

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: Greenbrier River	
Waterbody ID: SPOC118		Date: 3/24/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: SA, CR
Tract Number(s):		Nearest Milepost:	Associated Wetland ID(s): None
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input checked="" type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input checked="" type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: _____ ft. _____ ft. N/A <input type="checkbox"/>	OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input checked="" type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: _____ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _____ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input type="checkbox"/>	Bank height Right: _____ ft. Left: _____ ft.	Bank slope Right: _____ degrees Left: _____ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% <input checked="" type="checkbox"/> 20% <input checked="" type="checkbox"/> 20% <input checked="" type="checkbox"/> 60% _____% _____% _____% _____%			
Width of Riparian Zone: _____ ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> _____ in. _____ in.		
Dominant Bank Vegetation (list): Sycamore, red oak, white pine, highbush blueberry			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Riffles, pools, submerged vegetation			
Aquatic Organisms Observed (list): Caddisfly larvae, fish, crayfish			
T&E Species Observed (list): None			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ^a: <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:
SPOC118

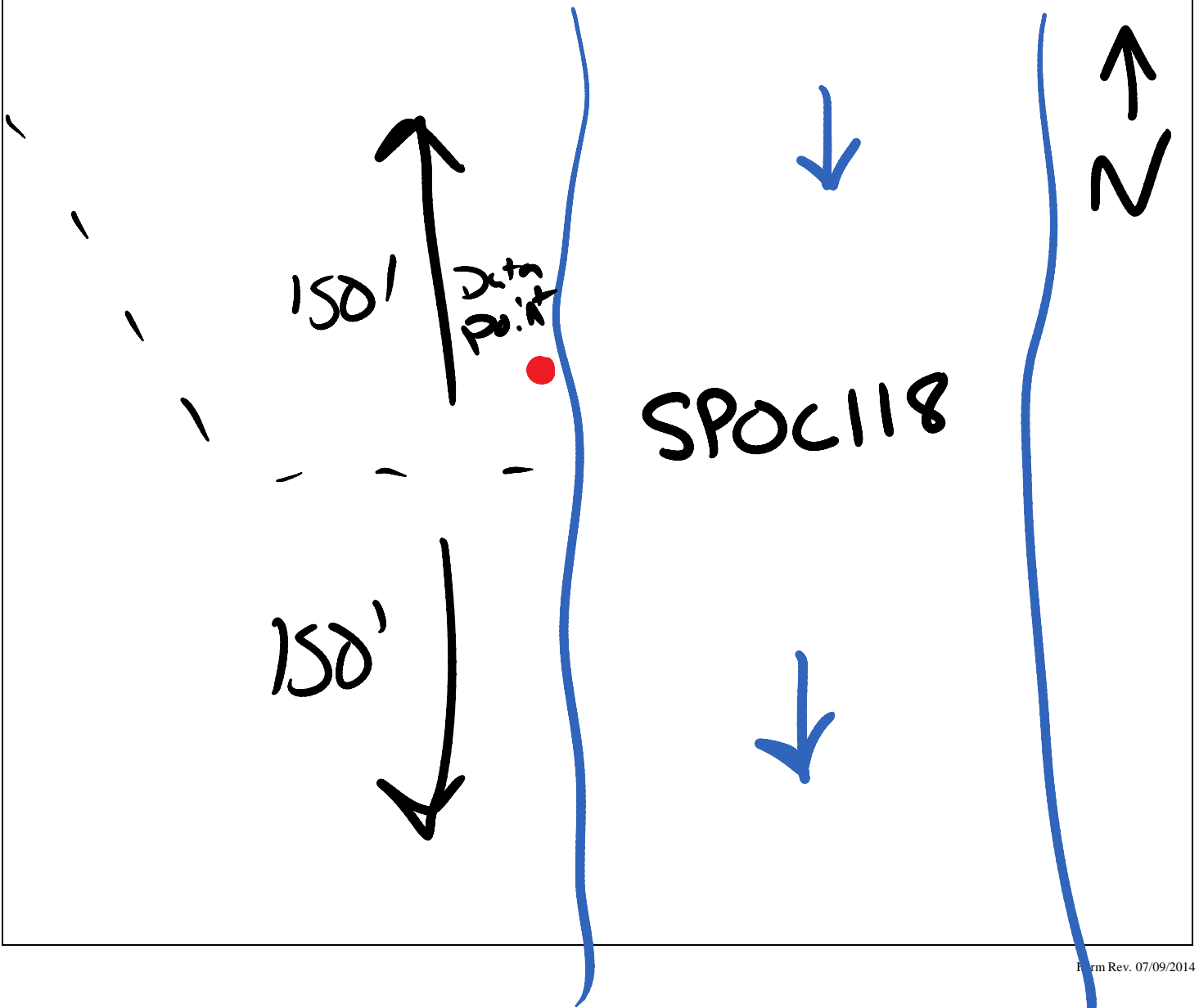
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody SPOC118 facing northeast upstream



Waterbody SPOC118 facing southwest downstream



Waterbody SPOC118 facing southeast across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Greenbrier River	
Waterbody ID: Spoe049		Date: 8/1/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E107		Nearest Milepost: NA	Associated Wetland ID(s): fringe
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 1 ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: 0.4 ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 3 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 1 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 1 ft. Left: 1 ft.	Bank slope Right: 45 degrees Left: 45 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____% _____% 45% 10% _____% 45% _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
Avg. DBH of Dominants: <i>(approx.)</i> 8 in. _____ in.			
Dominant Bank Vegetation <i>(list)</i> : Wingstem, cherry, stiltgrass			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Adjacent to yard			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

Spoe049

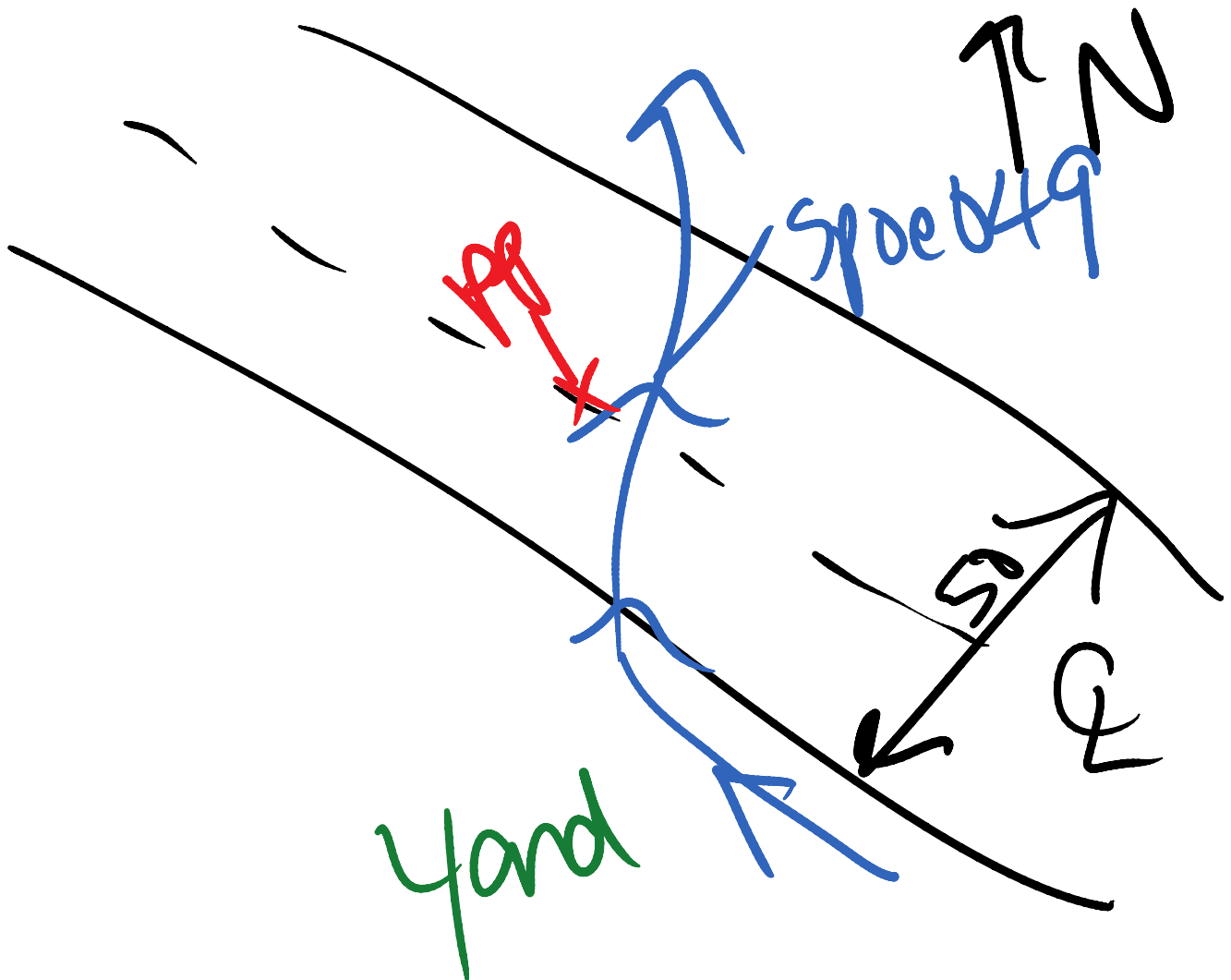
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe049 facing south upstream



Waterbody spoe049 facing north downstream



Waterbody spoe049 facing east across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Greenbrier River	
Waterbody ID: Spoe050		Date: 8/1/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: NA	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 5 ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: 0.5 ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: 10 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 2 ft. Left: 2 ft.	Bank slope Right: 40 degrees Left: 40 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
<input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% 30% 40% _____% _____% 30% _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> 12 in. 1 in.		
Dominant Bank Vegetation <i>(list)</i> : Oak, witch hazel, nettle, fern			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Terminates at roadway			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

Spoe050

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

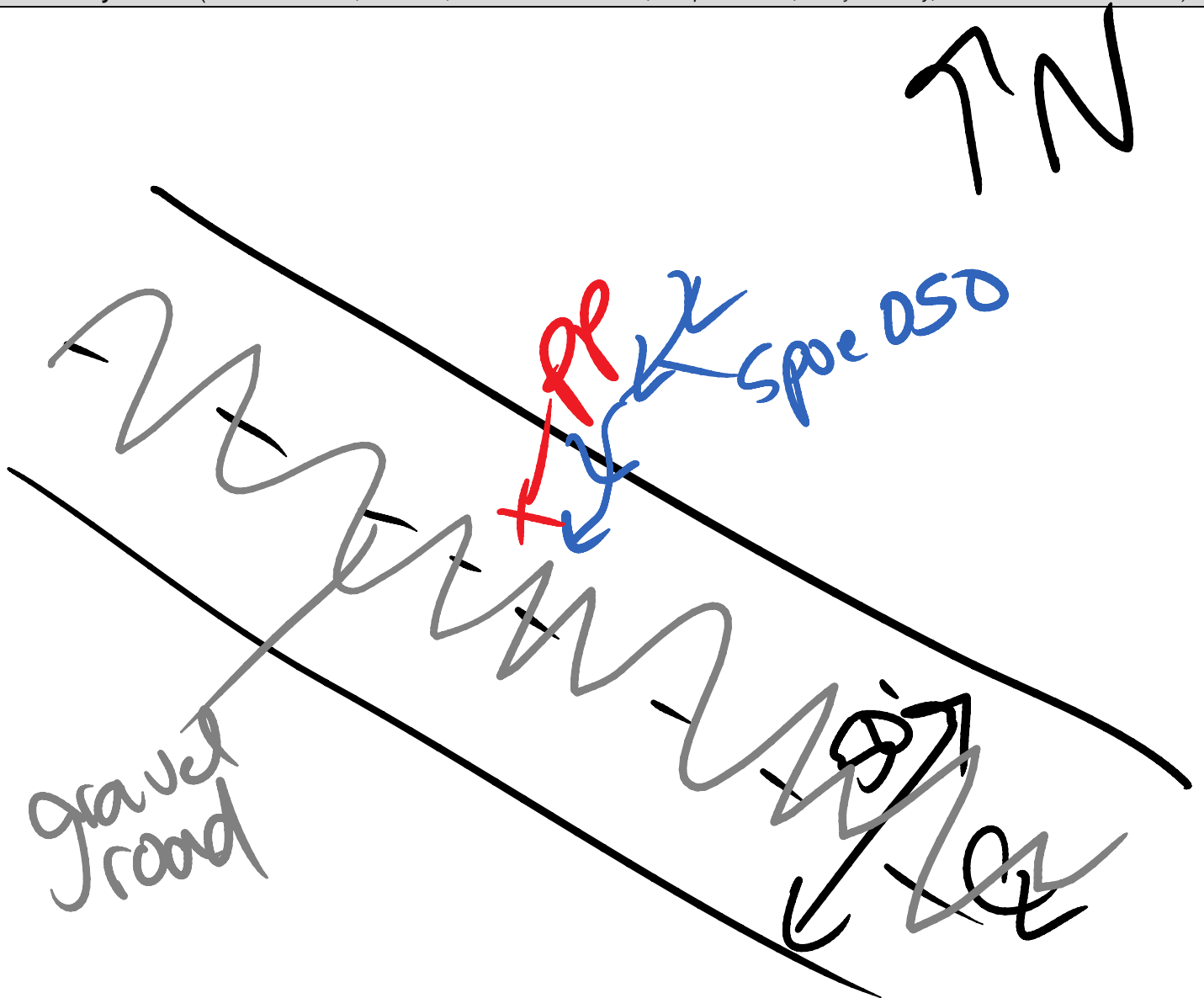
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Terminates at gravel road

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe050 facing northeast upstream



Waterbody spoe050 facing southwest downstream



Waterbody spoe050 facing northwest across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Laurel Run	
Waterbody ID: Spoe012		Date: 3/24/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): Unknown tract		Nearest Milepost: 76.9	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: _ 8 _ ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: _ 0.9 _ ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: _ 18 _ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _ 4 _ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> _ 6 _ ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> _ 0.4 _ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _ 0.75 _ fps N/A <input type="checkbox"/>	Bank height Right: _ 8 _ ft. Left: _ 15 _ ft.	Bank slope Right: _ 80 _ degrees Left: _ 50 _ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____ % _____ % <u>30</u> % <u>30</u> % <u>15</u> % <u>25</u> % _____ % _____ %			
Width of Riparian Zone: _____ ft. N/A <input checked="" type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
Avg. DBH of Dominants: <i>(approx.)</i> <u>10</u> in. <u>1</u> in.			
Dominant Bank Vegetation <i>(list)</i> : Rhododendron, wood fern, hemlock, tulip poplar			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs			
Aquatic Organisms Observed <i>(list)</i> : Insects			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe012

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

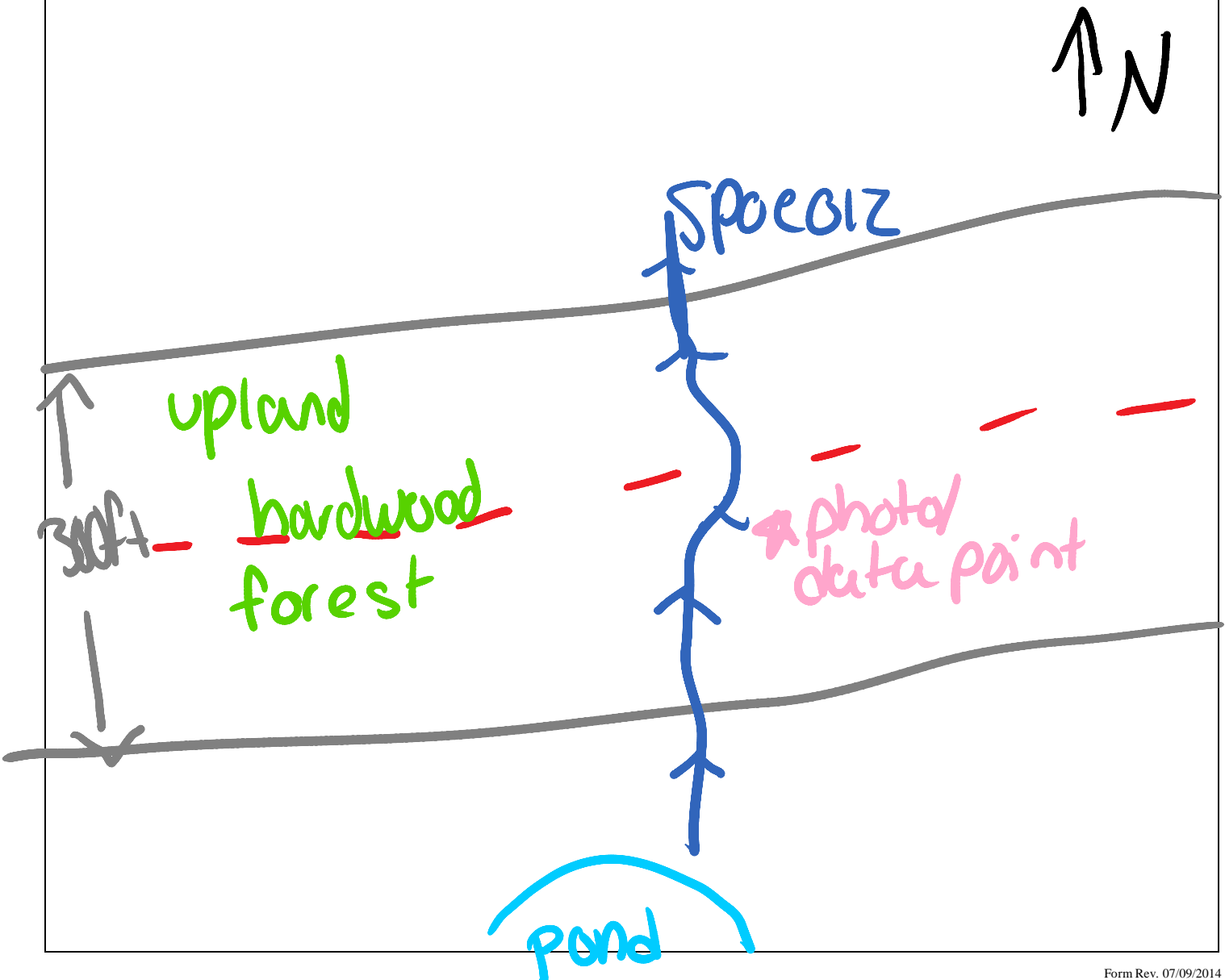
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream originates from pond 300 feet south of centerline.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody SPOE012 facing south upstream



Waterbody SPOE012 facing north downstream



Waterbody SPOE012 facing west across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Greenbrier River	
Waterbody ID: Spoe051		Date: 8/1/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: NA	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 4 ft.		OHWM Indicator: <i>(check all that apply)</i> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
OHWM Height: 0.4 ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: 20 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 4 ft. Left: 4 ft.	Bank slope Right: 30 degrees Left: 30 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> % of Substrate: _____% _____% 20% 10% _____% 70% _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> 14 in. 1 in.		
Dominant Bank Vegetation <i>(list)</i> : Stiltgrass, maple, nettle, oak			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culverted beneath road			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe051

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe051 facing east upstream



Waterbody spoe051 facing west downstream



Waterbody spoe051 facing north across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Greenbrier River	
Waterbody ID: Spoe052		Date: 8/1/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E052		Nearest Milepost: NA	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 4 ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: 0.4 ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: 8 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 2 ft. Left: 2 ft.	Bank slope Right: 30 degrees Left: 30 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% 20% 10% _____% 70% _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> 14 in. 1 in.		
Dominant Bank Vegetation <i>(list)</i> : Stiltgrass, maple, nettle, oak			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culverted beneath road			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe052

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe052 facing south upstream



Waterbody spoe052 facing north downstream



Waterbody spoe052 facing west across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Mile Branch	
Waterbody ID: Spoe008		Date: 3/21/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: 77.4	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: _ 5 _ ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: _ 1 _ ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: _ 8 _ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _ 4 _ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> _ 4 _ ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> _ 0.25 _ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _ 0.2 _ fps N/A <input type="checkbox"/>	Bank height Right: _ 2 _ ft. Left: _ 3 _ ft.	Bank slope Right: _ 30 _ degrees Left: _ 65 _ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____ % <u>10</u> % <u>30</u> % <u>30</u> % <u>20</u> % <u>10</u> % _____ % _____ %			
Width of Riparian Zone: _____ ft. N/A <input checked="" type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
Avg. DBH of Dominants: <i>(approx.)</i> <u>10</u> in. <u>2</u> in.			
Dominant Bank Vegetation <i>(list)</i> : Rhododendron, hickory			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Overhanging veg			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe008

