

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

Sampling Point: 66-W003-1W

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

0 = Total Cover
 50% of total cover: 0 20% of total cover: 0

Sapling/Shrub Stratum (Plot size: 15feet)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

0 = Total Cover
 50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: 5 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Symphotrichum prenanthoides</i> / Crooked-stem american-as	25	Yes	FAC
2. <i>Solidago gigantea</i> / Smooth goldenrod	20	Yes	FACW
3. <i>Carex</i> / Sedge	15	Yes	FACW
4. <i>Eutrochium maculatum</i> / Spotted trumpetweed	15	Yes	FACW
5. <i>Impatiens capensis</i> / Spotted jewelweed	10	No	FACW
6. <i>Toxicodendron radicans</i> / Eastern poison ivy	5	No	FAC
7.			
8.			
9.			
10.			
11.			

90 = Total Cover
 50% of total cover: 45 20% of total cover: 18

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

0 = Total Cover
 50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>60</u>	x 2 = <u>120</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>90</u>	(A) <u>210</u> (B)

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present?

Yes No

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

SOIL

Sampling Point: 66-W003-1W

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-10	10YR 5/1	95	10YR 4/4	5	C	PL,M	Silty Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators:</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR N)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p>	<p><input type="checkbox"/> Dark Surface (S7)</p> <p><input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)</p> <p><input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Iron-Manganese Masses (F12) (LRR N, MLRA 136)</p> <p><input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)</p> <p><input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 2 cm Muck (A10) (MLRA 147)</p> <p><input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)</p> <p><input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 136, 147)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p> ³Indicators of hydrophytic vegetation and wetland hydrology must be present. unless disturbed or problematic.</p>
---	--	---

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Gravel refusal.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bright Mountain Solar City/County: Hazard, Perry County Sampling Date: 05/24/2023
 Applicant/Owner: Avangrid Renewables, LLC State: Kentucky Sampling Point: 66-W004-1U
 Investigator(s): JB SB Section, Township, Range: _____ City of Hazard _____
 Landform (hillslope, terrace, etc): Terrace Local relief (concave, convex, none): concave Slope (%): 0-5
 Subregion (LRR or MLRA): LRR N Lat: 37.29475 Long: -83.2531445 Datum: WGS 84
 Soil Map Unit Name: Shelocta-Cutshin-Gilpin complex, 20 to 75 percent slopes, very stony NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: Adjacent to maintained residential property.					

HYDROLOGY

Wetland Hydrology Indicators:

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

<p>Field Observations:</p> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>
--	--

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

Remarks:

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

Sampling Point: 66-W004-1U

Tree Stratum (Plot size: <u>30 feet</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

_____ = Total Cover
 50% of total cover: 0 20% of total cover: 0

Sapling/Shrub Stratum (Plot size: <u>15 feet</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			

_____ = Total Cover
 50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5 feet</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Symphytichum prenanthoides / Crooked-stem american-as</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>
2. <u>Rubus allegheniensis / Allegheny blackberry</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Miscanthus sinensis / Chinese silvergrass</u>	<u>25</u>	<u>Yes</u>	<u>FACU</u>
4. <u>Solidago canadensis / Canada goldenrod</u>	<u>20</u>	<u>No</u>	<u>FACU</u>
5. <u>Solidago gigantea / Smooth goldenrod</u>	<u>10</u>	<u>No</u>	<u>FACW</u>
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

_____ = Total Cover
 50% of total cover: 55 20% of total cover: 22

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

_____ = Total Cover
 50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>30</u>	x 3 = <u>90</u>
FACU species <u>70</u>	x 4 = <u>280</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>110</u> (A)	<u>390</u> (B)

Prevalence Index = B/A = 3.55

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present?

Yes _____ No X

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

SOIL

Sampling Point: 66-W004-1U

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

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

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:
 Gravel refusal.

