

PHYSICAL SOIL CHARACTERISTICS & LEGEND

Symbol	Name	Group	Slopes	Capability Subclass	Hazard of Erosion
ASF	Arnot-Rock outcrop complex	C/D	steep	VIIIs	Slight
At	Atherton silt loam	B/D	-	IVw	Slight
BrA	Braceville gravelly loam	C		IIw	Slight
BrB	Braceville gravelly loam	C		IIw	Moderate
BrC	Braceville gravelly loam	C		IIIe	Moderate
ChA	Chenango gravelly loam	A		IIIs	Slight
ChB	Chenango gravelly loam	A		IIIs	Moderate
ChC	Chenango gravelly loam	A		IIIe	Moderate
Ho	Holly silt loam	B/D		IIIw	Slight
OIB	Oquaga and Lordstown channery silt loams	C		IIe	Moderate
OIC	Oquaga and Lordstown channery silt loams	C		IIIe	Moderate
OID	Oquaga and Lordstown channery silt loams	C		IVe	Moderate
OpB	Oquaga and Lordstown extremely stony silt loams	C		VIIIs	Slight
OpD	Oquaga and Lordstown extremely stony silt loams	C		VIIIs	Slight
OXF	Oquaga and Lordstown extremely stony silt loams	C	steep	VIIIs	Slight
Po	Pope Soils	B		I	None to Slight
RdA	Rexford loam	C		IIIw	None to Slight
RdB	Rexford loam	C		IIIw	Slight
WeB	Welker and Klinesville channery loam	C/D		IIIe	Moderate
WeC	Welker and Klinesville channery loam	C/D		IVe	Moderate
WeD	Welker and Klinesville channery silt loams	C/D		VIe	Moderate
WmB	Wellsboro very stony silt loam	C		VIs	Slight
WyD	Wyoming gravelly loam	A		IVe	Moderate
WyF	Wyoming gravelly loam	A		VIIe	Moderate

SOIL LIMITATIONS & RESOLUTIONS

ASF Arnot-Rock

- LIMITATIONS:
- DEPTH TO BEDROCK
  - SLOPE
  - STONINESS
  - ROCK OUTCROP

- RESOLUTIONS:
- EXTENSIVE ROCK REMOVAL AND ADDITIONAL SUITABLE FILL MAY BE REQUIRED.
  - STABILIZE ALL DISTURBED AREAS PER BMP's.
  - WHEN FILTER FABRIC FENCE CANNOT BE PROPERLY ANCHORED IN STONY SOILS, ALTERNATE SEDIMENT BARRIERS SUCH AS STRAW BALES OR ROCK BERMS SHALL BE UTILIZED. ALTERNATE MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PADEP'S EROSION AND SEDIMENTATION POLLUTION CONTROL PROGRAM MANUAL.
  - EXTENSIVE ROCK REMOVAL AND ADDITIONAL SUITABLE FILL MAY BE REQUIRED.

At Atherton

- LIMITATIONS:
- HIGH WATER TABLE
  - SLOW PERMEABILITY
  - PONDING

- RESOLUTIONS:
- WHERE NECESSARY, TEMPORARY DEWATERING FACILITIES WILL BE REQUIRED. LIMIT CONSTRUCTION IN AREAS OF HIGH WATER TABLES TO THE DRY SEASON AS NEEDED AND/OR FEASIBLE. WHEN SOILS BECOME UNSUITABLE OR SATURATED FROM THE WATER TABLE, EXCAVATE AND REPLACE THE SOIL WITH LOW PERMEABILITY SOILS.
  - SELECTING VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS; TILLING VEGETATED AREAS; AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.
  - DEWATER AREA USING THE PUMP FILTER BAG.
  - WHEN FILTER FABRIC FENCE CANNOT BE PROPERLY ANCHORED IN STONY SOILS, ALTERNATE SEDIMENT BARRIERS SUCH AS STRAW BALES OR ROCK BERMS SHALL BE UTILIZED. ALTERNATE MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PADEP'S EROSION AND SEDIMENTATION POLLUTION CONTROL PROGRAM MANUAL.

