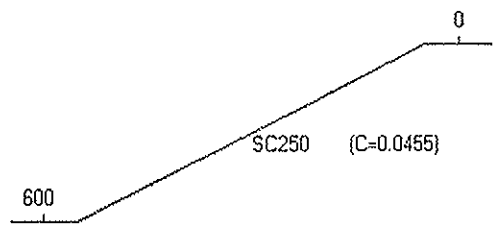
APPENDIX C
Slope Protection Calculations

North American Green - ECMDS Version 4.3	8/15/2011	03:36 PM	COMPUTED BY: NKG
PROJECT NAME: PPL BBNPP	PROJECT NO.: PPLS0902	SLOPE DESCRIPTION: 3:1 UNVEG MAX. SLOPE	

Country	United States
State/Region	Pennsylvania
City	Scranton
Annual R Factor	100
Total Slope Length (ft)	600
Protection Type	Temporary
Protection Period (months)	12
Beginning Month	April
Adjusted R Value	100.
Slope Gradient (H:1)	3
Soil Type	Sandy Loam
K Factor	0.19
Soil Loss Tolerance (in)	0.25

Slope Gradient = 3:1



Not to Scale

Reach	Cum. Dist. Begin (ft)-	End (ft)	Material	Vegetation Type Growth Habit	Density	ASL bare (in)	ASL mat (in)	MSL bare (in)	MSL mat (in)	SLT (in)	SF	Remarks	Staple
1	0	600	SC250			2.832	0.129	4.895	0.223	0.25	1.122	STABLE	D
2													
3													
	0	600		**Composite**		2.832	0.129						

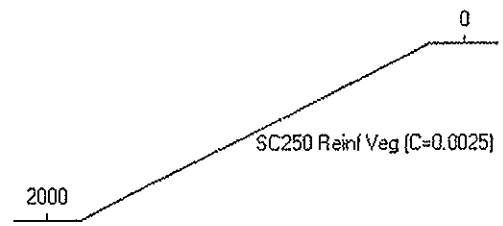
Vegetation Density=Percentage of soil coverage provided by vegetation
ASLbare=Average Soil Loss potential of unprotected soil (uniform inches)
MSLbare=Maximum Soil Loss potential on unprotected soil (uniform inches)
SLT=Soil Loss Tolerance for slope segment (uniform inches)
Composite=Average soil loss from total slope length (uniform inches)

C=Cover material performance factor (Fraction of soil loss of unprotected)
ASLmat=Average Soil Loss potential w/material (uniform inches)
MSLmat=Maximum Soil Loss potential w/material (uniform inches)
SF=Safety Factor

North American Green - ECMDS Version 4.3	8/15/2011	03:33 PM	COMPUTED BY: NKG
PROJECT NAME: PPL BBNPP	PROJECT NO.: PPLS0902	SLOPE DESCRIPTION: 3:1 VEG MAX. SLOPE	

Country	United States
State/Region	Pennsylvania
City	Scranton
Annual R Factor	100
Total Slope Length (ft)	2000
Protection Type	Permanent
Protection Period (months)	
Beginning Month	
Adjusted R Value	100.
Slope Gradient (H:1)	3
Soil Type	Sandy Loam
K Factor	0.19
Soil Loss Tolerance (in)	0.03

Slope Gradient = 3:1



Not to Scale

Reach	Cum. Dist. Begin (ft)	Cum. Dist. End (ft)	Material	Vegetation Type Growth Habit -	Density	ASL bare (in)	ASL mat (in)			SLT (in)	SF	Remarks
1	0	2000	SC250 Reinf.	Bunch Type	75-95%	2.796	0.007			0.03	4.292	STABLE
2												
3												
	0	2000		**Composite**		2.796	0.007					

Vegetation Density=Percentage of soil coverage provided by vegetation
ASLbare=Average Soil Loss potential of unprotected soil (uniform inches)
MSLbare=Maximum Soil Loss potential on unprotected soil (uniform inches)
SLT=Soil Loss Tolerance for slope segment (uniform inches)
Composite=Average soil loss from total slope length (uniform inches)