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bright Mountain Solar City/County: Hazard, Perry County Sampling Date: 05/24/2023
 Applicant/Owner: Avangrid Renewables, LLC State: Kentucky Sampling Point: 66-W004-1W
 Investigator(s): JB SB Section, Township, Range: _____ City of Hazard _____
 Landform (hillslope, terrace, etc): Hill seep Local relief (concave, convex, none): concave Slope (%): 30-40
 Subregion (LRR or MLRA): LRR N Lat: 37.294718 Long: -83.253162 Datum: WGS 84
 Soil Map Unit Name: Shelocta-Cutshin-Gilpin complex, 20 to 75 percent slopes, very stony NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ 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 <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Hill seep is caught in man made ditch that flows into an intermittent stream.	

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required: check all that apply)	Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
---	---

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

Remarks:

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

Sampling Point: 66-W004-1W

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

_____ = Total Cover
 50% of total cover: 0 20% of total cover: 0

Sapling/Shrub Stratum (Plot size: 15 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Salix</i> / Willow	10	Yes	FACW
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____

_____ = Total Cover
 50% of total cover: 5 20% of total cover: 2

Herb Stratum (Plot size: 5 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Impatiens capensis</i> / Spotted jewelweed	30	Yes	FACW
2. <i>Solidago gigantea</i> / Smooth goldenrod	20	Yes	FACW
3. <i>Carex</i> / Sedge	20	Yes	FACW
4. <i>Scirpus atrovirens</i> / Green bulrush	10	No	OBL
5. <i>Symphotrichum prenanthoides</i> / Crooked-stem american-as	10	No	FAC
6. <i>Trifolium pratense</i> / Red clover	3	No	FACU
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

_____ = Total Cover
 50% of total cover: 46 20% of total cover: 19

Woody Vine Stratum (Plot size: 30 feet)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

_____ = Total Cover
 50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 10	x 1 = 10
FACW species 80	x 2 = 160
FAC species 10	x 3 = 30
FACU species 3	x 4 = 12
UPL species 0	x 5 = 0
Column Totals: 103 (A)	212 (B)

Prevalence Index = B/A = 2.06

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? Yes No

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

SOIL

Sampling Point: 66-W004-1W

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	80	10YR 4/1	15	D	M	Silty Clay	
0-12			10YR 4/4	5	C	M	Silty Clay	
12-18	10YR 5/2	90	10YR 6/6	10	C	M	Clay	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bright Mountain Solar City/County: Hazard, Perry County Sampling Date: 04/12/2022
 Applicant/Owner: Avangrid Renewables, LLC State: Kentucky Sampling Point: 14-W001/
 Investigator(s): CM, RMS, JK Section, Township, Range: _____ City of Hazard 05-W001-1U
 Landform (hillslope, terrace, etc): Terrace Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR or MLRA): LRR N Lat: 37.290537 Long: -83.3100725 Datum: WGS 84
 Soil Map Unit Name: Fairpoint and Bethesda soils, 2 to 70 percent slopes, benched, stony NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks:					

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
--	---

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

Remarks:

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

Sampling Point: 14-W001/05-W001-1U

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Fagus</i> / Beech	5	Yes	NI
2. <i>Juniperus</i> / Juniper	2	Yes	NI
3.			
4.			
5.			
6.			
7.			
	<u>7</u> = Total Cover		

50% of total cover: 3 20% of total cover: 1

Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Rosa multiflora</i> / Multiflora rose, Multiflora rosa	30	Yes	FACU
2. <i>Alnus</i> / Alder	10	Yes	NI
3.			
4.			
5.			
6.			
7.			
8.			
9.			
	<u>40</u> = Total Cover		

50% of total cover: 20 20% of total cover: 8

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	<u>0</u> = Total Cover		

50% of total cover: 0 20% of total cover: 0

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	<u>0</u> = Total Cover		

50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>30</u>	x 4 = <u>120</u>
UPL species <u>17</u>	x 5 = <u>85</u>
Column Totals: <u>47</u> (A)	<u>205</u> (B)

Prevalence Index = B/A = 4.36

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present?