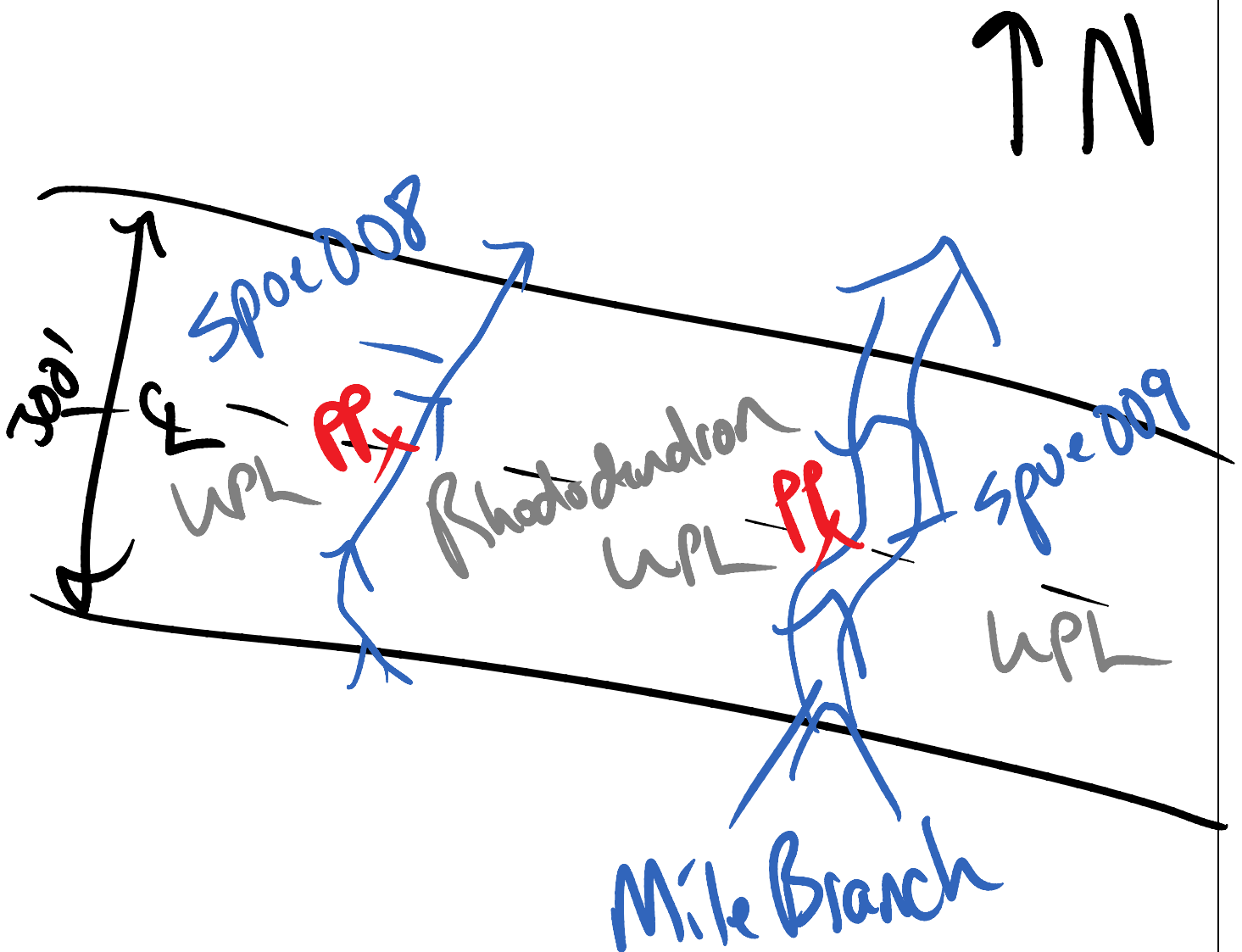
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody SPOE008 facing southwest upstream



Waterbody SPOE008 facing northeast downstream



Waterbody SPOE008 facing northwest across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: Mile Branch	
Waterbody ID: Spoe009		Date: 3/21/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: 77.5	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: <u>15</u> ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: <u>1</u> ft.		<input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: <u>25</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>8</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>10</u> ft.	Depth of Water: <i>(Approx.)</i> <u>0.5</u> ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> <u>1</u> fps	Bank height Right: <u>5</u> ft. Left: <u>3</u> ft.
N/A <input type="checkbox"/>		Bank slope Right: <u>90</u> degrees Left: <u>60</u> degrees	
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____% <u>10</u> % <u>50</u> % <u>20</u> % <u>10</u> % <u>10</u> % _____% _____%			
Width of Riparian Zone: <u>25</u> ft.		Vegetative Layers: <i>(check all that apply)</i>	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: <i>(approx.)</i>		<u>12</u> in. <u>2</u> in.	
Dominant Bank Vegetation <i>(list)</i> : Rhododendron, birch			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Riffles, runs, pools, overhanging veg, leaf packs			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe009

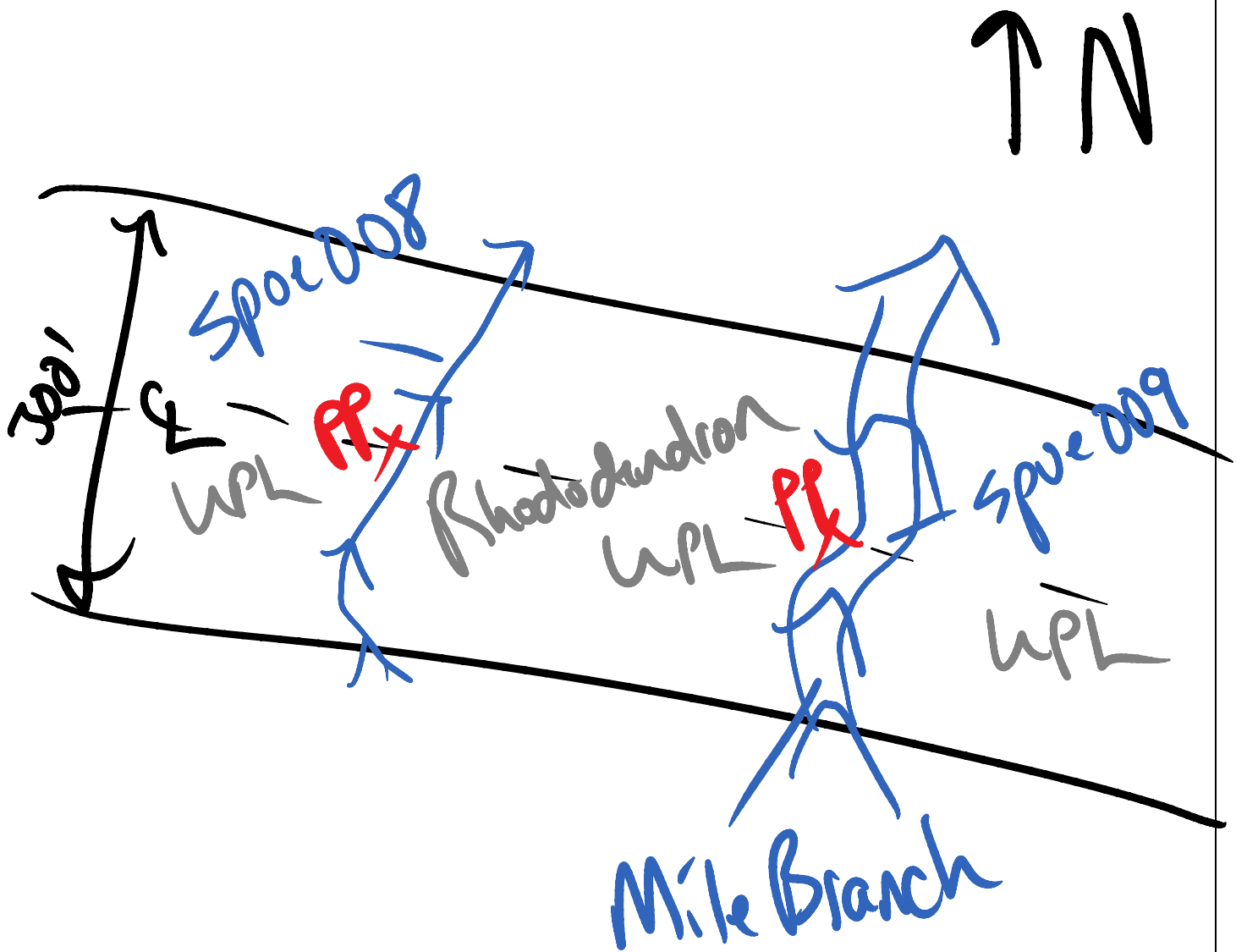
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody SPOE009 facing southwest upstream



Waterbody SPOE009 facing north downstream



Waterbody SPOE009 facing northwest across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Greenbrier River	
Waterbody ID: Spoe053		Date: 8/1/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: NA	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 2 ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: 0.4 ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 4 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 1 ft. Left: 1 ft.	Bank slope Right: 30 degrees Left: 30 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____% _____% 20% 10% _____% 70% _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
	Avg. DBH of Dominants: <i>(approx.)</i> 14 in. 1 in.		
Dominant Bank Vegetation <i>(list)</i> : Stiltgrass, maple, aster, oak			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culverted beneath road			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe053

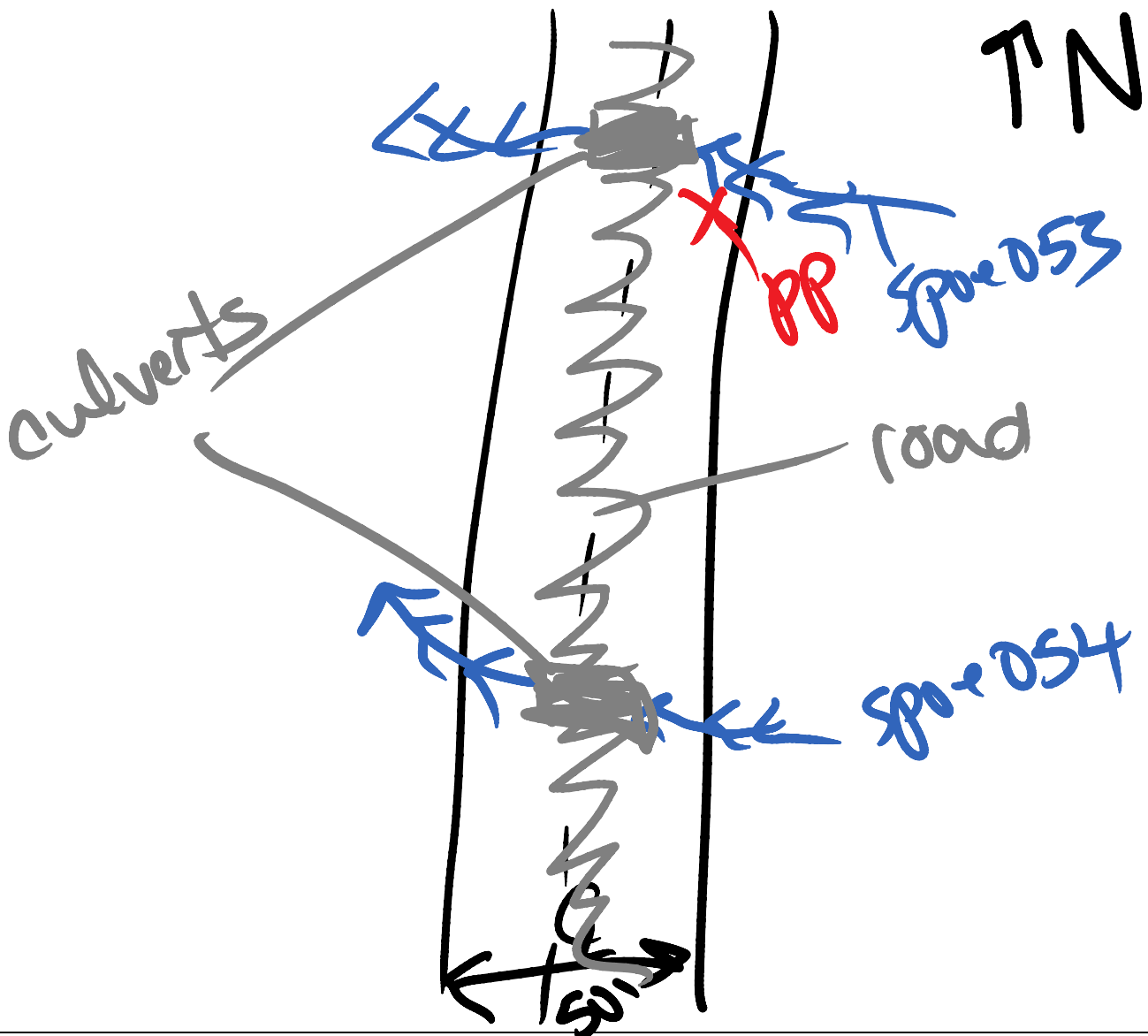
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe053 facing southeast upstream



Waterbody spoe053 facing northwest downstream



Waterbody spoe053 facing southwest across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Greenbrier River	
Waterbody ID: Spoe054		Date: 8/1/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Tract Number(s): 05-001-E051		Nearest Milepost: NA	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 2 ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: 0.4 ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: 4 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 3 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 1 ft. Left: 1 ft.	Bank slope Right: 30 degrees Left: 30 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____% _____% 40% 10% _____% 50% _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
	Avg. DBH of Dominants: <i>(approx.)</i> 14 in. 1 in.		
Dominant Bank Vegetation <i>(list)</i> : Stiltgrass, maple, aster, oak			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culverted beneath road			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe054

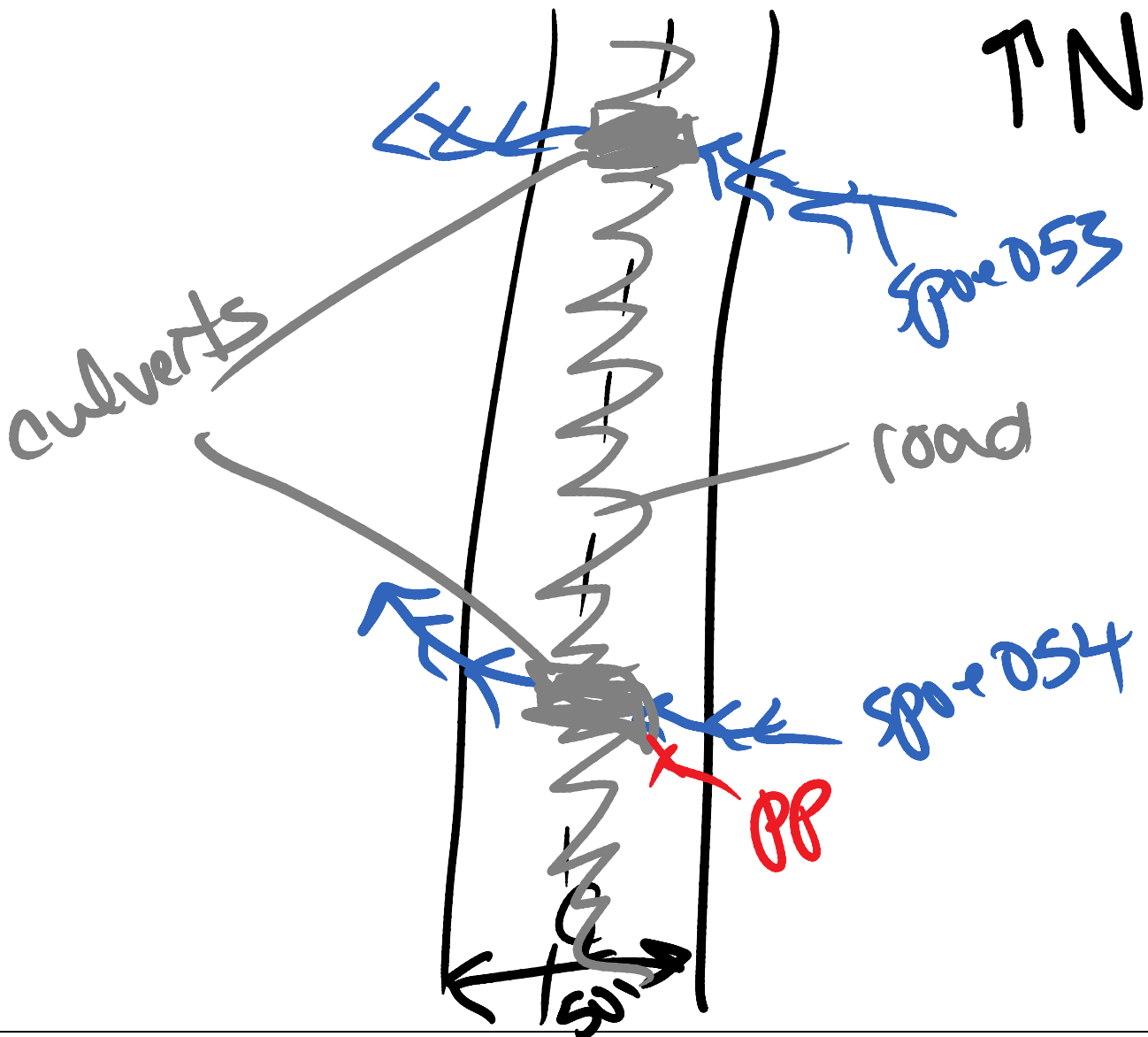
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe054 facing east upstream



Waterbody spoe054 facing west downstream



Waterbody spoe054 facing south across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Greenbrier River	
Waterbody ID: Spoe055		Date: 8/2/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: NA	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 2 ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: 0.4 ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: 4 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 1 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 1 ft. Left: 1 ft.	Bank slope Right: 45 degrees Left: 45 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
<input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% _____% 30% 70% _____% _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input type="checkbox"/> Trees: <input type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
Avg. DBH of Dominants: <i>(approx.)</i> _____ in. _____ in.			
Dominant Bank Vegetation <i>(list)</i> : Stiltgrass, coltsfoot			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culverted beneath road, roadside ditch for part of reach			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

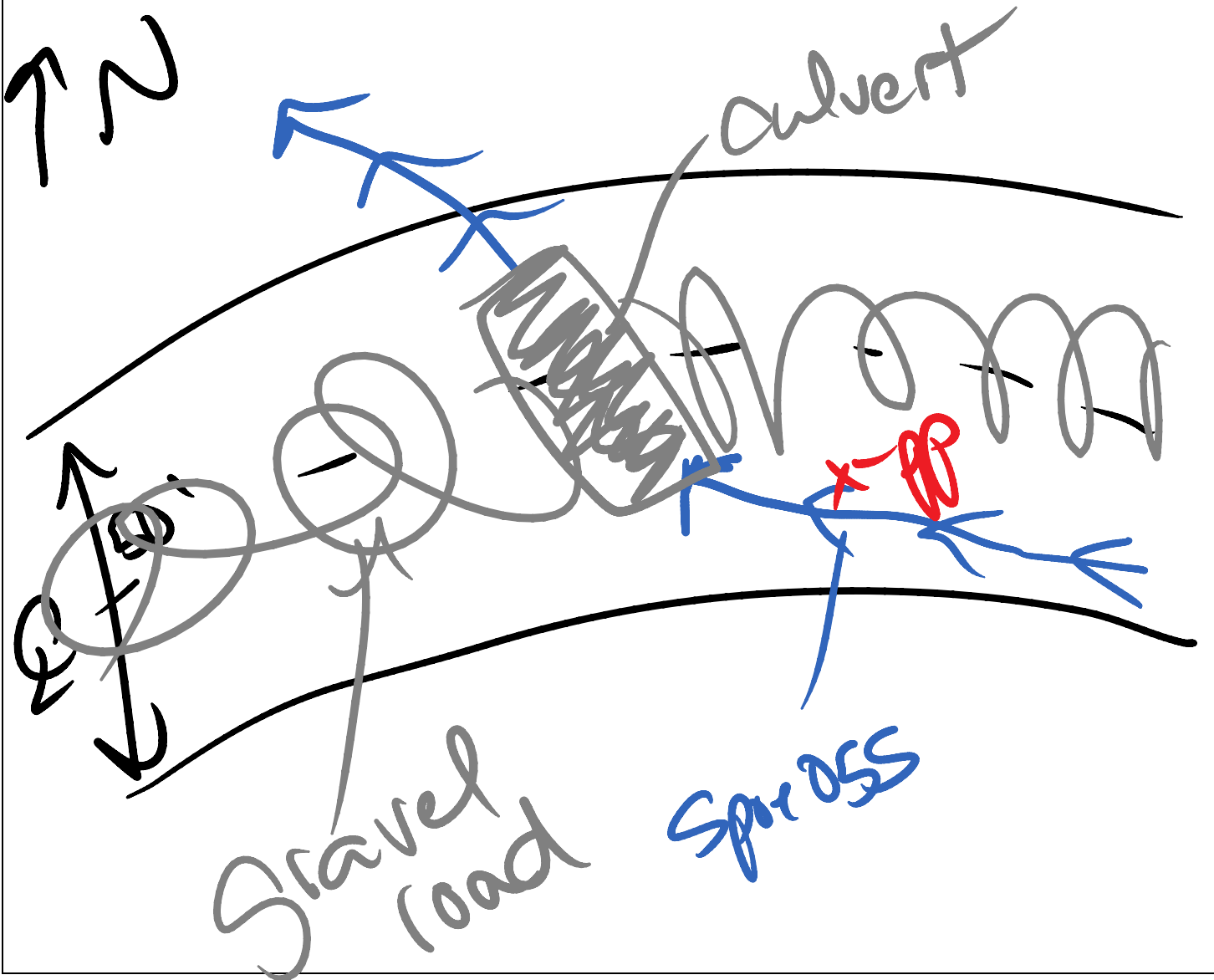
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe055 facing east upstream



Waterbody spoe055 facing west downstream



Waterbody spoe055 facing south across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Little Thorny Creek	
Waterbody ID: Spoe056		Date: 8/2/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: NA	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: _3_ ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: _0.2_ ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: _6_ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _2_ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: _0.5_ ft. Left: _0.5_ ft.	Bank slope Right: _30_ degrees Left: _30_ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____% _____% _____% <u>20</u> % <u>10</u> % <u>70</u> % _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
	Avg. DBH of Dominants: <i>(approx.)</i> <u>12</u> in. <u>2</u> in.		
Dominant Bank Vegetation <i>(list)</i> : Oak, maple, clearweed			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Starts at culvert			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

