APPENDIX B

LITHOLOGIC LOGS

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LITHOLOGIC LOG

Boring ID: SS-101

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2435 ft.	Boring Date: 9/1/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
0						
			0-5 75%	3.2		RESIDUUM: Brown to light reddish-brown, micaceous, silty, fine to medium SAND, relict structure (layers of strong foliation)
		SS-101A		6.6		
				1.6		
				0.8		
5			5-10 90%	0.7		
		SS-101B		0.1		
				0.1		
				0.0		
				0.0		Quartz seam , sandy GRAVEL, very moist at base of layer
10			10-15 90%	0.0		Brown, silty, fine to medium SAND, very moist, kaolin laminations, few coarse sand/gravel seams; gneissic appearance
		SS-101C		0.2		
				0.2		
				0.1		
				0.2		Dark gray to dark brown, fine to coarse SAND, trace to little silt, layers of weathered rock (gneiss)
15			15-20 100%	0.1		
				0.3		
		SS-101D		0.6		
				0.7		
				0.6		
20			20-22 100%	0.4		Wet/Saturated at 20 feet.
						Refusal with Geoprobe at 22 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-102

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly Checked By: R. Clark	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2428 ft.	Boring Date: 9/2/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 60%	0.0		RESIDUUM: Brown to dark brown, silty, fine to medium SAND, moist, relict structure (subhorizontal foliation to dipping 45 degrees)
		SS-102A		0.0		
5			5-10 100%	0.0		
				0.0		
				0.0		
		SS-102B		0.0		
10			10-15 100%	0.0		Gold brown to dark brown, silty, fine to medium SAND, highly micaceous, steeply dipping, moist to very moist
				0.0		
				1.0		
		SS-102C		15.3		
				35.5		
15			15-20 100%	10.0		
				43.6		
				115		
		SS-102D		202		
				701		Gravel layer at 18.5 feet.
20				447		Saturated/water table at 19.0 feet.
						Boring terminated at 20 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-103

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2424 ft.	Boring Date: 9/2/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 60%			RESIDUUM: Brown, fine to medium SAND, little to some silt, gneiss appearance with dark mineral weathering and manganese (vertical and along foliation planes), moist
		SS-103A		28.5		
				0.0		
				0.0		
5			5-10 100%	0.0		
				0.0		
				0.0		
				0.0		
		SS-103B		0.0		
10			10-15 100%	0.0		Brown to dark brown, micaceous, silty, fine to medium SAND, to fine to medium SAND with little to some silt, very moist, massive structure to steeply dipping foliation
				0.0		
				0.0		
				0.0		
		SS-103C		0.0		
15			15-20 100%	0.0		
		SS-103D		0.0		
				0.0		Saturated/water table at 17.0 feet.
				0.7		
				83.0		
20				170		
						Boring terminated at 20 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-104

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2437 ft.	Boring Date: 9/1/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 100%	0.0		RESIDUUM: Light reddish-brown to red, sandy SILT, dry, fine roots to 3 feet.
				0.0		
				0.0		
		SS-104A		0.0		
5			5-10 100%	0.0		Light to dark brown, silty, fine to medium SAND, to fine to medium SAND with some silt, relict structure (gneiss appearance, dark mineral weathering)
				0.0		
				0.0		
		SS-104B		0.0		
10			10-15 100%	0.3		
				0.9		
				1.8		
		SS-104C		1.6		Brownish-gray to gray, fine to medium SAND, little coarse sand, trace to little silt, slightly moist
				5.7		
15			15-20 100%	5.6		Orangish-brown to brown, micaceous, fine to medium SAND, little silt, relict structure, moist
				4.2		
				13.8		
		SS-104D		12.3		
				19.4		
20			20-25 100%	10.1		
				9.6		
				20.5		Brown to orangish-brown, silty, fine to medium SAND, relict structure, gneissic to strong foliation, very moist
				31.2		
		SS-104E		25		
25				41.9		
						Boring terminated at 25 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-105