Yes No

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

SOIL

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

Depth (inches)	Matrix		Redox Features			Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹		
0-18	10YR 5/3	80	7.5YR 5/8	20	C	M	Silty Clay Loam Gravel, fill material

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (**LRR N**)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (**LRR N, MLRA 147, 148**)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (**MLRA 147, 148**)
- Thin Dark Surface (S9) (**MLRA 147, 148**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
- Umbric Surface (F13) (**MLRA 136, 122**)
- Piedmont Floodplain Soils (F19) (**MLRA 148**)
- Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bright Mountain Solar City/County: Hazard, Perry County Sampling Date: 04/12/2022
 Applicant/Owner: Avangrid Renewables, LLC State: Kentucky Sampling Point: 14-W001-1W
 Investigator(s): CS RMS Section, Township, Range: _____ City of Hazard _____
 Landform (hillslope, terrace, etc): Terrace Local relief (concave, convex, none): concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR N Lat: 37.2913775 Long: -83.30896867 Datum: WGS 84
 Soil Map Unit Name: Fairpoint and Bethesda soils, 2 to 70 percent slopes, benched, stony NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation , Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks:	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required: check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Moss Trim Lines (B16)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
--	--

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

Remarks:

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

Sampling Point: 14-W001-1W

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus effusus / Common bog rush, Soft or lamp rush</u>	<u>60</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Scirpus cyperinus / Woolgrass</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Dichanthelium clandestinum / Deer-tongue rosette grass</u>	<u>15</u>	<u>No</u>	<u>FAC</u>
4. <u>Aster / Aster</u>	<u>10</u>	<u>No</u>	<u>NI</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

115 = Total Cover
50% of total cover: 57 20% of total cover: 23

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>90</u>	x 2 = <u>180</u>
FAC species <u>15</u>	x 3 = <u>45</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>10</u>	x 5 = <u>50</u>
Column Totals: <u>115</u> (A)	<u>275</u> (B)

Prevalence Index = B/A = 2.39

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present?

Yes X No _____

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

SOIL

Sampling Point: 14-W001-1W

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

Depth (inches)	Matrix		Redox Features			Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%					
0-16	10YR 4/1	90	7.5YR 5/8	10		C	M	Clay Loam	
16-18	10YR 4/1	95						Clay Loam	
16-18	10YR 6/4	5						Loamy Sand	

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bright Mountain Solar City/County: Hazard, Perry County Sampling Date: 04/13/2022
 Applicant/Owner: Avangrid Renewables, LLC State: Kentucky Sampling Point: 14-W002-1W
 Investigator(s): CM, RMS, JK Section, Township, Range: _____ City of Hazard _____
 Landform (hillslope, terrace, etc): Bowl shaped depression Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR or MLRA): LRR N Lat: 37.28827517 Long: -83.29104817 Datum: WGS 84
 Soil Map Unit Name: Fairpoint and Bethesda soils, 2 to 70 percent slopes, benched, stony NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil , or Hydrology _____ 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Recently mowed, reclaimed coal mine soil,	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required: check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Moss Trim Lines (B16)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Stunted or Stressed Plants (D1)
	<input type="checkbox"/> Geomorphic Position (D2)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> Microtopographic Relief (D4)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
--	--

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

Remarks:

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

Sampling Point: 14-W002-1W

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u><i>Typha latifolia</i> / Broadleaf cattail, Broad-leaved cattail</u>	<u>40</u>	<u>Yes</u>	<u>OBL</u>
2. <u><i>Scirpus cyperinus</i> / Woolgrass</u>	<u>10</u>	<u>No</u>	<u>FACW</u>
3. <u><i>Andropogon virginicus</i> / Broomsedge bluestem</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

55 = Total Cover
50% of total cover: 27 20% of total cover: 11

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>40</u>	x 1 = <u>40</u>
FACW species <u>10</u>	x 2 = <u>20</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>55</u> (A)	<u>80</u> (B)

Prevalence Index = B/A = 1.45

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present?

