



**ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING**

**2019 VISUAL SITE INSPECTION
IPL PETERSBURG RESTRICTED WASTE TYPE III LANDFILL
SOLID WASTE FACILITY PERMIT NO. FP63-02**

IPL PETERSBURG GENERATING STATION
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA 47567

ATC PROJECT NO. 170LF00600

DECEMBER 11, 2019

PREPARED FOR:

INDIANAPOLIS POWER & LIGHT COMPANY
6925 NORTH STATE ROAD 57
PETERSBURG, INDIANA 47567

ATTENTION: MR. WILL TEAGUE



December 11, 2019

Mr. Will Teague
Senior Scientist
Indianapolis Power and Light Company
6925 North State Road 57
Petersburg, Indiana 47567-0436

ATC Group Services LLC

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**Re: 2019 Visual Site Inspection
IPL Petersburg Restricted Waste Landfill
Solid Waste Facility Permit No. FP63-02
Indianapolis Power and Light Company
Petersburg Generating Station
Petersburg, Indiana
ATC Project No. 170LF00600**

Dear Mr. Teague:

ATC Group Services LLC (ATC) is pleased to present the findings of the October 29, 2019 Visual Site Inspection of the IPL Petersburg Generating Station Type III Restricted Waste Landfill. This visual inspection and report were done in accordance with guidelines established by the Coal Combustion Residuals (CCR) Rule published by the Environmental Protection Agency (EPA) on April 17, 2015.

The scope of this inspection was limited to an examination of readily observable surficial features of the landfill and its appurtenant structures, and a review of information that you provided. Please note that the inspection did not include any test drilling, testing of materials, precise physical measurements of landfill features, detailed calculations to verify slope stability or other engineering analyses. Although the inspection was conducted by competent personnel in accordance with generally accepted methods for inspecting landfills, it should not be considered as a warranty or guaranty of the future performance/safety of the landfill.

The landfill inspection was completed by David Stelzer and Juan Carrizo of ATC Group Services LLC (ATC). The weather conditions during the inspection were approximately 54°F and cloudy. Contained herein is a summary of the engineering observations of the landfill including condition of the cover soils, grading and erosion, vegetation, haul roads, perimeter ditches, down drain channels, riprap areas, culverts and other adjacent structures. The landfill system features are highlighted on the attached Site Plan shown in Figures 2 and 3 of this report.

The IPL Petersburg Generating Station Type III Restricted Waste Landfill is located about four (4) miles north of the City of Petersburg in Pike County, Indiana west of State Road 57 (Figure 1). The landfill encompasses an area of approximately 122.1 acres inside the Solid Waste Boundary (Figure 2). The Petersburg Type III RWS Landfill operates under Indiana Department of Environmental Management (IDEM) Permit Number 63-2.

The 2019 annual inspection was performed to address the standards and guidelines required by the CCR Rule instituted by the Environmental Protection Agency on April 17, 2015. As a result, CCR Landfills are now required to meet the requirements of 40 C.F.R. §257 to conduct annual inspections of the landfill in accordance with 40 C.F.R. §257.84(b). Listed below are requirements specified within the CCR Rule and the observations made by David Stelzer and Juan Carrizo during the annual inspection:

- i. Any changes in geometry of the structure since the previous annual inspection;
- ii. The approximate volume of CCR contained in the unit at the time of inspection;
- iii. Any appearances of an actual or potential structural weakness of the CCR unit;
- iv. Any other change (s) which may have affected the stability or operation of the CCR Unit since the last annual inspection.

Changes in Structural Geometry

Observed geometry changes during the 2019 Petersburg visual landfill inspection consisted mainly of small grading measures and vegetation improvements. Engineering observations were grouped into two inspection zones shown in Figure 3, 2019 Visual Site Inspection Grid Map.

The zone descriptions, observations, and recommendations are as follows:

Zone A Partial Closure Area – North and West Side-slopes

A 33.8 acre area on the northern and western slopes of the landfill have received partial closure certification from the Indiana Department of Environmental Management (IDEM). In general, this area has a good soil cover and is well-vegetated. Since the time of the 2018 inspection, additional improvements have been made to fill in ruts and over-seed sparsely vegetated areas.

1. Good vegetation exists along the majority of the west and north slopes of the partial closure area as shown in Figure 3, grid locations L23, L22, K19, M15, and M14.
2. A sapling has grown at the base of one of the riprap down chute channels along the west slope of the landfill, see grid location K19.
 - Recommendation: Remove the sapling to prevent root undermining of the soil cover. Continue an ongoing maintenance program to remove trees and shrubs from the cover system.

3. The northeast corner of the landfill, at the base of a riprap down chute channel, a washout erosion area has formed, see grid location Q13.
 - Recommendation: Install erosion control protection for this area such as erosion control mat to protect the integrity of the soil liner. Overseed the bare soil cover area.
4. At the southwest corner of the landfill, erosion has occurred along the face of the slope, exposing underlying poz-o-tec material, see grid location M23.
 - Recommendation: Repair the soil cover and regrade areas of the slope where erosion has occurred. Install erosion control mat in exposed areas and overseed areas of sparse vegetation once soil cover has been repaired.

Zone B Intermediate Cover Area – Top East and South Side slopes

In accordance with IDEM permit conditions, in 2016, the majority of the alternative intermediate cover on the top and east side slope of the landfill consisted of fixated scrubber sludge. In 2017 a soil cover was applied to this area and new vegetation added. Terrace and riprap down chute channels were added or improved to accommodate the addition of the new soil and vegetative cover.

1. Good vegetation exists along the majority of the south end of the landfill, top of landfill and east slope, where new soil cover has been installed.
2. Exposed and bare spot areas were observed on soil cover section next to the haul road, see grid location Q25.
 - Recommendation: Repair the soil cover in exposed bare area and regrade it to improve drainage flow to haul road swale.
3. Downcutting has occurred along the ditch adjacent to the haul road along the south side of the landfill, see grid locations O25, and Q25.
 - Recommendation: Repair the soil cover in the affected areas and install erosion control mat and where downcutting has occurred in the channel. Install erosion control mat and additional riprap armoring with non-woven geotextile on exposed reaches of the channel.
4. At the top of landfill erosion rills and gullies were observed at certain locations as shown in grid N23, M23, N22, O22, O21, N20, O20, N19, N18, O18, O17, N16, N15, O15, and O14.
 - Recommendation: Repair the soil cover and install erosion control mats in areas affected by erosion rills and gullies. Overseed these areas to establish a protective grass cover.