Spoe056

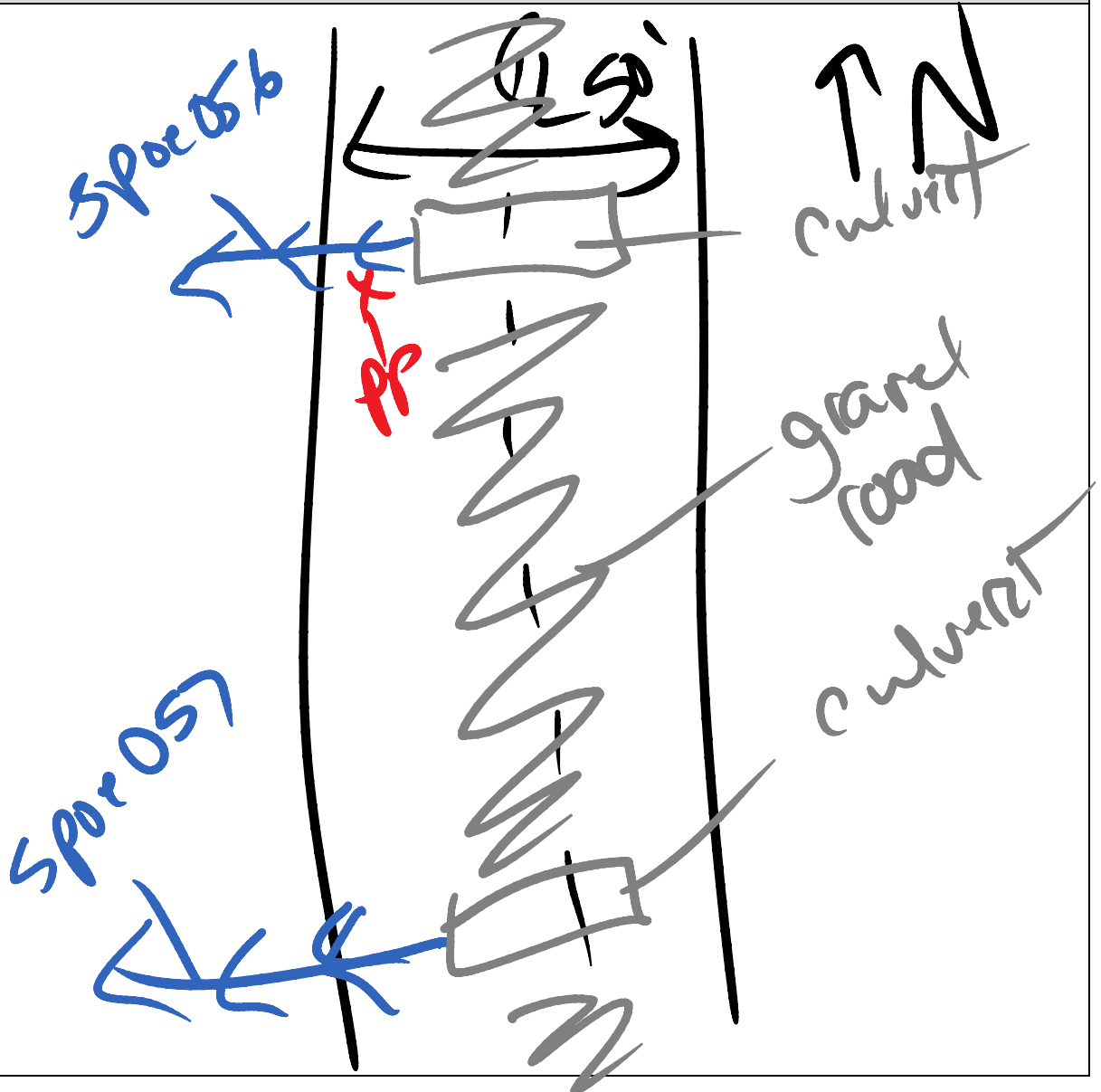
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe056 facing east upstream



Waterbody spoe056 facing west downstream



Waterbody spoe056 facing north across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Little Thorny Creek	
Waterbody ID: Spoe057		Date: 8/2/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: NA	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: _3_ ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: _0.2_ ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: _6_ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _2_ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: _0.5_ ft. Left: _0.5_ ft.	Bank slope Right: _30_ degrees Left: _30_ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____% _____% _____% <u>20</u> % <u>10</u> % <u>70</u> % _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
	Avg. DBH of Dominants: <i>(approx.)</i> <u>12</u> in. <u>2</u> in.		
Dominant Bank Vegetation <i>(list)</i> : Oak, maple, coltsfoot, sorrell			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Starts at culvert			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

Spoe057

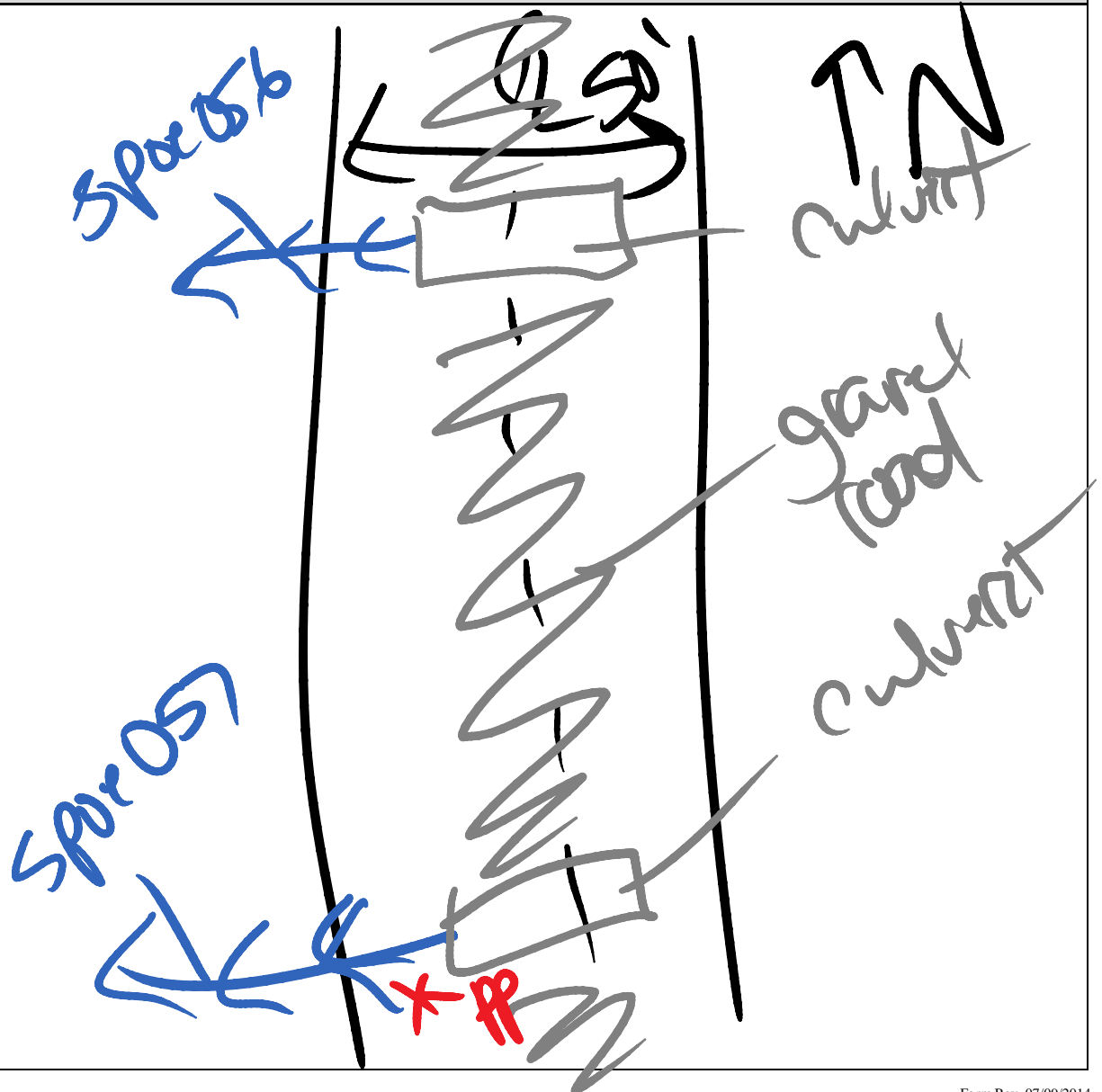
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe057 facing east upstream



Waterbody spoe057 facing west downstream



Waterbody spoe057 facing south across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: Little Thorny Creek	
Waterbody ID: Spoe059		Date: 8/2/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: NA	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input type="checkbox"/> Stream <input type="checkbox"/> Ditch <input checked="" type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 35 ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: 1 ft.		<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 35 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 35 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 3 ft. Left: 3 ft.	Bank slope Right: 90 degrees Left: 90 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> % of Substrate: _____% _____% _____% _____% _____% _____% _____% 100%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.		Vegetative Layers: <i>(check all that apply)</i> <input type="checkbox"/> Trees: _____ in. <input type="checkbox"/> Saplings/Shrubs: _____ in. <input type="checkbox"/> Herbs	
Avg. DBH of Dominants: <i>(approx.)</i>			
Dominant Bank Vegetation <i>(list)</i> : none			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Artificial, bank revetment, canal, bridge for access road			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

Spoe059

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

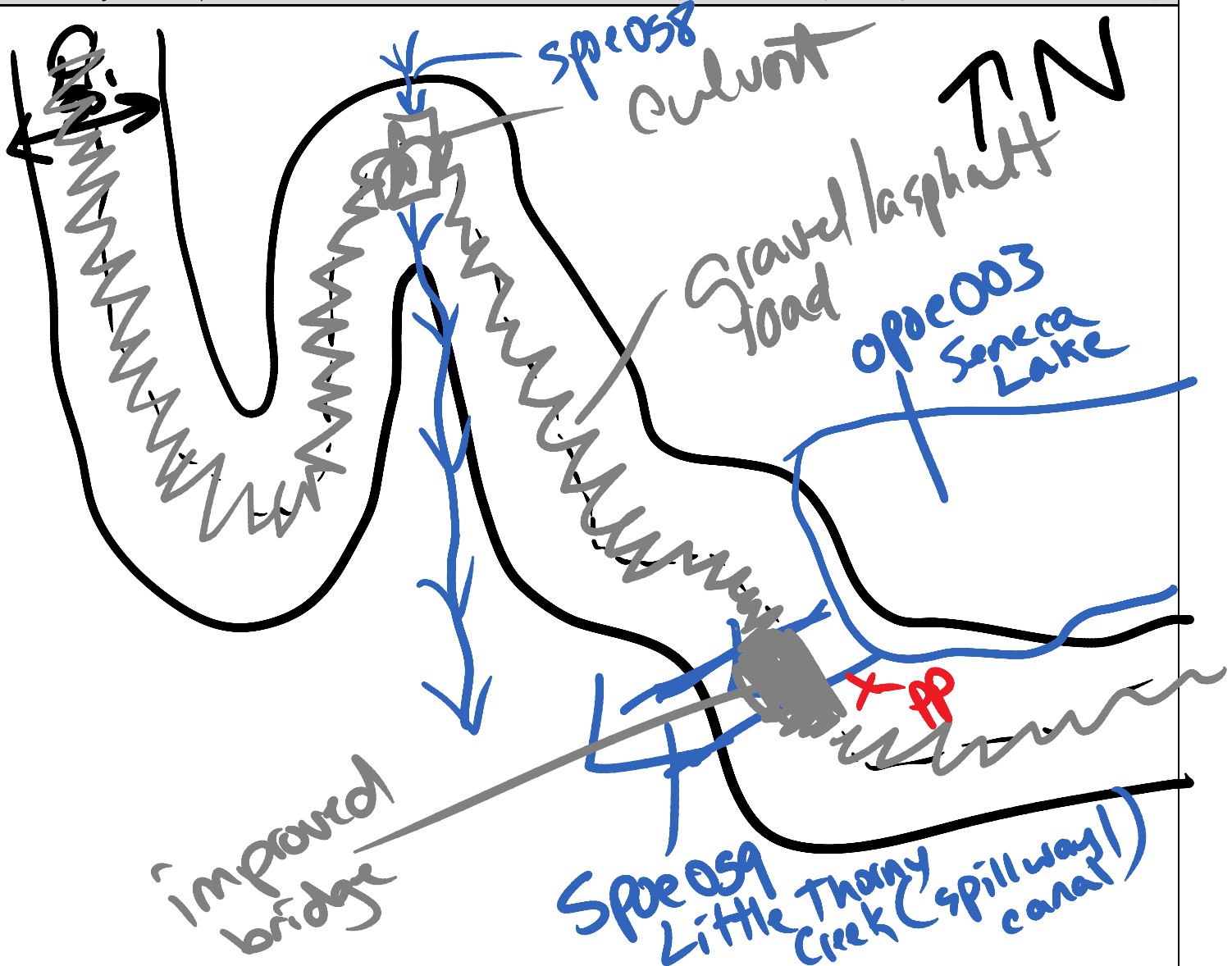
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Bridge unlikely to need improvements

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe059 facing northeast upstream



Waterbody spoe059 facing southwest downstream



Waterbody spoe059 facing southeast across

Open Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: Seneca Lake	
Waterbody ID: Opoe003		Date: 8/2/2016	
State: West Virginia	County: Pocahontas	Company: ERM	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: NA	Associated Wetland ID(s): fringe
Survey Type: <small>(check one)</small> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Waterbody Type: <small>(check one)</small> <input type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input type="checkbox"/> Lake <input type="checkbox"/> Reservoir <input checked="" type="checkbox"/> Impoundment <input type="checkbox"/> Oxbow <input type="checkbox"/> Other:			
Hydrologic Regime: <input checked="" type="checkbox"/> Permanently Flooded <input type="checkbox"/> Semipermanently Flooded <input type="checkbox"/> Seasonally Flooded <input type="checkbox"/> Temporarily Flooded			
OHWM Height: <u> 1 </u> ft.		OHWM Indicator: <small>(check all that apply)</small>	
		<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining <input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
Depth of Water: <u> 15 </u> ft. N/A <input type="checkbox"/>		Bank height (average): <u> 5 </u> ft.	
		Bank slope (average): <u> 45 </u> degrees	
Qualitative Attributes			
Water Appearance: <small>(check one)</small> <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% _____% <u> 100 </u> % _____% _____%			
Width of Riparian Zone: <u> </u> ft. N/A <input checked="" type="checkbox"/>		Vegetative Layers: <small>(check all that apply)</small> <input checked="" type="checkbox"/> Trees: <input type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: <small>(approx.)</small> <u> 12 </u> in. _____ in.	
Dominant Bank Vegetation <i>(list)</i> : Bulrush, pine, sedges			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.): Emergent veg, docks, overhanging veg			
Aquatic Organisms Observed <i>(list)</i> : Salamanders, minnows, fish, invertebrates			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Artificial impoundment, bank revetment, culvert outlets, adjacent to road			
Waterbody is: <small>(check one)</small> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Waterbody Quality ^a : <small>(check one)</small> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Opoe003

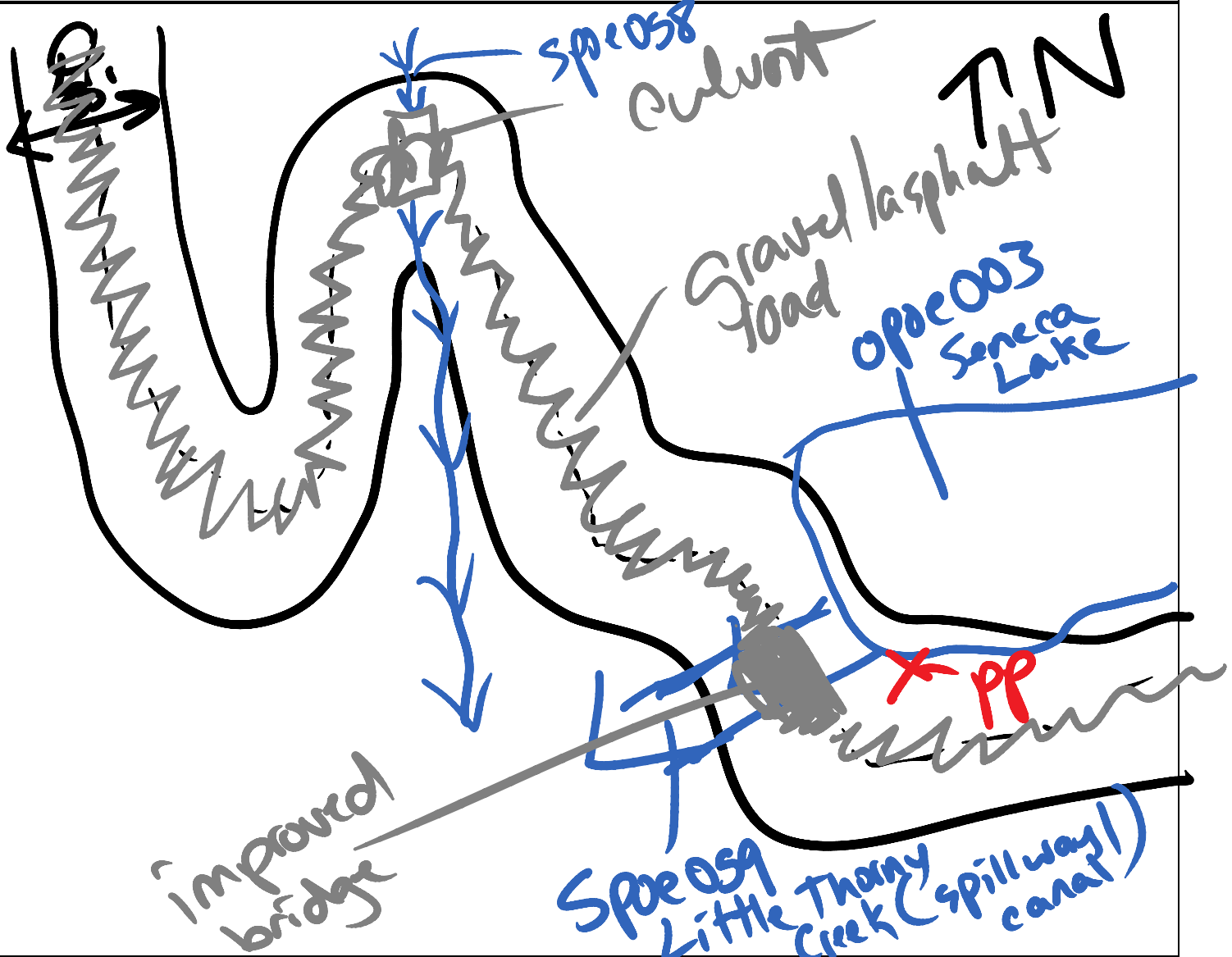
^a **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point locations, survey boundary, and IDs of associated features)





Open waterbody opoe003 facing east



Open waterbody opoe003 facing north



Open waterbody opoe003 facing northwest

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Thorn Creek	
Waterbody ID: Spoc113		Date: 3/22/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CR, SA
Photos: 3			
Tract Number(s): 05-001-E051-AR1		Nearest Milepost: 78	Associated Wetland ID(s): None
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 8 ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: 0.5 ft.		<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input checked="" type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 15 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 1 ft.	Width of Waterbody - Water Edge to Water Edge: 6 ft.	Depth of Water: <i>(Approx.)</i> 0.8 ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> 1 fps	Bank height: Right: 3 ft. Left: 4 ft.
N/A <input type="checkbox"/>		Bank slope: Right: 60 degrees Left: 70 degrees	
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: ___% ___% ___% 50% 25% 25% ___% ___%			
Width of Riparian Zone: 20 ft.		Vegetative Layers: <i>(check all that apply)</i>	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: <i>(approx.)</i> 12 in. 2 in.	
Dominant Bank Vegetation <i>(list)</i> : White pine, eastern hemlock, red oak, red maple, mountain laurel, greenbrier, Christmas Fern			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, overhanging roots, pools			
Aquatic Organisms Observed <i>(list)</i> : Fish, caddisfly larvae			
T&E Species Observed <i>(list)</i> : None			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Stream flows under access road through two 3' culverts			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoc113

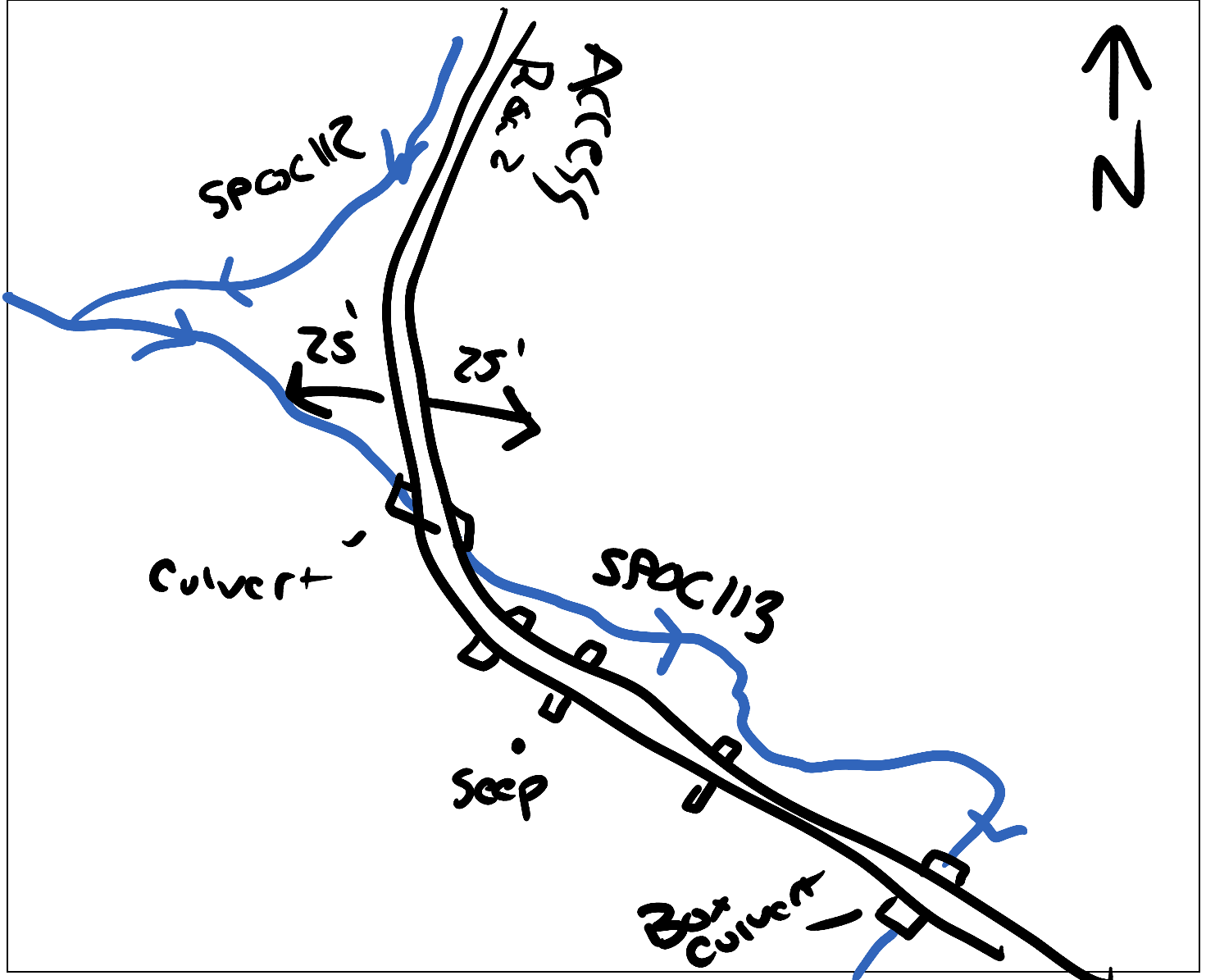
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody SPOC113 facing north-northwest upstream



