrology	<u>No</u> r	naturally problen	natic?				ers in Remarks.)		
SUMMARY OF FIND	INGS - Atta	ach site map showi	ng samplin	ng point loca	tions, tra	nsects, im	portar	nt feature	es, etc.		
Hydrophytic Vegetation I	Present?		Yes	No X							
Hydric Soil Present?				No X	Is the Sai	mnled Area	Yes		No X		
Wetland Hydrology Pres	ent?		Yes	No X	within a	Wetland?		Upla	ind		
Remarks:					<u> </u>						
Upland TS-15 paired with	n Wetland 7,	TS-14. TS-15 is located	on a scrub/s	hrub hillslope a	djacent to V	Vetland 7.					
The precipitation in Penr	ısylvania was	above average in Febru	uary 2018 and	d March 2018.							
HYDROLOGY											
Wetland Hydrology Ind	icators:							Seconda	ry Indicators (min	mum of two required)	
Primary Indicators (minimum	n of one is requ	ired; check all that apply)							Surface Soil Cracks	(B6)	
Surface Water (A1)			True Aquatic	, ,						Concave Surface (B8)	
High Water Table (A2	:)		-	fide Odor (C1)					Drainage Patterns (E		
Saturation (A3)				ospheres on Livir)		Moss Trim Lines (B16)			
Water Marks (B1)			_	Reduced Iron (C4)					Dry-Season Water Table (C2)		
Sediment Deposits (E	·2)		_	Reduction in Tilled Soils (C6)					Crayfish Burrows (C8)		
Drift Deposits (B3)			Thin Muck Su							Aerial Imagery (C9)	
Algal Mat or Crust (B	1)		Other (Explain	n in Remarks)					Stunted or Stressed	` '	
Iron Deposits (B5)	A	(DZ)							Geomorphic Position (D2)		
Inundation Visible on		(B7)							Shallow Aquitard (D:		
Water-Stained Leave	s (B9)								Mircotopographic Re		
Aquatic Fauna (B13)									FAC-Neutral Test (D	(5)	
Field Observations:											
Surface Water Present?	Yes _	No X		Depth (inches):							
Water Table Present?	Yes	No X		Depth (inches):			Wetland	d Hydrolog	gy Present?		
Saturation Present? (includes capillary fringe)	Yes _	No X	<u> </u>	Depth (inches):			Yes		No X		
Describe Recorded Data		ge, monitoring well, aeri	al photos, pre	evious inspection	ns), if availa	able:					
Remarks:											

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species	
1. Salix nigra	15	Yes	OBL	That Are OBL, FACW, or FAC: 1 (A)	1
2				(')	
3.				Total Number of Dominant	
				Species Across All Strata: 3 (B)	,
				(E)	
-				Percent of Deminant Species	
7.	-			Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/	(D)
1.		Total Carra		That Are OBL, FACW, or FAC: 33% (A/	D)
One line Otentum (Plat Oing)	15	= Total Cover		Prevalence Index worksheet:	
Sapling Stratum: (Plot Size: 15	.)				
	-			Total % Cover of: Multiply by:	
2.	· ·			OBL speciesx 1 =	
3	· ———			FACW speciesx 2 =	
4				FAC speciesx 3 =	
5				FACU speciesx 4 =	
6.				UPL speciesx 5 =	
7				Column Totals:(A)(B)	1
	0	= Total Cover			
Shrub Stratum: (Plot Size: 15)			Prevalence Index = B/A =	
1. Lonicera japonica	45	Yes	FACU		
2	· .			Hydrophytic Vegetation Indicators:	
3				1 - Rapid Test for Hydrophytic Vegetation	
4				2 - Dominance Test is >50%	
5.				3 - Prevalence Index is ≤3.0 ¹	
6.				4 - Morphological Adaptations ¹ (Provide supporting	
7.				data in Remarks or on a separate sheet)	
	45	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)	
Herb Stratum: (Plot size: 5)				
1. Alliaria petiolata	30	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must	
Microstegium vimineum	5	No	FAC	be present, unless disturbed or problematic.	
•				Definitions of Four Vegetation Strata:	
				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or	
5				more in diameter at breast height (DBH), regardless of height.	
-				Sapling - Woody plants, excluding woody vines, aproximately 20	ft
7.				(6 m) or more in height and less than 3 in. (7.6 cm) DBH.	11
	· ·			Shrub - Woody plants, excluding woody vines, aproximately 3 to	20
8	· 				
0				ft (1 to 6 m) in height.	
9				, , ,	
10.	· 			Herb - All herbaceous (non-woody) plants, regardless	
10.				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
10.				Herb - All herbaceous (non-woody) plants, regardless	
10. 11. 12.	35	= Total Cover		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
10	35			Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
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10	35	= Total Cover		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.	
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Sampling Point:

SOIL Sampling Point: TS-15

	ription: (Describe to	the depth				firm the al	bsence of indicator	s.)		
Depth Matrix				Redox Feat						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-16	2.5 Y 4/3	100					silt loam			
		- —								
							. ————————————————————————————————————			
							. <u> </u>			
							. <u> </u>			
¹ Type: C=Cond	centration, D=Depletion, F	RM=Reduce	ed Matrix, MS=Masked S	Sand Grains	š		² Location: PL= Pore	Lining, M=Matrix.		
Hydric Soil Inc	licators:						Indicators for Probl	lematic Hydric Soils ³ :		
Histosol (A	A1)		Dark Surface (S7))			2 cm Muck (A10) (MLRA 147)			
Histic Epip	edon (A2)		Polyvalue Below S	Surface (S8)) (MLRA 147,1	48)	Coast Prairie Redox (A16)			
Black Histi	ic (A3)		Thin Dark Surface	(S9) (MLR	A147, 148)		(MLRA 147, 148)			
Hydrogen	Sulfide (A4)		Loamy Gleyed Ma	atrix (F2)			Piedmont Floodplain Soils (F19)			
Stratified L	ayers (A5)		Depleted Matrix (F				(MLRA 136, 147)			
2 cm Mucl	(A10) (LRR N)		Redox Dark Surfa				Very Shallow Dark Surface (TF12)			
Depleted E	Below Dark Surface (A11)		Depleted Dark Su	rface (F7)			Other (Explain i			
	Surface (A12)		Redox Depression					······································		
	cky Mineral (S1) (LRR N,		Iron-Manganese M		2) (I RR N .					
	147, 148)		MLRA 136)	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-/ (=-::::,					
	yed Matrix (S4)		Umbric Surface (F	-13) (MI RA	136 122)		3Indicators of hydro	aphytic vagatation and		
							³ Indicators of hydrophytic vegetation and			
Sandy Red			Piedmont Floodpla				wetland hydrology must be present,			
Stripped M	iatrix (S6)		Red Parent Mater	iai (F21) (M	LRA 127, 147)		uniess disturbe	ed or problematic.		
Restrictive Lay	yer (if observed):									
Type:										
Depth (inc	hes):						Hydric Soil Present? Yes No _X			
Remarks:										
Remarks.										
1										
1										
1										

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.	7,7,0,0,1,0,1			That Are OBL, FACW, or FAC: 1 (A)
2				Total Number of Dominant
				Species Across All Strata: 1 (B)
				(D)
				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 100% (A/B)
		= Total Cover		1100% (ND)
Sapling Stratum: (Plot Size: 15)		= Total Cover		Prevalence Index worksheet:
				Total % Cover of: Multiply by:
				OBL species
3.				
				FACULTURE X 3 =
				FACU species x 4 =
6				UPL species x 5 =(A)
7				Column Totals:(A)(B)
	0		•	
				Prevalence Index = B/A =
1.				
2.				Hydrophytic Vegetation Indicators:
3				X 1 - Rapid Test for Hydrophytic Vegetation
4				X 2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0¹
6				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7				
	0	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5				
Herb Stratum: (Plot size: 5) 1. Phalaris arundinacea	0.5	Y	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Dhalaria an malinasaa	0.5	<u>Y</u> N	FACW FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Phalaris arundinacea	85			
Phalaris arundinacea Epilobium coloratum	85 10 5	N N	FACW	be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Phalaris arundinacea Epilobium coloratum Impatiens sp.	85 10 5	N N	FACW FACW	be present, unless disturbed or problematic. Definitions of Four Vegetation Strata:
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4.	85 10 5	N N	FACW FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5.	85 10 5	N N	FACW FACW	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.
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6.	85 10 5	N N	FACW FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4	85 10 5	N N	FACW FACW	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.
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4	85 10 5	N N	FACW FACW	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
Phalaris arundinacea Epilobium coloratum Impatiens sp. 4. 5. 6. 7. 8. 9.	85 10 5	N N	FACW FACW	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.
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9.	85 10 5	N N	FACW FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10.	85 10 5	N N	FACW	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.
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10.	85 10 5	N N	FACW	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.
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11.	85 10 5	N N	FACW	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.
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15)	85 10 5	N N	FACW	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.
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size:15) 1.	85 10 5	N N	FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size:15) 1. 2.	85 10 5	N N	FACW	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.
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1. 2. 3.	85 10 5	N N	FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1. 2. 3. 4.	85 10 5	N N	FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1. 2. 3. 4.	85 10 5	N N	FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1. 2. 3. 4. 5.	85 10 5	N N	FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1. 2. 3. 4. 5.	85 10 5	N N	FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1. 2. 3. 4. 5.	85 10 5	N N	FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1. 2. 3. 4. 5.	85 10 5	N N	FACW	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
1. Phalaris arundinacea 2. Epilobium coloratum 3. Impatiens sp. 4. 5. 6. 7. 8. 9. 10. 11. 12. Woody Vine Stratum: (Plot size: 15) 1. 2. 3. 4. 5.	85 10 5	N N	FACW	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

TS-16

Sampling Point:

SOIL Sampling Point:	TS-16

Depth	Matrix			Redox Fea	tures		_		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Remarks	
0-16		97	, ,	3	С	M			
0-10	10YR 4/2	91	7.5YR 4/4			M	clay loam		
							-		
							- 		
Type: C=Con	centration, D=Depletion, RM	M=Reduce	d Matrix, MS=Masked	Sand Grains	S.		² Location: PL= Pore	Lining, M=Matrix.	
Hydric Soil Inc	dicators:						Indicators for Proble	ematic Hydric Soils ³ :	
Histosol (A	A1)		Dark Surface (S7)			2 cm Muck (A10) (MLRA 147)		
	pedon (A2)		Polyvalue Below) (MLRA 147.1	Coast Prairie Redox (A16)			
Black Hist			Thin Dark Surface			(MLRA 147, 148)			
	Sulfide (A4)		Loamy Gleyed Ma		, -,	Piedmont Floodplain Soils (F19)			
	Layers (A5)		X Depleted Matrix ((MLRA 136, 147)			
2 cm Muc	k (A10) (LRR N)		Redox Dark Surfa			Very Shallow Dark Surface (TF12)			
Depleted	Below Dark Surface (A11)		Depleted Dark Su	ırface (F7)		Other (Explain in Remarks)			
Thick Dar	k Surface (A12)		Redox Depressio	ns (F8)					
Sandy Mu	icky Mineral (S1) (LRR N,		Iron-Manganese I	Masses (F1	2) (LRR N,				
MLRA	147, 148)		MLRA 136)						
Sandy Gle	eyed Matrix (S4)		Umbric Surface (I	F13) (MLRA	A 136, 122)	³ Indicators of hydrophytic vegetation and			
Sandy Re			Piedmont Floodpl				wetland hydrology must be present,		
Stripped N	Matrix (S6)		Red Parent Mater	rial (F21) (M	ILRA 127, 147)		unless disturbe	d or problematic.	
	yer (if observed):								
Type:									
Depth (inc	ches):						Hydric Soil Present? Yes X No		
Remarks:									

