ENVIRONMENTAL NOTES

GENERAL NOTES (FROM PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL- MARCH 2012):

- 1. ALL EARTH DISTURBANCES, INCLUDING CLEARING AND GRUBBING AS WELL AS CUTS AND FILLS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED E&S PLAN. A COPY OF THE APPROVED DRAWINGS (STAMPED, SIGNED AND DATED BY THE REVIEWING AGENCY) MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES. THE REVIEWING AGENCY SHALL BE NOTIFIED OF ANY CHANGES TO THE APPROVED PLAN PRIOR TO IMPLEMENTATION OF THOSE CHANGES. THE REVIEWING AGENCY MAY REQUIRE A WRITTEN SUBMITTAL OF THOSE CHANGES FOR REVIEW AND APPROVAL AT ITS DISCRETION.
- 2. AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES (INCLUDING CLEARING AND GRUBBING), THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE POST CONSTRUCTION STORMWATER MANAGEMENT PLAN AND A REPRESENTATIVE FROM THE LOCAL CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
- 3. AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THAT SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL COUNTY CONSERVATION DISTRICT OR BY DEP PRIOR TO IMPLEMENTATION.
- 5. AREAS TO BE FILLED ARE TO BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL.
- 6. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THOSE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE GRUBBING AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPS SPECIFIED BY THE CONSTRUCTION SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
- 7. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
- 8. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED AT THE LOCATION(S) SHOWN ON THE PLAN MAP(S) IN THE AMOUNT NECESSARY TO COMPLETE THE FINISH GRADING OF ALL EXPOSED AREAS THAT ARE TO BE STABILIZED BY VEGETATION. EACH STOCKPILE SHALL BE PROTECTED IN THE MANNER SHOWN ON THE PLAN DRAWINGS. STOCKPILE HEIGHTS SHALL NOT EXCEED 35-FEET. STOCKPILE SLOPES MUST BE 2H:1V OR FLATTER.
- 9. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL IMPLEMENT APPROPRIATE BMPS TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL CONSERVATION DISTRICT AND/OR THE REGIONAL DEP OFFICE.
- 10. ALL BUILDING MATERIALS AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE DEP'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1, AND 287.1 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THE SITE
- 11. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR THE DEP FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED.
- 12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ANY MATERIAL BROUGHT ON SITE IS CLEAN FILL. FORM FP-001 MUST BE RETAINED BY THE PROPERTY OWNER FOR ANY FILL MATERIAL AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE BUT QUALIFYING AS CLEAN FILL DUE TO ANALYTICAL TESTING.
- 13. ALL PUMPING OF WATER FROM ANY WORK AREA SHALL BE DONE ACCORDING TO THE PROCEDURE DESCRIBED IN THIS PLAN, OVER UNDISTURBED VEGETATED AREAS.
- 14. VEHICLES AND EQUIPMENT SHALL ENTER AND EXIT THE WORKSPACE DIRECTLY ONLY FROM ACCESS POINTS SHOWN ON THE APPROVED E&S PLANS.
- 15. UNTIL THE SITE IS STABILIZED, ALL E&S BMPS MUST BE MAINTAINED PROPERLY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT BMPS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADING, RESEEDING, REMULCHING AND RENETTING MUST BE PERFORMED IMMEDIATELY. IF E&S BMPS FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPS, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED.
- 16. NO SOIL AMENDMENTS SUCH AS AGRICULTURAL LIME, FERTILIZER, ETC. WILL BE USED IN WETLAND AREAS.
- 17. A LOG SHOWING DATES THAT E&S BMPS WERE INSPECTED AS WELL AS ANY DEFICIENCIES FOUND AND THE DATE THEY WERE CORRECTED SHALL BE MAINTAINED ON THE SITE AND BE MADE AVAILABLE TO REGULATORY AGENCY OFFICIALS AT THE TIME OF INSPECTION.
- 18. SEDIMENT TRACKED ONTO ANY PUBLIC ROADWAY OR SIDEWALK SHALL BE RETURNED TO THE CONSTRUCTION SITE BY THE END OF EACH WORK DAY AND DISPOSED IN THE MANNER DESCRIBED IN THIS PLAN. IN NO CASE SHALL THE SEDIMENT BE WASHED, SHOVELED, OR SWEPT INTO ANY ROADSIDE DITCH, STORM SEWER, OR SURFACE WATER.
- 19. ALL SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS.
- 20. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 3 TO 5 INCHES 6 TO 12 INCHES ON COMPACTED SOILS PRIOR TO PLACEMENT OF TOPSOIL. AREAS TO BE VEGETATED SHALL HAVE A MINIMUM 4-INCHES OF TOPSOIL IN PLACE PRIOR TO SEEDING AND MULCHING. FILL OUTSLOPES SHALL HAVE A MINIMUM OF 2-INCHES OF TOPSOIL.
- 21. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- 22. ALL EARTHEN FILLS SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS
- 23. FILL MATERIALS SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OR SATISFACTORY FILLS.