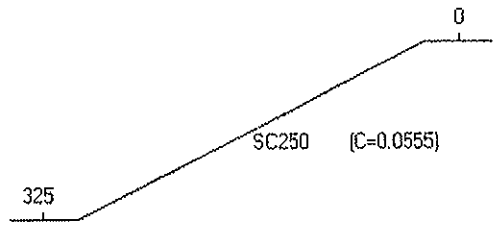
C=Cover material performance factor (Fraction of soil loss of unprotected)
ASLmat=Average Soil Loss potential w/material (uniform inches)
MSLmat=Maximum Soil Loss potential w/material (uniform inches)
SF=Safety Factor

North American Green - ECMDS Version 4.3 | 8/15/2011 | 03:36 PM | COMPUTED BY: NKG

PROJECT NAME: PPL 8BNPP | PROJECT NO.: PPLS0902 | SLOPE DESCRIPTION: 2:1 UNVEG MAX. SLOPE

Country	United States
State/Region	Pennsylvania
City	Scranton
Annual R Factor	100
Total Slope Length (ft)	325
Protection Type	Temporary
Protection Period (months)	12
Beginning Month	April
Adjusted R Value	100.
Slope Gradient (H:1)	2
Soil Type	Sandy Loam
K Factor	0.19
Soil Loss Tolerance (in)	0.25

Slope Gradient = 2:1



Not to Scale

Reach	Cum. Dist. Begin (ft)	Cum. Dist. End (ft)	Material	Vegetation Type Growth Habit	Density	ASL bare (in)	ASL mat (in)	MSL bare (in)	MSL mat (in)	SLT (in)	SF	Remarks	Staple
1	0	325	SC250			2.487	0.138	4.349	0.241	0.25	1.036	STABLE	D
2													
3													
	0	325		**Composite**		2.487	0.138						

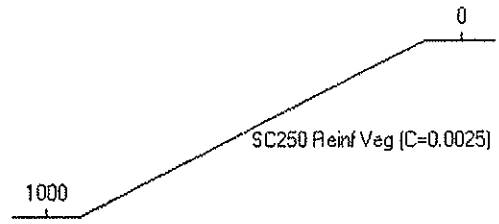
Vegetation Density=Percentage of soil coverage provided by vegetation
ASLbare=Average Soil Loss potential of unprotected soil (uniform inches)
MSLbare=Maximum Soil Loss potential on unprotected soil (uniform inches)
SLT=Soil Loss Tolerance for slope segment (uniform inches)
Composite=Average soil loss from total slope length (uniform inches)

C=Cover material performance factor (Fraction of soil loss of unprotected)
ASLmat=Average Soil Loss potential w/material (uniform inches)
MSLmat=Maximum Soil Loss potential w/material (uniform inches)
SF=Safety Factor

North American Green - ECMDS Version 4.3	8/15/2011	03:37 PM	COMPUTED BY: NKG
PROJECT NAME: PPL BBNPP	PROJECT NO.: PPLS0902	SLOPE DESCRIPTION: 2:1 VEG MAX. SLOPE	

Country	United States
State/Region	Pennsylvania
City	Scranton
Annual R Factor	100
Total Slope Length (ft)	1000
Protection Type	Permanent
Protection Period (months)	
Beginning Month	
Adjusted R Value	100.
Slope Gradient (H:1)	2
Soil Type	Sandy Loam
K Factor	0.19
Soil Loss Tolerance (in)	0.03

Slope Gradient = 2:1



Not to Scale

Reach	Cum. Dist. Begin (ft)	Cum. Dist. End (ft)	Material	Vegetation Type Growth Habit	Density	ASL bare (in)	ASL mat (in)	-		SLT (in)	SF	Remarks
1	0	1000	SC250 Reinf.	Bunch Type	75-95%	3.069	0.008			0.03	3.910	STABLE
2												
3												
	0	1000		**Composite**		3.069	0.008					

Vegetation Density=Percentage of soil coverage provided by vegetation
ASLbare=Average Soil Loss potential of unprotected soil (uniform inches)
MSLbare=Maximum Soil Loss potential on unprotected soil (uniform inches)
SLT=Soil Loss Tolerance for slope segment (uniform inches)
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