Yes X No _____

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

SOIL

Sampling Point: 14-W002-1W

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	5Y 4/1	100					Muck Lm Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: Oil textured, highly impacted by reclaimed coal mine, very solid rocky refusal multiple pits

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bright Mountain Solar City/County: Hazard, Perry County Sampling Date: 04/13/2022
 Applicant/Owner: Avangrid Renewables, LLC State: Kentucky Sampling Point: 14-W003-1W
 Investigator(s): CM, RMS, JK Section, Township, Range: _____ City of Hazard _____
 Landform (hillslope, terrace, etc): Bowl shaped depression Local relief (concave, convex, none): concave Slope (%): 2-5
 Subregion (LRR or MLRA): LRR N Lat: 37.288075 Long: -83.29109917 Datum: WGS 84
 Soil Map Unit Name: Fairpoint and Bethesda soils, 2 to 70 percent slopes, benched, stony NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil , or Hydrology _____ 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 <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: Recently mowed, reclaimed coal mine soil,	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required: check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) ___ Water Marks (B1) ___ Sediment Deposits (B2) ___ Drift Deposits (B3) ___ Algal Mat or Crust (B4) ___ Iron Deposits (B5) ___ Inundation Visible on Aerial Imagery (B7) ___ Water-Stained Leaves (B9) ___ Aquatic Fauna (B13)	___ True Aquatic Plants (B14) ___ Hydrogen Sulfide Odor (C1) ___ Oxidized Rhizospheres on Living Roots (C3) ___ Presence of Reduced Iron (C4) ___ Recent Iron Reduction in Tilled Soils (C6) ___ Thin Muck Surface (C7) ___ Other (Explain in Remarks) ___ Surface Soil Cracks (B6) ___ Sparsely Vegetated Concave Surface (B8) ___ Drainage Patterns (B10) ___ Moss Trim Lines (B16) ___ Dry-Season Water Table (C2) ___ Crayfish Burrows (C8) ___ Saturation Visible on Aerial Imagery (C9) ___ Stunted or Stressed Plants (D1) ___ Geomorphic Position (D2) ___ Shallow Aquitard (D3) ___ Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6</u> Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
--	--

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

Remarks:

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

Sampling Point: 14-W003-1W

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Typha latifolia</u> / Broadleaf cattail, Broad-leaved cattail	45	Yes	OBL
2. <u>Scirpus cyperinus</u> / Woolgrass	20	Yes	FACW
3. <u>Andropogon virginicus</u> / Broomsedge bluestem	5	No	FACU
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

70 = Total Cover
50% of total cover: 35 20% of total cover: 14

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>45</u>	x 1 = <u>45</u>
FACW species <u>20</u>	x 2 = <u>40</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>70</u> (A)	<u>105</u> (B)

Prevalence Index = B/A = 1.5

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present?

Yes X No _____

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

SOIL

Sampling Point: 14-W003-1W

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-5	10YR 4/1	99	10YR 5/8	1	C	M	Muck Lm Clay	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
Oil textured, highly impacted by reclaimed coal mine, very solid rocky refusal multiple pits

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bright Mountain Solar City/County: Hazard, Perry County Sampling Date: 04/13/2022
 Applicant/Owner: Avangrid Renewables, LLC State: Kentucky Sampling Point: 14-W005-1U
 Investigator(s): CM, RMS, JK Section, Township, Range: _____ City of Hazard _____
 Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): none Slope (%): 0-5
 Subregion (LRR or MLRA): LRR N Lat: 37.2894485 Long: -83.28519417 Datum: WGS 84
 Soil Map Unit Name: Matewan-Marrowbone-Latham complex, 20 to 80 percent slopes, very rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil X, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: Reclaimed coal mine					

HYDROLOGY

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

Field Observations: Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <u>X</u>
--	---

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

Remarks:

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

Sampling Point: 14-W005-1U

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Andropogon virginicus / Broomsedge bluestem</u>	<u>75</u>	<u>Yes</u>	<u>FACU</u>
2. <u>Trifolium pratense / Red clover</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>
3. <u>Plantago major / Common plantain</u>	<u>20</u>	<u>No</u>	<u>FACU</u>
4. <u>Aster / Aster</u>	<u>15</u>	<u>No</u>	<u>NI</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