- 24. FROZEN MATERIALS OR SOFT, MUCKY, OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED INTO FILLS.
- 25. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- 26. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STATE AND LOCAL STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- 27. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY UPON REACHING FINISHED GRADE. CUT SLOPES IN COMPETENT BEDROCK AND ROCK FILLS NEED NOT BE VEGETATED. SEEDED AREAS WITHIN 50 FEET OF A SURFACE WATER, OR AS OTHERWISE SHOWN ON THE PLAN DRAWINGS, SHALL BE BLANKETED ACCORDING TO THE STANDARDS OF THIS PLAN.
- 28. IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE IN ANY AREA OR SUBAREA OF THE PROJECT, THE OPERATOR SHALL STABILIZE ALL DISTURBED AREAS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE, WHICH WILL BE REACTIVATED WITHIN 1 YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN 1 YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
- 29. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- 30. E&S BMPS MUST REMAIN FUNCTIONAL AS SUCH UNTIL ALL AREAS TRIBUTARY TO THEM ARE PERMANENTLY STABILIZED OR UNTIL THEY ARE REPLACED BY ANOTHER BMP APPROVED BY THE LOCAL CONSERVATION DISTRICT OR DEP.
- 31. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT FOR AN INSPECTION PRIOR TO REMOVAL/CONVERSION OF THE E&S
- 32. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY E&S BMPS MUST BE REMOVED OR CONVERTED TO PERMANENT POST CONSTRUCTION STORMWATER MANAGEMENT BMPS. AREAS DISTURBED DURING REMOVAL OR CONVERSION OF THE BMPS MUST BE STABILIZED IMMEDIATELY. IN ORDER TO ENSURE RAPID REVEGETATION OF DISTURBED AREAS, SUCH REMOVAL/CONVERSIONS SHOULD BE PERFORMED ONLY DURING THE GERMINATING SEASON.
- 33. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE LOCAL CONSERVATION DISTRICT TO SCHEDULE A FINAL INSPECTION.
- 34. FAILURE TO CORRECTLY INSTALL E&S BMPS, FAILURE TO PREVENT SEDIMENT-LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE, OR FAILURE TO TAKE IMMEDIATE CORRECTIVE ACTION TO RESOLVE FAILURE OF E&S BMPS MAY RESULT IN ADMINISTRATIVE, CIVIL, AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE DEPARTMENT AS DEFINED IN SECTION 602 OF PENNSYLVANIA CLEAN STREAMS THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
- 35. CONCRETE WASH WATER SHALL BE HANDLED IN THE MANNER DESCRIBED ON THE PLAN DRAWINGS. IN NO CASE SHALL IT BE ALLOWED TO ENTER ANY SURFACE WATERS OR GROUNDWATER SYSTEMS.
- 36. ALL CHANNELS SHALL BE KEPT FREE OF OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO FILL, ROCKS LEAVES WOODY DEBRIS, ACCUMULATED SEDIMENT, EXCESS VEGETATION, AND CONSTRUCTION MATERIALS/WASTES.
- 37. UNDERGROUND UTILITIES CUTTING THROUGH ANY ACTIVE CHANNEL SHALL BE IMMEDIATELY BACKFILLED AND THE CHANNEL RESTORED TO ITS ORIGINAL CROSS-SECTION AND PROTECTIVE LINING. ANY BASE FLOW WITHIN THE CHANNEL SHALL BE CONVEYED PAST THE WORK AREA IN THE MANNER DESCRIBED IN THIS PLAN UNTIL SUCH RESTORATION IS COMPLETE.
- 38. CHANNELS HAVING RIPRAP, RENO MATTRESS OR GABION LININGS MUST BE SUFFICIENTLY OVER EXCAVATED SO THAT THE DESIGN DIMENSIONS WILL BE PROVIDED AFTER PLACEMENT OF THE PROTECTIVE LINING.
- 39. SEDIMENT BASINS AND/OR TRAPS SHALL BE KEPT FREE OF ALL CONSTRUCTION WASTE, WASH WATER, AND OTHER DEBRIS HAVING POTENTIAL TO CLOG BASIN/TRAP OUTLET STRUCTURES AND/OR POLLUTE THE SURFACE WATER.
- 40. SEDIMENT BASINS SHALL BE PROTECTED FROM UNAUTHORIZED ACTS BY THIRD PARTIES.
- 41. ANY DAMAGE THAT OCCURS IN WHOLE OR IN PART AS A RESULT OF BASIN OR TRAP DISCHARGE SHALL BE IMMEDIATELY REPAIRED BY THE PERMITTEE IN A PERMANENT MANNER SATISFACTORY TO THE MUNICIPALITY, LOCAL CONSERVATION DISTRICT, AND THE OWNER OF THE DAMAGED PROPERTY.
- 42. UPON REQUEST, THE APPLICANT OR HIS CONTRACTOR SHALL PROVIDE AN AS-BUILT (RECORD DRAWING) FOR ANY SEDIMENT BASIN OR TRAP TO THE MUNICIPAL INSPECTOR, LOCAL CONSERVATION DISTRICT OR THE DEPARTMENT.
- 43. EROSION CONTROL BLANKETING SHALL BE INSTALLED ON ALL SLOPES 3H:1V OR STEEPER, WITHIN 50 FEET OF A SURFACE WATER, WITHIN 100 FEET OF A SPECIAL PROTECTION SURFACE WATER, AND ON ALL OTHER DISTURBED AREAS SPECIFIED ON THE PLAN MAPS AND OR DETAIL SHEETS.
- 44. FILL MATERIAL FOR EMBANKMENTS SHALL BE FREE OF ROOTS, OR OTHER WOODY VEGETATION, ORGANIC MATERIAL, LARGE STONES, AND OTHER OBJECTIONABLE MATERIALS. THE EMBANKMENT SHALL BE COMPACTED IN MAXIMUM 9 INCH LAYERED LIFTS AT 95% DENSITY.