Waterbody SPOC113 facing south-southeast downstream



Waterbody SPOC113 facing west-southwest across

Open Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: Unnamed pond	
Waterbody ID: Opoe001		Date: 3/23/2016	
State: Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-2			
Tract Number(s): 05-001-E053		Nearest Milepost: 79.2	Associated Wetland ID(s): Wpoe008e
Survey Type: <small>(check one)</small> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Waterbody Type: <small>(check one)</small> <input checked="" type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input type="checkbox"/> Lake <input type="checkbox"/> Reservoir <input type="checkbox"/> Impoundment <input type="checkbox"/> Oxbow <input type="checkbox"/> Other:			
Hydrologic Regime: <input type="checkbox"/> Permanently Flooded <input type="checkbox"/> Semipermanently Flooded <input checked="" type="checkbox"/> Seasonally Flooded <input type="checkbox"/> Temporarily Flooded			
OHWM Height: <u> 1 </u> ft.	OHWM Indicator: <small>(check all that apply)</small>		
	<input checked="" type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving	<input type="checkbox"/> Wrested vegetation
	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input type="checkbox"/> Scouring
	<input type="checkbox"/> Litter and debris	<input type="checkbox"/> Abrupt plant community change	<input checked="" type="checkbox"/> Water staining
Depth of Water: <u> 2 </u> ft. N/A <input type="checkbox"/>	Bank height (average): <u> 2 </u> ft.	Bank slope (average): <u> 70 </u> degrees	
Qualitative Attributes			
Water Appearance: <small>(check one)</small> <input type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input checked="" type="checkbox"/> Other: Aqua Blue			
Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% <u> 10 </u> % <u> 10 </u> % <u> 80 </u> % _____% _____%			
Width of Riparian Zone: <u> </u> ft. N/A <input checked="" type="checkbox"/>	Vegetative Layers: <small>(check all that apply)</small>		
	<input checked="" type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:	<input checked="" type="checkbox"/> Herbs
	Avg. DBH of Dominants: <small>(approx.)</small> <u> 8 </u> in. <u> 1 </u> in.		
Dominant Bank Vegetation <small>(list)</small> : Pine, moss, fern			
Aquatic Habitats <small>(ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.)</small> : none			
Aquatic Organisms Observed <small>(list)</small> : none			
T&E Species Observed <small>(list)</small> : none			
Disturbances <small>(ex: livestock access, manure in waterbody, waste discharge pipes)</small> : Impounded, pipes on edges, appears to have chemical input			
Waterbody is: <small>(check one)</small> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Waterbody Quality ^a : <small>(check one)</small> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

Opoe001

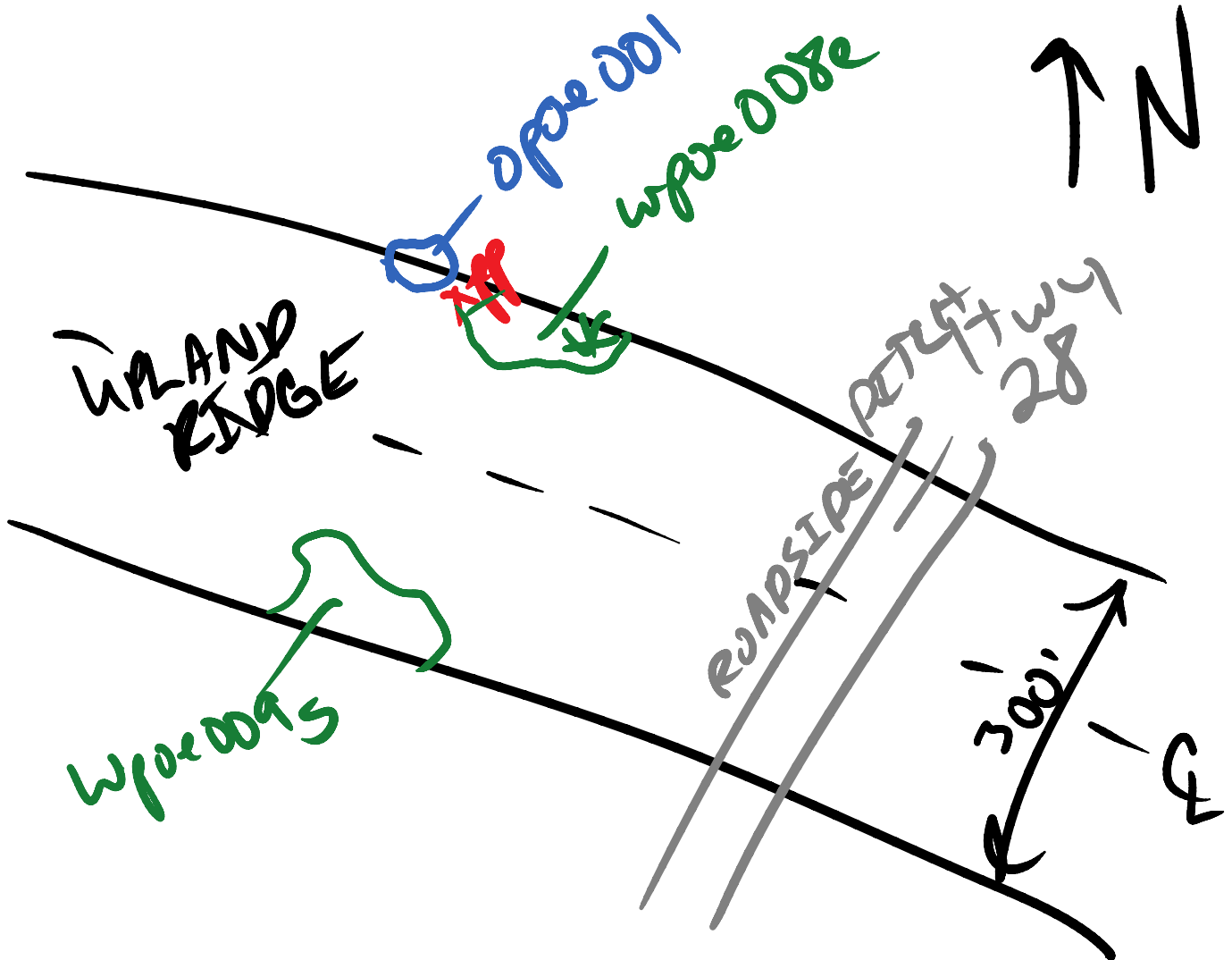
^a **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point locations, survey boundary, and IDs of associated features)





Open waterbody OPOE001 facing southwest



Open waterbody OPOE001 facing northeast



Open waterbody OPOE001 facing northwest

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: Thomas Creek	
Waterbody ID: Spoe013		Date: 3/28/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, SH
Photos: 1-3			
Tract Number(s): Unnamed tract south of 05-001-E055		Nearest Milepost: 79.3	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 12 ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: 2 ft.		<input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 30 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 8 ft.	Width of Waterbody - Water Edge to Water Edge: 10 ft.	Depth of Water: <i>(Approx.)</i> 1.5 ft.
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> 0.5 fps	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	
Bank height Right: 2 ft. Left: 2.5 ft.		Bank slope Right: 10 degrees Left: 70 degrees	
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____% _____% 30% 45% 20% 5% _____% _____%			
Width of Riparian Zone: 40 ft.		Vegetative Layers: <i>(check all that apply)</i>	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: <i>(approx.)</i> 6 in.		0.5 in.	
Dominant Bank Vegetation <i>(list)</i> : Rose, sedge, pine			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Riffles, runs, pools, overhanging banks			
Aquatic Organisms Observed <i>(list)</i> : minnows			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Cattle runoff			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe013

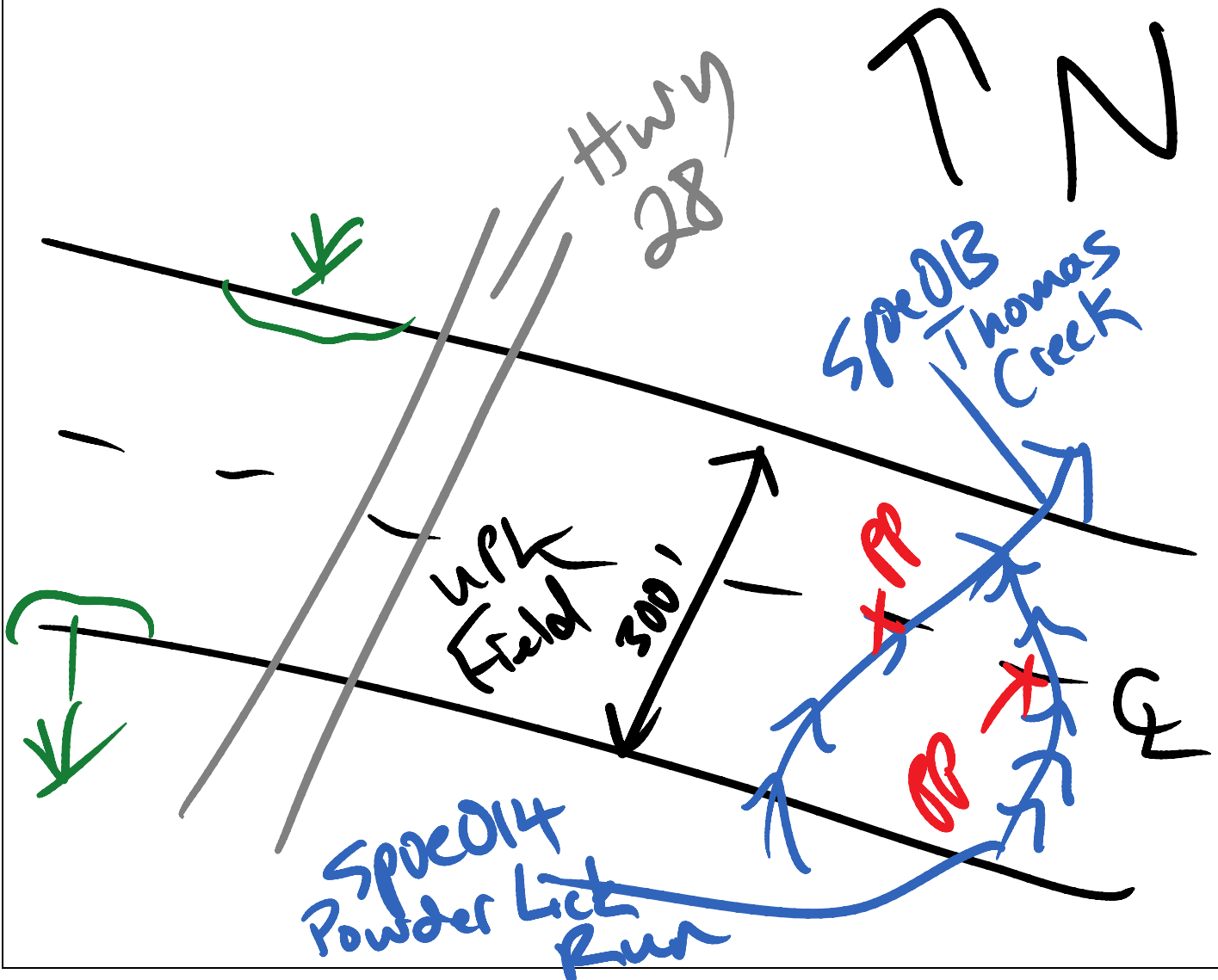
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe013 facing southwest upstream



Waterbody spoe013 facing northeast downstream



Waterbody spoe013 southeast across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: Powder Lick Run	
Waterbody ID: Spoe014		Date: 3/28/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, SH
Photos: 1-3			
Tract Number(s): Unnamed tract south of 05-001-E055		Nearest Milepost: 79.4	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: _ 8 _ ft.		OHWM Indicator: <i>(check all that apply)</i> <input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
Height: _ 1 _ ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: _ 15 _ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _ 6 _ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> _ 6 _ ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> _ 0.25 _ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _ 0.8 _ fps N/A <input type="checkbox"/>	Bank height Right: _ 2 _ ft. Left: _ 2 _ ft.	Bank slope Right: _ 80 _ degrees Left: _ 20 _ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> % of Substrate: _____ % _____ % <u>10</u> % <u>65</u> % <u>20</u> % <u>5</u> % _____ % _____ %			
Width of Riparian Zone: _____ ft. N/A <input checked="" type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> <u>10</u> in. <u>1</u> in.		
Dominant Bank Vegetation <i>(list)</i> : Hemlock, barberry, fern			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): riffles			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe014

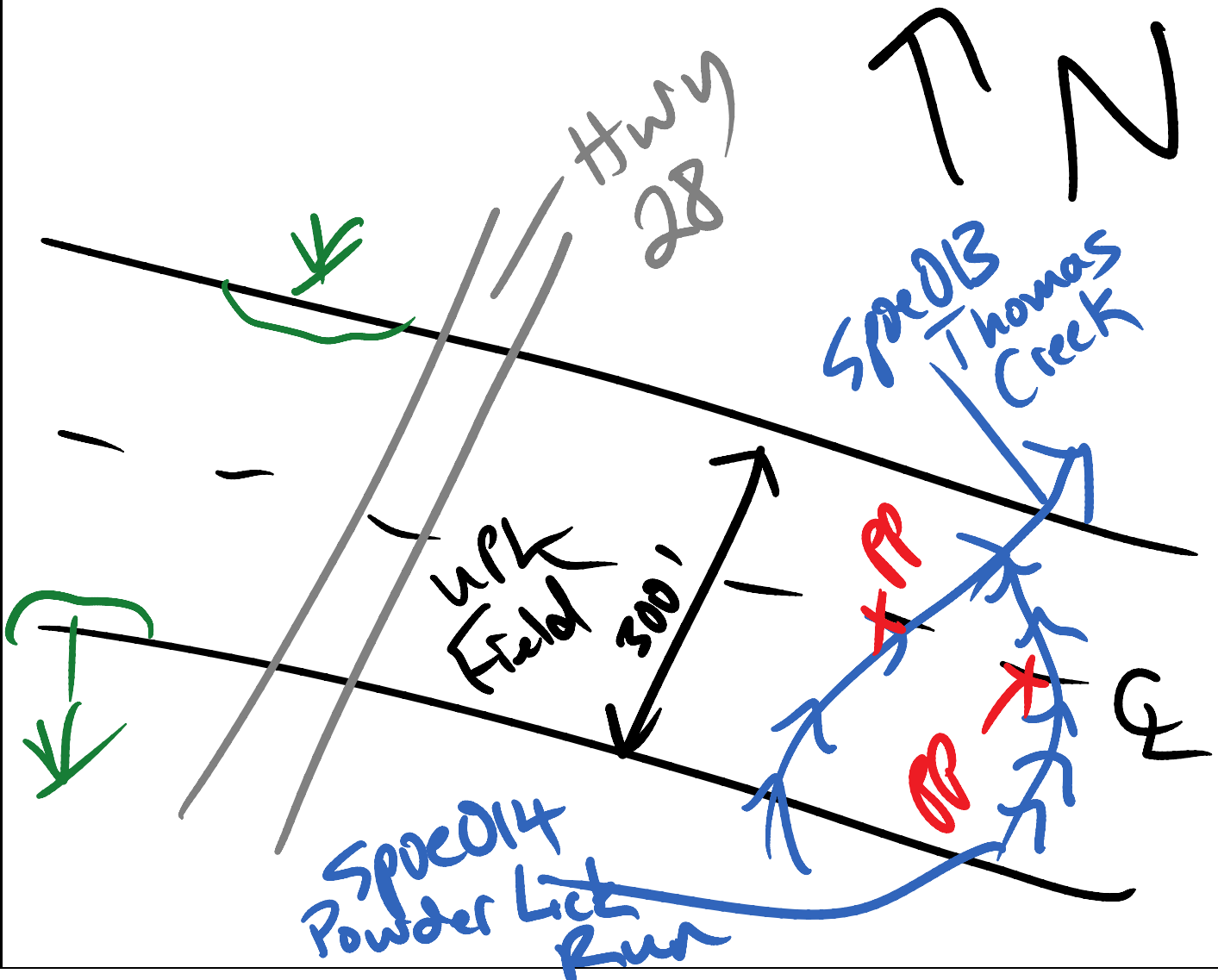
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe014 facing southwest upstream



Waterbody spoe014 facing northeast downstream



Waterbody spoe014 facing southeast across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Thomas Creek	
Waterbody ID: Spoe010		Date: 3/23/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05001-E051		Nearest Milepost: 79.8	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 6 ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: 1 ft.		<input type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 10 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 5 ft.	Width of Waterbody - Water Edge to Water Edge: 5 ft.	Depth of Water: <i>(Approx.)</i> 0.25 ft.
N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> 0.8 fps	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	
Bank height Right: 1 ft. Left: 2 ft.		Bank slope Right: 80 degrees Left: 45 degrees	
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____% <u>5</u> % <u>25</u> % <u>60</u> % <u>10</u> % _____% _____% _____%			
Width of Riparian Zone: 15 ft.		Vegetative Layers: <i>(check all that apply)</i>	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
Avg. DBH of Dominants: <i>(approx.)</i>		<u>12</u> in. <u>1</u> in.	
Dominant Bank Vegetation <i>(list)</i> : Pine, cinquefoil, fern			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, woody debris, riffles			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe010

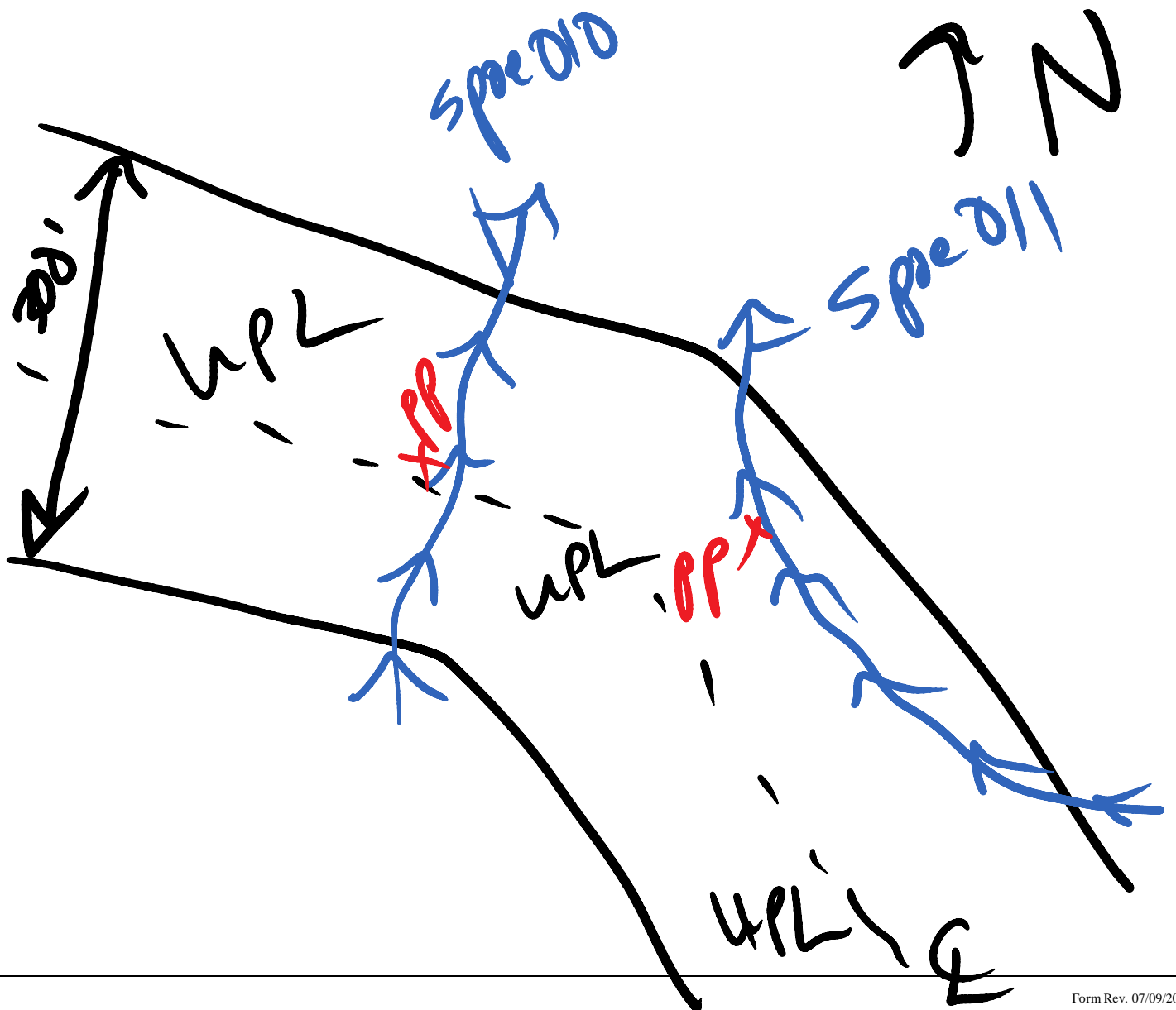
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody SPOE010 facing southwest upstream