BrA and BrB Braceville

- LIMITATIONS:
- SEASONAL HIGH WATER TABLE
  - MODERATELY SLOW PERMEABILITY

- RESOLUTIONS:
- WHERE NECESSARY, TEMPORARY DEWATERING FACILITIES WILL BE REQUIRED. LIMIT CONSTRUCTION IN AREAS OF SEASONAL HIGH WATER TABLES TO THE DRY SEASON AS NEEDED AND/OR FEASIBLE. WHEN SOILS BECOME UNSUITABLE OR SATURATED FROM THE WATER TABLE, EXCAVATE AND REPLACE THE SOIL WITH LOW PERMEABILITY SOILS.
  - SELECTING VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS; TILLING VEGETATED AREAS; AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.
  - DEWATER AREA USING THE PUMP FILTER BAG.

BrC Braceville

- LIMITATIONS:
- SEASONAL HIGH WATER TABLE
  - MODERATELY SLOW PERMEABILITY
  - SLOPE

- RESOLUTIONS:
- WHERE NECESSARY, TEMPORARY DEWATERING FACILITIES WILL BE REQUIRED. LIMIT CONSTRUCTION IN AREAS OF SEASONAL HIGH WATER TABLES TO THE DRY SEASON AS NEEDED AND/OR FEASIBLE. WHEN SOILS BECOME UNSUITABLE OR SATURATED FROM THE WATER TABLE, EXCAVATE AND REPLACE THE SOIL WITH LOW PERMEABILITY SOILS.
  - SELECTING VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS; TILLING VEGETATED AREAS; AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.
  - DEWATER AREA USING THE PUMP FILTER BAG.
  - STABILIZE ALL DISTURBED AREAS PER BMP's.

ChA Chenango

- LIMITATIONS:
- MODERATELY RAPID TO RAPID PERMEABILITY
  - GROUNDWATER CONTAMINATION

- RESOLUTIONS:
- IN THE EVENT OF A CONTAMINANT SPILL, ISOLATE AND CONTAIN THE SPILL AND CLEAN UP IMMEDIATELY. EXCAVATION OF THE CONTAMINATED SOIL AND REPLACEMENT OF SUITABLE SOIL MAY BE REQUIRED.
  - DUE DILIGENCE AND TESTING MAY BE REQUIRED IN THOSE AREAS OF CONCERN.

ChB and ChC Chenango

- LIMITATIONS:
- MODERATELY RAPID TO RAPID PERMEABILITY
  - GROUNDWATER CONTAMINATION
  - COARSE FRAGMENTS

- RESOLUTIONS:
- IN THE EVENT OF A CONTAMINANT SPILL, ISOLATE AND CONTAIN THE SPILL AND CLEAN UP IMMEDIATELY. EXCAVATION OF THE CONTAMINATED SOIL AND REPLACEMENT OF SUITABLE SOIL MAY BE REQUIRED.
  - DUE DILIGENCE AND TESTING MAY BE REQUIRED IN THOSE AREAS OF CONCERN.
  - WHEN FILTER FABRIC FENCE CANNOT BE PROPERLY ANCHORED IN STONY SOILS, ALTERNATE SEDIMENT BARRIERS SUCH AS STRAW BALES OR ROCK BERMS SHALL BE UTILIZED. ALTERNATE MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PADEP'S EROSION AND SEDIMENTATION POLLUTION CONTROL PROGRAM MANUAL.

Ho Holy

- LIMITATIONS:
- SEASONAL HIGH WATER TABLE
  - FREQUENT FLOODING

- RESOLUTIONS:
- WHERE NECESSARY, TEMPORARY DEWATERING FACILITIES WILL BE REQUIRED. LIMIT CONSTRUCTION IN AREAS OF SEASONAL HIGH WATER TABLES TO THE DRY SEASON AS NEEDED AND/OR FEASIBLE. WHEN SOILS BECOME UNSUITABLE OR SATURATED FROM THE WATER TABLE, EXCAVATE AND REPLACE THE SOIL WITH LOW PERMEABILITY SOILS.
  - SELECTING VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS; TILLING VEGETATED AREAS; AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.
  - DEWATER AREA USING THE PUMP FILTER BAG.