Project/Site:	170-822 / Yı	ıkon Landfill No. 7 Expa	insion	City/County:	Westmore	land Cou	nty		Sampling Date	e: March 12, 2018
Applicant/Owner:		MAX Environme	ntal Technolo	gies, Inc.			State:	PA	Sampling Point	t: TS-17
Investigator(s):		CRB, DWL		Se	ection, Towns	hip, Rang	e:		South Hunting	gdon Township
Landform (hillslope, terrace	e, etc.):	Floodp	lain	Local Re	lief (concave,	convex, no	ne):		None	Slope (%):
Subregion (LRR or MLR/	_	LRR N	Lat:	40° 12' 58.95	3" N Lond	1:	79° 41'	41.916" W	Datum	n: NAD83
Soil Map Unit Name:		Jdorthents, 0 to 8 perce				,			fication:	-
Are climatic/hydrologic co					Yes	No	,		olain in Remarks.)	
· -	o , Soil	No , or Hydrology	-	significantly distu		_		-	es" present?	
	,	,,	·				Yes	Х	No	
Are Vegetation N	o, Soil	No , or Hydrology	/ <u>No</u> r	naturally problem	atic?	(If neede	ed, expla	in any answe	ers in Remarks.)	_
SUMMARY OF FIND	INGS - Atta	ach site map showi	ng samplir	ng point locat	ions, trans	ects, in	nporta	nt feature	es, etc.	
Hydrophytic Vegetation F	Present?		Yes	No X			-			
Hydric Soil Present?			· · · · · · · · · · · · · · · · · · ·		Is the Samp	olod Aroo	Yes		No X	
Wetland Hydrology Pres	ent?			No X	within a W			Upla	· · · · · · · · · · · · · · · · · · ·	- -
Remarks:					1					
Upland test site adjacent	to Wetland 8	3 and Wetland 9, located	d in a low-lyin	g floodplain adja	cent to Strea	m 6.				
The precipitation in Penn	sylvania was	above average in Febr	uary 2018 an	d March 2018.						
HYDROLOGY										
Wetland Hydrology Ind	icators:							Seconda	ary Indicators (m	inimum of two required)
Primary Indicators (minimum	of one is requ	ired; check all that apply)							Surface Soil Crac	ks (B6)
Surface Water (A1)			_True Aquatic	, ,						ed Concave Surface (B8)
High Water Table (A2)		_	Ifide Odor (C1)					Drainage Patterns	
Saturation (A3)			_	zospheres on Livin	g Roots (C3)				Moss Trim Lines (
Water Marks (B1)				Reduced Iron (C4)					Dry-Season Wate	
Sediment Deposits (B	(2)		_	Reduction in Tilled	Soils (C6)				Crayfish Burrows	
Drift Deposits (B3)	4\		_ Thin Muck St							on Aerial Imagery (C9)
Algal Mat or Crust (B4	1)		_Otner (Explai	in in Remarks)					Stunted or Stress	` '
Iron Deposits (B5) Inundation Visible on	Aorial Imagon	(D7)							Geomorphic Posit Shallow Aquitard	
Water-Stained Leaves		(67)							Mircotopographic	. ,
Aquatic Fauna (B13)	3 (00)								FAC-Neutral Test	
/ requesto Fauria (B10)									1710 Houlian rost	(50)
Field Observations:										
Surface Water Present?	Yes _			Depth (inches):		_				
Water Table Present?	Yes _	No	<u> </u>	Depth (inches):		_	Wetlan	d Hydrolo	gy Present?	
Saturation Present? (includes capillary fringe)	Yes _	No	<u> </u>	Depth (inches):		_	Yes		No X	_
Describe Recorded Data		ge, monitoring well, aeri	al photos, pre	evious inspection	ıs), if availabl	e:				
Remarks:										

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.		· <u> </u>		That Are OBL, FACW, or FAC: 0 (A)
2.				
2				Total Number of Dominant
A				Species Across All Strata: 2 (B)
				(5)
				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 0% (A/B)
· .	0	Total Cover		That Are OBL, FACW, OF FAC.
Operline Offstrome (Plat Offstrome 45)		= Total Cover		Prevalence Index worksheet:
Sapling Stratum: (Plot Size: 15)				
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3.		·		FACW species x 2 =
4				FAC species x 3 =
5				FACU speciesx 4 =
6				UPL speciesx 5 =
7				Column Totals:(A)(B)
	0	•	•	
Shrub Stratum: (Plot Size: 15)		<u>.</u>		Prevalence Index = B/A =
1				
2				Hydrophytic Vegetation Indicators:
3			<u> </u>	1 - Rapid Test for Hydrophytic Vegetation
4				2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0 ¹
6.				4 - Morphological Adaptations ¹ (Provide supporting
7.				data in Remarks or on a separate sheet)
	0	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)		•		
Rubus allegheniensis	40	Υ	FACU	¹ Indicators of hydric soil and wetland hydrology must
Rubus occidentalis	5	N	UPL	be present, unless disturbed or problematic.
Solidago canadensis	25	Υ Υ	FACU	Definitions of Four Vegetation Strata:
4. Allium schoenoprasum	5	N	FACU	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Lamium purpureum	10	N	UPL	more in diameter at breast height (DBH), regardless of height.
6. Glechoma hederacea	5	N	FACU	Sapling - Woody plants, excluding woody vines, aproximately 20 ft
7. Agrimonia parviflora	5	N	FACW	(6 m) or more in height and less than 3 in. (7.6 cm) DBH.
8.				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20
9.				ft (1 to 6 m) in height.
10.				Herb - All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
12.				Woody Vines - All woody vines greater than 3.28 ft in height.
	95	= Total Cover	 -	Trace y times y times greater than one of the management
Woody Vine Stratum: (Plot size: 15)		- Total Cover		
	60	V	FAC	
	- 60	<u> </u>	FAC	
2		· 		Hydrophytic
3		· 		Vegetation
4 5.		·		Present? Yes NoX
5.	60	= Total Cover		
	-	= Total Cover		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			

Sampling Point:

Profile Desc	ription: (Describe to	the depth	needed to docume	nt the ind	icator or con	firm the al	bsence of indicators.))			
Depth	Matrix			Redox Fea	tures						
(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				
				_							
							<u></u> -				
							- 				
							- <u>- </u>				
	centration, D=Depletion, R	RM=Reduce	ed Matrix, MS=Masked	Sand Grains	S.		² Location: PL= Pore Li				
Hydric Soil In	dicators:						Indicators for Problem	natic Hydric Soils³:			
Histosol (A1)		Dark Surface (S7)			2 cm Muck (A10)	(MLRA 147)			
Histic Epi	pedon (A2)		Polyvalue Below	Surface (S8) (MLRA 147,1	48)	Coast Prairie Red	ox (A16)			
Black His	tic (A3)		Thin Dark Surface	e (S9) (MLR	(A147, 148)		(MLRA 147, 148))			
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2)							Piedmont Floodpla	ain Soils (F19)			
Stratified	Layers (A5)		Depleted Matrix (F3)			(MLRA 136, 147)			
2 cm Muc	k (A10) (LRR N)		Redox Dark Surfa	ace (F6)			Very Shallow Dark	k Surface (TF12)			
Depleted	Below Dark Surface (A11)		Depleted Dark Su	ırface (F7)			Other (Explain in F	Remarks)			
Thick Dar	k Surface (A12)		Redox Depressio	ns (F8)							
Sandy Mu	ucky Mineral (S1) (LRR N,		Iron-Manganese I	Masses (F1	2) (LRR N,						
MLRA	147, 148)		MLRA 136)								
Sandy Gle	eyed Matrix (S4)		Umbric Surface (I	F13) (MLR<i>A</i>	\ 136, 122)		³ Indicators of hydroph	hytic vegetation and			
Sandy Re	dox (S5)		Piedmont Floodpl	ain Soils (F	19) (MLRA 148	3)	wetland hydrology	must be present,			
Stripped N	Matrix (S6)		Red Parent Mater	rial (F21) (N	ILRA 127, 147)		unless disturbed or problematic.				
Restrictive La	yer (if observed):										
Type:	, (
_	1)							, , , , ,			
Depth (inc	cnes):						Hydric Soil Present?	Yes No <u>X</u>			
Remarks:							1				
1											

Project/Site:	170-822 / \	′ukon Landfil	l No. 7 Expar	nsion	City/County:	West	moreland Co	unty		Sampling Date:	March 12, 2018
Applicant/Owner:		MAX	Environmen	tal Technolo	ogies, Inc.			State:	PA	Sampling Point:	TS-18
Investigator(s):		С	RB, DWL		Se	ection, To	ownship, Ra	nge:		South Hunting	don Township
Landform (hillslope, terrace	e, etc.):		Floodpla	ain	Local Re	elief (cond	cave, convex,	none):		Concave	Slope (%):
Subregion (LRR or MLRA		-	RR N	Lat:	40° 12' 58.75	9" N	Lona:	79° 41	43.019" W	Datum:	
Soil Map Unit Name:	•	Udorthents,								ification:	
Are climatic/hydrologic co						Voc	N			plain in Remarks.)	
· -	o , Soil		or Hydrology	-	significantly distu	_			_	es" present?	
7110 Vogotation	<u>, </u>		orriyarology	110	oigriiioaritiy diota	iibou.	7110	Yes	Х	No	
Are Vegetation N	, Soil	<u>No</u> ,	or Hydrology	No	naturally problem	natic?	(If nee			ers in Remarks.)	-
SUMMARY OF FIND	INGS - At	tach site n	nap showir	ng sampli	ng point locat	ions, t	ransects, i	importa	nt feature	es, etc.	
Hydrophytic Vegetation F	resent?			Yes X	No						
Hydric Soil Present?				Yes X	·	la 4h a 6	Camania d A	Yes	X	No	
Wetland Hydrology Prese	ent?			Yes X	No	within	n a Wetland?	<u></u>	_	9 - PSS	- -
Remarks:						1					
Wetland 9 is located in a	low-lying flo	odplain area	and is fed by	/ flow from S	Stream 5 and Stre	eam 6. B	oth streams	lose cha	nnel and di	sperse in the wetl	and.
The precipitation in Penn	sylvania wa	s above ave	rage in Febru	ıary 2018 ar	nd March 2018.						
HYDROLOGY											
Wetland Hydrology Indi	cators:								Seconda	ary Indicators (mi	nimum of two required)
Primary Indicators (minimum	of one is rec	uired; check a	ll that apply)							Surface Soil Crack	s (B6)
X Surface Water (A1)				True Aquatio	Plants (B14)					Sparsely Vegetated	d Concave Surface (B8)
X High Water Table (A2)			Hydrogen Su	ulfide Odor (C1)				X	Drainage Patterns	(B10)
X Saturation (A3)				Oxidized Rhi	izospheres on Livin	g Roots (C3)			Moss Trim Lines (E	316)
Water Marks (B1)				Presence of	Reduced Iron (C4)					Dry-Season Water	Table (C2)
Sediment Deposits (B	2)			Recent Iron	Reduction in Tilled	Soils (C6))			Crayfish Burrows (C8)
Drift Deposits (B3)				Thin Muck S	surface (C7)					Saturation Visible of	on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Expla	in in Remarks)					Stunted or Stresse	
Iron Deposits (B5)										Geomorphic Position	` ,
Inundation Visible on		y (B7)								Shallow Aquitard (I	,
X Water-Stained Leaves	(B9)									Mircotopographic F	
Aquatic Fauna (B13)									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):	2	2	Wetlar	nd Hydrolo	gy Present?	
Saturation Present? (includes capillary fringe)	Yes	X	No		Depth (inches):)	Yes	X	No	-
Describe Recorded Data	(stream gar	uge, monitori	ing well, aeria	al photos, pr	evious inspection	ns), if ava	ailable:	•			
Remarks:											