Waterbody SPOE010 facing northeast downstream



Waterbody SPOE010 facing southeast across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Thomas Creek	
Waterbody ID: Spoe011		Date: 3/23/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, AS
Photos: 1-3			
Tract Number(s): 05-001-E051		Nearest Milepost: 79.9	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: _ 5 _ ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: _ 1 _ ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: _ 10 _ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _ 5 _ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> _ 5 _ ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> _ 0.1 _ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _ 0.4 _ fps N/A <input type="checkbox"/>	Bank height Right: _ 1 _ ft. Left: _ 6 _ ft.	Bank slope Right: _ 45 _ degrees Left: _ 80 _ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____ % _____ % <u>40</u> % <u>20</u> % <u>10</u> % <u>30</u> % _____ % _____ %			
Width of Riparian Zone: _____ ft. N/A <input checked="" type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
Avg. DBH of Dominants: <i>(approx.)</i> <u>8</u> in. <u>1</u> in.			
Dominant Bank Vegetation <i>(list)</i> : Fern, eastern hemlock, pine			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input checked="" type="checkbox"/> High <input type="checkbox"/> Moderate <input type="checkbox"/> Low			

Waterbody ID:

Spoe011

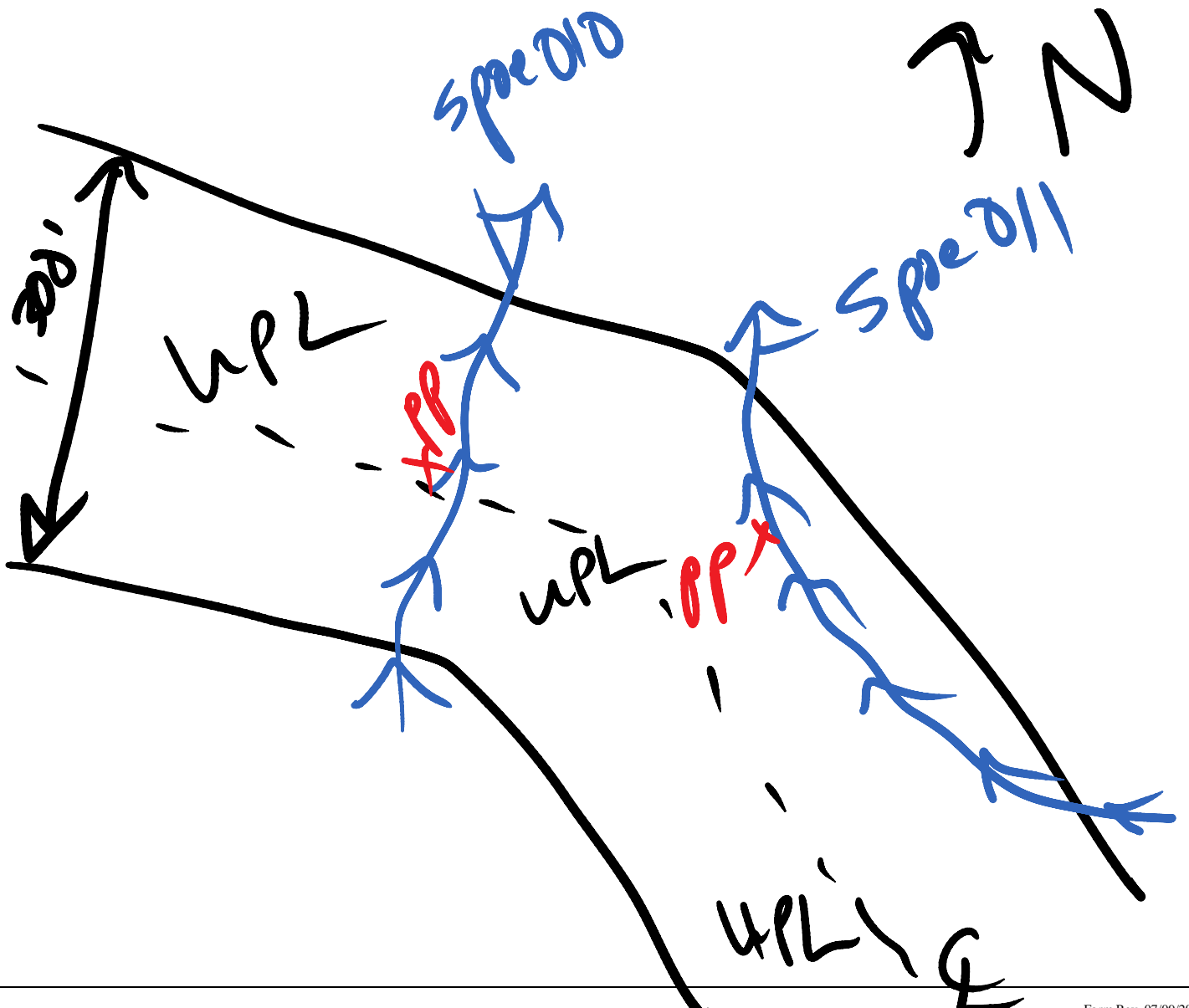
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody SPOE011 facing southeast upstream



Waterbody SPOE011 facing southwest downstream



Waterbody SPOE011 facing northeast across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Sugar Camp Run		Waterbody ID: Spoe019
Date: 5/12/2016				
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, KO	Photos: 1-3
Tract Number(s): 05-001-E060		Nearest Milepost: 81.0		Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: <u>3</u> ft.		OHWM Indicator: <i>(check all that apply)</i> <input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input checked="" type="checkbox"/> Water staining		
OHWM Height: <u>0.25</u> ft.		<input checked="" type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: <u>12</u> ft.	Width of Waterbody - Toe of Slope to Toe of Slope: <u>2</u> ft.	Width of Waterbody - Water Edge to Water Edge: <u>1</u> ft.	Depth of Water: <i>(Approx.)</i> <u>0.1</u> ft.	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> <u>0.2</u> fps		Bank height Right: <u>2</u> ft. Left: <u>3</u> ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope Right: <u>20</u> degrees Left: <u>30</u> degrees
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% _____% _____% <u>5</u> % <u>15</u> % <u>80</u> % _____% _____%				
Width of Riparian Zone: _____ ft.		Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input checked="" type="checkbox"/>		Avg. DBH of Dominants: <i>(approx.)</i> <u>8</u> in. <u>1</u> in.		
Dominant Bank Vegetation <i>(list)</i> : White pine, Blueberry, Maple				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none				
Aquatic Organisms Observed <i>(list)</i> : none				
T&E Species Observed <i>(list)</i> : none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Low				

Waterbody ID:

Spoe019

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

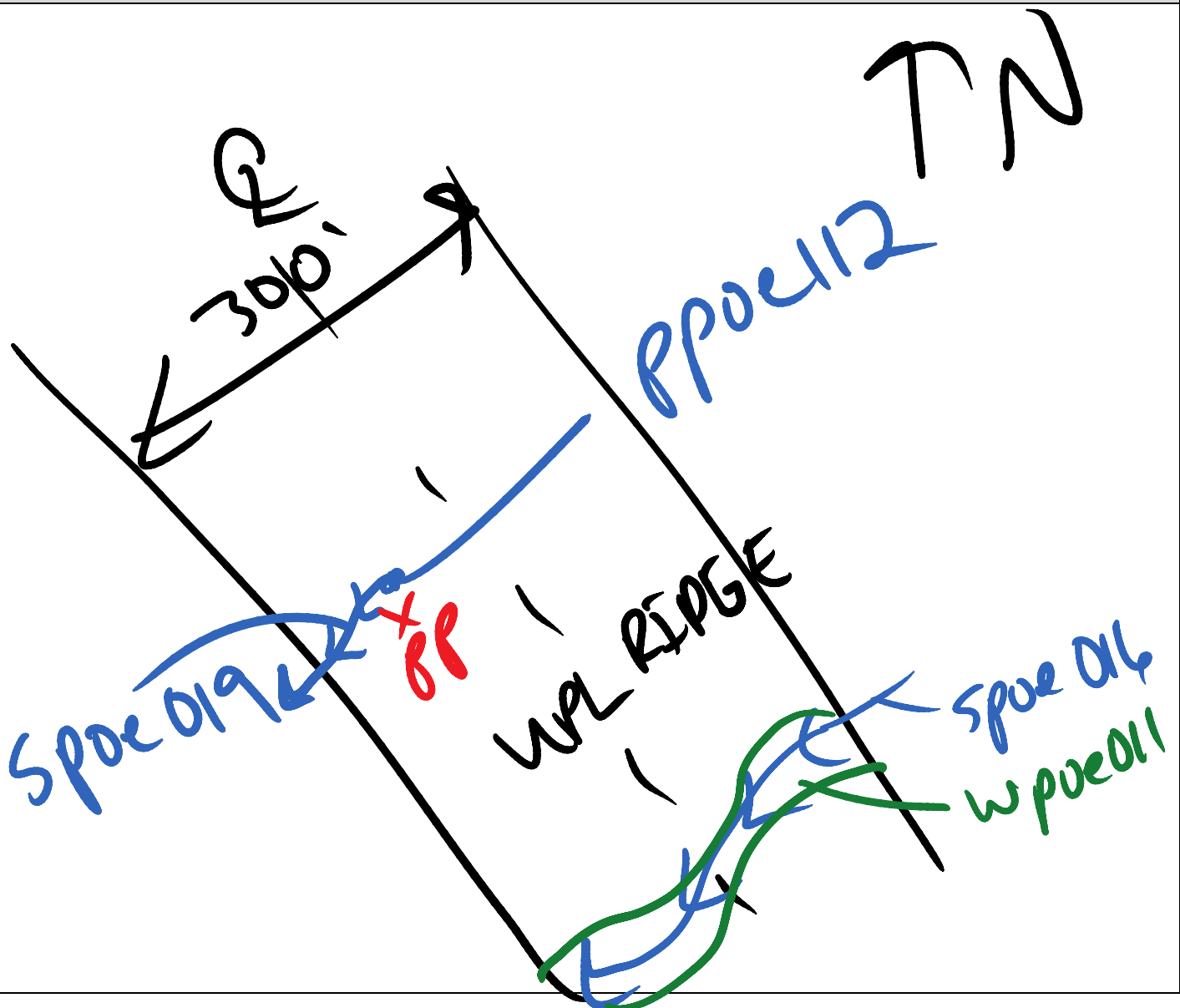
Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Weakly intermittent originating at spring ppoe112

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe019 facing north upstream



Waterbody spoe019 facing south downstream



Waterbody spoe019 facing west across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Sugar Camp Run	
Waterbody ID: Spoe016		Date: 3/29/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, SH
Photos: 1-3			
Tract Number(s): 05-001-E060		Nearest Milepost: 81.0	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: _ 3 _ ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: _ 1 _ ft.		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input checked="" type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: _ 7 _ ft.	Width of Waterbody - Toe of Slope to Toe of Slope: _ 1 _ ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> _ 1 _ ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> _ 0.1 _ ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _ 0.2 _ fps N/A <input type="checkbox"/>	Bank height Right: _ 1 _ ft. Left: _ 1 _ ft.	Bank slope Right: _ 30 _ degrees Left: _ 35 _ degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i>			
% of Substrate: _____ % _____ % _____ % _____ % <u>25</u> % <u>75</u> % _____ % _____ %			
Width of Riparian Zone: _____ ft. N/A <input checked="" type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i>		
	<input type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
	Avg. DBH of Dominants: <i>(approx.)</i> ___ in. <u>0.5</u> in.		
Dominant Bank Vegetation <i>(list)</i> : Pine, sedge, grasses			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): none			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

Spoe016

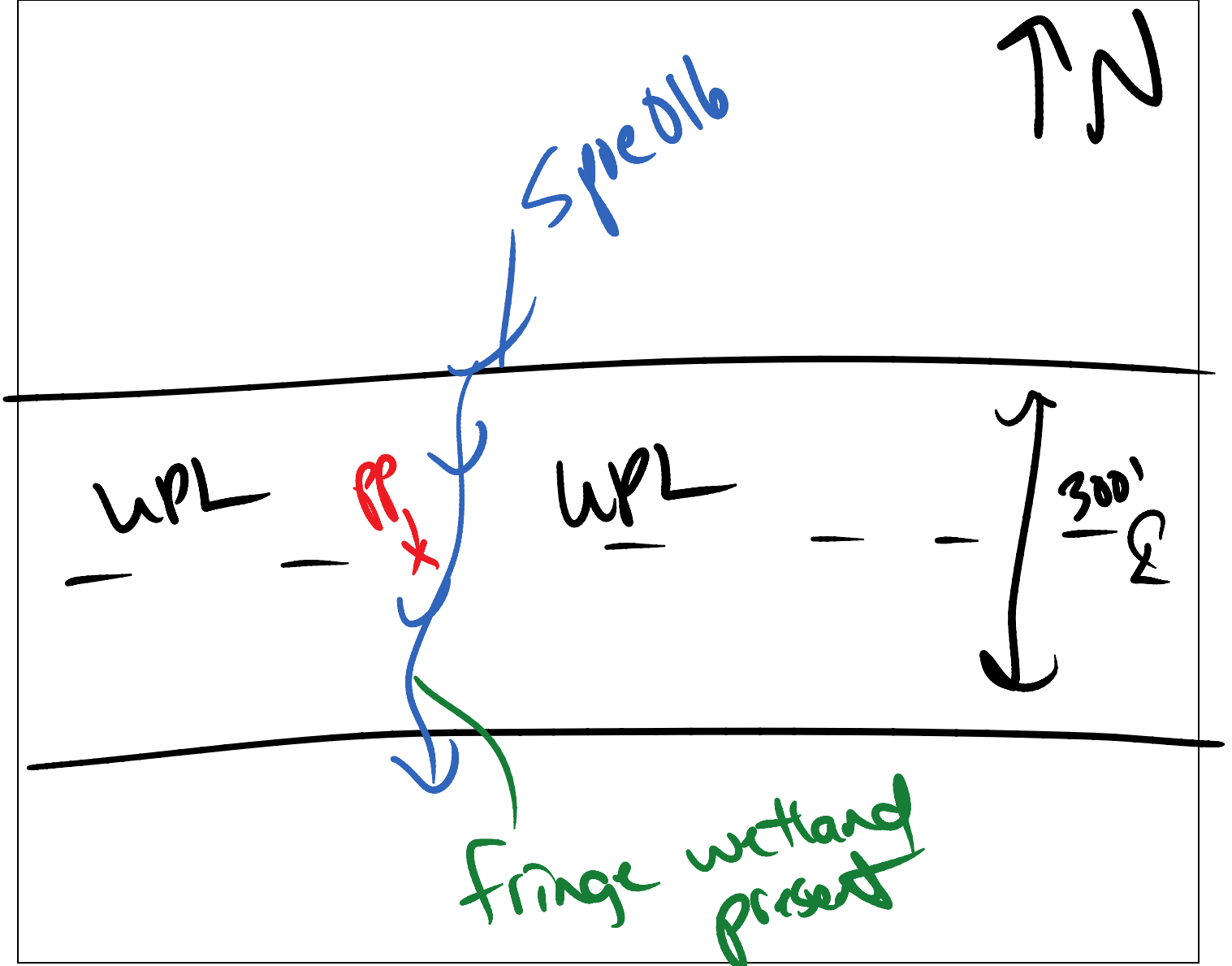
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe016 facing north upstream



Waterbody spoe016 facing south downstream



Waterbody spoe016 facing east across

Open Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: Unnamed pond	
Waterbody ID: Opoe002		Date: 6/16/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, SA, KO
Photos: 1-2			
Tract Number(s): 05-001-E060		Nearest Milepost: NA	Associated Wetland ID(s): fringe
Survey Type: <small>(check one)</small> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Waterbody Type: <small>(check one)</small> <input checked="" type="checkbox"/> Stock Pond <input type="checkbox"/> Natural Pond <input type="checkbox"/> Lake <input type="checkbox"/> Reservoir <input type="checkbox"/> Impoundment <input type="checkbox"/> Oxbow <input type="checkbox"/> Other:			
Hydrologic Regime: <input type="checkbox"/> Permanently Flooded <input checked="" type="checkbox"/> Semipermanently Flooded <input type="checkbox"/> Seasonally Flooded <input type="checkbox"/> Temporarily Flooded			
OHWM Height: <u>0.5</u> ft.		OHWM Indicator: <small>(check all that apply)</small>	
		<input type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input checked="" type="checkbox"/> Abrupt plant community change <input checked="" type="checkbox"/> Soil characteristic change	
Depth of Water: <u>2</u> ft. N/A <input type="checkbox"/>		Bank height (average): <u>1</u> ft.	Bank slope (average): <u>30</u> degrees
Qualitative Attributes			
Water Appearance: <small>(check one)</small> <input type="checkbox"/> No water <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <small>(check all that apply)</small> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input type="checkbox"/> Cobble <input type="checkbox"/> Gravel <input type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% _____% _____% _____% <u>100</u> % _____% _____%			
Width of Riparian Zone: _____ft. N/A <input checked="" type="checkbox"/>		Vegetative Layers: <small>(check all that apply)</small> <input type="checkbox"/> Trees: <input type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: <small>(approx.)</small> _____in. _____in.	
Dominant Bank Vegetation <small>(list)</small> : Rushes, alder, grasses, goldenrod			
Aquatic Habitats <small>(ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools, etc.)</small> : Submerged aquatic veg			
Aquatic Organisms Observed <small>(list)</small> : Tadpoles, dragonflies			
T&E Species Observed <small>(list)</small> : none			
Disturbances <small>(ex: livestock access, manure in waterbody, waste discharge pipes)</small> : Artificial, adjacent to driveway			
Waterbody is: <small>(check one)</small> <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			
Waterbody Quality ^a : <small>(check one)</small> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

Opoe002

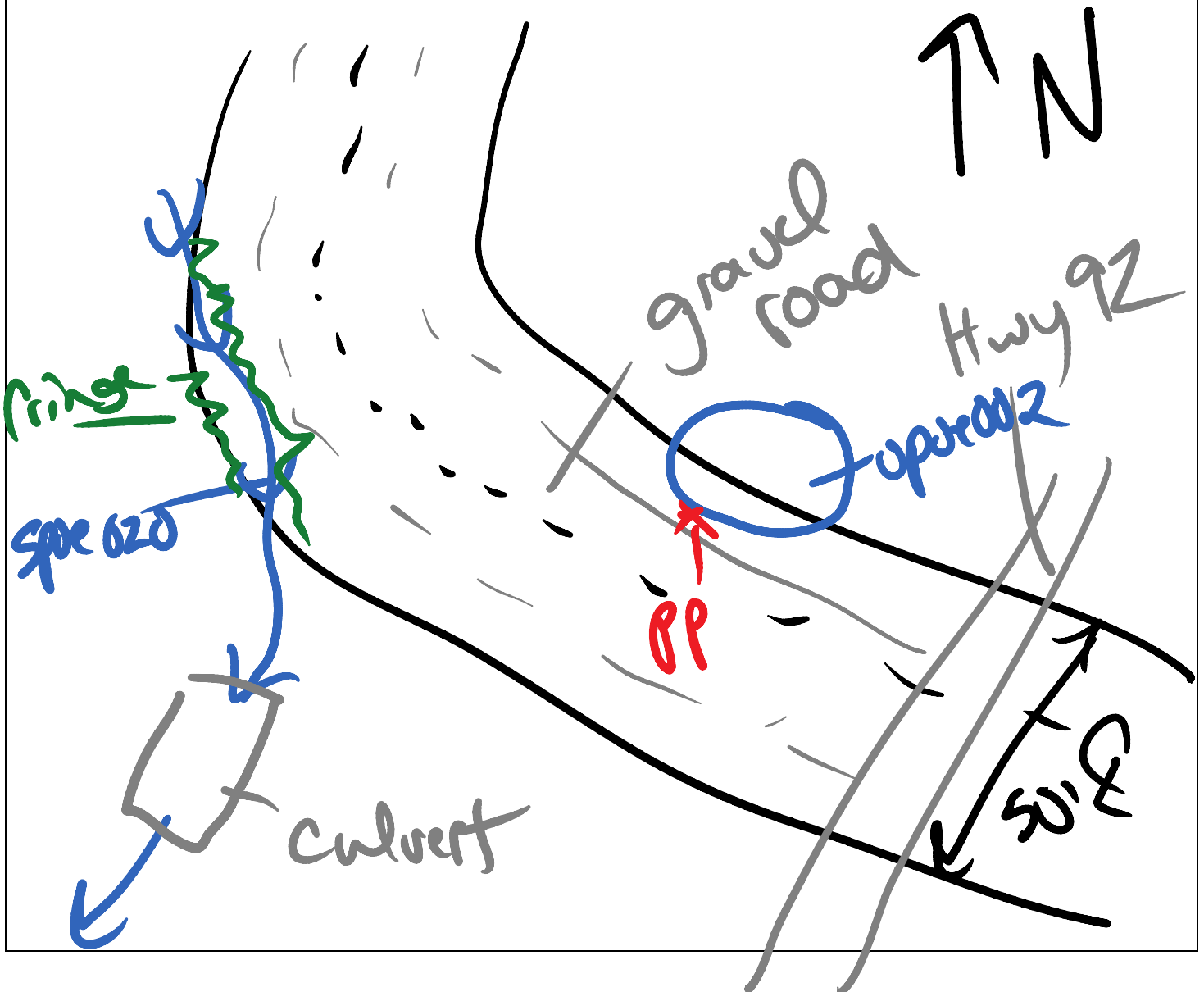
^a **High Quality:** Natural, natural bank vegetation around entire waterbody; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or bank vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point locations, survey boundary, and IDs of associated features)