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2436 ft.	Boring Date: 9/1/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 90%	0.0		POSSIBLE FILL: Red to light brown, sandy SILT to silty, fine to medium SAND, dry, fine roots
				0.0		
		SS-105A		0.0		
5			5-10 100%	0.0		
				0.0		
				0.0		
				0.0		RESIDUUM: Light brown to orangish-brown to gray, fine to medium SAND, trace to little silt, moist, gneissic with dark mineral weathering, trace to some mica
		SS-105B		0.0		
10			10-15 100%	0.0		
				0.0		
				0.0		
		SS-105C		0.0		
15			15-20 100%	0.0		
				0.0		
				0.0		
		SS-105D		0.0		
20			20-25 100%	0.0		Manganese-coated slickenside at 19.8 feet.
				0.0		
				0.0		
				0.0		
		SS-105E		1.3		
25				0.0		

Boring terminated at 25 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-106

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2435 ft.	Boring Date: 9/1/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
0						
		SS-106A	0-5 75%	1.4		POSSIBLE FILL: Light red to light brown, sandy SILT, little fine roots, dry
				0.2		
				0.1		
				0.1		
5			5-10 90%	0.1		
				0.0		
				0.0		RESIDUUM: Light brown to dark brown, fine to medium SAND, trace to some silt, dry, relict structure (gneissic with faint foliation, dark mineral weathering)
		SS-106B		0.0		
10			10-15 100%	0.0		
				0.0		
				0.0		
				0.0		
		SS-106C		0.0		
15			15-20 100%	0.0		
				0.0		
				0.0		
				0.0		
		SS-106D		0.0		
20			20-25 100%	0.0		
				0.0		
				0.0		
				0.0		
		SS-106E		0.0		
25				0.0		

Boring terminated at 25 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-107

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2435 ft.	Boring Date: 9/2/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 100%	0.0		POSSIBLE FILL: Light red to light brown, silty SAND with gravel, fine roots to 3 feet, dry, little to some mica
				0.0		
				0.0		
		SS-107A		0.0		
5			5-10 100%	0.0		
				0.0		
				0.0		RESIDUUM: Brown, silty, fine to medium SAND, trace to some mica, dry to slightly moist, gneissic appearance
				0.0		
		SS-107B		0.0		
10			10-15 100%	0.0		
				0.0		
				0.0		
				0.0		
		SS-107C		0.0		
15			15-20 100%	0.0		Brown to grayish-brown, fine to medium SAND, little to some silt, moist, little mica
				0.0		
				0.0		
				0.0		
		SS-107D		0.0		
20			20-25 100%	0.0		Orangish-brown to gray, fine to medium SAND, little silt, moist to very moist, gneissic appearance, little mica
				0.0		
				0.0		
				0.0		
		SS-107E		0.0		
25				0.0		

Boring terminated at 25 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-108

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2432 ft.	Boring Date: 9/2/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 80%	0.0		POSSIBLE FILL: Red to brownish-red, sandy SILT to silty, fine to medium SAND, little fine to medium roots, dry to slightly moist, trace gravel
				0.0		
				0.0		
		SS-108A		0.0		
5			5-10 100%	0.0		RESIDUUM: Brown, silty, fine to medium SAND to fine to medium SAND with little to some silt, little to some mica, slightly moist to moist, gneissic appearance
				0.0		
				0.0		
		SS-108B		0.0		
10			10-15 100%	0.0		
				0.0		
				0.0		
		SS-108C		0.0		
15			15-20 100%	0.0		
				0.0		
				0.0		Gray, fine to medium SAND, trace to little silt, very moist, gneissic appearance
		SS-108D		0.0		
20			20-25 100%	0.0		
				0.0		
				0.0		
				0.0		Orangish-brown, micaceous, fine to medium SAND, some silt, very moist, gneissic appearance
		SS-108E		0.0		
25				0.0		
						Boring terminated at 25 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-109

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2437 ft.	Boring Date: 8/31/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 80%	0.0		POSSIBLE FILL: Brownish-red, sandy SILT, fine roots
		SS-109A		0.9		
				0.0		RESIDUUM: Brown to gray, micaceous, silty, fine to medium SAND, to fine to medium SAND, little to some silt, dry, relict structure (gneissic appearance)
				0.0		
5			5-10 100%	0.0		
				0.0		
				0.0		
				0.0		
		SS-109B		0.0		
10			10-15 100%	0.0		
				0.2		
		SS-109C		1.3		
				2.3		
				0.5		Brown, micaceous, fine to medium SAND, some silt, moist, relict structure (gneissic with dark mineral weathering)
15			15-20 100%	0.0		
				2.9		
		SS-109D		7.1		
				10.4		
				7.2		
				4.3		
20			20-25 100%	9.2		Gray, fine to medium SAND, trace to little silt, moist (gneissic with dark mineral weathering)
		SS-109E		6.6		
				13.8		
				6.1		
						Refusal with Geoprobe at 23 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-110