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.	7,000,00	<u> </u>		That Are OBL, FACW, or FAC: 3 (A)
			<u> </u>	Total Number of Dominant
				Species Across All Strata: 3 (B)
				(5)
6				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 100% (A/B)
··	0	= Total Cover		110070 (1007)
Sapling Stratum: (Plot Size: 15)		- 10101 00101		Prevalence Index worksheet:
·				Total % Cover of: Multiply by:
3				OBL species
3		. ———		FACW species
A				FAC species
				FACU species x 4 =
-				UPL species x 5 =
7.				Column Totals: (A) (B)
	0	= Total Cover		Column Totals. (A)
Chrish Stratum: (Diet Size: 15)		= Total Cover		Dravelance Index - R/A
Shrub Stratum: (Plot Size: 15) 1. Cornus amomum	50	Y	FACW	Prevalence Index = B/A =
2.	50	· <u> </u>	FACW	Hydrophytic Vegetation Indicators:
3				X 1 - Rapid Test for Hydrophytic Vegetation
4				X 2 - Dominance Test is >50%
5		· 		3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting
6.				data in Remarks or on a separate sheet)
7				
	50	= Total Cover	•	Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)			E4.0	
Verbesina alternifolia	10	N	FAC	¹ Indicators of hydric soil and wetland hydrology must
2. Poa palustris	25	<u>Y</u>	FACW	be present, unless disturbed or problematic.
3. Impatiens sp.	15	Y	FACW	Definitions of Four Vegetation Strata:
Phalaris arundinacea	10	N	FACW	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
5. Rosa multiflora	5	N	FACU	
6. Alliaria petiolata	5	N	FACU	Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
7. Rumex crispus	5	N	FAC	
8				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.
9				· , , ,
10				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				Woody Vines - All woody vines greater than 3.28 ft in height.
	75	= Total Cover	•	
Woody Vine Stratum: (Plot size:15)				
1				
2				Hydrophytic
3				Vegetation
4				Present?
5				
	0	= Total Cover	•	
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			

Sampling Point:

Profile Desc	cription: (Describe to	the depth	needed to documen	t the indi	cator or con	firm the ab	sence of indicators.)			
Depth	Matrix		I	Redox Fea	tures		_			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-4	10YR 4/2	98	7.5YR 4/6	2	С	М	sandy clay loam			
4-16	10YR 4/4	100					clay loam			
							- <u> </u>			
							- <u> </u>			
¹ Type: C=Con	ncentration, D=Depletion,	RM=Reduce	d Matrix, MS=Masked S	Sand Grain	s.		² Location: PL= Pore Liniu	ng, M=Matrix.		
Hydric Soil In	dicators:						Indicators for Problema	tic Hydric Soils ³ :		
Histosol ((A1)		Dark Surface (S7)				2 cm Muck (A10) (M	LRA 147)		
Histic Epi	ipedon (A2)		Polyvalue Below S	Surface (S8	B) (MLRA 147,	148)	Coast Prairie Redox	(A16)		
Black His	tic (A3)	Thin Dark Surface	(S9) (MLF	RA147, 148)		(MLRA 147, 148)				
Hydrogen	n Sulfide (A4)	Loamy Gleyed Ma	trix (F2)			Piedmont Floodplain	n Soils (F19)			
Stratified	Layers (A5)	X Depleted Matrix (F	3)			(MLRA 136, 147)				
2 cm Muc	-			ce (F6)			Very Shallow Dark S	Surface (TF12)		
Depleted	Below Dark Surface (A11	Depleted Dark Sur	rface (F7)			Other (Explain in Remarks)				
Thick Dar	rk Surface (A12)	•	Redox Depression	ıs (F8)						
Sandy Mu	ucky Mineral (S1) (LRR N,	,	Iron-Manganese M	lasses (F1	2) (LRR N,					
	147, 148)	•	MLRA 136)							
	eyed Matrix (S4)		Umbric Surface (F	13) (MLR	A 136, 122)		3Indicators of hydrophy	tic vegetation and		
Sandy Re		•	Piedmont Floodpla			8)	wetland hydrology n	-		
	Matrix (S6)	•	Red Parent Materi				unless disturbed o			
Restrictive La	ayer (if observed):									
	ayer (ii observeu).									
Type:	ahaa):						Hudria Sail Brasant?	Vac V No		
Depth (in							Hydric Soil Present?	Yes <u>X</u> No		
Remarks:							1			

Project/Site:	170-822 / Y	'ukon Landf	ill No. 7 Expa	nsion	City/County:	Westr	moreland Co	ounty		Sampling Date:	August 13, 2019
Applicant/Owner:		MA	X Environmer	ital Technolo	ogies, Inc.			State:	PA	Sampling Point:	TS-19
Investigator(s):			PAK, DWL		Se	ction, To	ownship, Ra	nge:		South Huntingo	don Township
Landform (hillslope, terrace	, etc.):		Depress	sion	Local Re	lief (conc	ave, convex,	none):		Concave	Slope (%):
Subregion (LRR or MLRA	۸):		LRR N	Lat:	40° 13' 0.017	" N	Long:	79° 41	' 44.432" W	Datum:	
Soil Map Unit Name:			0 to 8 percer				<u> </u>			fication:	
Are climatic/hydrologic co						Vas	X N	lo.		plain in Remarks.)	
· -	, Soil		or Hydrology	-	significantly distu	_				es" present?	
			, , , , , ,		,			Yes	X	No	
Are Vegetation No	, Soil	No ,	or Hydrology	No	naturally problem	atic?	(If nee	eded, expla	ain any answe	ers in Remarks.)	.
SUMMARY OF FIND	NGS - Att	tach site	map showi	ng sampli	ng point locat	ions. tr	ransects.	importa	nt feature	es. etc.	
Hydrophytic Vegetation F				Yes X	No						
Hydric Soil Present?				Yes X		مطه ما		Yes	X	No	
Wetland Hydrology Prese	ent?			Yes X	No	within	sampied Are ⊢a Wetland?	a		10 - PEM	-
Remarks:				·							-
Wetland 10 is a depressi	onal area, p	ossibly form	ned by subside	ence.							
HYDROLOGY											
Wetland Hydrology Indi	cators:								Seconda	ary Indicators (mir	nimum of two required)
Primary Indicators (minimum	of one is req	uired; check	all that apply)							Surface Soil Cracks	s (B6)
X Surface Water (A1)				True Aquatic	Plants (B14)					Sparsely Vegetated	d Concave Surface (B8)
X High Water Table (A2				Hydrogen Su	ılfide Odor (C1)					Drainage Patterns	(B10)
X Saturation (A3)				Oxidized Rhi	zospheres on Living	g Roots (0	C3)			Moss Trim Lines (B	316)
Water Marks (B1)				Presence of	Reduced Iron (C4)					Dry-Season Water	Table (C2)
Sediment Deposits (B	2)			Recent Iron	Reduction in Tilled	Soils (C6)				Crayfish Burrows (0	C8)
Drift Deposits (B3)				Thin Muck S	urface (C7)					Saturation Visible of	n Aerial Imagery (C9)
X Algal Mat or Crust (B4)		-	Other (Expla	in in Remarks)					Stunted or Stressed	
Iron Deposits (B5)										Geomorphic Position	
Inundation Visible on		/ (B7)								Shallow Aquitard (D	•
Water-Stained Leaves	(B9)									Mircotopographic R	
Aquatic Fauna (B13)										FAC-Neutral Test (D5)
Field Observations:											
Surface Water Present?	Yes	X	No		Depth (inches):	0-3					
Water Table Present?	Yes	X	No		Depth (inches):	0	<u> </u>	Wetlar	nd Hydrolo	gy Present?	
Saturation Present? (includes capillary fringe)	Yes	X	No		Depth (inches):	0	<u> </u>	Yes	X	No	-
Describe Recorded Data	(stream gai	uge, monito	ring well, aeria	al photos, pr	evious inspection	s), if ava	ailable:				
Remarks:											

	Abaquita	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status	Number of Dominant Species
1.	70 COVE	Opecies:	Status	·
2.				That Are OBL, FACW, or FAC:5 (A)
				Total Number of Deminent
3				Total Number of Dominant
4	-	· 		Species Across All Strata: 6 (B)
6.				Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 83% (A/B)
	0	= Total Cover	•	Prevalence Index worksheet:
Sapling Stratum: (Plot Size: 15)			
1				Total % Cover of: Multiply by:
2				OBL speciesx 1 =
3				FACW speciesx 2 =
4				FAC species x 3 =
5				FACU species x 4 =
6.				UPL speciesx 5 =
7				Column Totals: (A)(B)
	0	= Total Cover		
Shrub Stratum: (Plot Size: 15)			Prevalence Index = B/A =
Rosa multiflora	5	Υ	FACU	
2		·		Hydrophytic Vegetation Indicators:
3.				1 - Rapid Test for Hydrophytic Vegetation
4.				X 2 - Dominance Test is >50%
5.				3 - Prevalence Index is ≤3.0 ¹
6				4 - Morphological Adaptations ¹ (Provide supporting
7.	-			data in Remarks or on a separate sheet)
· · ·	5	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5		- 10101 00101		
Penthorum sedoides	35	Υ	OBL	
Polygonum pensylvanicum	10	Y	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Leersia oryzoides	10	Y	OBL	Definitions of Four Vegetation Strata:
Scirpus atrovirens	10	Y	OBL	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Rumex crispus	10	Y	FAC	more in diameter at breast height (DBH), regardless of height.
6. Rosa multiflora	5	N	FACU	Sapling - Woody plants, excluding woody vines, aproximately 20 ft
-	2	N	OBL	(6 m) or more in height and less than 3 in. (7.6 cm) DBH.
0	•		OBL	Shrub Woody plants evaluding woody vines enrovimetaly 2 to 20
-				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.
9.	-	· 		
10	-	· 		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11.		· -		
12				Woody Vines - All woody vines greater than 3.28 ft in height.
		= Total Cover	•	
Woody Vine Stratum: (Plot size: 15)			
1				
2				Hydrophytic
3				Vegetation
4				Present? Yes X No No
5				
	0	= Total Cover	•	
Remarks: (Include photo numbers here or on a se	parate sheet.)			

Sampling Point:

SOIL

Depth	cription: (Describe to Matrix	tne aepth i	needed to docume	nt the indi Redox Fea		tirm the at	osence of indicators.)	
·	-	0/	Color (moint)		Type ¹	Loc ²		Domorko
(inches)	Color (moist)	%	Color (moist)	%	Туре		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	
						-		
¹Type: C=Con	ncentration, D=Depletion,	RM=Reduce	d Matrix. MS=Masked	Sand Grain	s.		² Location: PL= Pore Linir	ng. M=Matrix.
Hydric Soil In		- reduce	a mann, mo-machea	Caria Grain	<u>. </u>		Indicators for Problema	
Histosol ((A1)		Dark Surface (S7)			2 cm Muck (A10) (MI	•
	ipedon (A2)	-	Polyvalue Below	,) (MLRA 147,	148)	Coast Prairie Redox	
Black His	stic (A3)	-	Thin Dark Surfac	e (S9) (MLR	(A147, 148)		(MLRA 147, 148)	
Hydrogen	n Sulfide (A4)	-	Loamy Gleyed M	atrix (F2)			Piedmont Floodplain	Soils (F19)
Stratified	Layers (A5)	-	Depleted Matrix (F3)			(MLRA 136, 147)	
X 2 cm Muc	ck (A10) (LRR N)	· <u>-</u>	Redox Dark Surfa	ace (F6)			Very Shallow Dark S	Surface (TF12)
Depleted	Below Dark Surface (A11)	Depleted Dark St	urface (F7)			Other (Explain in Re	marks)
Thick Dar	rk Surface (A12)	-	Redox Depression	ns (F8)				
Sandy Mu	ucky Mineral (S1) (LRR N	,	Iron-Manganese	Masses (F1	2) (LRR N,			
MLRA	147, 148)	· <u>-</u>	MLRA 136)					
Sandy Gl	leyed Matrix (S4)		Umbric Surface (F13) (MLR	136, 122)		3Indicators of hydrophy	rtic vegetation and
Sandy Re		-	Piedmont Floodp	lain Soils (F	19) (MLRA 14	8)	wetland hydrology m	=
Stripped I	Matrix (S6)	-	Red Parent Mate	rial (F21) (N	ILRA 127, 147)	unless disturbed o	r problematic.
							1	
	ayer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil Present?	Yes X No
Remarks:								
Remarks.								