170 = Total Cover
50% of total cover: 85 20% of total cover: 34

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>155</u>	x 4 = <u>620</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>170</u> (A)	<u>695</u> (B)

Prevalence Index = B/A = 4.09

- Hydrophytic Vegetation Indicators:**
- 1 - Rapid Test for Hydrophytic Vegetation
 - 2 - Dominance Test is >50%
 - 3 - Prevalence Index ≤3.0¹
 - 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present? Yes No

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

SOIL

Sampling Point: 14-W005-1U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/1	100					Silt Loam	Reclaimed coal mine, rocky surface, refusa

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) (**LRR N**)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) (**LRR N, MLRA 147, 148**)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) (**MLRA 147, 148**)
- Thin Dark Surface (S9) (**MLRA 147, 148**)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
- Umbric Surface (F13) (**MLRA 136, 122**)
- Piedmont Floodplain Soils (F19) (**MLRA 148**)
- Red Parent Material (F21) (**MLRA 127, 147**)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (**MLRA 147**)
 - Coast Prairie Redox (A16) (**MLRA 147, 148**)
 - Piedmont Floodplain Soils (F19) (**MLRA 136, 147**)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bright Mountain Solar City/County: Hazard, Perry County Sampling Date: 04/13/2022
 Applicant/Owner: Avangrid Renewables, LLC State: Kentucky Sampling Point: 14-W005-1U
 Investigator(s): CM, RMS, JK Section, Township, Range: _____ City of Hazard _____
 Landform (hillslope, terrace, etc): Flat Local relief (concave, convex, none): none Slope (%): 0-5
 Subregion (LRR or MLRA): LRR N Lat: 37.2894485 Long: -83.28519417 Datum: WGS 84
 Soil Map Unit Name: Matewan-Marrowbone-Latham complex, 20 to 80 percent slopes, very rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil X, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			
Remarks: Reclaimed coal mine					

HYDROLOGY

Wetland Hydrology Indicators:

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

<p>Field Observations:</p> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<p>Wetland Hydrology Present? Yes _____ No <u>X</u></p>
--	--

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

Remarks:

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

Sampling Point: 14-W005-1U

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Andropogon virginicus</i> / Broomsedge bluestem	75	Yes	FACU
2. <i>Trifolium pratense</i> / Red clover	60	Yes	FACU
3. <i>Plantago major</i> / Common plantain	20	No	FACU
4. <i>Aster</i> / Aster	15	No	NI
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

170 = Total Cover
50% of total cover: 85 20% of total cover: 34

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>155</u>	x 4 = <u>620</u>
UPL species <u>15</u>	x 5 = <u>75</u>
Column Totals: <u>170</u> (A)	<u>695</u> (B)

Prevalence Index = B/A = 4.09

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present?

Yes _____ No X

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

SOIL

Sampling Point: 14-W005-1U

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 4/1	100					Silt Loam	Reclaimed coal mine, rocky surface, refusa

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

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

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

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bright Mountain Solar City/County: Hazard, Perry County Sampling Date: 04/13/2022
 Applicant/Owner: Avangrid Renewables, LLC State: Kentucky Sampling Point: 14-W005-1W
 Investigator(s): CM, RMS, JK Section, Township, Range: _____ City of Hazard _____
 Landform (hillslope, terrace, etc): Bowl shaped depression Local relief (concave, convex, none): concave Slope (%): 1-4
 Subregion (LRR or MLRA): LRR N Lat: 37.28957683 Long: -83.2852575 Datum: WGS 84
 Soil Map Unit Name: Matewan-Marrowbone-Latham complex, 20 to 80 percent slopes, very rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ 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 <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Reclaimed coal mine rocky surface	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required: check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> True Aquatic Plants (B14)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
---	---

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

Remarks:

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

Sampling Point: 14-W005-1W

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

_____ = Total Cover
 50% of total cover: 0 20% of total cover: 0

Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			

_____ = Total Cover
 50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Typha latifolia / Broadleaf cattail, Broad-leaved cattail</u>	<u>80</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Scirpus cyperinus / Woolgrass</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Juncus effusus / Common bog rush, Soft or lamp rush</u>	<u>10</u>	<u>No</u>	<u>FACW</u>
4. <u>Andropogon virginicus / Broomsedge bluestem</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

_____ = Total Cover
 50% of total cover: 72 20% of total cover: 29

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

_____ = Total Cover
 50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>80</u>	x 1 = <u>80</u>
FACW species <u>60</u>	x 2 = <u>120</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>145</u> (A)	<u>220</u> (B)

Prevalence Index = B/A = 1.52

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present?