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2436 ft.	Boring Date: 9/1/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 100%	0.0		POSSIBLE FILL: Light red to red, sandy SILT, trace fine roots, moist
				0.0		
				0.0		
				0.0		RESIDUUM: Brownish-red, silty, fine to medium SAND, little mica, moist
		SS-110A		0.0		
5			5-10 100%	0.0		Brown to light red, micaceous, silty, fine to medium SAND, moist
				0.0		
				0.0		
		SS-110B		0.0		
10			10-15 100%	0.0		
				0.0		Grayish-brown, brown, orangish-brown, fine to medium SAND, little silt, slightly moist to moist with depth, gneissic appearance
				0.0		
		SS-110C		0.0		
15			15-20 100%	0.0		
				0.0		
				0.0		
		SS-110D		0.0		
20			20-25 100%	0.0		
				0.0		
				0.0		
		SS-110E		0.0		
25				0.0		

Boring terminated at 25 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-111

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2435 ft.	Boring Date: 9/1/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 100%	0.0		POSSIBLE FILL: Red, sandy SILT, trace very fine roots, trace gravel, moist
				0.0		
				0.0		
		SS-111A		1.7		
				0.0		RESIDUUM: Light red to light brown, silty, fine to medium SAND to fine to medium SAND with little to some silt, slightly moist, gneissic appearance, dark mineral weathering
5			5-10 100%	0.0		
				0.9		
				0.0		
				2.0		
		SS-111B		0.0		
10			10-15 100%	0.0		
				0.0		
				0.0		
				0.0		
		SS-111C		0.0		
15			15-20 100%	0.0		Light brown to orangish-brown, fine to coarse SAND with little silt, little to some mica, moist to very moist, gneissic
				0.0		
				0.0		
				0.0		
		SS-111D		0.0		
20			20-25 100%	0.0		
				0.0		
				0.0		
				0.0		
		SS-111E		0.0		
25				0.0		
						Boring terminated at 25 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-112

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SL Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2433 ft.	Boring Date: 9/2/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 90%	0.0		FILL: Light brown, sandy GRAVEL, dry
				0.0		POSSIBLE FILL: Brownish-red, silty, fine to medium SAND, trace very fine roots, slightly moist
				10.2		RESIDUUM: Orangish-brown to light brown, fine to medium SAND, little to some silt, little coarse sand, little to some mica, dry to slightly moist, gneissic appearance
		SS-112A		26.7		
5			5-10 100%	6.0		
				0.0		
				0.0		
				0.0		
		SS-112B		0.0		
10			10-15 100%	0.0		
				0.0		
				0.0		
				0.0		
		SS-112C		0.0		
15			15-20 100%	0.0		Reddish-brown to brown, micaceous, silty, fine to medium SAND, to fine to medium SAND little to some silt, moist to very moist, gneissic appearance with dark mineral weathering
				0.0		
				0.0		
				0.0		
		SS-112D		0.0		
20			20-25 100%	0.0		
				0.0		
				0.0		
				0.0		
		SS-112E		0.0		
25				0.0		

Boring terminated at 25 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-113

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2417 ft.	Boring Date: 8/30/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 75%			Concrete Large roots at 0.5 feet.
		SS-113A		1.0		RESIDUUM: Light orange to brownish-orange, fine to coarse SAND to SAND with little silt, relict structure (dark mineral weathering), massive structure
				0.4		
				0.0		
5			5-10 95%	0.0		Orangish-brown to dark brown, micaceous, fine to medium SAND, little silt, slightly moist to moist, relict structure (dark mineral weathering), slight foliation
				0.0		
				0.0		
		SS-113B		0.1		
				0.0		
10				0.0		

Boring terminated at 10 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-114

Project Name: Mills Gap Road Site	Drilling Company: N/A
Location: Skyland, North Carolina	Driller: N/A
Project Number: 6686081744.06	Boring Method: Hand Auger
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Hand Auger
Approximate Ground Surface Elevation (feet): ft.	Boring Date: 9/2/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			N/A	0.0		FILL: Brown, silty SAND, dry, some roots
				0.0		
				0.0		
				0.0		
5			N/A	0.0		RESIDUUM: Brown, micaceous, silty, fine to medium SAND, dry
				0.0		Grayish-brown to orangish-brown, fine to medium SAND, little to some silt, slightly moist
				0.0		Dark brown, micaceous, silty, fine to medium SAND
				0.0		
10				0.0		