Sampling Point: TS-19

Project/Site:	170-822 /	Yukon Landfill No.	7 Expansion	City/County:	Westmorelar	nd County		Sampling Date:	August 13, 2019
Applicant/Owner:		MAX Envi	ronmental Techno	logies, Inc.		Sta	ite: PA	Sampling Point:	TS-20
Investigator(s):		PAK, [DWL	Se	ection, Township	o, Range:		South Huntingo	lon Township
Landform (hillslope, terra	ce, etc.):		Flat plain	Local Re	elief (concave, cor	nvex, none):		None	Slope (%):
Subregion (LRR or MLI	₹A):	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 clas	ssification:	N/A
Are climatic/hydrologic	conditions or	n the site typical for	this time of year?		Yes X	No		explain in Remarks.)	
Are Vegetation	No, Soil	No , or Hy	drology No	significantly distu	rbed?	Are "Norma	l Circumstar	nces" present?	
						Yes	X	No	
Are Vegetation	No, Soil	No , or Hy	drology No	naturally problem	atic? ((If needed, ex	kplain any ans	swers in Remarks.)	
SUMMARY OF FIN	DINGS - A	ttach site map s	showing sampl	ing point locat	ions, transed	cts, impo	rtant featu	ıres, etc.	
Hydrophytic Vegetation	Present?		Yes	No X					
Hydric Soil Present?			Yes		Is the Sample	d Area	'es	No X	
Wetland Hydrology Pre	sent?		Yes		within a Wetl				
Remarks:					<u> </u>				
itemarks.									
Upland test site adjace	it to Wetland	d 11, located in a su	uccessional field.						
HYDROLOGY									
Wetland Hydrology In	dicators:						Secon	idary Indicators (min	imum of two required)
Primary Indicators (minimu		quired; check all that	apply)				<u> </u>	Surface Soil Cracks	· · · · ·
Surface Water (A1)				ic Plants (B14)					Concave Surface (B8)
High Water Table (A	.2)	·	Hydrogen S	Sulfide Odor (C1)				Drainage Patterns (B10)
Saturation (A3)		_	Oxidized RI	nizospheres on Livin	g Roots (C3)			Moss Trim Lines (B	16)
Water Marks (B1)		_	Presence o	f Reduced Iron (C4)				Dry-Season Water	Table (C2)
Sediment Deposits	B2)	<u>.</u>	Recent Iron	Reduction in Tilled	Soils (C6)			Crayfish Burrows (C	28)
Drift Deposits (B3)		·=	Thin Muck	Surface (C7)				Saturation Visible of	n Aerial Imagery (C9)
Algal Mat or Crust (34)	·=	Other (Expl	ain in Remarks)				Stunted or Stressed	l Plants (D1)
Iron Deposits (B5)								Geomorphic Positio	n (D2)
Inundation Visible o	n Aerial Image	ery (B7)						Shallow Aquitard (D	3)
Water-Stained Leav	es (B9)							Mircotopographic R	elief (D4)
Aquatic Fauna (B13)							FAC-Neutral Test ([05)
Field Observations:									
Surface Water Present	? Yes	No	X	Depth (inches):					
Water Table Present?	Yes	No	X	Depth (inches):		Wet	land Hydro	logy Present?	
Saturation Present?	Yes	No		Depth (inches):			es		
(includes capillary fring									
Describe Recorded Da	a (stream ga	auge, monitoring we	ell, aerial photos, p	revious inspection	s), if available:				
Remarks:									

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.				That Are OBL, FACW, or FAC: 1 (A)
2.				
3.				Total Number of Dominant
4.				Species Across All Strata: 2 (B)
5.				
6.				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 50% (A/B)
	0	= Total Cover		
Sapling Stratum: (Plot Size: 15)				Prevalence Index worksheet:
1.				Total % Cover of: Multiply by:
2.				OBL species x 1 =
3.				FACW species x 2 =
4.				FAC species x 3 =
5.				FACU species x 4 =
6.				UPL species
7.				Column Totals: (A) (B)
	0	= Total Cover		
Shrub Stratum: (Plot Size: 15)				Prevalence Index = B/A =
1.				
2.				Hydrophytic Vegetation Indicators:
3.				1 - Rapid Test for Hydrophytic Vegetation
4.				2 - Dominance Test is >50%
5.				3 - Prevalence Index is ≤3.0¹
6.		,		4 - Morphological Adaptations ¹ (Provide supporting
7.		. ——		data in Remarks or on a separate sheet)
	0	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)				
Euthamia graminifolia	30	Υ	FAC	¹ Indicators of hydric soil and wetland hydrology must
Solidago altissima	15	Υ Υ	FACU	be present, unless disturbed or problematic.
3. Toxicodendron radicans	10	N	FAC	Definitions of Four Vegetation Strata:
Ambrosia artemisiifolia	10	N	FACU	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
Potentilla simplex	10	N	FACU	more in diameter at breast height (DBH), regardless of height.
6. Daucus carota	5	N	UPL	Sapling - Woody plants, excluding woody vines, aproximately 20 ft
7. Eupatorium perfoliatum	5	N	FACW	(6 m) or more in height and less than 3 in. (7.6 cm) DBH.
8.				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20
9.		,		ft (1 to 6 m) in height.
10.		. ——		Herb - All herbaceous (non-woody) plants, regardless
11.		,		of size, and woody plants less than 3.28 ft tall.
12.		,		Woody Vines - All woody vines greater than 3.28 ft in height.
	85	= Total Cover		
Woody Vine Stratum: (Plot size: 15)				
1.				
2.		. ——		
3.		. ——		Hydrophytic Vegetation
4.		. ——		Present? Yes No X
5.		. ——		
	0	= Total Cover		
Remarks: (Include photo numbers here or on a sepa	arate sheet.)			
	,			

Sampling Point:

Profile Desc	ription: (Describe to	the depth	needed to docume	nt the ind	icator or con	firm the al	sence of indica	tors.)		
Depth	Matrix			Redox Fea	tures		_			
(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	
	10111071						<u> </u>		117 9.410.	
¹ Type: C=Con	centration, D=Depletion, R	M=Reduce	d Matrix, MS=Masked	Sand Grains	S.		² Location: PL= F	ore Lining, i	M=Matrix.	
Hydric Soil Inc	dicators:						Indicators for Pr	roblematic i	Hydric Soils ³ :	
Histosol (A	A1)		Dark Surface (S7))			2 cm Muck	(A10) (MLR	A 147)	
<u> </u>	pedon (A2)		Polyvalue Below S) (MLRA 147,1	48)	Coast Prairi	e Redox (A1	16)	
Black Hist			Thin Dark Surface	e (S9) (MLR	A147, 148)		(MLRA 14			
	Sulfide (A4)		Loamy Gleyed Ma				Piedmont Fl		oils (F19)	
	Layers (A5)		Depleted Matrix (F				(MLRA 13	8, 147)	, ,	
	k (A10) (LRR N)		Redox Dark Surfa				Very Shallo		ace (TF12)	
	Below Dark Surface (A11)		Depleted Dark Su				Other (Expla			
	k Surface (A12)		Redox Depression						-,	
	icky Mineral (S1) (LRR N,		Iron-Manganese N	. ,	2) (LRR N,					
	147, 148)		MLRA 136)	`	,					
	eyed Matrix (S4)		Umbric Surface (F	- - - - - - - - - - - - - - - - - - -	136, 122)		³ Indicators of h	vdrophytic v	egetation and	
Sandy Re			Piedmont Floodpla			3)	wetland hydr		-	
	Matrix (S6)		Red Parent Mater					urbed or pro		
Restrictive La	yer (if observed):									
Type:										
Depth (inc	thes):						Hydric Soil Pres	sent?	Yes	No X
Dopar (iiio							,			<u>. </u>
Remarks:										
Disturbed soil.										
Disturbed soil.										

0-822 / Yukon Landfill No. 7 E	xpansion	City/County:	Westmorelan	d County		Sampling Date: _	August 13, 2019	
MAX Enviror	mental Technolo	gies, Inc.		State:	PA	Sampling Point:	TS-21	
PAK, DW	L	Se	ection, Township	, Range:		South Huntingde	on Township	
c.): Dep	ression	Local Re	elief (concave, con	vex, none):	Co	oncave	Slope (%):	
LRR N	Lat:	40° 13' 5.049	"N Long:	79° 41'	49.815" W	Datum:		
			Voc. V				13/73	
	=	significantly distu		· ·	='			
	10gy 110 C	ngrillourity diota	1000.			•		
_, Soil <u>No</u> , or Hydro	logy <u>No</u> r	naturally problem	natic? (I					
SS - Attach site map sh	owing samplin	ng point locat	ions, transec	ts, importa	nt feature	s, etc.		
			,	, ,		,		
one.				. Yes	X	No		
•		No	Is the Sampled within a Wetla	Area				
ccessional field, possibly forn	ned by subsidenc	e.						
ors:					Secondar	y Indicators (mini	mum of two required)	
one is required; check all that app	ly)				s	Surface Soil Cracks	(B6)	
	True Aquatic	Plants (B14)			s	sparsely Vegetated	Concave Surface (B8)	
	Hydrogen Su	lfide Odor (C1)				rainage Patterns (E	310)	
	X Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (E						B16)	
_	Presence of I	Reduced Iron (C4)				ry-Season Water T	able (C2)	
_	Recent Iron F	Reduction in Tilled	Soils (C6)			Crayfish Burrows (Ca	3)	
_	Thin Muck Su	urface (C7)				Saturation Visible on	Aerial Imagery (C9)	
_	Other (Explai	n in Remarks)					, ,	
,						. ,		
9)								
					<u> </u>	AC-Neutral Test (D	5)	
Yes No	<u>X </u>	Depth (inches):		Wetlan	d Hydrolog	y Present?		
Yes No	X	Depth (inches):		Yes	X	No		
eam gauge, monitoring well,	aerial photos, pre	evious inspection	s), if available:	1				
	MAX Environ PAK, DW c.): Dep LRR N UaB - Udorthents, 0 to 8 per itions on the site typical for this , Soil No, or Hydro , Soil No, or Hydro GS - Attach site map sho sent? Cors: One is required; check all that app all Imagery (B7) yes No Yes No Yes No Yes No No	MAX Environmental Technology	MAX Environmental Technologies, Inc. PAK, DWL Sec. Depression Local Record Local Rec	MAX Environmental Technologies, Inc. PAK, DWL Section, Township c.): Depression Local Relief (concave, con LRR N Lat: 40° 13′ 5.049° N Long: UaB - Udorthents, 0 to 8 percent slopes Itions on the site typical for this time of year? Yes X , Soil No , or Hydrology No significantly disturbed? A significantly	MAX Environmental Technologies, Inc. State: PAK, DWL Section, Township, Range: C.): Depression Local Relief (concave, convex, none): LRR N	MAX Environmental Technologies, Inc. State: PA	MAX Environmental Technologies, Inc.	

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			That Are OBL, FACW, or FAC: 2 (A)
				(,,
2				Total Number of Dominant
				Species Across All Strata: 2 (B)
-				(5)
-				Percent of Dominant Species
7.				That Are OBL, FACW, or FAC: 100% (A/B)
···	0	= Total Cover	,	110070 (1007)
Sapling Stratum: (Plot Size: 15)		- 10101 00101		Prevalence Index worksheet:
				Total % Cover of: Multiply by:
3				OBL species x 1 =
				FACW species
				FAC species
				FACU species x 4 =
6				UPL species x 5 =
7.				Column Totals: (A) (B)
···	0	= Total Cover	,	(V)(D)
Shrub Stratum: (Plot Size: 15)		- 10101 00101		Prevalence Index = B/A =
1				Trevalence mack = BIA =
				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
A				X 2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
-				4 - Morphological Adaptations ¹ (Provide supporting
7.				data in Remarks or on a separate sheet)
··	0	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)		= Total Cover		1 Toblematio 119 drophytic Vogetation (Explain)
Scirpus cyperinus	35	Υ	FACW	1
Juncus tenuis	10	N	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. Solidago rugosa	20	Y	FAC	Definitions of Four Vegetation Strata:
Scirpus atrovirens	10	N	OBL	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Potentilla simplex	10	N	FACU	more in diameter at breast height (DBH), regardless of height.
Euthamia graminifolia	10	N	FAC	Sapling - Woody plants, excluding woody vines, aproximately 20 ft
7. Typha angustifolia	5	N	OBL	(6 m) or more in height and less than 3 in. (7.6 cm) DBH.
8.				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20
9.				ft (1 to 6 m) in height.
10.				Herb - All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
12.				Woody Vines - All woody vines greater than 3.28 ft in height.
	100	= Total Cover		g
Woody Vine Stratum: (Plot size: 15)	100	- 10101 00101		
1.				
3.				Hydrophytic
4.				Vegetation Present? Yes X No
5.				100 <u>X</u> 100 <u>X</u>
	0	= Total Cover		
Remarks: (Include photo numbers here or on a sepa	rate sheet)			<u> </u>
remarks. (molado prioto fidinació ficio di cir a cope	indio onooti.)			