Yes X No _____

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

SOIL

Sampling Point: 14-W005-1W

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-8	5Y 4/1	98	10YR 5/8	2	C	M	Silty Clay Loam	Rocky refusal multiple spots, reclaimed coa

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- 2 cm Muck (A10) **(LRR N)**
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1) **(LRR N, MLRA 147, 148)**
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)

- Dark Surface (S7)
- Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- Thin Dark Surface (S9) **(MLRA 147, 148)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- Umbric Surface (F13) **(MLRA 136, 122)**
- Piedmont Floodplain Soils (F19) **(MLRA 148)**
- Red Parent Material (F21) **(MLRA 127, 147)**

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) **(MLRA 147)**
 - Coast Prairie Redox (A16) **(MLRA 147, 148)**
 - Piedmont Floodplain Soils (F19) **(MLRA 136, 147)**
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)
- ³Indicators of hydrophytic vegetation and wetland hydrology must be present unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Bright Mountain Solar City/County: Hazard, Perry County Sampling Date: 04/13/2022
 Applicant/Owner: Avangrid Renewables, LLC State: Kentucky Sampling Point: 14-W005-1W
 Investigator(s): CM, RMS, JK Section, Township, Range: _____ City of Hazard _____
 Landform (hillslope, terrace, etc): Bowl shaped depression Local relief (concave, convex, none): concave Slope (%): 1-4
 Subregion (LRR or MLRA): LRR N Lat: 37.28957683 Long: -83.2852575 Datum: WGS 84
 Soil Map Unit Name: Matewan-Marrowbone-Latham complex, 20 to 80 percent slopes, very rocky NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ 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 <u>X</u> No _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: <u>Reclaimed coal mine rocky surface</u>	

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required: check all that apply)	Secondary Indicators (minimum of two required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> True Aquatic Plants (B14)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____
---	---

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

Remarks:

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

Sampling Point: 14-W005-1W

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Sapling/Shrub Stratum (Plot size: <u>15</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Typha latifolia / Broadleaf cattail, Broad-leaved cattail</u>	<u>80</u>	<u>Yes</u>	<u>OBL</u>
2. <u>Scirpus cyperinus / Woolgrass</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>
3. <u>Juncus effusus / Common bog rush, Soft or lamp rush</u>	<u>10</u>	<u>No</u>	<u>FACW</u>
4. <u>Andropogon virginicus / Broomsedge bluestem</u>	<u>5</u>	<u>No</u>	<u>FACU</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

145 = Total Cover
50% of total cover: 72 20% of total cover: 29

Woody Vine Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. _____			

0 = Total Cover
50% of total cover: 0 20% of total cover: 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>80</u>	x 1 = <u>80</u>
FACW species <u>60</u>	x 2 = <u>120</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>5</u>	x 4 = <u>20</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>145</u> (A)	<u>220</u> (B)

Prevalence Index = B/A = 1.52

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index ≤3.0¹
- 4 - Morphological Adaptations¹ (Provide supporting Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Four Vegetation Strata

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

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

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

Hydrophytic Vegetation Present?

Yes X No _____

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

SOIL

Sampling Point: 14-W005-1W

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-8	5Y 4/1	98	10YR 5/8	2	C	M	Silty Clay Loam	Rocky refusal multiple spots, reclaimed coal

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 2 cm Muck (A10) (LRR N)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> (LRR N, MLRA 147, 148)	<input type="checkbox"/> (LRR N, MLRA 136)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) (MLRA 136, 122)
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21) (MLRA 127, 147)

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

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