5. Along the eastern and northern side slope of the landfill, erosion rills and gullies were observed at locations as shown in grid P22, Q22, P21, Q20, Q19, Q18, Q17, P16, Q16, P15, Q15, P14, P13, O13 and N13.
 - Recommendation: Repair the soil cover and install erosion control mats in areas affected by erosion rills and erosion cavities. Overseed these areas to establish a protective grass cover.

6. Along the eastern and northern side slopes of the landfill there are areas of minor sparse vegetation cover as show in grid locations O13, P13, and Q15.
 - Recommendation: Overseed these areas to establish a fuller grass cover.

CCR Volume

There is a 43 acre expansion area east of the existing landfill which has been approved as a Type I landfill, this area has not been developed at this time. Currently, landfill operations are limited to the original landfill footprint.

Based on IPL surveying information at the time of the inspection, there is approximately 7,043,808 cubic yards of CCR material placed in the landfill unit.

Structural Integrity

All landfill slopes appear to be stable with no visual indications or signs of sloughing or subsidence were detected during the 2019 visual inspection.

Stability and Operation

The landfill is generally in good condition and well vegetated in most places. No significant deficiencies were noted and operation of the landfill unit at this time is not expected to be adversely affected by any items detected during the 2019 inspection.

We appreciate the opportunity to assist you with this project. If you have any questions concerning information contained in this report, please do not hesitate to call either of the undersigned at 317.849.4990.

Sincerely,

ATC Group Services LLC



Juan D. Carrizo, P.E., CFM, CPM
Senior Project Engineer

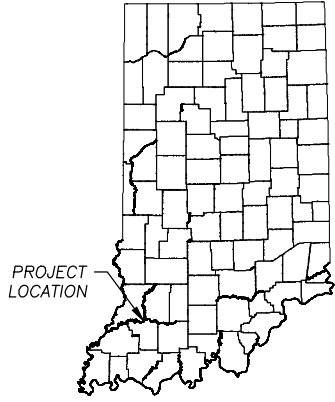


David Stelzer, P.E., PhD.
Senior Project Manager

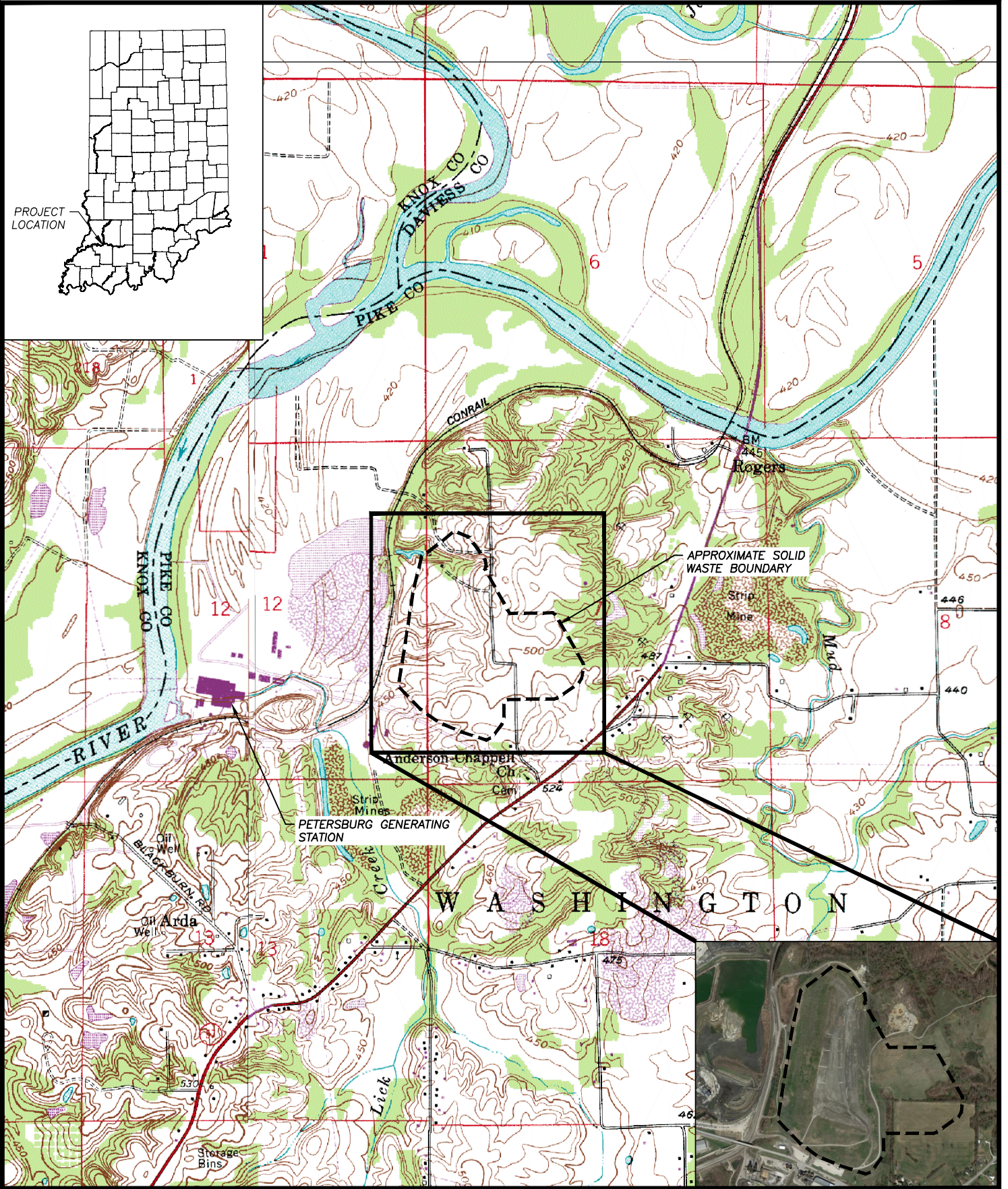
Copies: Will Teague (1)
Erwin Leidolf (1)

Attachments:

Figure 1 Vicinity Map
Figure 2 CCR Disposal Facilities
Figure 3 2019 Visual Site Inspection Grid Map