Sampling Point:

Profile Desc	ription: (Describe to	the depth	needed to documer	nt the indi	cator or cor	nfirm the ab	sence 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			
	-										
		. .									
¹Type: C=Con	centration, D=Depletion,	RM=Reduce	d Matrix MS=Masked S	Sand Grain			² Location: PL= Pore Linir	ng M=Matrix			
Hydric Soil In	•	- TOUGUO	a matrix, mo-matrica (Sana Grain	<u>. </u>		Indicators for Problemat				
Histosol (Dark Surface (S7)				2 cm Muck (A10) (MI	•			
	pedon (A2)	•	Polyvalue Below S		(MI RA 147.	148)	Coast Prairie Redox				
Black His		,	Thin Dark Surface			,	(MLRA 147, 148)	(1115)			
	Sulfide (A4)	•	Loamy Gleyed Ma		, -,		Piedmont Floodplain	Soils (F19)			
	Layers (A5)	•	X Depleted Matrix (F				(MLRA 136, 147)				
	k (A10) (LRR N)	•	Redox Dark Surfa				Very Shallow Dark Surface (TF12)				
Depleted	Below Dark Surface (A11))	Depleted Dark Su	rface (F7)			Other (Explain in Remarks)				
Thick Dar	k Surface (A12)		Redox Depression	ns (F8)							
Sandy Mu	ucky Mineral (S1) (LRR N,		Iron-Manganese M	Masses (F1	2) (LRR N,						
MLRA	147, 148)		MLRA 136)								
Sandy GI	eyed Matrix (S4)		Umbric Surface (F	13) (MLR	A 136, 122)		³ Indicators of hydrophy	tic vegetation and			
Sandy Re	edox (S5)		Piedmont Floodpl	ain Soils (F	19) (MLRA 1 4	18)	wetland hydrology m	ust be present,			
Stripped I	Matrix (S6)		Red Parent Mater	ial (F21) (N	ILRA 127, 147	7)	unless disturbed of	r problematic.			
Restrictive La	yer (if observed):										
Type:											
Depth (in	ches):		Hydric Soil Present?					Yes X No			
Remarks:											
Disturbed soil.											

Project/Site: 170)-822 / Yukon Landfill No. 7 Expa	nsion City/County:	Westmoreland Coun	ty Sampling Date:	August 13, 2019
Applicant/Owner:	MAX Environmen	ntal Technologies, Inc.		State: PA Sampling Point:	TS-22
Investigator(s):	PAK, DWL		Section, Township, Range	e: South Huntingo	lon Township
Landform (hillslope, terrace, etc			Relief (concave, convex, nor	ne): Concave	Slope (%):
Subregion (LRR or MLRA):	LRR N	Lat: 40° 13' 0.5	80" N Lona:	79° 41' 51.537" W Datum:	
Soil Map Unit Name:	UaB - Udorthents, 0 to 8 percel	<u></u>	<u> </u>	NWI classification:	
·	tions on the site typical for this tin		Yes X No	(If no, explain in Remarks.)	14/7
· -	, Soil No , or Hydrology	-		mal Circumstances" present?	
	_, co <u></u>	,		Yes X No	
Are Vegetation No	, Soil No , or Hydrology	/ No naturally prob		d, explain any answers in Remarks.)	
SUMMARY OF FINDING	SS - Attach site map showi	ng sampling point lo	ations, transects, im	portant features, etc.	
Hydrophytic Vegetation Pres	ent?	Yes X No			
Hydric Soil Present?		Yes X No	Is the Sampled Area	Yes X No	
Wetland Hydrology Present?		Yes X No	within a Wetland?	Wetland 12 - PFO	
Remarks:					
	rib 37643 to Sewickley Creek. S		nce the original delineation	n. As such, the stream has low, poo	orly defined banks that
HYDROLOGY					
Wetland Hydrology Indicat	ors:			Secondary Indicators (min	imum of two required)
Primary Indicators (minimum of o	one is required; check all that apply)			Surface Soil Cracks	(B6)
Surface Water (A1)		_True Aquatic Plants (B14)		X Sparsely Vegetated	Concave Surface (B8)
High Water Table (A2)	X	_Hydrogen Sulfide Odor (C1)		X Drainage Patterns (B10)
Saturation (A3)	X	_Oxidized Rhizospheres on L	ving Roots (C3)	Moss Trim Lines (B	16)
Water Marks (B1)		Presence of Reduced Iron (Dry-Season Water	Γable (C2)
Sediment Deposits (B2)		_Recent Iron Reduction in Till	ed Soils (C6)	Crayfish Burrows (C	(8)
Drift Deposits (B3)		_ Thin Muck Surface (C7)		<u></u>	n Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Remarks)		Stunted or Stressed	` '
Iron Deposits (B5)				X Geomorphic Positio	, ,
Inundation Visible on Aeria	• • • •			Shallow Aquitard (D	•
Water-Stained Leaves (B9 Aquatic Fauna (B13)	9)			Mircotopographic R X FAC-Neutral Test (I	
Aqualic Fauria (B13)				XI AC-Neutiai lest (L	55)
Field Observations:					
Surface Water Present?	Yes NoX	Depth (inches):		
Water Table Present?	Yes NoX	Depth (inches):	Wetland Hydrology Present?	
Saturation Present? (includes capillary fringe)	Yes NoX_	Depth (inches):	YesX No	
	eam gauge, monitoring well, aeri	al photos, previous inspec	ions), if available:		
Remarks:					

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
1. Acer negundo	40	Y	FAC	That Are OBL, FACW, or FAC: 4 (A)
2		· — · —		
		· 		Total Number of Dominant
				Species Across All Strata: 4 (B)
				Species Across Air Strata.
5.		· 		
6.		· 		Percent of Dominant Species
7				That Are OBL, FACW, or FAC: 100% (A/B)
	40	= Total Cover	•	Prevalence Index worksheet:
Sapling Stratum: (Plot Size: 15)				Prevalence index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species x 1 =
3.				FACW species x 2 =
4				FAC species x 3 =
5				FACU species x 4 =
6				UPL species x 5 =
7.				Column Totals: (A)(B)
	0	= Total Cover		
Shrub Stratum: (Plot Size: 15)		•		Prevalence Index = B/A =
1.				
2.				Hydrophytic Vegetation Indicators:
		· 	·	1 - Rapid Test for Hydrophytic Vegetation
1		· ———		X 2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0 ¹
				4 - Morphological Adaptations ¹ (Provide supporting
6.		· 		data in Remarks or on a separate sheet)
7		· -		
	0	= Total Cover	•	Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5)				
1. Impatiens sp.	35	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
Leersia oryzoides	20	Y	OBL	be present, unless disturbed or problematic.
3. Microstegium vimineum	20	Y	FAC	Definitions of Four Vegetation Strata:
Persicaria longiseta	15	N	FAC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
5. Pilea pumila	5	N	FACW	more in diameter at breast height (DBH), regardless of height.
6. Echinochloa muricata	5	N	FACW	Sapling - Woody plants, excluding woody vines, aproximately 20 ft
7.				(6 m) or more in height and less than 3 in. (7.6 cm) DBH.
8.				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20
9.				ft (1 to 6 m) in height.
10.				Herb - All herbaceous (non-woody) plants, regardless
11.				of size, and woody plants less than 3.28 ft tall.
12.		· 		Woody Vines - All woody vines greater than 3.28 ft in height.
	100	= Total Cover		, , , ,
Woody Vine Stratum: (Plot size: 15)				
1.				
		· 		
2				Hydrophytic
3.		· 		Vegetation
4		· 		Present?
5	0	= Total Cove		
		= Total Cover		
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

Sampling Point:

Profile Desc	cription: (Describe to	the depth	needed to documen	t the indi	cator or con	firm the ab	sence of indicators.)				
Depth	Matrix			Redox Fea	tures		<u> </u>				
(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				
	ncentration, D=Depletion, I	RM=Reduce	d Matrix, MS=Masked S	Sand Grain	S.		² Location: PL= Pore Lining				
Hydric Soil In							Indicators for Problema	•			
Histosol (,		Dark Surface (S7)				2 cm Muck (A10) (M				
	ipedon (A2)		Polyvalue Below S	•		148)	Coast Prairie Redox	(A16)			
Black His		,	Thin Dark Surface		RA147, 148)		(MLRA 147, 148)				
X Hydrogen			Loamy Gleyed Ma	. ,			Piedmont Floodplain	Soils (F19)			
	Layers (A5)	•	X Depleted Matrix (F				(MLRA 136, 147)				
	ck (A10) (LRR N)		Redox Dark Surfa	. ,			Very Shallow Dark Surface (TF12) Other (Explain in Remarks)				
	Below Dark Surface (A11))	Depleted Dark Sur				Other (Explain in Re	marks)			
	rk Surface (A12)		Redox Depression		2) // DD N						
	ucky Mineral (S1) (LRR N,	٠.	Iron-Manganese N	lasses (F1	2) (LKK N,						
	147, 148)		MLRA 136)				3				
	eyed Matrix (S4)	•	Umbric Surface (F			•	³ Indicators of hydrophytic vegetation and				
Sandy Re			Piedmont Floodpla				wetland hydrology m				
Stripped I	Matrix (S6)	,	Red Parent Materi	ial (F21) (N	ILRA 127, 147)	unless disturbed o	r problematic.			
Restrictive La	ayer (if observed):										
Type:											
Depth (in	ches):						Hydric Soil Present?	Yes X No			
Remarks:											

Project/Site: 17	70-822 / Yukon Landfill No. 7 Expa	ansion City/Co	ounty: We	stmoreland Cou	unty	Sampling Date	: August 13, 2019		
Applicant/Owner:	MAX Environme	ental Technologies, Inc	c.		State: F	PA Sampling Point	:TS-23		
Investigator(s):	PAK, DWL		Section	Township, Rang	ge:	South Hunting	don Township		
Landform (hillslope, terrace, e	tc.): Floodp	olain	Local Relief (c	oncave, convex, no	one):	None	Slope (%):		
Subregion (LRR or MLRA):	LRR N	Lat: 40°	13' 0.642" N	Lona:	79° 41' 51	.835" W Datum	: NAD83		
Soil Map Unit Name:	UaB - Udorthents, 0 to 8 perce			g-		VI classification:			
•			Vo	o V No			IN//A		
· -	ditions on the site typical for this tir , Soil, or Hydrolog		re ntly disturbed?			(If no, explain in Remarks.) Imstances" present?			
Ale vegetation No		y	iniy distarbou:	AIC IV	Yes	X No			
Are Vegetation No	, Soil, or Hydrolog	y <u>No</u> naturally	problematic?	(If need	_	any answers in Remarks.)	_		
SUMMARY OF FINDING	GS - Attach site map show	ing sampling poi	nt locations	, transects, in	mportant t	features, etc.			
Hydrophytic Vegetation Pres	sent?	Yes X No							
Hydric Soil Present?				e Sampled Area	Yes _	No X	_		
Wetland Hydrology Present	?		13 11	e Sampled Alea hin a Wetland?	`		- =		
Remarks:									
Upland test site adjacent to	Wetland 12 and Trib 37643 to Se	ewickley Creek							
HYDROLOGY									
Wetland Hydrology Indica	tors:				Š	Secondary Indicators (m	nimum of two required)		
Primary Indicators (minimum of	one is required; check all that apply)					Surface Soil Crack	ss (B6)		
Surface Water (A1)		True Aquatic Plants (E	314)		_	Sparsely Vegetate	d Concave Surface (B8)		
High Water Table (A2)		Hydrogen Sulfide Odd	or (C1)		_	Drainage Patterns	(B10)		
Saturation (A3)		Oxidized Rhizosphere	s on Living Root	s (C3)	_	Moss Trim Lines (B16)			
Water Marks (B1)		Presence of Reduced	Iron (C4)		_	Dry-Season Water	Table (C2)		
Sediment Deposits (B2)		Recent Iron Reduction	n in Tilled Soils (C6)	_	Crayfish Burrows	C8)		
Drift Deposits (B3)		Thin Muck Surface (C	7)		_	Saturation Visible	on Aerial Imagery (C9)		
Algal Mat or Crust (B4)		Other (Explain in Rem	arks)		_	Stunted or Stresse	ed Plants (D1)		
Iron Deposits (B5)					_	Geomorphic Positi	on (D2)		
Inundation Visible on Aer	ial Imagery (B7)				_	Shallow Aquitard (D3)		
Water-Stained Leaves (E	i9)				_	Mircotopographic			
Aquatic Fauna (B13)					-	X FAC-Neutral Test	(D5)		
Field Observations:									
Surface Water Present?	Yes No	X Depth (ii	nches):						
Water Table Present?	Yes No	X Depth (ii	nches):		Wetland F	Hydrology Present?			
Saturation Present?	Yes No	X Depth (ii	nches):		Yes	NoX	_		
(includes capillary fringe) Describe Recorded Data (si	tream gauge, monitoring well, aer	rial photos, previous ir	nspections), if a	available:					
(4)		, , , , , , , , , , , , , , , , , ,	,,,,						
Remarks:									