Boring terminated at 10 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-115

Project Name: Mills Gap Road Site	Drilling Company: N/A
Location: Skyland, North Carolina	Driller: N/A
Project Number: 6686081744.06	Boring Method: Hand Auger
Logged By: R. Clark RC Checked By: S. Kelly SK	Equipment: Hand Auger
Approximate Ground Surface Elevation (feet): ft.	Boring Date: 9/7/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			N/A	2.8		Concrete
				7.5		FILL: Reddish-brown, silty SAND, moist, little to some gravel
				10.0		
				3.4		

Refusal with Hand Auger at 4 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-116

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2417 ft.	Boring Date: 8/31/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 50%	1.4		Concrete
				1.8		RESIDUUM: Brown to dark brown, micaceous to highly micaceous, fine to medium SAND, little silt, little coarse sand, relict structure (gneissic appearance), slight foliation is subhorizontal
		SS-116A		4.5		
5			5-10 80%	6.7		
				10.4		
				1.3		7.0-7.2 feet: Wet/Saturated elastic, silty, clayey SAND layer (kaolin rich)
				12.0		
		SS-116B		20.3		
10				27.5		

Boring terminated at 10 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-117

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2417 ft.	Boring Date: 8/30/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 50%			Concrete
						FILL: Brown to red, silty SAND with trace gravel, moist
				20.8		
5		SS-117		19.2 28.9		RESIDUUM: Brown, highly micaceous, silty SAND, slightly moist

Boring terminated at 5 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-118

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2417 ft.	Boring Date: 8/30/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 75%			Concrete
						FILL: Brown, micaceous, silty SAND
				0.6		RESIDUUM: Dark orangish-brown to brown, silty SAND with relict structure and mineral weathering
				0.5		Orange, fine to coarse SAND, little silt, gneissic appearance to massive with weathered minerals
5		SS-118		0.1 0.5		

Boring terminated at 5 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-119

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2417 ft.	Boring Date: 8/30/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 75%			Concrete
				1.1		FILL: Brown, micaceous, silty SAND, trace gravel, very moist
				1.1		RESIDUUM: Brown to dark brown, micaceous to highly micaceous, silty, fine to medium SAND, moist to very moist, zones of strong foliation and mineral weathering
				0.8		
5				1.4		
	X	SS-119	5-10 100%			
				0.6		
				0.6		7.5 -8.0 feet: Quartz seam (orange-iron staining)
				0.3		Orange to dark orangish-brown, micaceous, fine to medium SAND, little to some silt, moist
				0.3		
10						

Boring terminated at 10 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-120

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2417 ft.	Boring Date: 8/30/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 75%	2.1		Concrete
				1.9		RESIDUUM: Brown to orangish-brown, silty, fine to medium SAND, some mica, moist, relict structure
				2.3		
5	X	SS-120	5-10 100%	4.1		Dark reddish-brown, micaceous, silty SAND, trace gravel, strong foliation
				3.0		
				1.7		
				2.1		Orange to brown, fine to medium SAND, little to some silt, relict structure (dark mineral weathering), moist
				0.9		
10				2.5		

Boring terminated at 10 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-121

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2417 ft.	Boring Date: 8/30/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 80%	0.0		Concrete
				0.4		FILL: Reddish-brown, sandy SILT
				0.4		RESIDUUM: Brownish-orange, silty, fine to medium SAND, to SAND with little silt, slightly moist, relict structure, micaceous, foliation is subhorizontal
				0.8		
5			5-10 100%	0.8		
				2.2		
		SS-121		0.3		
				0.1		
10				0.1		

Boring terminated at 10 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-122

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2416 ft.	Boring Date: 8/31/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 80%	0.0		RESIDUUM: Reddish-brown, fine to medium SAND, little silt, dry, slight foliation and dark mineral weathering, zones of moderate to strong foliation
				0.0		
				0.0		
				0.0		
5			5-10 100%	0.0		
				0.0		Quartz seams at 6.0 to 7.0 feet
		SS-122		0.0		
				0.0		
				0.0		
10						