PROJECT LOCATION

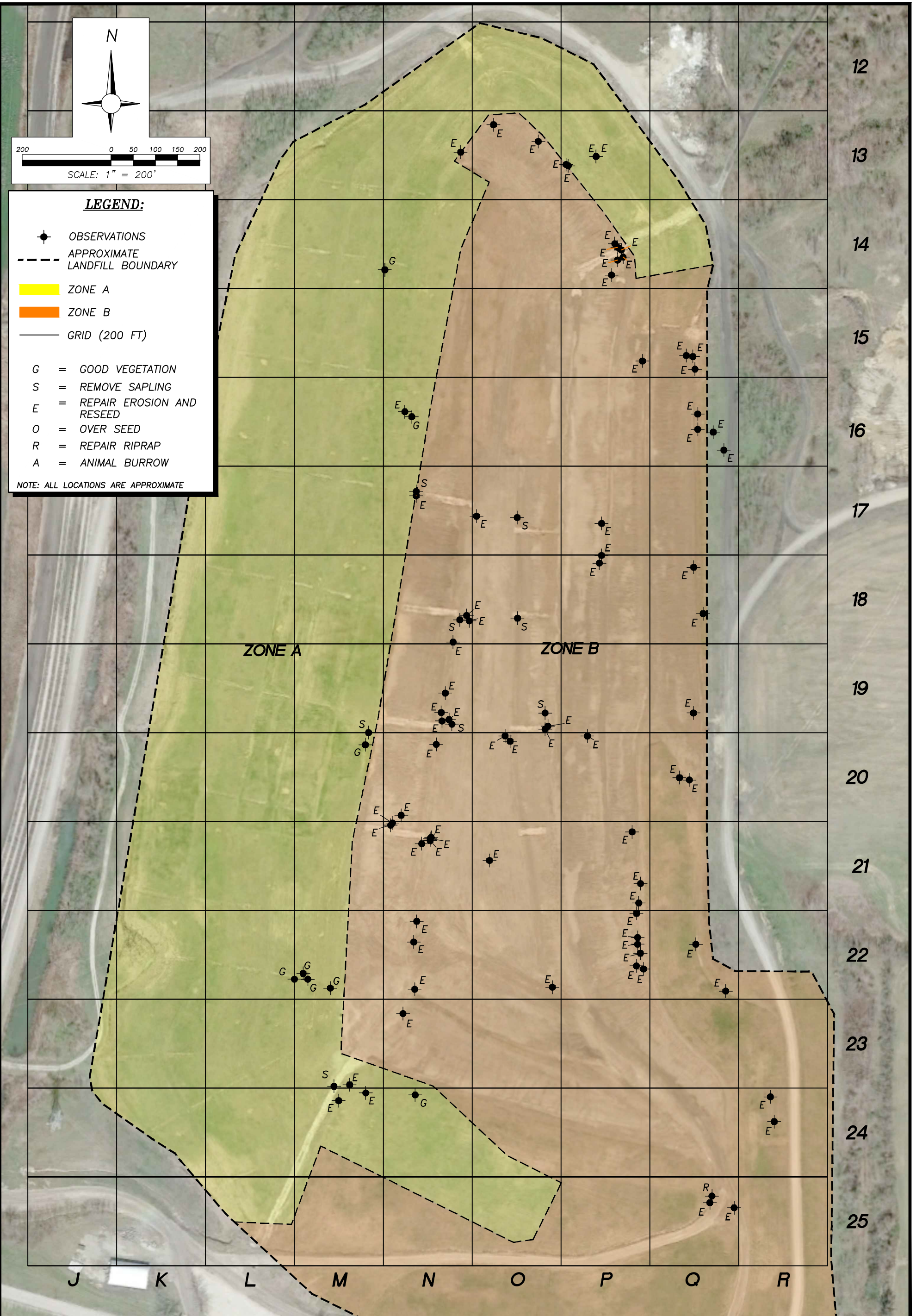


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VICINITY MAP

IPL PETERSBURG ASH POND EMBANKMENTS
 INDIANAPOLIS POWER AND LIGHT COMPANY
 6925 NORTH STATE ROAD 57
 PETERSBURG, INDIANA

Project Number: 170GC00600		Drn. By: JG
Drawing File: SEE LOWER LEFT		Ckd. By: JC
Date: 11/19	Scale: AS SHOWN	App'd By:
ATC		Figure: 1



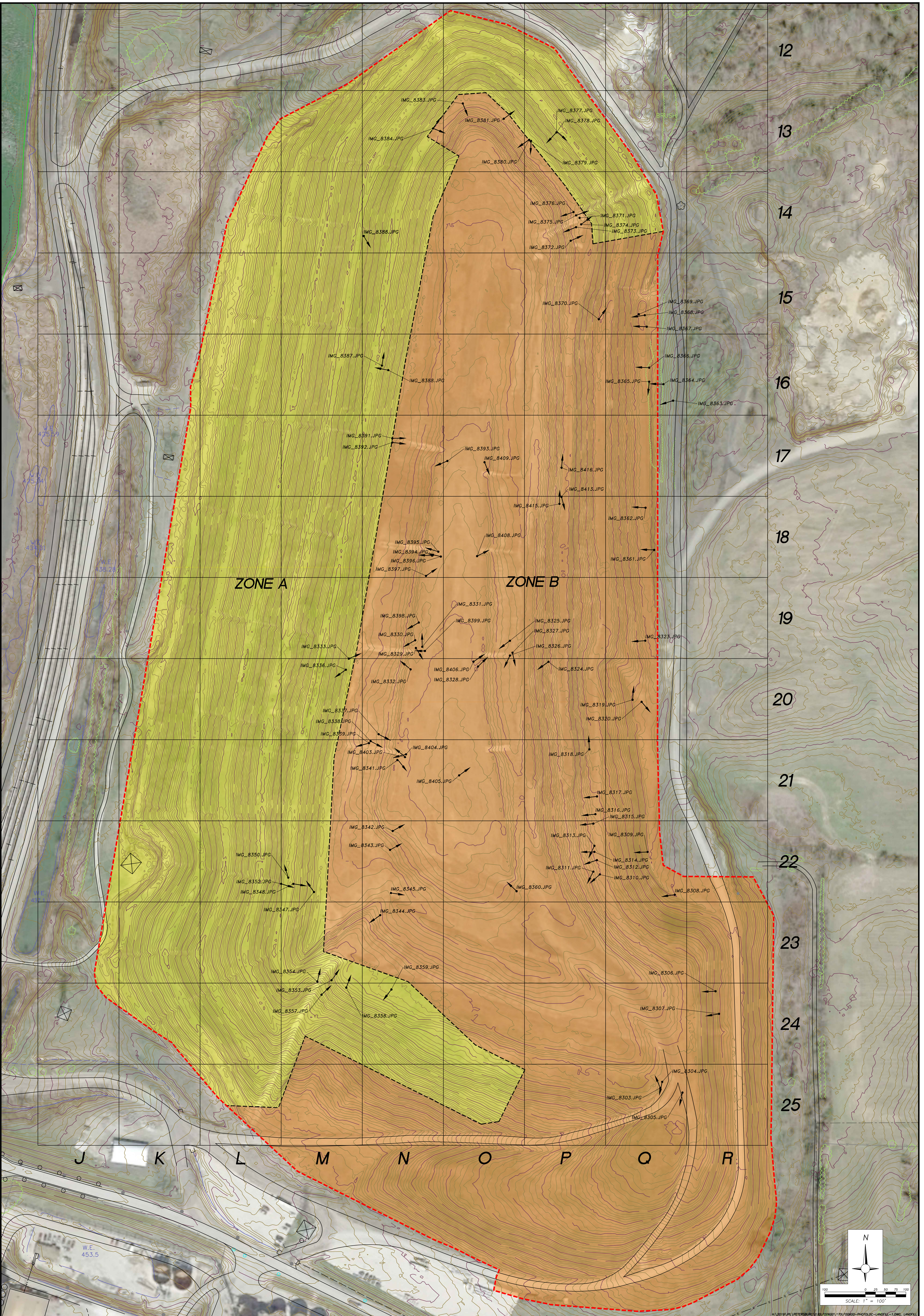
LEGEND:

- OBSERVATIONS
- - - APPROXIMATE LANDFILL BOUNDARY
- ZONE A
- ZONE B
- GRID (200 FT)

G = GOOD VEGETATION
 S = REMOVE SAPLING
 E = REPAIR EROSION AND RESEED
 O = OVER SEED
 R = REPAIR RIPRAP
 A = ANIMAL BURROW

NOTE: ALL LOCATIONS ARE APPROXIMATE

Figure: 3	Date: 11/19 Scale: AS SHOWN	2019 VISUAL SITE INSPECTION GRID MAP IPL PETERSBURG RESTRICTED WASTE TYPE III LANDFILL INDIANAPOLIS POWER AND LIGHT COMPANY 6925 NORTH STATE ROAD 57 PETERSBURG, INDIANA	Project Number: 170LF00600 Drawing File: SEE LOWER LEFT	Drn. By: JG Ckd. By: JC App'd By: Ckd. Date:



ZONE A

ZONE B

12

13

14

15

16

17

18

19

20

21

22

23

24

25

J

K

L

M

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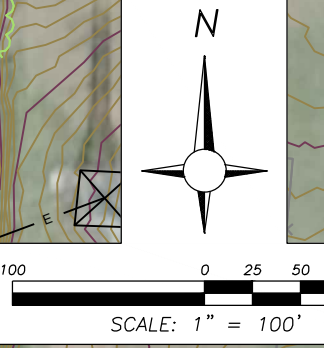