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30)	% Cover	Species?	Status	Number of Dominant Species
Prunus serotina	30	Υ Υ	FACU	That Are OBL, FACW, or FAC: 4 (A)
Acer saccharinum	40	Υ	FACW	
3. Juglans nigra	10	N	FACU	Total Number of Dominant
4.				Species Across All Strata: 5 (B)
5.				
6.				Percent of Dominant Species
7.	_			That Are OBL, FACW, or FAC: 80% (A/B)
	80	= Total Cover		
Sapling Stratum: (Plot Size: 15)			Prevalence Index worksheet:
1	_′			Total % Cover of: Multiply by:
2	-			OBL species x 1 =
2				FACW species x 2 =
4				FAC species x 3 =
				FACU species x 4 =
				UPL species
7.				Column Totals: (A) (B)
	0	= Total Cover		(1)
Shrub Stratum: (Plot Size: 15		70101 00101		Prevalence Index = B/A =
1. Acer negundo	_/ 30	Υ	FAC	Trevalence mask = 5// =
3				Hydrophytic Vegetation Indicators:
	- ·			1 - Rapid Test for Hydrophytic Vegetation
				X 2 - Dominance Test is >50%
				3 - Prevalence Index is ≤3.0¹
-				4 - Morphological Adaptations ¹ (Provide supporting
7.				data in Remarks or on a separate sheet)
· .	30	= Total Cover		Problematic Hydrophytic Vegetation ¹ (Explain)
Herb Stratum: (Plot size: 5		= Total Cover		Troblematic Hydrophytic Vogetation (Explain)
Verbesina alternifolia	_	Υ	FAC	
Verbesina alterrinola Viola sp.	10	N	-	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.
-				
7.				Sapling - Woody plants, excluding woody vines, aproximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.
0				
8				Shrub - Woody plants, excluding woody vines, aproximately 3 to 20 ft (1 to 6 m) in height.
9.				, , , , , , , , , , , , , , , , , , ,
10.				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11.				
12				Woody Vines - All woody vines greater than 3.28 ft in height.
	90	= Total Cover	•	
Woody Vine Stratum: (Plot size: 15		.,	=	
1. Vitis vulpina	10	Y	FAC	
2.				Hydrophytic
3.				Vegetation
4				Present?
5		Tetal Cause		
	10	= Total Cover		
Remarks: (Include photo numbers here or on a se	eparate sheet.)			

TS-23

Sampling Point:

Profile Desc	ription: (Describe to	the depth	needed to docume	nt the ind	icator or cor	firm the al	bsence 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		
		- ——							
		- 							
¹Type: C-Con	centration, D=Depletion, F	M-Reduce	ad Matrix MS-Masked (Sand Grains			² Location: PL= Pore I	ining M-Matrix	
Hydric Soil In	•	NI-INEGUCE	u Matrix, MS=Maskeu C	Janu Grains	o.		Indicators for Proble		
_			DI-0	,				•	
Histosol (Dark Surface (S7)		\	40)	2 cm Muck (A10)	,	
	pedon (A2)		Polyvalue Below S			48)	Coast Prairie Rec		
Black Hist			Thin Dark Surface		A147, 148)		(MLRA 147, 148		
	Sulfide (A4)		Loamy Gleyed Ma				Piedmont Floodp	, ,	
	Layers (A5)		Depleted Matrix (F				(MLRA 136, 147		
_	k (A10) (LRR N)		Redox Dark Surfa	. ,			Very Shallow Dark Surface (TF12)		
	Below Dark Surface (A11)		Depleted Dark Su				Other (Explain in	Remarks)	
	k Surface (A12)		Redox Depression						
	ucky Mineral (S1) (LRR N,		Iron-Manganese N	vlasses (F12	2) (LRR N,				
	147, 148)		MLRA 136)						
Sandy Gle	eyed Matrix (S4)		Umbric Surface (F	-13) (MLRA	136, 122)		³ Indicators of hydrop	phytic vegetation and	
Sandy Re	dox (S5)		Piedmont Floodpl	ain Soils (F	19) (MLRA 148	3)	wetland hydrology	y must be present,	
Stripped N	Matrix (S6)		Red Parent Mater	ial (F21) (M	ILRA 127, 147)		unless disturbed	d or problematic.	
Restrictive La	yer (if observed):								
Type:									
Depth (inc	ches):					Hydric Soil Present? Yes No			
Remarks:									
1									
1									
I									

STREAM SURVEY DATA COLLECTION FORM
PROJECT 170-822 Weather Conditions: Sunny Partly Cloudy Cloudy Rain DATE 3-8-3-018 Any precipitation in the last 5 days? STREAM FIELD ID STREAM STREAM NAME Sew: Creek Stream Type: Perennial Intermittent
Photographs taken Photograph numbers: 5 upstream downstream crossing Flagged (total flags) Stream crossed/encroached by centerline or limit of disturbance GPS coordinates collected Pyes No Crossing length feet Road crossing and type:
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 4 - 80 At centerline: Average top of bank depth (feet): 2 10 - 2 1 At centerline: Wetted width (feet): 2 10 - 2 1 At centerline: Wetted depth (feet): 2 10 - 2 1 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") Sand X Cobble (2" to 10") Clay Soulder (>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 You No Describe: Fish or wildlife observed? Yes You No Describe:
Other Observations and Comments: ONLY LDB GPS ed, Continues above and below DB.

YUKON LANGIFIL NO.7 STREAM SURVEY DATA COLLECTION FORM
PROJECT //O - 8 d. Weather Conditions: D. Sunny M. Partly Cloudy D. Cloudy D. Dais
DATE 3-8-20/6 Any precipitation in the last 5 days? W Yes D No.
STREAM NAME UNT 1 To Sawickley Creek Stream Type: Derennial
REVIEWED(S)
The intermittent
Photographs taken Photograph numbers: (// upstream // downstream crossing
A Flagged (total flags) Stream crossed/encroached by centerling or limit of distributions
☐ Yes 💢 No Crossing length feet
Road crossing and type:
Hydrological Characteristics: □ Bridge □ Ford crossing □ Culvert (Diameter:)
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): Silt Gravel (0.25" to 2") Bedrock Vegetation (%) Clay Boulder (>10") Other Explain:
Flow Characteristics:
Water present: ➤ No water, streambed dry □ Streambed moist □ Standing water □ Flowing water
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:
Industrial □ mining □ residential □ 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
Wetland fringe: X Yes (☒ Abutting or ☐ Adjacent) ☐ No
Welland ID: Wetland 3
Biological Characteristics:
Macroinvertebrates observed? ☐ Yes X No Describe:
Fish or wildlife observed? □ Yes ⋉ No Describe:
Other Observations and Comments: Dry channel starts below intermittent
portion, Confluence with Somickley Greek

VUKON LANDETIL NO.7 STREAM SURVEY DATA COLLECTION FORM
PROJECT 170-822 Weather Conditions: Sunny Partly Cloudy Cloudy Rain
Rain Soliday Gloudy Rain
STREAM FIELD ID STREAM
STREAM NAME UT 1 to Sewickley Creek Stream Type: - Perennial
REVIEWER(S) GRB, DWL Intermittent
□ Ephemeral
A Photographs taken Photograph numbers: 16 upstream 1/downstream crossing
Flagged (total flags) Stream crossed/encroached by centerline or limit of disturbance
© GPS coordinates collected □ Yes 🖈 No Crossing length feet
Road crossing and type:
☐ Bridge ☐ Ford crossing ☐ Culvert (Diameter:
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): 1,5-1,5 At centerline: Wetted width (feet): 0,5-1/1 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 Sand Sand Gravel (0.25" to 2") Cobble (2" to 10") Bedrock Vegetation (%)
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
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 赵 wetland □ mixed use □ industrial □ mining □ residential
Stream Shading: ★ 75 - 100% □ 50 - 74% □ 25 - 49% □ 0 - 24%
Wetland fringe: ∀ Yes (X Abutting or □ Adjacent) □ No
Wetland ID: wetland 2
Biological Characteristics:
Macroinvertebrates observed? Yes No Describe: Alat warms
Fish or wildlife observed? Yes No Describe:
Other Observations and Comments:
Drainage pattern originates from wetland Z
Drainage Pattern
V /

Yukon Landfill NO. 7 STREAM SURVEY DATA COLLECTION FORM
PROJECT 170-822 Weather Conditions: Sunny Partly Cloudy Cloudy Rain DATE 3-8-2018 Any precipitation in the last 5 days? Yes No
STREAM NAME Tr. b 37643 to Sewickley Creek Stream Type: Perennial Intermittent
Photographs taken Photograph numbers: 30 upstream 31 downstream crossing
K Flagged (total flags) Stream crossed/encroached by centerline or limit of disturbance:
Yes □ No Crossing length feet Road crossing and type:
□ Bridge □ Ford crossing □ Culvert (Diameter:)
Tributary is: X 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):
Primary tributary substrate composition (check all that apply): Silt Silt Sand Sand Sand Solder (2" to 10") 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 ID:
Biological Characteristics: Macroinvertebrates observed? Yes I No Describe: pouched Sneil, tipulidae, caddis Fish or wildlife observed? I Yes No Describe:
Other Observations and Comments: Stream flows through a wooded valley and into Wetland 4.

STREAM SURVEY DATA COLLECTION FORM

PROJECT 170 - 877 Weather Conditions: Sunny Partly Cloudy Cloudy Rain DATE 4-9-18 Any precipitation in the last 5 days? STREAM FIELD ID STILL AM 5
STREAM FIELD ID STILL TO TY'S 37634 to Sewickley Stream Type: Perennial REVIEWER(S) USB DWL Creckley Perennial
Photographs taken Photograph numbers: Upupstream bound downstream crossing Flagged (total flags) Ephemeral crossing Stream crossed/encroached by centerline or limit of disturbance:
☐ GPS coordinates collected ☐ Yes ☐ No Crossing length feet Road crossing and type:
Hydrological Characteristics: □ Bridge □ Ford crossing ♥ Culvert (Diameter: 💯)
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): /, 5 - 3 / At centerline: Average top of bank depth (feet): /, 5 - 3 / At centerline: Wetted width (feet): /, 5 - / / At centerline: Wetted depth (feet): /, 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 Silt Sand Cobble (2" to 10") 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 Weather Conditions: Sunny Partly Cloudy Cloudy Rain DATE 3/12/18 Any precipitation in the last 5 days? Yes No
STREAM NAME UNT 2 to Trib 37643 to Swickley Creek Stream Type: Perennial Intermittent
Photographs taken Photograph numbers:upstreamdownstreamcrossing
Flagged (total flags) Stream crossed/encroached by centerline or limit of disturbance:
☐ GPS coordinates collected ☐ Yes ☑ No Crossing length feet
Road crossing and type:
Hydrological Characteristics: Bridge Ford crossing Culvert (Diameter: 30")
Tributary is: X 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): 4t 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
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: (koadside) □ 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: ₩etland 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.