OIB Oquaga and Lordstown

- LIMITATIONS:
- DEPTH TO BEDROCK

- RESOLUTIONS:
- EXTENSIVE ROCK REMOVAL AND ADDITIONAL SUITABLE FILL MAY BE REQUIRED.

OIC and OID Oquaga and Lordstown  
WeC and WeD Welker and Klinesville

- LIMITATIONS:
- DEPTH TO BEDROCK
  - SLOPE

- RESOLUTIONS:
- EXTENSIVE ROCK REMOVAL AND ADDITIONAL SUITABLE FILL MAY BE REQUIRED.
  - STABILIZE ALL DISTURBED AREAS PER BMP's.

OpB Oquaga and Lordstown

- LIMITATIONS:
- DEPTH TO BEDROCK
  - SURFACE STONINESS

- RESOLUTIONS:
- EXTENSIVE ROCK REMOVAL AND ADDITIONAL SUITABLE FILL MAY BE REQUIRED.
  - WHEN FILTER FABRIC FENCE CANNOT BE PROPERLY ANCHORED IN STONY SOILS, ALTERNATE SEDIMENT BARRIERS SUCH AS STRAW BALES OR ROCK BERMS SHALL BE UTILIZED. ALTERNATE MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PADEP'S EROSION AND SEDIMENTATION POLLUTION CONTROL PROGRAM MANUAL.

OpD and OXF Oquaga and Lordstown

- LIMITATIONS:
- DEPTH TO BEDROCK
  - SLOPE
  - SURFACE STONINESS

- RESOLUTIONS:
- EXTENSIVE ROCK REMOVAL AND ADDITIONAL SUITABLE FILL MAY BE REQUIRED.
  - STABILIZE ALL DISTURBED AREAS PER BMP's.
  - WHEN FILTER FABRIC FENCE CANNOT BE PROPERLY ANCHORED IN STONY SOILS, ALTERNATE SEDIMENT BARRIERS SUCH AS STRAW BALES OR ROCK BERMS SHALL BE UTILIZED. ALTERNATE MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PADEP'S EROSION AND SEDIMENTATION POLLUTION CONTROL PROGRAM MANUAL.

Ps Pope

- LIMITATIONS:
- FLOOD HAZARD

- RESOLUTIONS:
- DEWATER AREA USING THE PUMP FILTER BAG.

RdA and RdB Rexford

- LIMITATIONS:
- SEASONAL HIGH WATER TABLE
  - SLOW PERMEABILITY

- RESOLUTIONS:
- WHERE NECESSARY, TEMPORARY DEWATERING FACILITIES WILL BE REQUIRED. LIMIT CONSTRUCTION IN AREAS OF SEASONAL HIGH WATER TABLES TO THE DRY SEASON AS NEEDED AND/OR FEASIBLE. WHEN SOILS BECOME UNSUITABLE OR SATURATED FROM THE WATER TABLE, EXCAVATE AND REPLACE THE SOIL WITH LOW PERMEABILITY SOILS.
  - SELECTING VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS; TILLING VEGETATED AREAS; AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.
  - DEWATER AREA USING THE PUMP FILTER BAG.

WeB Welker and Klinesville

- LIMITATIONS:
- DEPTH TO BEDROCK
  - COARSE FRAGMENTS

- RESOLUTIONS:
- EXTENSIVE ROCK REMOVAL AND ADDITIONAL SUITABLE FILL MAY BE REQUIRED.
  - WHEN FILTER FABRIC FENCE CANNOT BE PROPERLY ANCHORED IN STONY SOILS, ALTERNATE SEDIMENT BARRIERS SUCH AS STRAW BALES OR ROCK BERMS SHALL BE UTILIZED. ALTERNATE MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PADEP'S EROSION AND SEDIMENTATION POLLUTION CONTROL PROGRAM MANUAL.