Table #1. List of Observation Photographs and Description of Landfill Conditions



Photo ID	Grid ID	Description
IMG_8303.JPG	Q-25	Erosion gully formed along eastern section of Zone B, photo looking northwest.
IMG_8304.JPG	Q-25	Erosion occurring along access road swale, undermining riprap cover.
IMG_8305.JPG	Q-25	Sparse vegetation, access road turnaround in disrepair with poor grading and drainage on section next to Haul Road.
IMG_8306.JPG	R-24	Erosion gully formed along eastern section of Zone B, photo looking west.
IMG_8307.JPG	R-24	Erosion gully formed along eastern section of Zone B, photo looking west.
IMG_8308.JPG	Q-22	Erosion gully formed along eastern section of Zone B, photo looking northwest.
IMG_8309.JPG	Q-22	Erosion gully formed along eastern section of Zone B, photo looking northwest.
IMG_8310.JPG	P-22	Sparse vegetation and erosion gully formed along western section of Zone B, photo looking west.
IMG_8311.JPG	P-22	Sparse vegetation along drainage swale, east slope, Zone B, photo looking south.
IMG_8312.JPG	P-22	Sparse vegetation and erosion gully formed along western section of Zone B, photo looking west.
IMG_8313.JPG	P-22	Sparse vegetation and erosion gully formed along western section of Zone B, photo looking southwest.
IMG_8314.JPG	P-22	Sparse vegetation and erosion gully formed along western section of Zone B, photo looking west.
IMG_8315.JPG	P-22	Sparse vegetation and erosion gully formed along western section of Zone B, photo looking west.
IMG_8316.JPG	P-21	Erosion gully formed along eastern section of Zone B, photo looking west.
IMG_8317.JPG	P-21	Erosion gullies formed along eastern section of Zone B, photo looking west.
IMG_8318.JPG	P-21	Sparse vegetation along drainage swale and landfill bench, photo looking north.
IMG_8319.JPG	Q-20	Erosion gully formed along terrace drainage channel on eastern section of Zone B, photo looking north.
IMG_8320.JPG	Q-20	Erosion gully formed along terrace channel on the eastern section of Zone B, photo looking south.
IMG_8323.JPG	Q-19	Erosion rills formed along slope on eastern slope of Zone B, photo looking west.
IMG_8324.JPG	P-20	Erosion rills formed along slope on eastern slope of Zone B, photo looking west.
IMG_8325.JPG	O-19	Saplings rooted within riprap downchute, east side slope of the landfill in Zone B, photo looking southwest.
IMG_8326.JPG	O-19	Sparse vegetation and erosion rills formed on eastern slope of Zone B, photo looking southwest.
IMG_8327.JPG	O-19	Sparse vegetation and erosion rills formed on eastern slope of Zone B, photo looking south.
IMG_8328.JPG	O-19	Erosion gully formed and saplings rooted in riprap downchute, photo looking northeast.
IMG_8329.JPG	N-19	Erosion gullies formed on western slope of Zone B, photo looking south.
IMG_8330.JPG	N-19	Erosion gully formed and saplings rooted in riprap downchute, photo looking west.
IMG_8331.JPG	N-19	Rills formed along slope on western slope of Zone B, photo looking north.
IMG_8332.JPG	N-20	Rills formed and sparse vegetation along slope on western slope of Zone B, photo looking northwest.
IMG_8333.JPG	M-20	Sparse vegetation, saplings rooted in riprap downchute.
IMG_8336.JPG	M-20	View of slope of landfill, Zone A, vegetation is well established, photo looking southwest.
IMG_8337.JPG	N-20	Sparse vegetation, saplings rooted in riprap downchute.
IMG_8338.JPG	N-21	Vegetation growth and saplings rooted in riprap downchute, photo looking southeast.
IMG_8339.JPG	N-21	Vegetation growth and saplings rooted in riprap downchute, photo looking southeast.
IMG_8340.JPG	N-21	Erosion gully formed adjacent to riprap downchute, photo looking west.
IMG_8341.JPG	N-21	Sparse vegetation on southwest section of landfill, photo looking southeast.
IMG_8342.JPG	N-22	Erosion gullies formed, sparse vegetation cover on western slope of Zone B, photo looking west.
IMG_8343.JPG	N-22	Erosion gully formed on western section of Zone B, photo looking northeast.
IMG_8344.JPG	N-23	Erosion gully formed adjacent to riprap downchute, photo looking southwest.
IMG_8345.JPG	N-22	Erosion gully formed along southwestern section of Zone B, photo looking east.
IMG_8347.JPG	M-22	View of slope of landfill, Zone A, vegetation is well established, photo looking northwest.
IMG_8348.JPG	M-22	View of downchute and west slope of landfill, Zone A, vegetation is well established, photo looking east.
IMG_8350.JPG	M-22	View of west slope of landfill, Zone A, vegetation is well established, photo looking southwest.
IMG_8352.JPG	L-22	View of west slope of landfill, Zone A, vegetation is well established, photo looking northeast.
IMG_8353.JPG	M-23	Erosion along south landfill slope has exposed underlying Poz-o-tec material, photo looking west.
IMG_8354.JPG	M-23	Saplings rooted within riprap downchute, south slope of the landfill in Zone B, photo looking north.
IMG_8357.JPG	M-24	Erosion gully, south slope of the landfill in Zone B, photo looking north.
IMG_8358.JPG	M-24	Erosion gully, south slope of the landfill in Zone B, photo looking north.
IMG_8359.JPG	N-24	View of south slope of landfill, Zone A, vegetation is well established, photo looking southwest.
IMG_8360.JPG	O-22	Erosion gully formed along eastern section of Zone B, photo looking southwest.
IMG_8361.JPG	Q-18	Erosion rills formed on downslope of northeast section of landfill, photo looking west.
IMG_8362.JPG	Q-18	Erosion rills formed on downslope of northeast section of landfill, photo looking west.
IMG_8363.JPG	Q-16	Erosion rills formed on downslope of northeast section of landfill, photo looking west.
IMG_8364.JPG	Q-16	Erosion rills formed on downslope of northeast section of landfill, photo looking west.
IMG_8365.JPG	Q-16	Erosion rills formed on bench drainage swale, east section of landfill, photo looking south.
IMG_8366.JPG	Q-16	Erosion rills formed on downslope of northeast section of landfill, photo looking west.
IMG_8367.JPG	Q-15	Erosion rills formed on downslope of northeast section of landfill, photo looking west.
IMG_8368.JPG	Q-15	Erosion rills formed on downslope of northeast section of landfill, photo looking northwest.
IMG_8370.JPG	P-15	Erosion gullies formed along terrace swale on northeast slope of landfill, photo looking north.
IMG_8371.JPG	P-14	Erosion gullies formed along swale on northeast slope of landfill, photo looking east.
IMG_8372.JPG	P-14	Sparse vegetation on northeast section of landfill, photo looking southeast.
IMG_8373.JPG	P-14	Erosion gully formed adjacent to riprap downchute, photo looking southwest.
IMG_8374.JPG	P-14	Saplings rooted within riprap downchute, northeast slope in Zone B, photo looking northwest.
IMG_8375.JPG	P-14	Erosion gullies formed, saplings rooted in riprap downchute, east slope in Zone A, photo looking east.
IMG_8376.JPG	P-14	Erosion rills formed in slope of the landfill, photo looking east.
IMG_8377.JPG	P-13	Erosion gullies formed in slope of the landfill, photo looking west.
IMG_8378.JPG	P-13	Sparse vegetation on northeast section of landfill, photo looking southeast.
IMG_8379.JPG	P-13	Erosion gullies formed in slope of the landfill, photo looking west.
IMG_8380.JPG	N-14	Erosion rills, sparse vegetation along east slope of the landfill, photo looking west.
IMG_8381.JPG	O-13	Sparse vegetation on northeast section of landfill, photo looking north.
IMG_8383.JPG	O-13	Sparse vegetation on northeast section of landfill, photo looking south.
IMG_8384.JPG	N-13	Erosion rills, sparse vegetation along east slope of the landfill, photo looking east.
IMG_8386.JPG	N-14	View of west slope of the landfill, Zone A, vegetation well established.
IMG_8387.JPG	N-16	Sparse vegetation on northwest section of landfill, photo looking north.
IMG_8388.JPG	N-16	Erosion rill, northwest slope of the landfill, Zone A, photo looking west.
IMG_8391.JPG	N-17	Saplings rooted within riprap downchute, west slope of the landfill in Zone B, photo looking east.
IMG_8392.JPG	N-17	Sparse vegetation on west section of landfill, photo looking southeast.
IMG_8393.JPG	O-17	Sparse vegetation on west section of landfill, photo looking southwest.
IMG_8394.JPG	N-18	Saplings rooted within riprap downchute, west slope of the landfill in Zone B, photo looking southwest.
IMG_8395.JPG	N-18	Erosion gullies formed in slope of the landfill, photo looking west.
IMG_8396.JPG	N-18	Erosion gullies formed in slope of the landfill, photo looking west.
IMG_8397.JPG	N-18	Sparse vegetation on east section of landfill, photo looking south.
IMG_8398.JPG	N-19	Saplings rooted within riprap downchute, sparse vegetation, west slope of the landfill in Zone B, photo looking southwest.
IMG_8399.JPG	N-19	Erosion gullies formed in slope of the landfill, saplings rooted in riprap downchute, photo looking southwest.
IMG_8403.JPG	N-21	Erosion gullies formed in slope of the landfill, photo looking southwest.
IMG_8404.JPG	N-21	Sparse vegetation on west section of landfill, photo looking southeast.
IMG_8405.JPG	O-21	Sparse vegetation on east section of landfill, saplings rooted in riprap downchute, photo looking east.
IMG_8406.JPG	O-20	Erosion gullies formed in slope of the landfill, saplings rooted in riprap downchute, photo looking east.
IMG_8408.JPG	O-18	Saplings rooted in riprap downchute, photo looking east.
IMG_8409.JPG	O-17	Erosion gullies formed in slope of the landfill, saplings rooted in riprap downchute, photo looking northeast.
IMG_8413.JPG	P-18	Erosion rills formed along terrace swale, east slope of the landfill in Zone B, photo looking south.
IMG_8415.JPG	P-18	Erosion rills formed along terrace swale, east slope of the landfill in Zone B, photo looking north.
IMG_8416.JPG	P-17	Erosion gully formed along terrace swale, east slope of the landfill in Zone B, photo looking north.



Grid ID Q-25	Photo ID IMG_8303	 A photograph showing a deep, narrow erosion gully cutting through a field of tall, dry grass. The gully is filled with loose soil and small rocks. The sky is overcast with grey clouds.
Date October 29, 2019		
Description: Erosion gully formed along eastern section of Zone B, photo looking northwest.		
Grid ID Q-25	Photo ID IMG_8304	 A photograph showing an erosion gully along an access road swale. The gully is filled with loose soil and small rocks, and is surrounded by tall, dry grass. In the background, there are industrial structures, a power line tower, and a body of water under an overcast sky.
Date October 29, 2019		
Description: Erosion occurring along access road swale, undermining riprap cover.		