Boring terminated at 10 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-123

Project Name: Mills Gap Road Site	Drilling Company: N/A
Location: Skyland, North Carolina	Driller: N/A
Project Number: 6686081744.06	Boring Method: Hand Auger
Logged By: R. Clark RC Checked By: S. Kelly SL	Equipment: Hand Auger
Approximate Ground Surface Elevation (feet): 2417 ft.	Boring Date: 9/7/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			N/A	0.0		Concrete
				0.0		FILL: Reddish-brown, silty SAND
				0.0		RESIDUUM: Quartz seam
				0.0		Reddish-brown, silty SAND, moist, some mica
				0.0		
5			N/A	0.0		Yellowish-brown, silty SAND, moist
				0.0		
				0.0		Reddish-brown to brown, silty SAND, moist
		SS-123		0.0		
						Boring terminated at 9.5 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-124

Project Name: Mills Gap Road Site	Drilling Company: N/A
Location: Skyland, North Carolina	Driller: N/A
Project Number: 6686081744.06	Boring Method: Hand Auger
Logged By: R. Clark RC Checked By: S. Kelly SK	Equipment: Hand Auger
Approximate Ground Surface Elevation (feet): ft.	Boring Date: 9/3/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			N/A	0.0		Concrete
				0.0		FILL: Tan to yellowish-brown, silty, fine SAND, moist
				0.0		RESIDUUM: Reddish-brown, silty SAND, moist, some relict structure
				0.0		
5			N/A	0.0		
				0.0		
				0.0		
				0.0		
				0.0		
10		SS-124				Boring terminated at 10 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-125

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly Checked By: R. Clark	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2417 ft.	Boring Date: 8/31/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
0						
			0-5 80%	0.0		FILL: Brownish-red, sandy SILT, moist
				0.0		
				0.0		
				0.0		
5			5-10 100%	0.0		
				0.0		
				0.0		
				0.0		7.8-8.0 feet: Gravel layer (gravel is concrete)
	X	SS-125		0.0		RESIDUUM: Brown, micaceous, silty, fine to medium SAND, slightly moist, relict structure
10						

Boring terminated at 10 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-126

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SL Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2416 ft.	Boring Date: 8/31/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 75%	0.0		Asphalt
				0.0		FILL: Brownish-red, silty, fine to medium SAND to sandy SILT, moist, little mica
				0.0		
5			5-10 90%	0.0		POSSIBLE FILL: Reddish-brown, silty, fine to medium SAND, slightly moist
				0.0		
				0.0		
				0.0		
10			10-15 80%	0.0		RESIDUUM: Reddish-brown, micaceous, silty, fine to medium SAND, to SAND with little to some silt, slightly moist
	X	SS-126		0.0		
				0.0		
				1.0		
15				1.3 0.0		

Boring terminated at 15 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-127

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2415 ft.	Boring Date: 8/31/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 75%	0.0		Asphalt
				3.0		FILL: Brownish-red to red, silty, fine to medium SAND, to sandy SILT
				0.0		Brown, organic, silty SAND at 2.0 to 2.2 feet.
				0.0		
5			5-10 100%	0.0		
				0.0		RESIDUUM: Orangish-red to red, silty, fine to coarse SAND, to SAND with some silt, relict structure (dark mineral weathering), trace mica, dry
				0.0		
				2.6		
				3.1		
10	X	SS-127	10-15 100%	5.6		
				1.9		
				1.9		Brown, to orangish-brown, micaceous to highly micaceous, silty, fine to medium SAND, moist, relict structure, zones of strong foliation
				1.7		
				4.2		
15						

Boring terminated at 15 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-128

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2414 ft.	Boring Date: 8/31/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 75%	0.0		Asphalt
				0.0		FILL: Brownish-red, sandy SILT, to silty, fine to medium SAND, slightly moist
				0.0		
				0.0		RESIDUUM: Red to orangish-red, silty, fine to medium SAND, little mica, slightly moist
5			5-10 100%	0.0		
				0.0		
				0.0		
				0.7		
				0.8		
10	X	SS-128	10-15 100%	0.0		Orange to brown, fine to coarse SAND, little to some silt
				0.0		
				1.3		Reddish-brown to brown, micaceous, silty, fine to medium SAND to fine to medium SAND with little to some silt, moist
				DNM		
15				DNM		

Boring terminated at 15 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)
DNM = Did not measure