WmB Wellsboro

- LIMITATIONS:
- SEASONAL HIGH WATER TABLE
  - SLOW PERMEABILITY
  - SURFACE STONINESS

- RESOLUTIONS:
- WHERE NECESSARY, TEMPORARY DEWATERING FACILITIES WILL BE REQUIRED. LIMIT CONSTRUCTION IN AREAS OF SEASONAL HIGH WATER TABLES TO THE DRY SEASON AS NEEDED AND/OR FEASIBLE. WHEN SOILS BECOME UNSUITABLE OR SATURATED FROM THE WATER TABLE, EXCAVATE AND REPLACE THE SOIL WITH LOW PERMEABILITY SOILS.
  - SELECTING VEGETATIVE SPECIES TOLERANT TO WET CONDITIONS; TILLING VEGETATED AREAS; AND IMPLEMENTING COMBINATIONS OF THESE AND/OR OTHER METHODS.
  - DEWATER AREA USING THE PUMP FILTER BAG.

WyD Wyoming

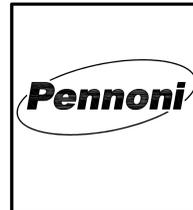
- LIMITATIONS:
- SLOPE
  - RAPID PERMEABILITY
  - COARSE FRAGMENTS
  - GROUNDWATER CONTAMINATION

- RESOLUTIONS:
- STABILIZE ALL DISTURBED AREAS PER BMP's.
  - IN THE EVENT OF A CONTAMINANT SPILL, ISOLATE AND CONTAIN THE SPILL AND CLEANUP IMMEDIATELY. EXCAVATION OF THE CONTAMINATED SOIL AND REPLACEMENT OF SUITABLE SOIL MAY BE REQUIRED.
  - WHEN FILTER FABRIC FENCE CANNOT BE PROPERLY ANCHORED IN STONY SOILS, ALTERNATE SEDIMENT BARRIERS SUCH AS STRAW BALES OR ROCK BERMS SHALL BE UTILIZED. ALTERNATE MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PADEP'S EROSION AND SEDIMENTATION POLLUTION CONTROL PROGRAM MANUAL.
  - DUE DILIGENCE AND TESTING MAY BE REQUIRED IN THOSE AREAS OF CONCERN.

WyF Wyoming

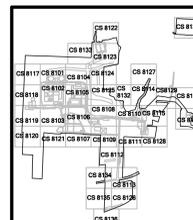
- LIMITATIONS:
- SLOPE
  - RAPID PERMEABILITY
  - COARSE FRAGMENTS

- RESOLUTIONS:
- STABILIZE ALL DISTURBED AREAS PER BMP's.
  - IN THE EVENT OF A CONTAMINANT SPILL, ISOLATE AND CONTAIN THE SPILL AND CLEAN UP IMMEDIATELY. EXCAVATION OF THE CONTAMINATED SOIL AND REPLACEMENT OF SUITABLE SOIL MAY BE REQUIRED.
  - WHEN FILTER FABRIC FENCE CANNOT BE PROPERLY ANCHORED IN STONY SOILS, ALTERNATE SEDIMENT BARRIERS SUCH AS STRAW BALES OR ROCK BERMS SHALL BE UTILIZED. ALTERNATE MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PADEP'S EROSION AND SEDIMENTATION POLLUTION CONTROL PROGRAM MANUAL.



DATE	NO.	REVISIONS	BY
9/15/11	1	EXCESS EARTHWORK REDUCTION AND L&D COMMENTS	DFC
11/12/10	0	INITIAL SUBMISSION	DFC

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR. DIMENSIONS SHALL BE INSTALLED IN ACCORDANCE WITH PADEP'S EROSION AND SEDIMENTATION POLLUTION CONTROL PROGRAM MANUAL.



BELL BEND NUCLEAR POWER PLANT  
EROSION AND SEDIMENTATION CONTROL SOIL CHARACTERISTICS  
PPL BELL BEND, LLC  
38 BOMBAY AVE, SUITE 2  
BERWICK, PA 17603

100 N. Wilkes-Barre Boulevard  
Wilkes-Barre, PA 18702 (570) 824-2200

SALEM TOWNSHIP, PENNSYLVANIA

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OTHERS OR FOR EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN PERMISSION OR ADAPTION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES; AND OWNER SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

JOB NO.	PPLS0902
SHEET	2 OF 75

SCALE	N.T.S.	DRAWING NO.	CS8002
DRAWN BY	LGB		
DATE	9/15/2011		
APPROVED	JFM		