Grid ID Q-25	Photo ID IMG_8305	
Date October 29, 2019		
Description: Sparse vegetation, access road turnaround in disrepair with poor grading and drainage on section next to Haul Road.		
Point ID R-24	Photo ID IMG_8306	
Date October 29, 2019		
Description: Erosion gully formed along eastern section of Zone B, photo looking west.		

Point ID R-24	Photo ID IMG_8307	
Date October 29, 2019		
Description: Erosion gully formed along eastern section of Zone B, photo looking west.		
Point ID Q-22	Photo ID IMG_8308	
Date October 29, 2019		
Description: Erosion gully formed along eastern section of Zone B, photo looking northwest.		

Point ID Q-22	Photo ID IMG_8309	
Date October 29, 2019		
Description: Erosion gully formed along eastern section of Zone B, photo looking northwest.		
Point ID P-22	Photo ID IMG_8310	
Date October 29, 2019		
Description: Sparse vegetation and erosion gully formed along western section of Zone B, photo looking west.		

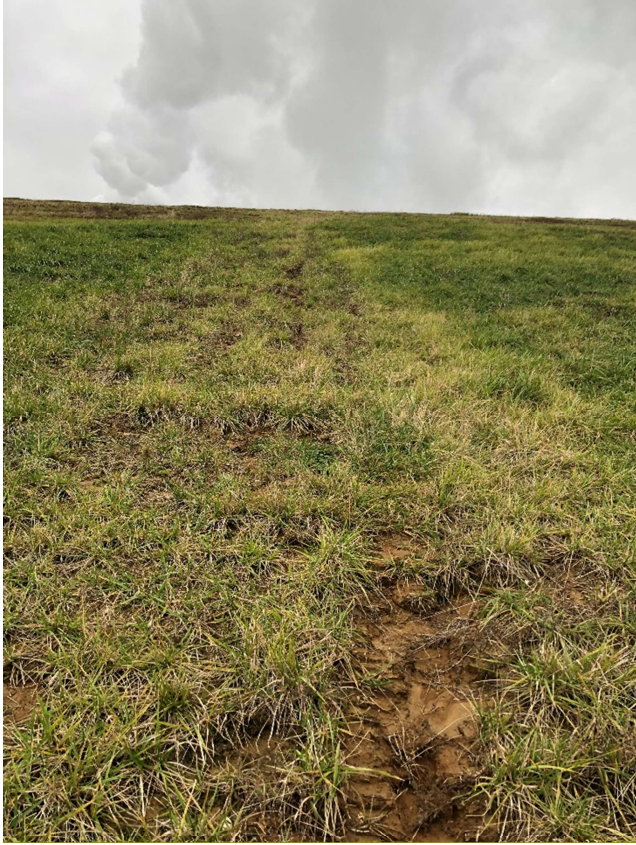

Point ID P-22	Photo ID IMG_8311	
Date October 29, 2019		
Description: Sparse vegetation along drainage swale, east slope, Zone B, photo looking south.		
Point ID P-22	Photo ID IMG_8312	
Date October 29, 2019		
Description: Sparse vegetation and erosion gully formed along western section of Zone B, photo looking west.		



Point ID P-22	Photo ID IMG_8313	
Date October 29, 2019		
Description: Sparse vegetation and erosion gully formed along western section of Zone B, photo looking southwest.		
Point ID P-22	Photo ID IMG_8314	
Date October 29, 2019		
Description: Sparse vegetation and erosion gully formed along western section of Zone B, photo looking west.		



Point ID P-22	Photo ID IMG_8315	
Date October 29, 2019		
Description: Sparse vegetation and erosion gully formed along western section of Zone B, photo looking west.		
Point ID P-21	Photo ID IMG_8316	
Date October 29, 2019		
Description: Erosion gully formed along eastern section of Zone B, photo looking west.		



Point ID P-21	Photo ID IMG_8317	
Date October 29, 2019		
Description: Erosion gullies formed along eastern section of Zone B, photo looking west.		
Point ID P-21	Photo ID IMG_8318	
Date October 29, 2019		
Description: Sparse vegetation along drainage swale and landfill bench, photo looking north.		

Point ID Q-20	Photo ID IMG_8319	 A photograph showing a narrow, deep erosion gully cutting through a field of tall, dry grasses. The gully is filled with reddish-brown soil. In the background, a grassy slope rises towards a line of trees under a clear sky.
Date October 29, 2019		
Description: Erosion gully formed along terrace drainage channel on eastern section of Zone B, photo looking north.		
Point ID Q-20	Photo ID IMG_8320	 A photograph showing an erosion gully in a grassy field, viewed from a different angle than the first photo. The gully is filled with soil and surrounded by tall, dry grasses. In the background, a grassy slope rises, and several power line towers are visible against a clear sky.
Date October 29, 2019		
Description: Erosion gully formed along terrace channel on the eastern section of Zone B, photo looking south.		



Point ID Q-19	Photo ID IMG_8323	
Date October 29, 2019		
Description: Erosion rills formed along slope on eastern slope of Zone B, photo looking west.		
Point ID P-20	Photo ID IMG_8324	
Date October 29, 2019		
Description: Erosion rills formed along slope on eastern slope of Zone B, photo looking west.		



Point ID O-19	Photo ID IMG_8325	
Date October 29, 2019		
Description: Saplings rooted within riprap downchute, east side slope of the landfill in Zone B, photo looking southwest.		
Point ID Q16	Photo ID IMG_8326	
Date October 29, 2019		
Description: Sparse vegetation and erosion rills formed on eastern slope of Zone B, photo looking southwest.		

Point ID O-19	Photo ID IMG_8327	
Date October 29, 2019		
Description: Sparse vegetation and erosion rills formed on eastern slope of Zone B, photo looking south.		
Point ID O-19	Photo ID IMG_8328	
Date October 29, 2019		
Description: Erosion gully formed and saplings rooted in riprap downchute, photo looking northeast.		



Point ID N-19	Photo ID IMG_8329	
Date October 29, 2019		
Description: Erosion gullies formed on western slope of Zone B, photo looking south.		
Point ID N-19	Photo ID IMG_8330	
Date October 29, 2019		
Description: Erosion gully formed and saplings rooted in riprap downchute, photo looking west.		


Point ID N-19	Photo ID IMG_8331	
Date October 29, 2019		
Description: Rills formed along slope on western slope of Zone B, photo looking north.		
Point ID N-20	Photo ID IMG_8332	
Date October 29, 2019		
Description: Rills formed and sparse vegetation along slope on western slope of Zone B, photo looking northwest.		