Yukon Land Fill NO.7 STREAM SURVEY DATA COLLECTION FORM
PROJECT 1/0-822 Weather Conditions: Sunny Partly Cloudy Cloudy Rain DATE 3/12/18 Any precipitation in the last 5 days? Yes No
STREAM NAME UNT 3 to Trib 37643 to Sewickley Creek Stream Type: Perennial Intermittent
Photographs taken Photograph numbers:upstreamdownstreamcrossing Flagged (total flags)
Hydrological Characteristics: Tributary is: X 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): Average top of bank depth (feet): Wetted width (feet): Wetted depth (feet): At centerline: Wetted depth (feet): At centerline: At centerline: At centerline: Ordinary High Water Mark (OHWM), if observed:
Primary tributary substrate composition (check all that apply): Silt Gravel (0.25" to 2") Sand Cobble (2" to 10") Clay Boulder (>10") Bedrock Vegetation (%) 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:
Stream Shading: □ 75 - 100% □ 50 - 74% ★ 25 - 49% □ 0 - 24% Wetland fringe: ★ Yes (★ Abutting or □ Adjacent) □ No Wetland ID: ₩ 3
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.

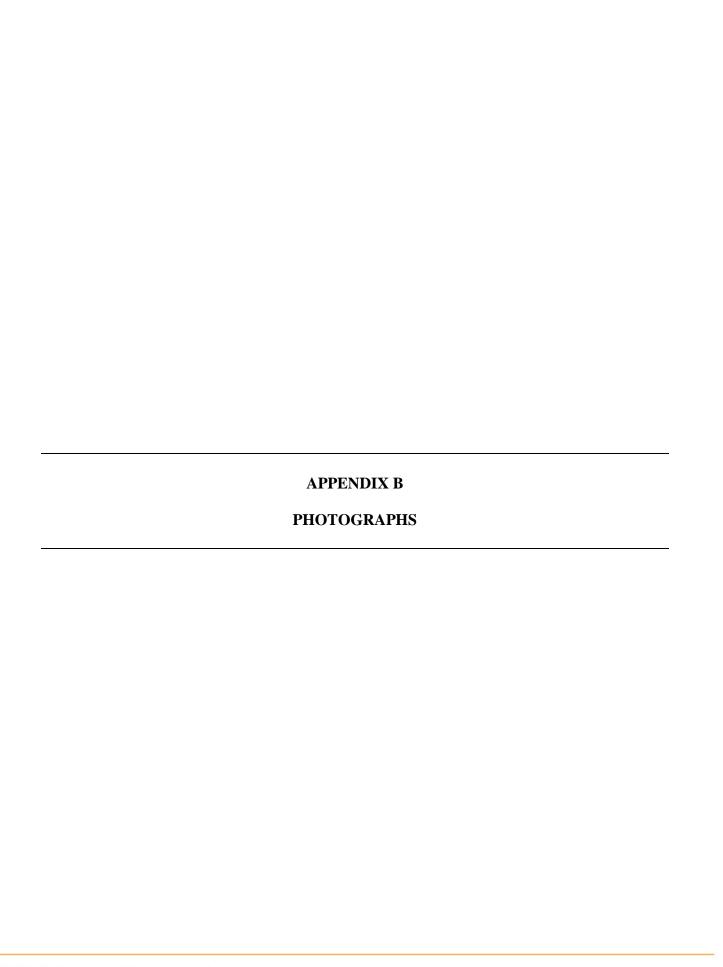




Photo 1: Test Site 1, Wetland 1A. Facing southwest - March 8, 2018



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



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



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



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



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



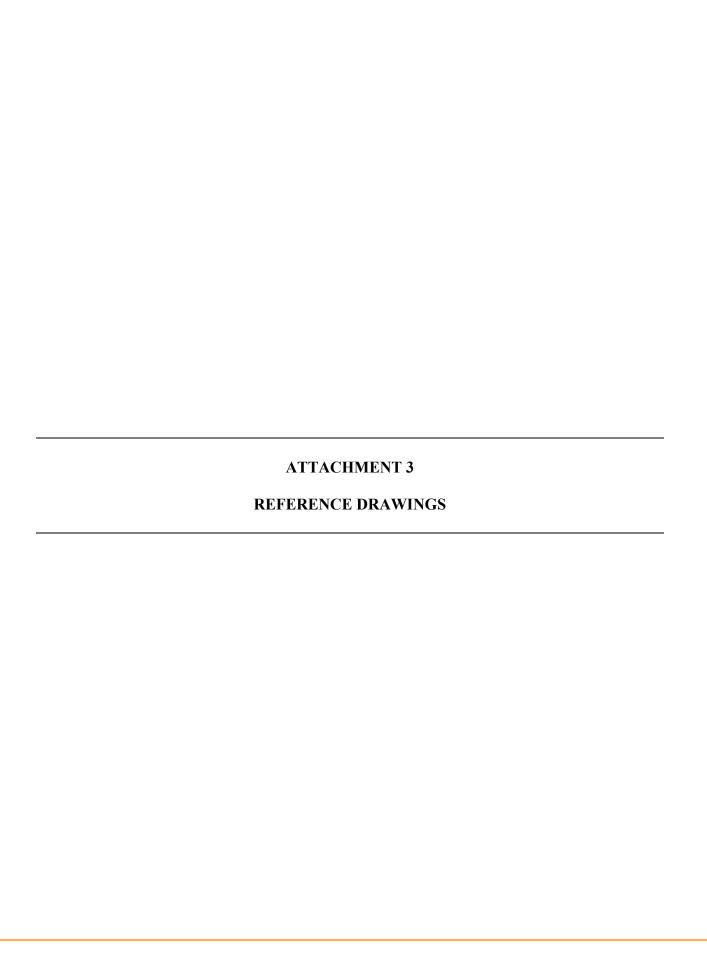
Photo 32: UNT 2 to Trib 37643 to Sewickley Creek, ephemeral portion. Facing upstream - April 9, 2018



Photo 33: UNT 3 to Trib 37643 to Sewickley Creek. Facing downstream - March 12, 2018



Photo 34: Pond 1. Facing northeast - March 8, 2018





MILL SERVICE INC.

YUKON PLANT

SOUTH HUNTINGDON TOWNSHIP

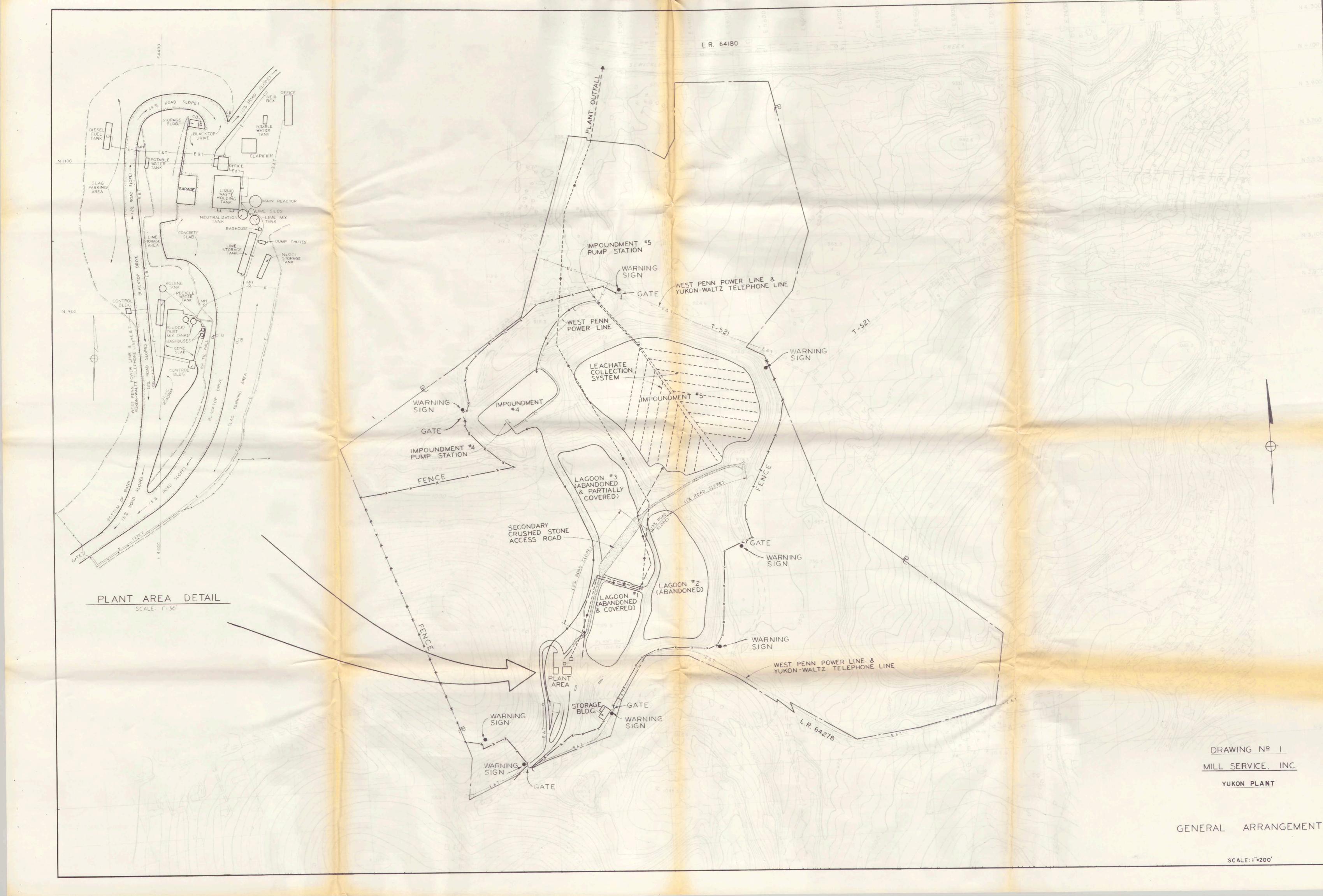
WESTMORELAND COUNTY, PENNSYLVANIA

HAZARDOUS WASTE MANAGEMENT
FACILITY PERMIT APPLICATION
PART B APRIL 20,1983

DUNCAN, LAGNESE AND ASSOCIATES, INC.