Open waterbody OPOE002 facing northwest



Open waterbody OPOE002 facing southeast

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Sugar Camp Run	
Waterbody ID: Spoe015		Date: 3/29/2016	
State: West Virginia	County: Pocahontas	Company: NRG	Crew Member Initials: CG, SH
Photos: 1-3			
Tract Number(s): 05-001-E060		Nearest Milepost: 81.2	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 5 ft.	OHWM Indicator: <i>(check all that apply)</i>	<input type="checkbox"/> Clear line on bank	<input type="checkbox"/> Shelving
OHWM Height: 2 ft.	<input checked="" type="checkbox"/> Bent, matted, or missing vegetation	<input type="checkbox"/> Wrack line	<input type="checkbox"/> Litter and debris
N/A <input type="checkbox"/>	<input type="checkbox"/> Wrested vegetation	<input checked="" type="checkbox"/> Scouring	<input type="checkbox"/> Water staining
<input type="checkbox"/> Abrupt plant community change	<input checked="" type="checkbox"/> Soil characteristic change		
Width of Waterbody - Top of Bank to Top of Bank: 10 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 4 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 4 ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> 0.25 ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> 0.4 fps N/A <input type="checkbox"/>	Bank height Right: 2 ft. Left: 2 ft.	Bank slope Right: 35 degrees Left: 80 degrees
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> % of Substrate: _____% _____% 5% 40% 25% 30% _____% _____%			
Width of Riparian Zone: N/A <input checked="" type="checkbox"/> _____ ft.	Vegetative Layers: <i>(check all that apply)</i>	<input type="checkbox"/> Trees:	<input checked="" type="checkbox"/> Saplings/Shrubs:
	Avg. DBH of Dominants: <i>(approx.)</i>	_____ in.	<input checked="" type="checkbox"/> Herbs
Dominant Bank Vegetation <i>(list)</i> : Goldenrod, sedge, grasses			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): none			
Aquatic Organisms Observed <i>(list)</i> : none			
T&E Species Observed <i>(list)</i> : none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Powerline ROW			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			
Stream Quality ³ : <i>(check one)</i> <input type="checkbox"/> High <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Low			

Waterbody ID:

Spoe015

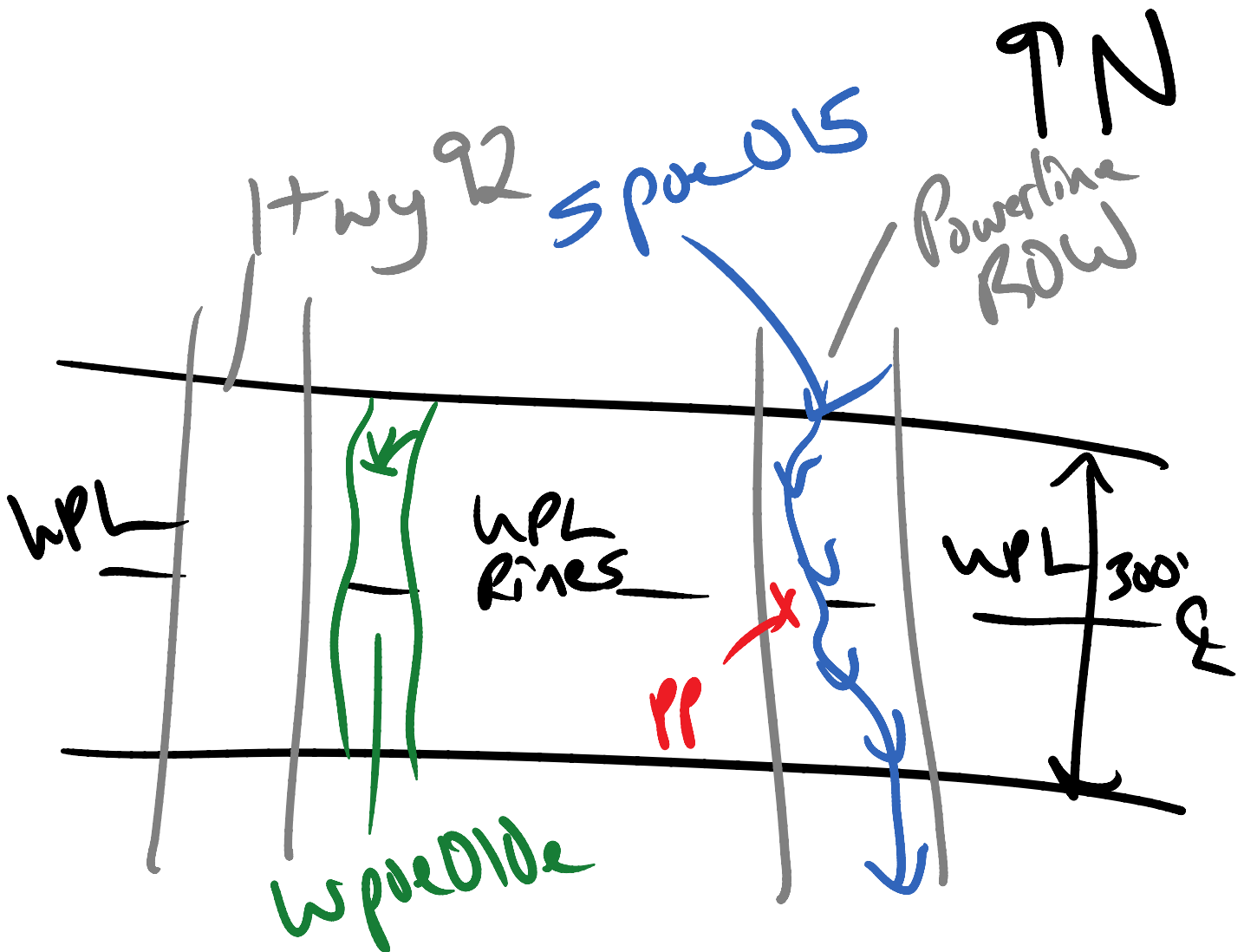
^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)





Waterbody spoe015 facing north upstream



Waterbody spoe015 facing south downstream



Waterbody spoe015 facing northeast across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Sugar Camp Run	
Waterbody ID: spoa408		Date: 5/25/2016	
State: West Virginia	County: Pocahontas	Company: NRG - ERM	Crew Member Initials: GB, KO
Tract Number(s): Access road 05-001-E064.AR1 within 05-001-E064		Nearest Milepost: 81.1	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 5.0 ft. Height: 1.0 ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 9.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 4.0 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 3.0 ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> 0.25 ft.
Sinuosity: <i>(check one)</i> <input type="checkbox"/> Straight <input checked="" type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> 1.0 fps N/A <input type="checkbox"/>	Bank height Right: 3.0 ft. Left: 3.0 ft.	Bank slope Right: 90 degrees Left: 70 degrees
Analysis of Bank Stability (i.e. root structure, vegetation, substrate characteristics): Banks exhibit undercutting; loose soil/rock and exposed roots present			
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> % of Substrate: _____% _____% 30% 35% 25% _____% 10% _____%			
Width of Riparian Zone: 50 ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: 11.0 in. <input checked="" type="checkbox"/> Saplings/Shrubs: 1.0 in. <input checked="" type="checkbox"/> Herbs		
Dominant Bank Vegetation (list): White oak, red maple, sugar maple, white pine, ironwood, violet, golden ragwort, Christmas fern, black cohosh, Virginia creeper, wood fern			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, overhanging banks, coarse woody debris			
Aquatic Organisms Observed (list): Invertebrates – stonefly, caddisfly, black fly			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Paralleled by existing gravel road			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			

Waterbody ID:

spoa408

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream continues out of access road corridor in both directions; parallels existing gravel road; does not cross road; mature second growth mixed hardwoods with white pine element.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

Stream Quality ^a:

(check one)

High

Moderate

Low

↑N

Mature 2nd growth mixed ItWs
with white pine element throughout SB

Existing gravel ROAD
Forest Service ROAD 1012

25'

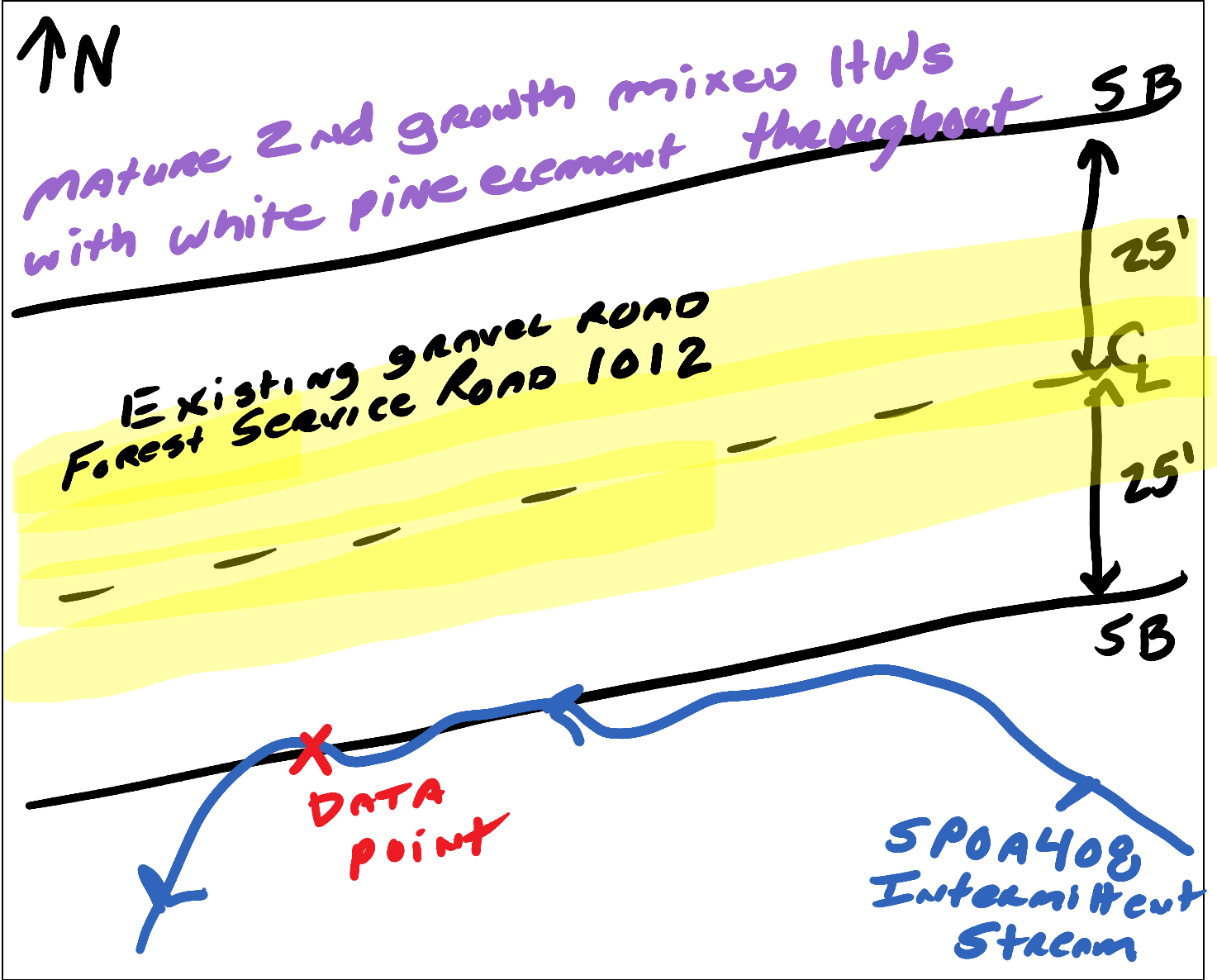
CL

25'

SB

X
DATA
point

SPOA408
Intermittent
Stream





Waterbody SPOA408 facing northeast upstream



Waterbody SPOA408 facing southwest downstream



Waterbody SPOA408 facing northwest across



Waterbody SPOA408 scouring facing northwest across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Sugar Camp Run	
Waterbody ID: spoa402		Date: 5/12/2016	
State: West Virginia	County: Pocahontas	Company: NRG/ERM	Crew Member Initials: GB, SA
Photos: 3 photos			
Tract Number(s): 05-001-E064 – Monongahela National Forest		Nearest Milepost: 81.5	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 4.0 ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: 0.50 ft.		<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 10.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 3.0 ft.	Width of Waterbody - Water Edge to Water Edge: 3.0 ft.	Depth of Water: <i>(Approx.)</i> 0.25 ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> 0.75 fps	Bank height Right: 3.0 ft. Left: 6.0 ft.
Bank slope Right: 75 degrees Left: 75 degrees			
Analysis of Bank Stability (i.e. root structure, vegetation, substrate characteristics): No evidence of bank instability			
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% 40% 30% 10% 10% 10% _____%			
Width of Riparian Zone: _____ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input checked="" type="checkbox"/>	Avg. DBH of Dominants: <i>(approx.)</i> 12.0 in. 1.5 in. -		
Dominant Bank Vegetation (list): White pine, red maple, sugar maple, northern red oak, witch hazel, chestnut oak, striped maple, violet, hay scented fern, Christmas fern, partridge berry, wood fern			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): coarse woody debris in channel, scattered leaf packs			
Aquatic Organisms Observed (list): Invertebrates			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None apparent			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			

Waterbody ID:

spoa402

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Steep gradient intermittent stream with no evidence of bank instability; continues out of corridor in both directions; receives outflow from seeps ppoa404 & ppoa405 via erosional rill on steep slopes above stream. Area is mature second growth forest with white pine and mixed hardwoods.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

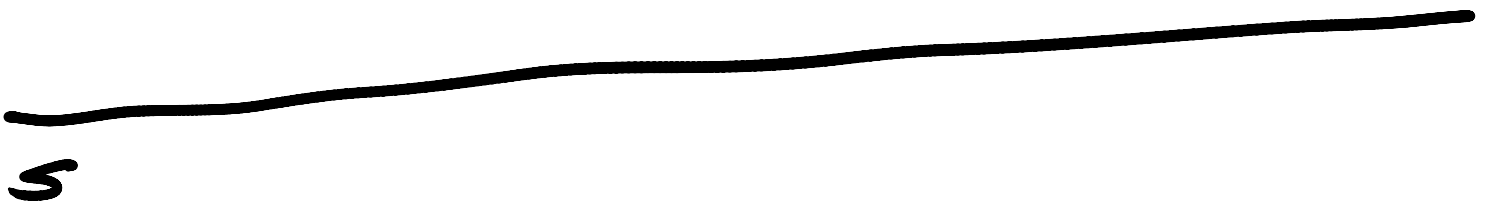
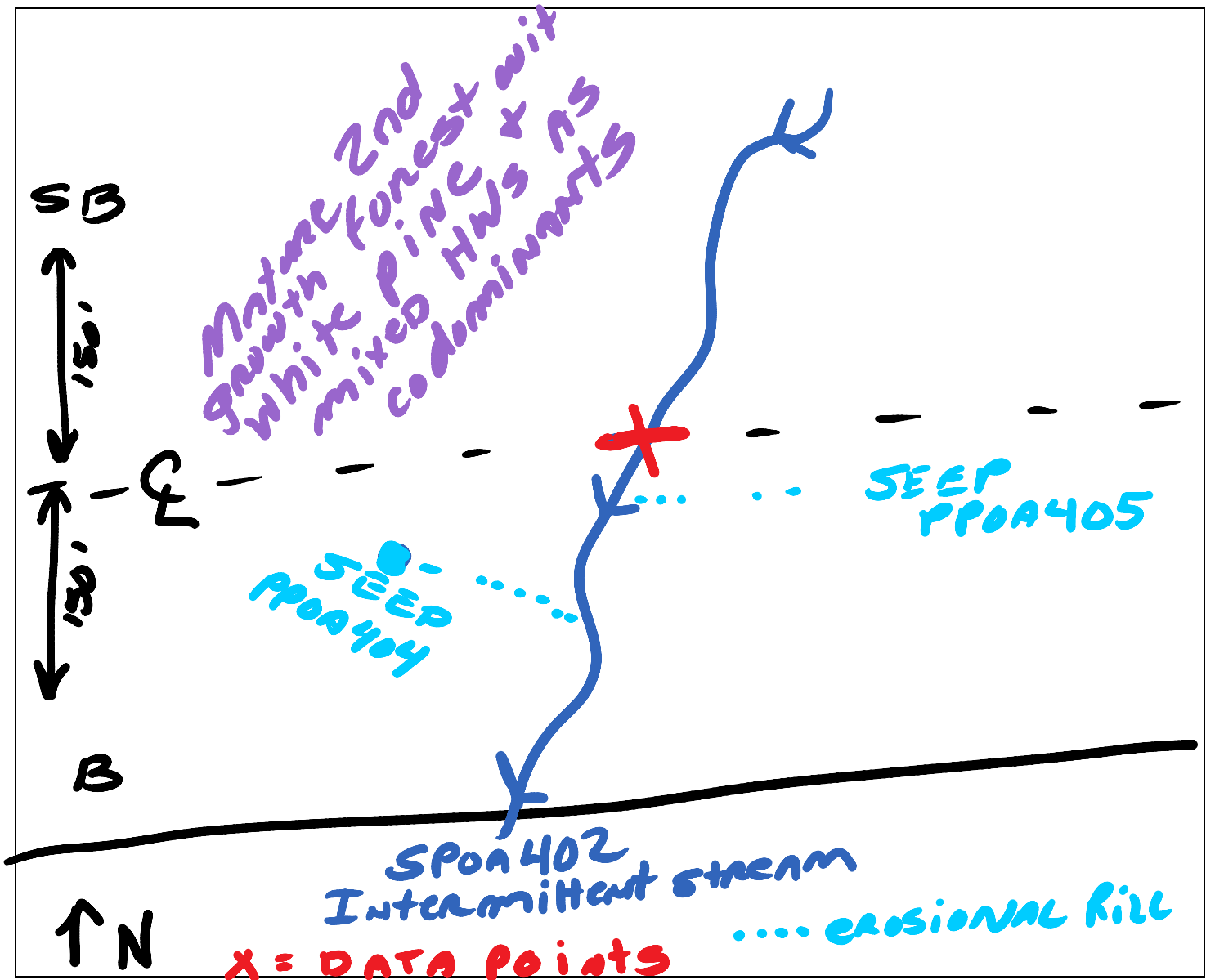
Stream Quality ^a:

(check one)

High

Moderate

Low





Waterbody SPOA402 facing north upstream



Waterbody SPOA402 facing south downstream



Waterbody SPOA402 facing west across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Sugar Camp Run	
Waterbody ID: spoa410		Date: 5/25/2016	
State: West Virginia	County: Pocahontas	Company: NRG - ERM	Crew Member Initials: GB, KO
Tract Number(s): Access road 05-001-E064.AR1 within 05-001-E064		Nearest Milepost: 81.9	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 1.0 ft. Height: 0.33 ft. N/A <input type="checkbox"/>		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining <input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 3.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 1.0 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input checked="" type="checkbox"/> _____ ft.	Depth of Water: <i>(Approx.)</i> N/A <input checked="" type="checkbox"/> _____ ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> _____ fps N/A <input checked="" type="checkbox"/>	Bank height Right: 2.0 ft. Left: 3.0 ft.	Bank slope Right: 75 degrees Left: 85 degrees
Analysis of Bank Stability (i.e. root structure, vegetation, substrate characteristics): No evidence of bank instability observed			
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input checked="" type="checkbox"/> No water <input type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other: % of Substrate: _____% _____% 25% 35% 20% 10% 10% _____%			
Width of Riparian Zone: 30 ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs Avg. DBH of Dominants: <i>(approx.)</i> 10.0 in. 1.0 in. -		
Dominant Bank Vegetation (list): White oak, Chestnut oak, striped maple, black locust, white pine, sweet birch, New York fern, witch hazel, blackberry, violet, speedwell, buttercup, goldenrod			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs			
Aquatic Organisms Observed (list): None			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Existing dirt road crosses stream with no bridge or culvert present			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			

Waterbody ID:

spoa410

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream continues out of access road corridor in both directions; no culvert present for road crossing; receives outflow from seep ppoa417 located approximately 15 feet upslope; seep outflow becomes subterranean immediately upon reaching stream channel.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

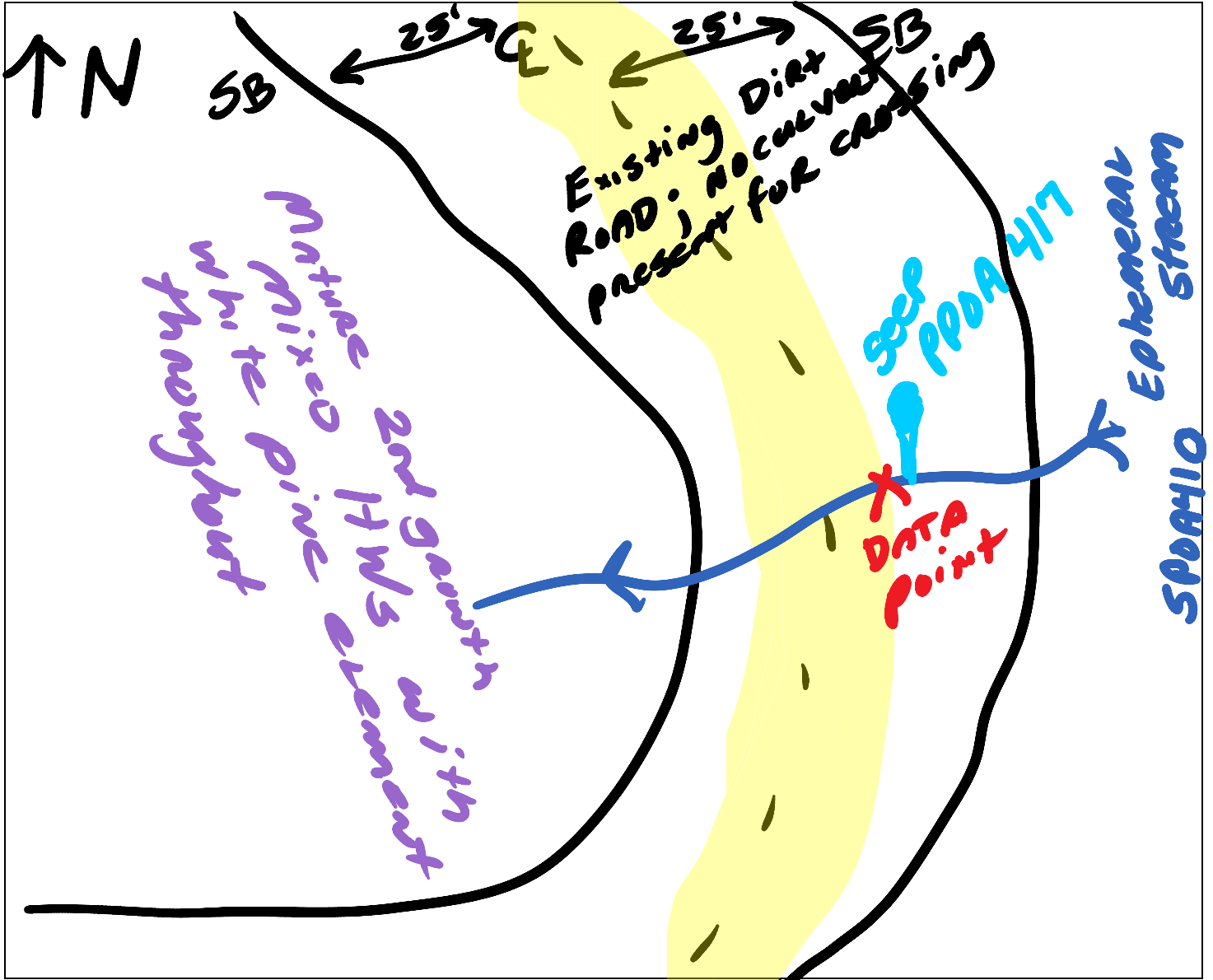
Stream Quality ^a:

(check one)

High

Moderate

Low





Waterbody SPOA410 facing southeast upstream



Waterbody SPOA410 facing northwest downstream



Waterbody SPOA410 facing northeast across



Waterbody SPOA410 scouring facing east

Linear Waterbody Data Sheet

Survey Description				
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Shock Run		Waterbody ID: spoa400
Date: 5/12/2016				
State: West Virginia	County: Pocahontas	Company: NRG/ERM	Crew Member Initials: GB, SA	Photos: 5 photos
Tract Number(s): 05-001-E064 – Monongahela National Forest		Nearest Milepost: 82.05	Associated Wetland ID(s): none	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 12.0 ft.		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input checked="" type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
OHWM Height: 1.0 ft.		<input type="checkbox"/> Bent, matted, or missing vegetation <input checked="" type="checkbox"/> Wrack line <input type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 16.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 9.0 ft.	Width of Waterbody - Water Edge to Water Edge: 10.0 ft.	Depth of Water: <i>(Approx.)</i> 0.50 ft.	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> 1.75 fps		Bank height: Right: 4.0 ft. Left: 3.0 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope: Right: 90 degrees Left: 50 degrees
Analysis of Bank Stability (i.e. root structure, vegetation, substrate characteristics): Loose rocks/soil and exposed roots in places; would consider normal for a stream of this gradient with flashy, high flows				
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input checked="" type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: _____% 5% 50% 30% 10% _____% 5% _____%				
Width of Riparian Zone: 50 ft.		Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input type="checkbox"/>		Avg. DBH of Dominants: <i>(approx.)</i> 12.0 in. 1.0 in. -		
Dominant Bank Vegetation (list): Sugar maple, hemlock, sweet birch, beech, black cherry, striped maple, witch hazel, green ash, Christmas fern, wood nettle, foamflower, violet, lady fern, woodland sedge				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Small step poles, riffles, core woody debris in channel, scattered leaf packs along edges, wrack piles				
Aquatic Organisms Observed (list): Invertebrates, crayfish				
T&E Species Observed (list): none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None apparent				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				

Waterbody ID:

spoa400

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Moderately steep gradient perennial stream exhibiting areas of bank instability in the form of loose rock/soil and exposed roots; normal for a stream of this gradient. Stream continues out of corridor in both directions; receives output from seep ppoa401 located on cut bank above stream; intermittent stream spoa401 flows into this stream within the survey corridor downstream of center line. Surrounding area is a mature second growth mixed hardwood forest with scattered hemlock.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

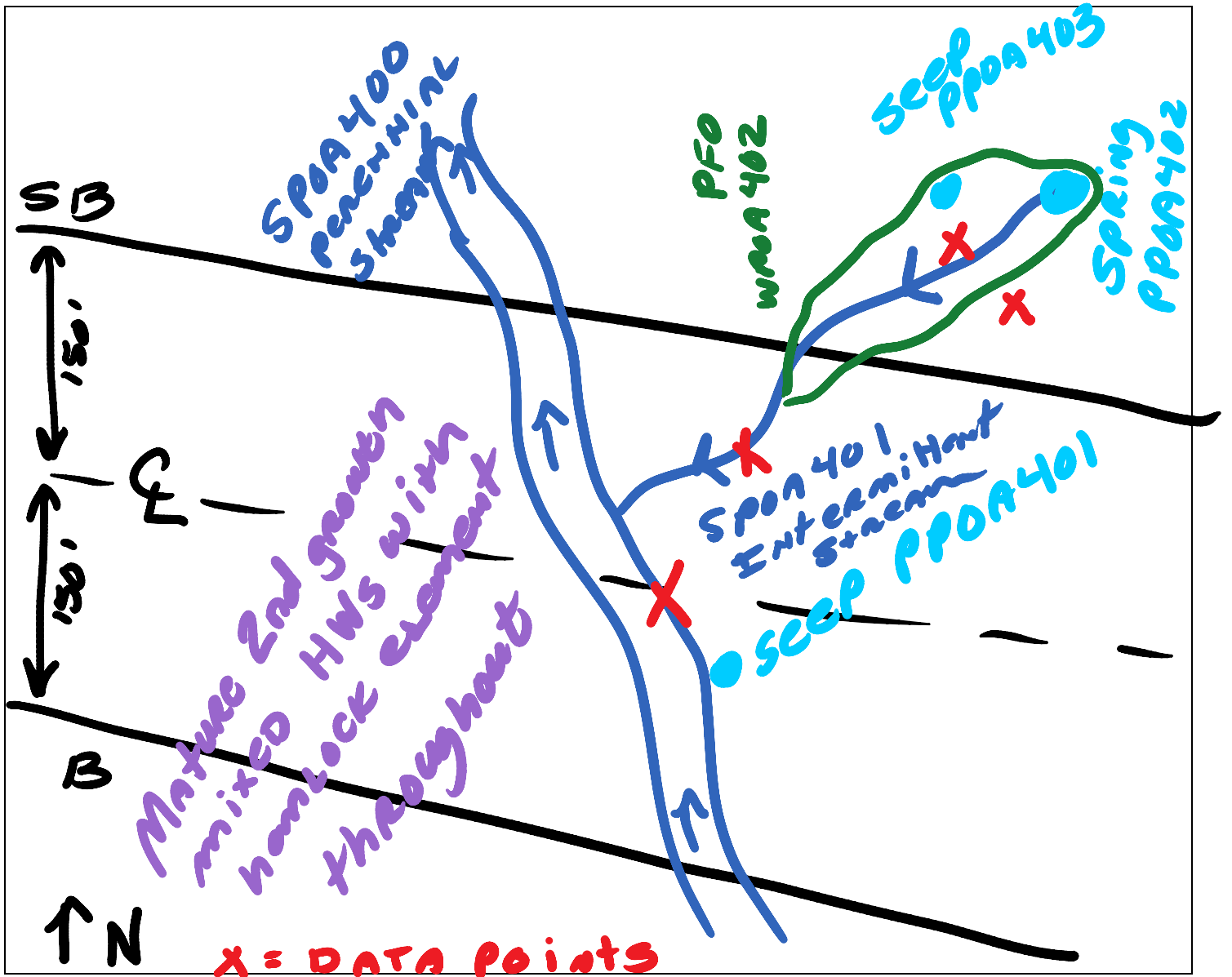
Stream Quality ^a:

(check one)

High

Moderate

Low



5



Waterbody SPOA400 facing south upstream



Waterbody SPOA400 facing north downstream



Waterbody SPOA400 facing east across

Linear Waterbody Data Sheet

Survey Description				
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Shock Run		Waterbody ID: spoa401
Date: 5/12/2016				
State: West Virginia	County: Pocahontas	Company: NRG/ERM	Crew Member Initials: GB, SA	Photos: 3 photos
Tract Number(s): 05-001-E064 – Monongahela National Forest		Nearest Milepost: 82.05	Associated Wetland ID(s): wpoa402	
Survey Type: <i>(check one)</i> <input checked="" type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input type="checkbox"/> Access Road <input type="checkbox"/> Other:				
Physical Attributes				
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial				
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:				
OHWM Width: 4.0 ft.		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining		
OHWM Height: 0.50 ft.		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change		
N/A <input type="checkbox"/>				
Width of Waterbody - Top of Bank to Top of Bank: 10.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 3.0 ft.	Width of Waterbody - Water Edge to Water Edge: 3.5 ft.	Depth of Water: <i>(Approx.)</i> 0.25 ft.	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> 1.5 fps		Bank height Right: 6.0 ft. Left: 7.0 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>		Bank slope Right: 70 degrees Left: 75 degrees
Analysis of Bank Stability (i.e. root structure, vegetation, substrate characteristics): Loose rocks/soil and exposed roots in places; would consider normal for a stream of this gradient with flashy, high flows				
Qualitative Attributes				
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:				
Substrate: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:				
% of Substrate: 40% % 40% 5% 5% % 10% %				
Width of Riparian Zone: ft.		Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input checked="" type="checkbox"/>		Avg. DBH of Dominants: <i>(approx.)</i> 12.0 in. 1.0 in. -		
Dominant Bank Vegetation (list): Sugar maple, hemlock, sweet birch, beech, black cherry, striped maple, witch hazel, green ash, Christmas fern, wood nettle, foamflower, violet, lady fern, woodland sedge				
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): coarse woody debris in channel, scattered leaf packs				
Aquatic Organisms Observed (list): Invertebrates				
T&E Species Observed (list): none				
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): None apparent				
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated				

Waterbody ID:

spoa401

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Steep gradient intermittent stream exhibiting areas of bank instability in the form of loose rock/soil and exposed roots; normal for a stream of this gradient. Stream flows into perennial stream spoa400 within the survey corridor; upstream continues out of corridor where it originates at spring ppoa402 within PFO wetland wpoa402; also receives outflow from seep ppoa403 via wetland. Surrounding area is a mature second growth mixed hardwood forest with scattered hemlock.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

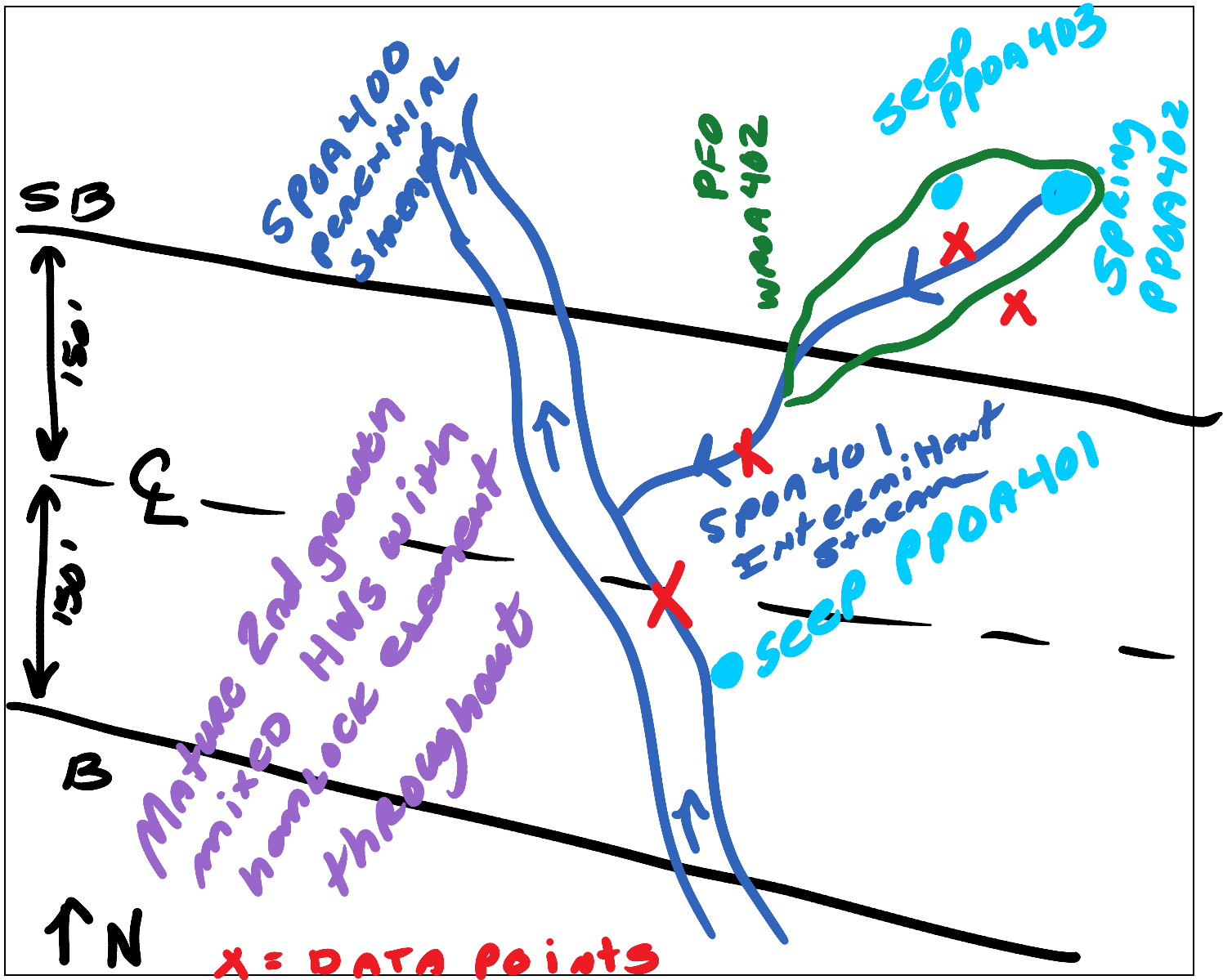
Stream Quality ^a:

(check one)

High

Moderate

Low



5



Waterbody SPOA401 facing east upstream



Waterbody SPOA401 facing west downstream



Waterbody SPOA401 facing north across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Knapp Creek	
Waterbody ID: spoa407		Date: 5/13/2016	
State: West Virginia	County: Pocahontas	Company: NRG/ERM	Crew Member Initials: GB, SA
Photos: 3 photos			
Tract Number(s): Access road 05-001-E064.AR2; Monongahela NF		Nearest Milepost: 83.6	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 2.0 ft.		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
Height: 0.33 ft.		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: 5.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 1.0 ft.	Width of Waterbody - Water Edge to Water Edge: 1.5 ft.	Depth of Water: <i>(Approx.)</i> 0.25 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> 1.25 fps	
N/A <input type="checkbox"/>		Bank height: Right: 2.5 ft. Left: 10.0 ft.	
Bank slope: Right: 60 degrees Left: 70 degrees			
Analysis of Bank Stability (i.e. root structure, vegetation, substrate characteristics): Confined to ditch along existing road; banks are road cut and road bed			
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% 40% 35% 10% 5% 10%			
Width of Riparian Zone: _____ ft.		Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
N/A <input checked="" type="checkbox"/>		Avg. DBH of Dominants: <i>(approx.)</i> 12.0 in. 1.0 in. -	
Dominant Bank Vegetation (list): Chestnut oak, sweet birch, pignut hickory, white oak, red maple, sugar maple, green ash, serviceberry, garlic mustard, yellow cress, golden ragwort, colts foot, New York fern, white snakeroot			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs			
Aquatic Organisms Observed (list): none			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert crossing for existing gravel road; 24" corrugated metal culvert; confined to ditch for 125 feet along existing road			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			

Waterbody ID:

spoa407

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream begins at spring ppoa413 located on road cut and is confined to ditch for 125 feet; downstream continues out; culvert crossing for existing gravel road (forest service road 55); mature second growth mixed hardwood forest.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

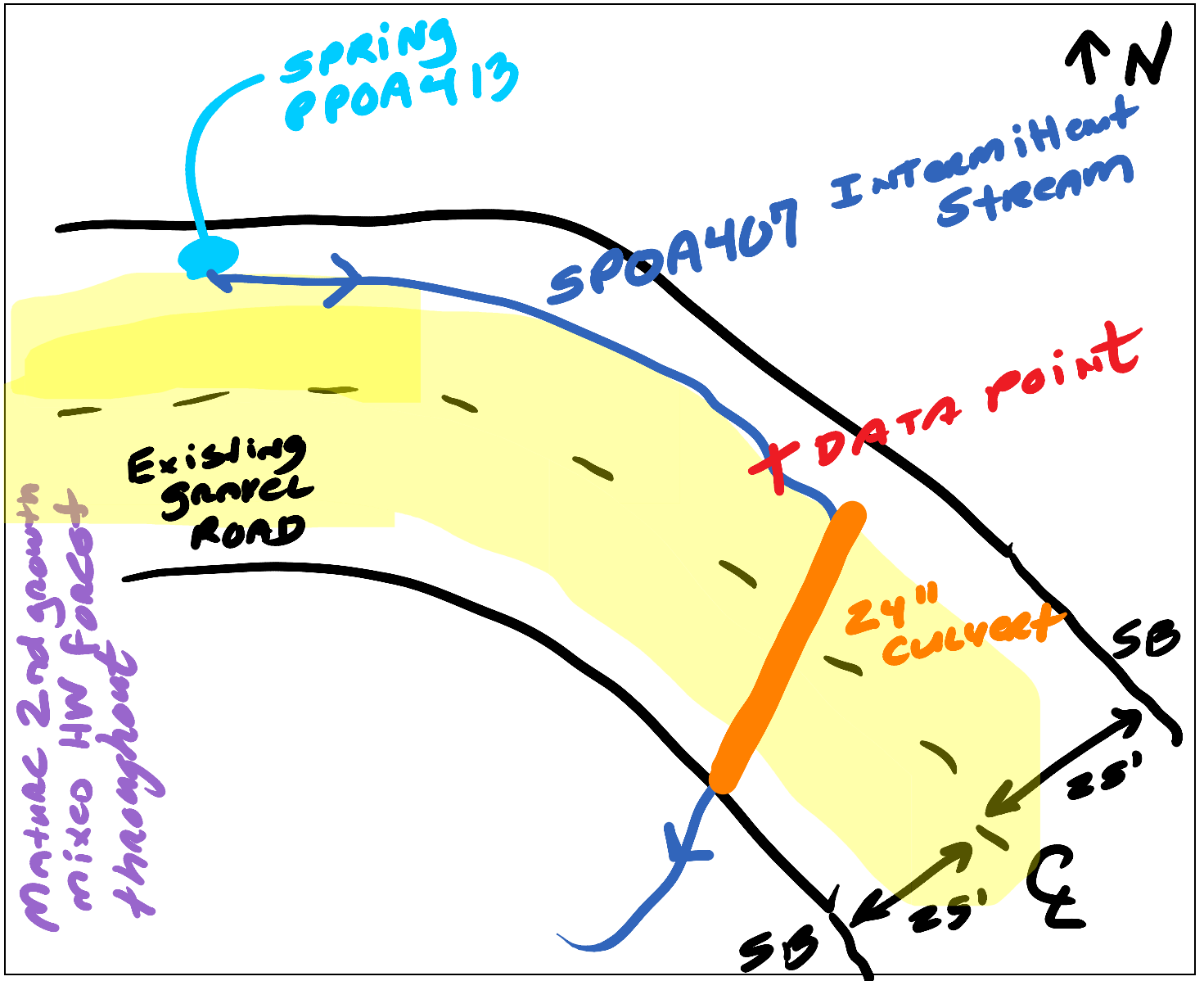
Stream Quality ^a:

(check one)

High

Moderate

Low





Waterbody SPOA407 facing northwest upstream



Waterbody SPOA407 facing southeast downstream



Waterbody SPOA407 facing northeast across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Knapp Creek	
Waterbody ID: spoa406		Date: 5/13/2016	
State: West Virginia	County: Pocahontas	Company: NRG/ERM	Crew Member Initials: GB, SA
Photos: 3 photos			
Tract Number(s): Access road 05-001-E064.AR2; Monongahela NF		Nearest Milepost: 83.8	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 2.0 ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: 0.33 ft.		<input checked="" type="checkbox"/> Clear line on bank	
N/A <input type="checkbox"/>		<input type="checkbox"/> Shelving	
		<input type="checkbox"/> Wrested vegetation	
		<input type="checkbox"/> Scouring	
		<input type="checkbox"/> Water staining	
<input type="checkbox"/> Bent, matted, or missing vegetation		<input type="checkbox"/> Wrack line	
		<input checked="" type="checkbox"/> Litter and debris	
		<input type="checkbox"/> Abrupt plant community change	
		<input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 5.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 1.0 ft.	Width of Waterbody - Water Edge to Water Edge: 1.5 ft.	Depth of Water: <i>(Approx.)</i> 0.25 ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight		Water velocity: <i>(Approx.)</i> 1.25 fps	
<input type="checkbox"/> Meandering		N/A <input type="checkbox"/>	
		Bank height	
		Right: 2.5 ft.	
		Left: 10.0 ft.	
		Bank slope	
		Right: 60 degrees	
		Left: 70 degrees	
Analysis of Bank Stability (i.e. root structure, vegetation, substrate characteristics): Confined to ditch along existing road; banks are road cut and road bed			
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% 40% 35% 10% 5% 10%			
Width of Riparian Zone: _____ ft.		Vegetative Layers: <i>(check all that apply)</i>	
N/A <input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> Trees:	
		<input checked="" type="checkbox"/> Saplings/Shrubs:	
		<input checked="" type="checkbox"/> Herbs	
		Avg. DBH of Dominants: <i>(approx.)</i> 12.0 in. 1.0 in. -	
Dominant Bank Vegetation (list): Chestnut oak, sweet birch, pignut hickory, white pine, white oak, red maple, sugar maple, green ash, serviceberry, garlic mustard, yellow cress, golden ragwort, colts foot, New York fern			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs			
Aquatic Organisms Observed (list): none			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert crossing for existing gravel road; 24" corrugated metal culvert; confined to ditch for 150 Ft along existing road			
Tributary is: <i>(check one)</i> <input type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input checked="" type="checkbox"/> Manipulated			