Point ID M-20	Photo ID IMG_8333	
Date October 29, 2019		
Description: Sparse vegetation, saplings rooted in riprap downchute.		
Point ID M-20	Photo ID IMG_8336	
Date October 29, 2019		
Description: View of slope of landfill, Zone A, vegetation is well established, photo looking southwest.		

Point ID N-20	Photo ID IMG_8337	
Date October 29, 2019		
Description: Sparse vegetation, saplings rooted in riprap downchute.		
Point ID N-21	Photo ID IMG_8338	
Date October 29, 2019		
Description: Vegetation growth and saplings rooted in riprap downchute, photo looking southeast.		



Point ID N-21	Photo ID IMG_8339	
Date October 29, 2019		
Description: Vegetation growth and saplings rooted in riprap downchute, photo looking southeast.		
Point ID N-21	Photo ID IMG_8340	
Date October 29, 2019		
Description: Erosion gully formed adjacent to riprap downchute, photo looking west.		



Point ID N-21	Photo ID IMG_8341	
Date October 29, 2019		
Description: Sparse vegetation on southwest section of landfill, photo looking southeast.		
Point ID N-22	Photo ID IMG_8342	
Date October 29, 2019		
Description: Erosion gullies formed, sparse vegetation cover on western slope of Zone B, photo looking west.		

Point ID N-22	Photo ID IMG_8343	 A photograph showing a narrow, sandy erosion gully cutting through a field of tall, green grass. The sky is overcast with grey clouds.
Date October 29, 2019		
Description: Erosion gully formed on western section of Zone B, photo looking northeast.		
Point ID N-23	Photo ID IMG_8344	 A photograph showing a sandy erosion gully in a field of dry, brownish grass. In the background, there is a large industrial facility with blue buildings and a tall smokestack, identified as the Petersburg Steam Station.
Date October 29, 2019		
Description: Erosion gully formed adjacent to riprap downchute, photo looking southwest.		

Point ID N-22	Photo ID IMG_8345	 A photograph showing a narrow, sandy erosion gully cutting through a field of tall, dry grasses and weeds. The gully is filled with sand and some sparse vegetation. In the background, there are utility poles and a cloudy sky.
Date October 29, 2019		
Description: Erosion gully formed along southwestern section of Zone B, photo looking east.		
Point ID M-22	Photo ID IMG_8347	 A wide-angle photograph showing a large, flat area of land covered in tall, dry grasses. In the distance, there is a large, flat area that appears to be a landfill or a large field, with some structures and utility poles visible. The sky is overcast and grey.
Date October 29, 2019		
Description: View of slope of landfill, Zone A, vegetation is well established, photo looking northwest.		



Point ID M-22	Photo ID IMG_8348	
Date October 29, 2019		
Description: View of downchute and west slope of landfill, Zone A, vegetation is well established, photo looking east.		
Point ID M-22	Photo ID IMG_8350	
Date October 29, 2019		
Description: View of west slope of landfill, Zone A, vegetation is well established, photo looking southwest.		



Point ID L-22	Photo ID IMG_8352	
Date October 29, 2019		
Description: View of west slope of landfill, Zone A, vegetation is well established, photo looking northeast.		
Point ID M-23	Photo ID IMG_8353	
Date October 29, 2019		
Description: Erosion along south landfill slope has exposed underlying Poz-o-tec material, photo looking west.		



Point ID M-23	Photo ID IMG_8354	
Date October 29, 2019		
Description: Saplings rooted within riprap downchute, south slope of the landfill in Zone B, photo looking north.		
Point ID M-24	Photo ID IMG_8357	
Date October 29, 2019		
Description: Erosion gully, south slope of the landfill in Zone B, photo looking north.		



Grid ID M-24	Photo ID IMG_8358	 A photograph showing a deep erosion gully in a grassy field. The gully is filled with soil and some sparse vegetation. The surrounding area is covered in tall, dry grasses and some green plants. The sky is overcast.
Date October 29, 2019		
Description: Erosion gully, south slope of the landfill in Zone B, photo looking north.		
Grid ID N-24	Photo ID IMG_8359	 A photograph showing a view of the south slope of a landfill in Zone A. The slope is covered in tall, dry grasses and some green plants. In the background, the Petersburg Steam Station is visible, including several large buildings and cooling towers. The sky is overcast.
Date October 29, 2019		
Description: View of south slope of landfill, Zone A, vegetation is well established, photo looking southwest.		

Grid ID O-22	Photo ID IMG_8360	 A photograph showing a deep, narrow erosion gully cutting through a field of green and yellowish-brown grasses. The sky is overcast with grey clouds.
Date October 29, 2019		
Description: Erosion gully formed along eastern section of Zone B, photo looking southwest.		
Point ID Q-18	Photo ID IMG_8361	 A wide-angle photograph of a grassy field with several shallow, parallel erosion rills running across it. The sky is bright with some light clouds.
Date October 29, 2019		
Description: Erosion rills formed on downslope of northeast section of landfill, photo looking west.		



Point ID Q-18	Photo ID IMG_8362	
Date October 29, 2019		
Description: Erosion rills formed on downslope of northeast section of landfill, photo looking west.		
Point ID Q-16	Photo ID IMG_8363	
Date October 29, 2019		
Description: Erosion rills formed on downslope of northeast section of landfill, photo looking west.		



Point ID Q-16	Photo ID IMG_8364	
Date October 29, 2019		
Description: Erosion rills formed on downslope of northeast section of landfill, photo looking west.		
Point ID Q-16	Photo ID IMG_8365	
Date October 29, 2019		
Description: Erosion rills formed on bench drainage swale, east section of landfill, photo looking south.		


Point ID Q-16	Photo ID IMG_8366	
Date October 29, 2019		
Description: Erosion rills formed on downslope of northeast section of landfill, photo looking west.		
Point ID Q-15	Photo ID IMG_8367	
Date October 29, 2019		
Description: Erosion rills formed on downslope of northeast section of landfill, photo looking west.		



Point ID Q-15	Photo ID IMG_8368	
Date October 29, 2019		
Description: Erosion rills formed on downslope of northeast section of landfill, photo looking northwest.		
Point ID P-15	Photo ID IMG_8370	
Date October 29, 2019		
Description: Erosion gullies formed along terrace swale on northeast slope of landfill, photo looking north.		



Point ID P-14	Photo ID IMG_8371	 A photograph showing a field of tall, green and brown grasses. In the center, there is a deep, narrow erosion gully that has formed in the soil. The background shows a line of trees under a clear sky.
Date October 29, 2019		
Description: Erosion gullies formed along swale on northeast slope of landfill, photo looking east.		
Point ID P-14	Photo ID IMG_8372	 A photograph showing a sandy, light-brown slope. The vegetation is sparse, consisting of small green plants and patches of grass growing in the sand. The overall appearance is that of a recently eroded or sandy area.
Date October 29, 2019		
Description: Sparse vegetation on northeast section of landfill, photo looking southeast.		