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LITHOLOGIC LOG

Boring ID: SS-129

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly SK Checked By: R. Clark RC	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2413 ft.	Boring Date: 8/31/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 75%	0.0		Asphalt
				0.0		FILL: Orangish-brown, silty, fine to medium SAND, to sandy SILT, fine roots, moist
				0.0		
5			5-10 100%	0.0		POSSIBLE FILL: Brown, sandy SILT, trace gravel, organics, very moist
				0.0		Orangish-red, sandy SILT, moist
				0.0		
				0.0		RESIDUUM: Brownish-red, micaceous, silty, fine to medium SAND, relict structure (massive with dark mineral weathering)
10		SS-129	10-15 100%	0.0		
				0.0		
				0.0		
				DNM		
15				DNM		
						Boring terminated at 15 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)
DNM = Did not measure

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LITHOLOGIC LOG

Boring ID: SS-130

Project Name: Mills Gap Road Site	Drilling Company: A.E. Drilling Services, LLC
Location: Skyland, North Carolina	Driller: John Gorman (NC 3485)
Project Number: 6686081744.06	Boring Method: Direct-Push Technology
Logged By: S. Kelly Checked By: R. Clark	Equipment: Geoprobe 8040
Approximate Ground Surface Elevation (feet): 2412 ft.	Boring Date: 9/2/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			0-5 60%	0.0		Asphalt
				0.0		POSSIBLE FILL: Red to brownish-orange, silty SAND to sandy SILT, little gravel, trace roots
				0.0		
5			5-10 100%	0.0		Dark grayish-brown, sandy, elastic SILT, very moist, trace very fine roots, organic
				0.0		Organic, sandy SILT, very moist
				0.0		
				0.0		
				0.0		
10		SS-130	10-15 100%	0.0		RESIDUUM: Orange to brownish-orange, silty, fine to medium SAND to fine to coarse SAND, little to some silt, moist
				0.0		
				0.0		
				0.0		
15				0.0		

Boring terminated at 15 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-133

Project Name: Mills Gap Road Site	Drilling Company: N/A
Location: Skyland, North Carolina	Driller: N/A
Project Number: 6686081744.06	Boring Method: Hand Auger
Logged By: K. Weir KW Checked By: S. Kelly SK	Equipment: Hand Auger
Approximate Ground Surface Elevation (feet): 2420 ft.	Boring Date: 9/3/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
	☒	SS-133	N/A	0.0		RESIDUUM: Residual, reddish-brown, slightly micaceous, silty SAND

Boring terminated at 1 foot.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-134

Project Name: Mills Gap Road Site	Drilling Company: N/A
Location: Skyland, North Carolina	Driller: N/A
Project Number: 6686081744.06	Boring Method: Hand Auger
Logged By: K. Weir KW Checked By: S. Kelly SK	Equipment: Hand Auger
Approximate Ground Surface Elevation (feet): 2445 ft.	Boring Date: 9/3/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			N/A	0.0		FILL: Tan, fine to medium SAND with some silt
				0.0		POSSIBLE FILL: Reddish-brown, fine SAND with little silt
				0.0		
				0.0		RESIDUAL: Reddish-brown, fine SAND with little silt
5		SS-134	N/A	0.0		

Boring terminated at 5 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)

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LITHOLOGIC LOG

Boring ID: SS-135

Project Name: Mills Gap Road Site	Drilling Company: N/A
Location: Skyland, North Carolina	Driller: N/A
Project Number: 6686081744.06	Boring Method: Hand Auger
Logged By: R. Clark RC Checked By: S. Kelly SK	Equipment: Hand Auger
Approximate Ground Surface Elevation (feet): 2417 ft.	Boring Date: 9/8/2010

Depth (feet)	Sample	Sample Number	Recovery (%)	PID (ppm)	Lithology	Lithologic Description
			N/A	0.0		Concrete
				0.0		FILL: Reddish-brown, silty SAND
				0.0		RESIDUUM: Reddish-brown, dense, silty SAND, moist, little mica
				0.0		
5				0.0		Dark reddish-brown to brown, silty SAND, some reliect structure, trace to little rock fragments, some mica
				0.0		
				0.0		
				0.6		
	X	SS-135B		2.1		
10				3.6		
						Boring terminated at 10 feet.

REMARKS:
PID (ppm) = Photoionization Detector (parts per million)