ENGINEERS

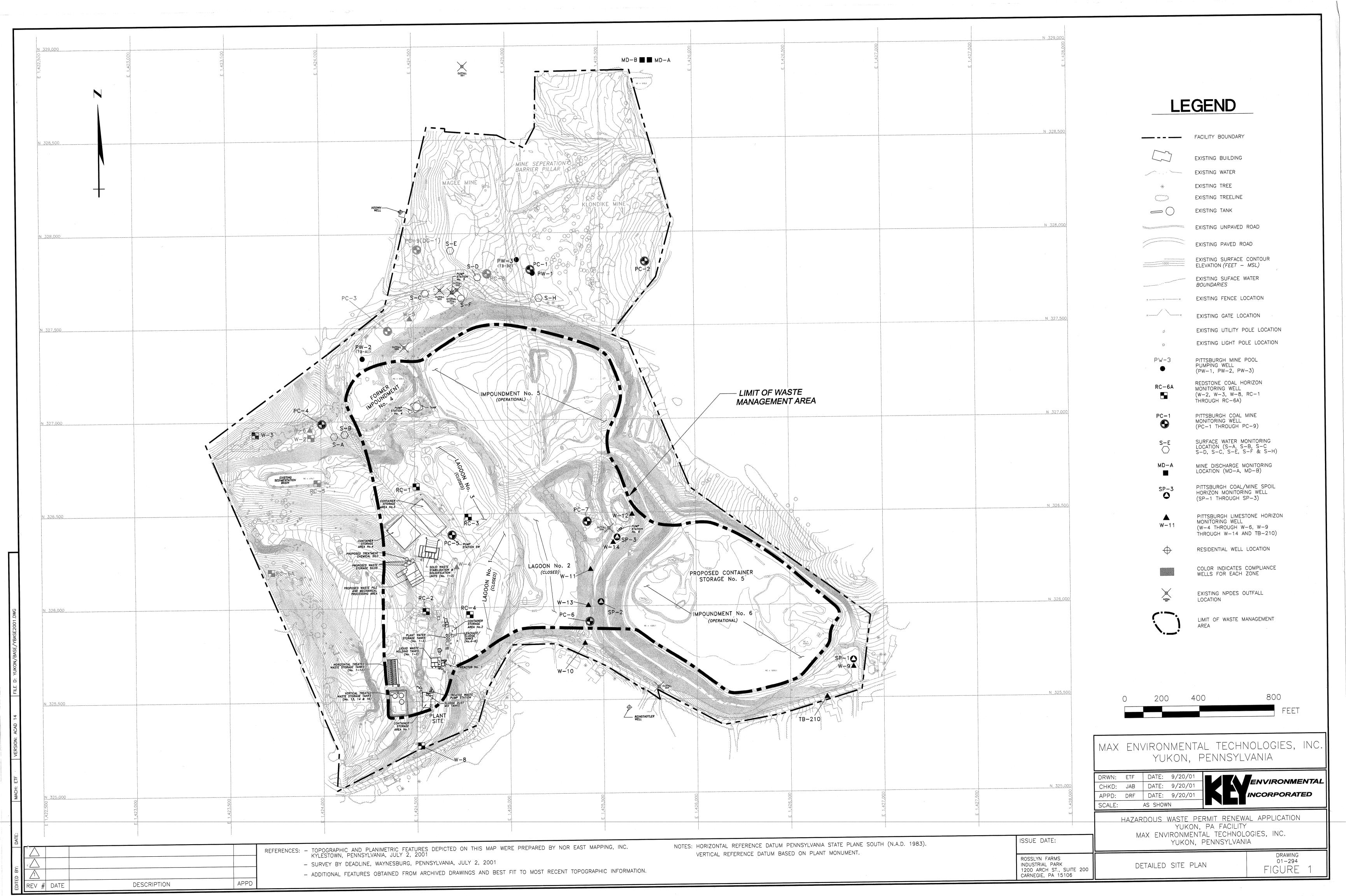
PITTSBURGH PA.

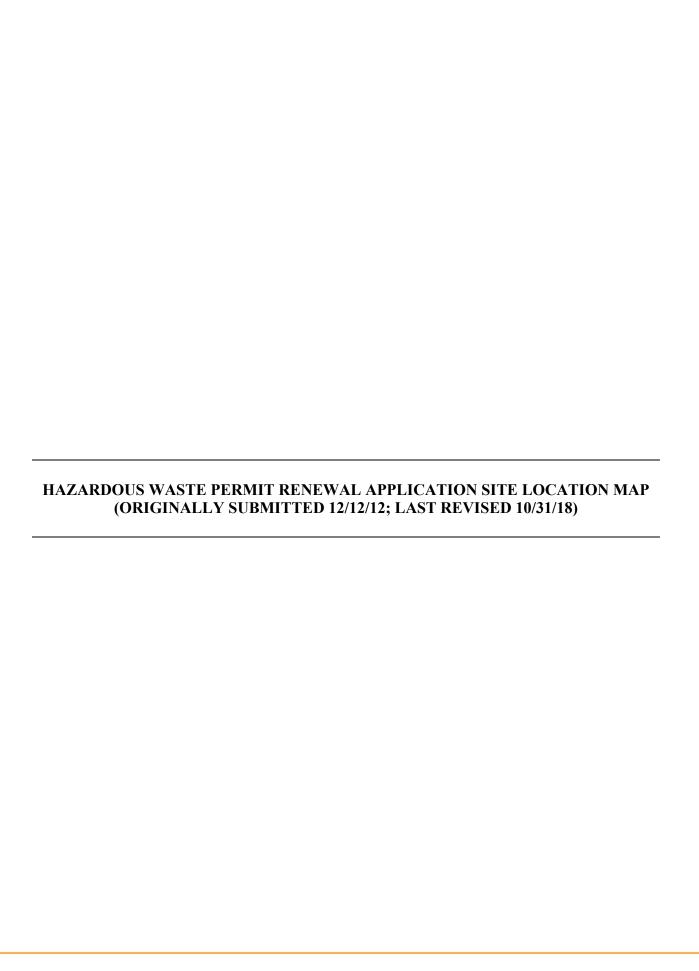


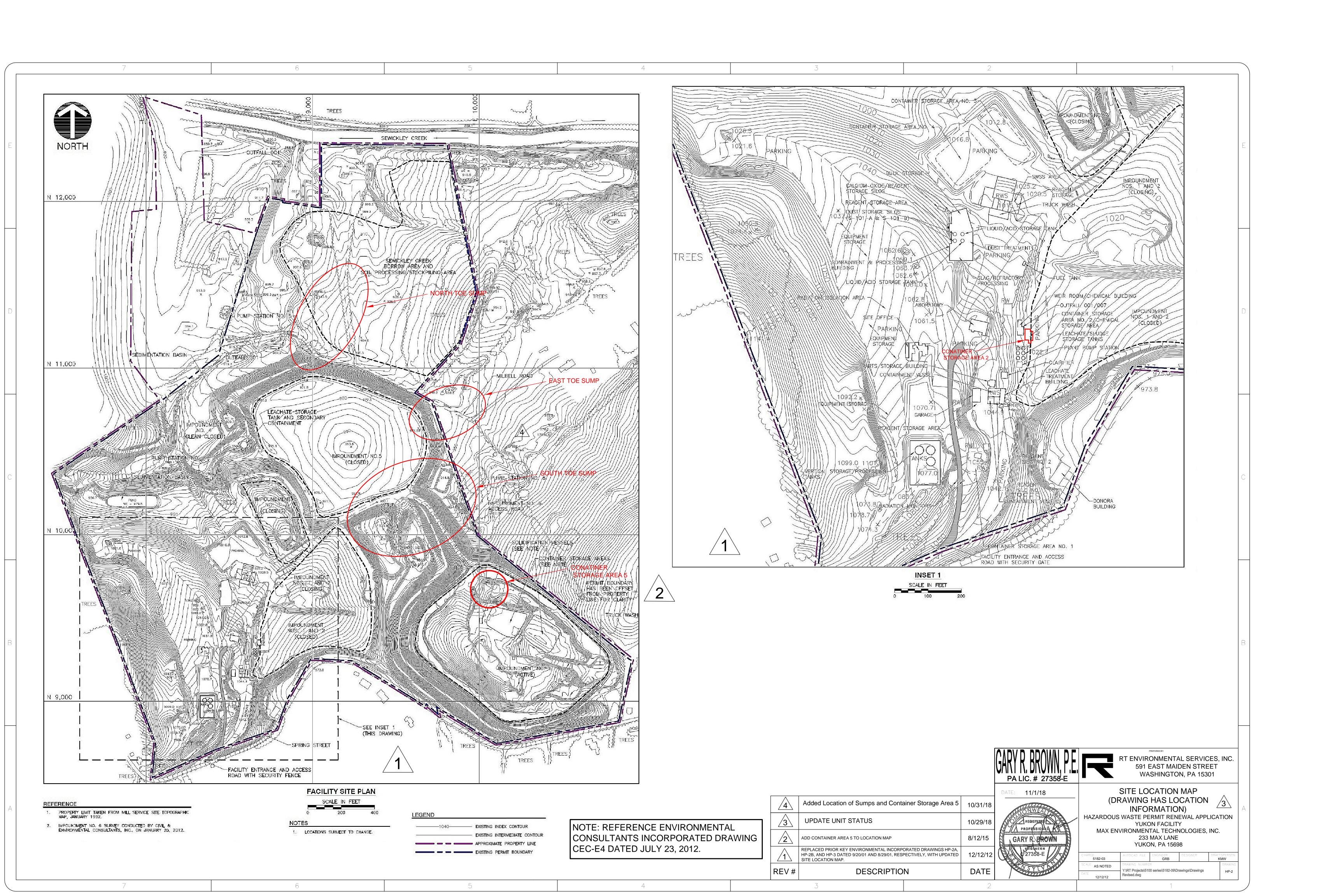


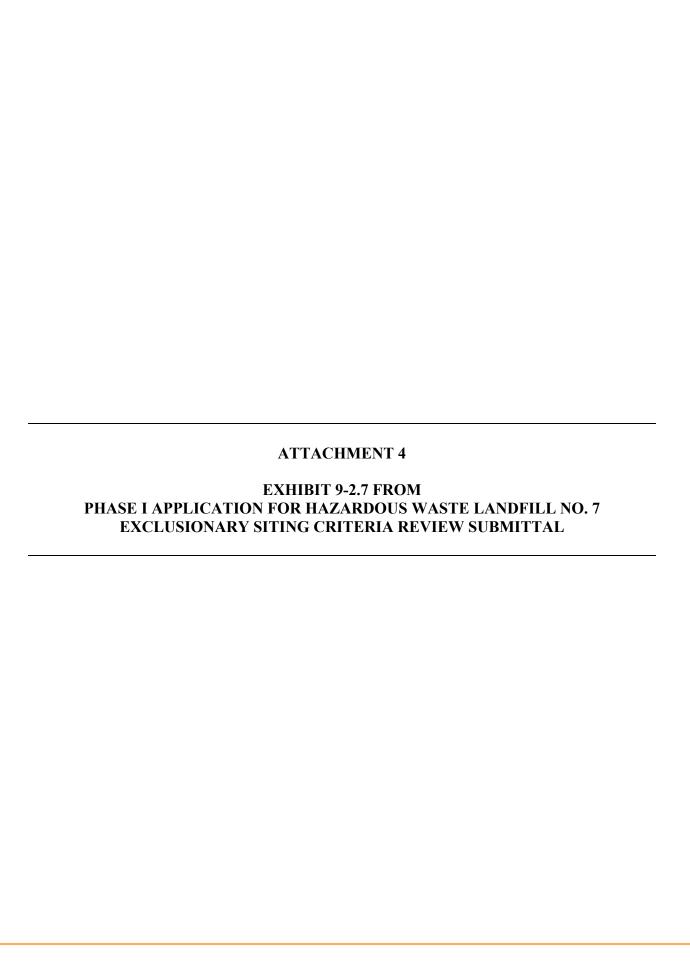














DEPARTMENT OF THE ARMY

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 COM	IPLETION DATE FOR PJD:			
B. NAME AND A	DDRESS OF PERSON REQUESTING PJI	D:		
C. DISTRICT OFF	FICE, FILE NAME, AND NUMBER:			
(USE THE TABLE	CATION(S) AND BACKGROUND INFORM BELOW TO DOCUMENT MULTIPLE AC IRCES AT DIFFERENT SITES)			
State:	County/parish/borough:	City:		
Center coordin	ates of site (lat/long in degree decimal form	mat):		
Lat.:	Long.:			
Universal Trans	sverse Mercator:			
Name of neare	st waterbody:			
E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):Office (Desk) Determination. Date:				
Field Deter	mination. Date(s):			
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)

- 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 "preconstruction 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 s below where indicated for all checked	subject file. Appropriately reference sources items:
Maps, plans, plots or plat submitted	d by or on behalf of the PJD requestor:
Office concurs with data sheets	y or on behalf of the PJD requestor. /delineation report. a sheets/delineation report. Rationale:
Data sheets prepared by the Corp.	s:
Corps navigable waters' study:	
U.S. Geological Survey Hydrologic	c Atlas:
USGS NHD data.	
USGS 8 and 12 digit HUC map	
	te scale & quad name:
☐ Natural Resources Conservation S	Service Soil Survey. Citation:
☐ National wetlands inventory map(s). Cite name:
State/local wetland inventory map(s):
	(National Geodetic Vertical Datum of 1929
	Date):
or Other (Name &	Date):
Previous determination(s). File no	and date of response letter:
Other information (please specify):	
MPORTANT NOTE: The information red	corded on this form has not necessarily not be relied upon for later jurisdictional
signature and date of degulatory 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

ATTENTION: This email message is from an external sender. Do not open links or attachments from unknown sources. To report suspicious email, forward the message as an attachment to <u>CWOPA_SPAM@pa.gov</u>.

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 *

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^{*} Please note our office has moved. A new address is shown above.



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