Point ID P-14	Photo ID IMG_8373	
Date October 29, 2019		
Description: Erosion gully formed adjacent to riprap downchute, photo looking southwest.		
Point ID P-14	Photo ID IMG_8374	
Date October 29, 2019		
Description: Saplings rooted within riprap downchute, northeast slope in Zone B, photo looking northwest.		


Point ID P-14	Photo ID IMG_8375	 A photograph showing a steep slope with a downchute of riprap. The riprap consists of large, light-colored rocks. The slope is covered with dry grass and some green and yellow vegetation. The background shows a line of trees under a cloudy sky.
Date October 29, 2019		
Description: Erosion gullies formed, saplings rooted in riprap downchute, east slope in Zone A, photo looking east.		
Point ID P-14	Photo ID IMG_8376	 A photograph showing a wide, grassy slope of a landfill. The slope is covered with green and brown grass. There are visible erosion rills or tracks running down the slope. The background shows a line of trees under a cloudy sky.
Date October 29, 2019		
Description: Erosion rills formed in slope of the landfill, photo looking east.		



Point ID P-13	Photo ID IMG_8377	 A photograph showing a steep, eroded slope of a landfill. The soil is exposed in several gullies, and the vegetation is sparse and dry. The sky is overcast with grey clouds.
Date October 29, 2019		
Description: Erosion gullies formed in slope of the landfill, photo looking west.		
Point ID P-13	Photo ID IMG_8378	 A photograph showing a wide, open area of a landfill with sparse, dry vegetation. The ground is mostly dirt and grass. The sky is overcast with grey clouds.
Date October 29, 2019		
Description: Sparse vegetation on northeast section of landfill, photo looking southeast.		



Point ID P-13	Photo ID IMG_8379	 A photograph showing a steep, eroded slope of a landfill. The soil is exposed in several deep, narrow gullies. Sparse vegetation, including grasses and some small shrubs, is scattered across the slope. The sky is overcast.
Date October 29, 2019		
Description: Erosion gullies formed in slope of the landfill, photo looking west.		
Point ID N-14	Photo ID IMG_8380	 A photograph showing a wide, shallow erosion rill on a landfill slope. The soil is exposed in the center of the rill. Sparse vegetation, including grasses and some small shrubs, is scattered across the slope. The sky is overcast.
Date October 29, 2019		
Description: Erosion rills, sparse vegetation along east slope of the landfill, photo looking west.		



Point ID O-13	Photo ID IMG_8381	
Date October 29, 2019		
Description: Sparse vegetation on northeast section of landfill, photo looking north.		
Point ID O-13	Photo ID IMG_8383	
Date October 29, 2019		
Description: Sparse vegetation on northeast section of landfill, photo looking south.		



Point ID N-13	Photo ID IMG_8384	
Date October 29, 2019		
Description: Erosion rills, sparse vegetation along east slope of the landfill, photo looking east.		
Point ID N-14	Photo ID IMG_8386	
Date October 29, 2019		
Description: View of west slope of the landfill, Zone A, vegetation well established.		

Point ID N-16	Photo ID IMG_8387	
Date October 29, 2019		
Description: Sparse vegetation on northwest section of landfill, photo looking north.		
Point ID N-16	Photo ID IMG_8388	
Date October 29, 2019		
Description: Erosion rill, northwest slope of the landfill, Zone A, photo looking west.		


Point ID N-17	Photo ID IMG_8391	
Date October 29, 2019		
Description: Saplings rooted within riprap downchute, west slope of the landfill in Zone B, photo looking east.		
Point ID N-17	Photo ID IMG_8392	
Date October 29, 2019		
Description: Sparse vegetation on west section of landfill, photo looking southeast.		



Grid ID O-17	Photo ID IMG_8393	
Date October 29, 2019		
Description: Sparse vegetation on west section of landfill, photo looking southwest.		
Grid ID N-18	Photo ID IMG_8394	
Date October 29, 2019		
Description: Saplings rooted within riprap downchute, west slope of the landfill in Zone B, photo looking southwest.		



Grid ID N-18	Photo ID IMG_8395	
Date October 29, 2019		
Description: Erosion gullies formed in slope of the landfill, photo looking west.		
Point ID N-18	Photo ID IMG_8396	
Date October 29, 2019		
Description: Erosion gullies formed in slope of the landfill, photo looking west.		

Point ID N-18	Photo ID IMG_8397	
Date October 29, 2019		
Description: Sparse vegetation on east section of landfill, photo looking south.		
Point ID N-19	Photo ID IMG_8398	
Date October 29, 2019		
Description: Saplings rooted within riprap downchute, sparse vegetation, west slope of the landfill in Zone B, photo looking southwest.		

Point ID N-19	Photo ID IMG_8399	
Date October 29, 2019		
Description: Erosion gullies formed in slope of the landfill, sapplings rooted in riprap downchute, photo looking southwest.		
Point ID N-21	Photo ID IMG_8403	
Date October 29, 2019		
Description: Erosion gullies formed in slope of the landfill, photo looking southwest.		

Point ID N-21	Photo ID IMG_8404	
Date October 29, 2019		
Description: Sparse vegetation on west section of landfill, photo looking southeast.		
Point ID O-21	Photo ID IMG_8405	
Date October 29, 2019		
Description: Sparse vegetation on east section of landfill, saplings rooted in in riprap downchute, photo looking east.		

Point ID O-20	Photo ID IMG_8406	
Date October 29, 2019		
Description: Erosion gullies formed in slope of the landfill, saplings rooted in riprap downchute, photo looking east.		
Point ID O-18	Photo ID IMG_8408	
Date October 29, 2019		
Description: Saplings rooted in riprap downchute, photo looking east.		

Point ID O-17	Photo ID IMG_8409	
Date October 29, 2019		
Description: Erosion gullies formed in slope of the landfill, saplings rooted in riprap downchute, photo looking northeast.		
Point ID P-18	Photo ID IMG_8413	
Date October 29, 2019		
Description: Erosion rills formed along terrace swale, east slope of the landfill in Zone B, photo looking south.		

Point ID P-18	Photo ID IMG_8415	
Date October 29, 2019		
Description: Erosion rills formed along terrace swale, east slope of the landfill in Zone B, photo looking north.		
Point ID P-17	Photo ID IMG_8416	
Date October 29, 2019		
Description: Erosion gully formed along terrace swale, east slope of the landfill in Zone B, photo looking north.		