Waterbody ID:

spoa406

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream begins at spring ppoa409 located on road cut and is confined to ditch for 150 feet; downstream continues out; culvert crossing for existing gravel road (forest service road 55); mature second growth mixed hardwood forest with scattered white pine.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

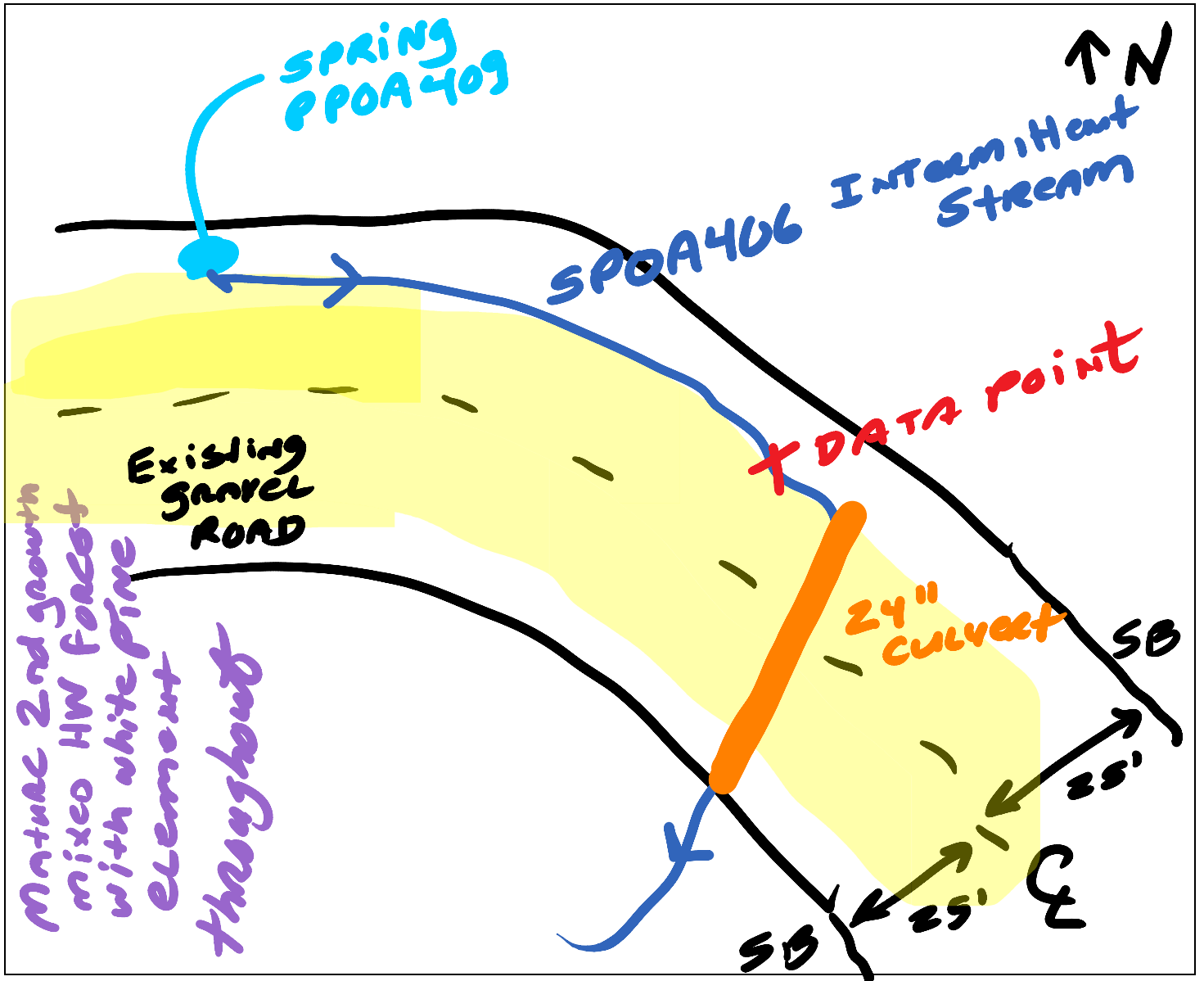
Stream Quality ^a:

(check one)

High

Moderate

Low





Waterbody SPOA406 facing northwest upstream



Waterbody SPOA406 facing southeast downstream



Waterbody SPOA406 facing northeast across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Knapp Creek	
Waterbody ID: spoa405		Date: 5/13/2016	
State: West Virginia	County: Pocahontas	Company: NRG/ERM	Crew Member Initials: GB, SA
Photos: 4 photos			
Tract Number(s): Access road 05-001-E064.AR2; Monongahela NF		Nearest Milepost: 83.9	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 5.0 ft.		OHWM Indicator: <i>(check all that apply)</i>	
Height: 1.0 ft.		<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 9.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 5.0 ft.	Width of Waterbody - Water Edge to Water Edge: 5.0 ft.	Depth of Water: <i>(Approx.)</i> 0.33 ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> 1.5 fps	Bank height Right: 5.0 ft. Left: 5.0 ft.
N/A <input type="checkbox"/>		Bank slope Right: 80 degrees Left: 80 degrees	
Analysis of Bank Stability (i.e. root structure, vegetation, substrate characteristics): Banks are eroded and stream is down cutting at culvert outlet; outlet is set too high.			
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% 50% 30% 10% _____% 10%			
Width of Riparian Zone: _____ ft.	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
N/A <input checked="" type="checkbox"/>	Avg. DBH of Dominants: <i>(approx.)</i> 13.0 in. 1.5 in. -		
Dominant Bank Vegetation (list): Basswood, green ash, sweet birch, striped maple, red maple, sugar maple, beech, multiflora rose, witch hazel, Dutchman's pipe, geranium, Christmas fern, wood aster, golden ragwort, wood nettle			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, coarse woody debris in channel			
Aquatic Organisms Observed (list): Invertebrates			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert crossing for existing gravel road; 18" corrugated metal culvert			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			

Waterbody ID:

spoa405

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream continues out of access road corridor in both directions; moderate gradient stream with eroded banks at culvert outlet; culvert crossing for existing gravel road (forest service road 55); mature second growth mixed hardwood; stream is a tributary to perennial stream spoa404 outside access road corridor; receives outflow from seep ppoa407 located on nearly vertical road cut.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

Stream Quality ^a:

(check one)

High

Moderate

Low



Waterbody SPOA405 facing northwest upstream



Waterbody SPOA405 facing southeast downstream



Waterbody SPOA405 facing northeast across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Knapp Creek	
Waterbody ID: spoa404		Date: 5/13/2016	
State: West Virginia	County: Pocahontas	Company: NRG/ERM	Crew Member Initials: GB, SA
Photos: 4 photos			
Tract Number(s): Access road 05-001-E064.AR2; Monongahela NF		Nearest Milepost: 83.9	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 8.0 ft.		OHWM Indicator: <i>(check all that apply)</i>	
OHWM Height: 1.25 ft.		<input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
N/A <input type="checkbox"/>		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
Width of Waterbody - Top of Bank to Top of Bank: 15.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 6.0 ft.	Width of Waterbody - Water Edge to Water Edge: N/A <input type="checkbox"/> 7.0 ft.	Depth of Water: <i>(Approx.)</i> N/A <input type="checkbox"/> 0.50 ft.
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering	Water velocity: <i>(Approx.)</i> 1.5 fps N/A <input type="checkbox"/>	Bank height Right: 4.5 ft. Left: 8.0 ft.	Bank slope Right: 60 degrees Left: 75 degrees
Analysis of Bank Stability (i.e. root structure, vegetation, substrate characteristics): No evidence of bank instability			
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% 40% 35% 15% _____% 10%			
Width of Riparian Zone: 30 ft. N/A <input type="checkbox"/>	Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs		
	Avg. DBH of Dominants: <i>(approx.)</i> 13.0 in. 1.5 in. -		
Dominant Bank Vegetation (list): Basswood, green ash, sweet birch, striped maple, red maple, sugar maple, beech, multiflora rose, witch hazel, Dutchman's pipe, geranium, Christmas fern, wood aster, golden ragwort, wood nettle			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, coarse woody debris in channel, occasional pools, riffles			
Aquatic Organisms Observed (list): Invertebrates, crayfish			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert crossing for existing gravel road; 48" concrete square box culvert			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			

Waterbody ID:

spoa404

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream continues out of access road corridor in both directions; moderate gradient stream with stable banks; culvert crossing for existing gravel road (forest service road 55); mature second growth mixed hardwood ; intermittent stream is a tributary outside access road corridor.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

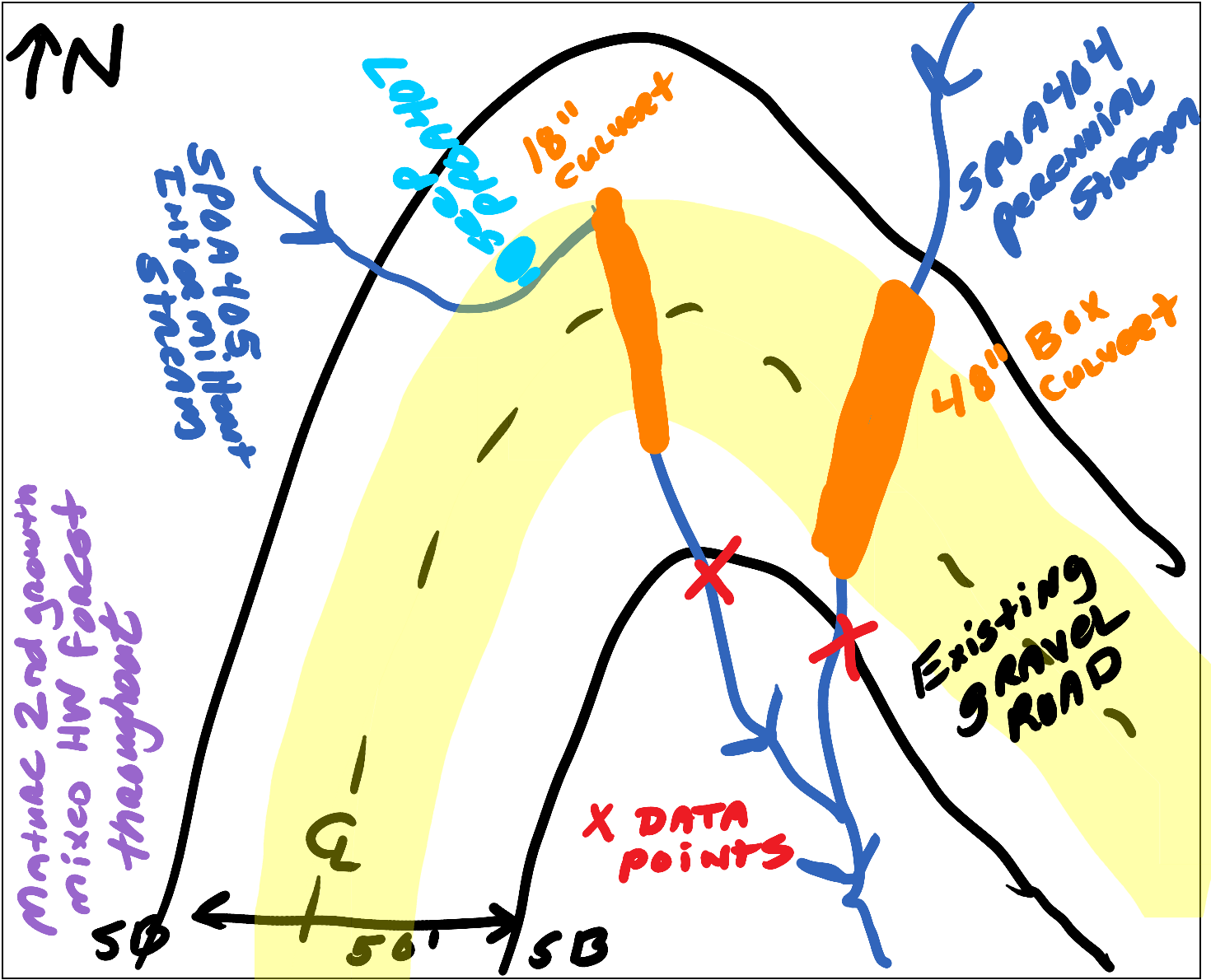
Stream Quality ^a:

(check one)

High

Moderate

Low





Waterbody SPOA404 facing north upstream



Waterbody SPOA404 facing south downstream



Waterbody SPOA404 facing east across

Linear Waterbody Data Sheet

Survey Description			
Project Name: Atlantic Coast Pipeline		Waterbody Name: UNT to Knapp Creek	
Waterbody ID: spoa403		Date: 5/13/2016	
State: West Virginia	County: Pocahontas	Company: NRG/ERM	Crew Member Initials: GB, SA
Photos: 3 photos			
Tract Number(s): Access road 05-001-E064.AR2; Monongahela NF		Nearest Milepost: 84.1	Associated Wetland ID(s): none
Survey Type: <i>(check one)</i> <input type="checkbox"/> Centerline <input type="checkbox"/> Re-Route <input checked="" type="checkbox"/> Access Road <input type="checkbox"/> Other:			
Physical Attributes			
Stream Classification: <i>(check one)</i> <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Perennial			
Waterbody Type: <i>(check one)</i> <input type="checkbox"/> River <input checked="" type="checkbox"/> Stream <input type="checkbox"/> Ditch <input type="checkbox"/> Canal <input type="checkbox"/> Other:			
OHWM Width: 3.0 ft.		OHWM Indicator: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Clear line on bank <input type="checkbox"/> Shelving <input type="checkbox"/> Wrested vegetation <input checked="" type="checkbox"/> Scouring <input type="checkbox"/> Water staining	
OHWM Height: 0.50 ft.		<input type="checkbox"/> Bent, matted, or missing vegetation <input type="checkbox"/> Wrack line <input checked="" type="checkbox"/> Litter and debris <input type="checkbox"/> Abrupt plant community change <input type="checkbox"/> Soil characteristic change	
N/A <input type="checkbox"/>			
Width of Waterbody - Top of Bank to Top of Bank: 6.0 ft.	Width of Waterbody - Toe of Slope to Toe of Slope: 2.5 ft.	Width of Waterbody - Water Edge to Water Edge: 3.0 ft.	Depth of Water: <i>(Approx.)</i> 0.25 ft.
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	
Sinuosity: <i>(check one)</i> <input checked="" type="checkbox"/> Straight <input type="checkbox"/> Meandering		Water velocity: <i>(Approx.)</i> 1.0 fps	
N/A <input type="checkbox"/>		N/A <input type="checkbox"/>	
Bank height Right: 3.0 ft. Left: 3.0 ft.		Bank slope Right: 70 degrees Left: 60 degrees	
Analysis of Bank Stability (i.e. root structure, vegetation, substrate characteristics): No evidence of bank instability			
Qualitative Attributes			
Water Appearance: <i>(check one)</i> <input type="checkbox"/> No water <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Turbid <input type="checkbox"/> Sheen on surface <input type="checkbox"/> Surface scum <input type="checkbox"/> Algal mats <input type="checkbox"/> Other:			
Substrate: <i>(check all that apply)</i> <input type="checkbox"/> Bedrock <input type="checkbox"/> Boulder <input checked="" type="checkbox"/> Cobble <input checked="" type="checkbox"/> Gravel <input checked="" type="checkbox"/> Sand <input checked="" type="checkbox"/> Silt/ clay <input checked="" type="checkbox"/> Organic <input type="checkbox"/> Other:			
% of Substrate: _____% _____% 35% 35% 15% 5% 10%			
Width of Riparian Zone: _____ ft.		Vegetative Layers: <i>(check all that apply)</i> <input checked="" type="checkbox"/> Trees: <input checked="" type="checkbox"/> Saplings/Shrubs: <input checked="" type="checkbox"/> Herbs	
N/A <input checked="" type="checkbox"/>		Avg. DBH of Dominants: <i>(approx.)</i> 10.0 in. 1.0 in. -	
Dominant Bank Vegetation (list): White oak, northern red oak, beech, red maple, black gum, white pine, mountain laurel, pink azalea, cinquefoil, wood aster, teaberry			
Aquatic Habitats (ex: submerged or emerged aquatic vegetation, overhanging banks/roots, leaf packs, large submerged wood, riffles, deep pools): Leaf packs, coarse woody debris in channel			
Aquatic Organisms Observed (list): none			
T&E Species Observed (list): none			
Disturbances (ex: livestock access, manure in waterbody, waste discharge pipes): Culvert crossing for existing gravel road; 24" corrugated metal culvert			
Tributary is: <i>(check one)</i> <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Artificial, man-made <input type="checkbox"/> Manipulated			

Waterbody ID:

spoa403

^a **High Quality:** Natural channel, natural vegetation extends at least one or two active channel widths on each side; banks stable and protected by roots; water color is clear to tea-colored; no barriers to fish movement; many fish cover types available; diverse and stable aquatic habitat; no disturbance by livestock or man.

Moderate Quality: Altered channel evidenced by rip-rap; natural vegetation extends 1/3-1/2 of the active channel width on each side; filtering function or riparian vegetation only moderately compromised; banks moderately unstable; water color is cloudy, submerged objects covered with greenish film; moderate odor; minor barriers to fish movement; fair aquatic habitat; minimum disturbance by livestock or man.

Low Quality: Channel is actively down cutting or widening; rip rap and channelization excessive; natural vegetation less than 1/3 of the active channel width on each side; lack of regeneration; filtering function severely compromised; banks unstable (eroding); water color is muddy and turbid; obvious pollutants (algal mats, surface scum, surface sheen); heavy odor; severe barriers to fish movement; little to no aquatic habitat; severe disturbance from livestock or man.

Notes:

Stream continues out of access road corridor in both directions; moderate gradient stream with stable banks; culvert crossing for existing gravel road (forest service road 55); mature second growth mixed hardwood forest.

Waterbody Sketch (Include north arrow, centerline, distance from centerline, data point location, survey boundary, and IDs of associated features)

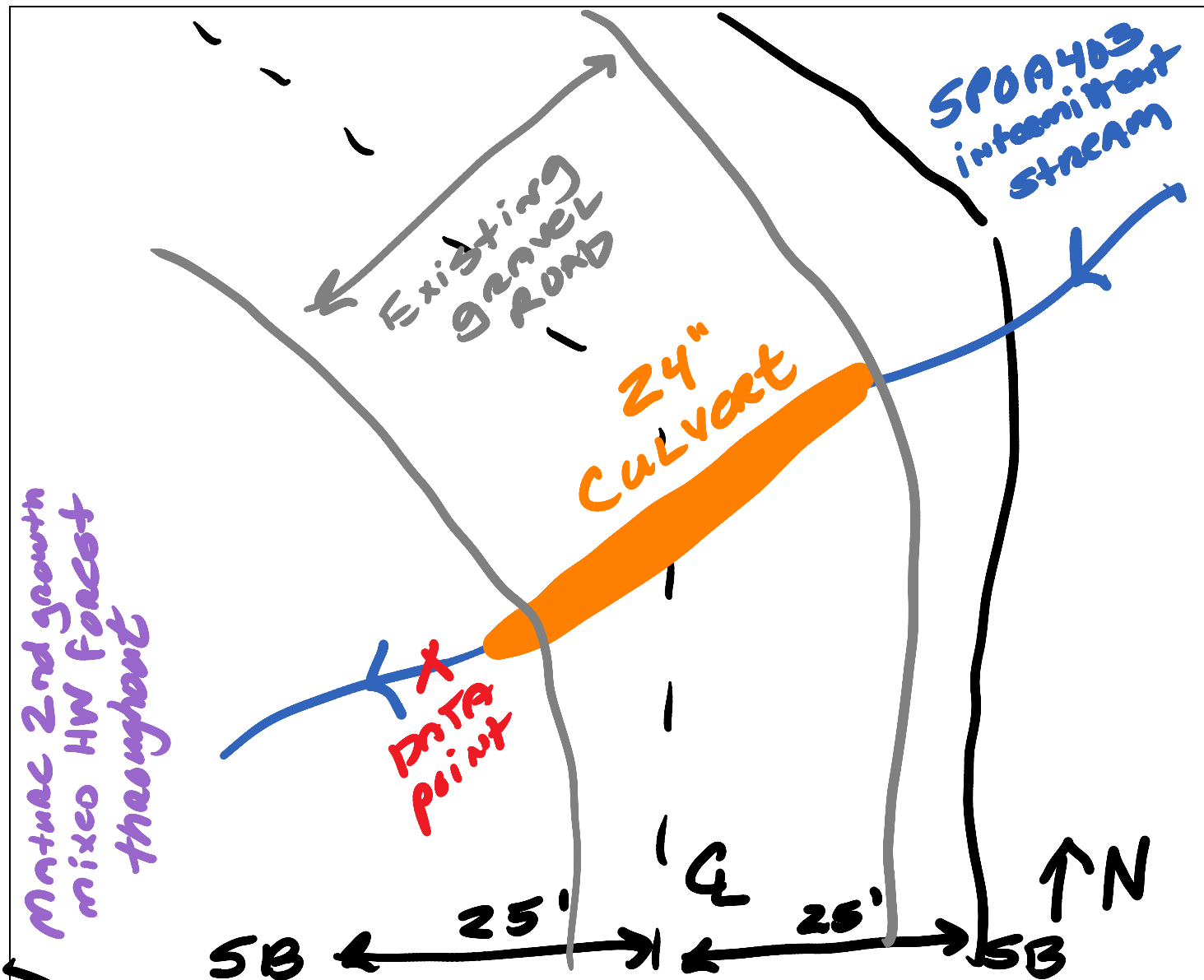
Stream Quality ^a:

(check one)

High

Moderate

Low





Waterbody SPOA403 facing east upstream



Waterbody SPOA403 facing west downstream



Waterbody SPOA403 facing south across