GENERAL EROSION & SEDIMENT NOTES:

- INSPECT SNOW PLACEMENT AREAS DURING THE THAW CYCLE. INSTALL EROSION & SEDIMENT CONTROL BMPS DURING QUICK THAWS AND WHEN SNOW MELT RUNOFF IS CONCENTRATED OR IS CAUSING EROSION.
- 2. DISCHARGING SEDIMENT LADEN WATER WHICH WILL CAUSE OR CONTRIBUTE TO THE DEGRADATION OF A BENEFICIAL USE OF A WATER OF THE STATE FROM THE CONSTRUCTION SITE, A DEWATERING SITE, OR SEDIMENT BASIN/TRAP INTO ANY WATER BODY OR STORM DRAIN WITHOUT FILTRATION OR EQUIVALENT TREATMENT IS PROHIBITED.
- 3. DISCHARGES ORIGINATING FROM OFF-SITE SOURCES, WHICH FLOW THROUGH OR ACROSS THE AREAS DISTURBED BY CONSTRUCTION, SHALL BE DIVERTED AROUND THE ACTIVE CONSTRUCTION AREA WHENEVER POSSIBLE.

- 4. STAGING AREAS, ASSEMBLY AREAS, TEMPORARY EQUIPMENT AND NON-HAZARDOUS MATERIAL STORAGE AREAS SHALL BE LOCATED OUTSIDE THE 100-YR FLOOD ZONE. HAZARDOUS MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 100 FEET BACK FROM SURFACE WATER BODIES.
- 5. ALL EXCAVATED MATERIALS THAT WILL NOT BE USED ON THE SITE CANNOT BE IN THE FLOODPLAIN AND MUST BE HAULED TO A DISPOSAL SITE LOCATED OUTSIDE OF THE FLOODPLAIN.
- 6. CONSTRUCTION STAGING AREAS SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM THE EDGE OF A WETLAND.
- 7. MEASURES SHALL BE TAKEN TO PREVENT TRENCHES FROM DRAINING A WETLAND OR CHANGING ITS HYDROLOGY.
- 8. IT IS DESIRED THAT THE AMOUNT AND DURATION OF OPEN TRENCH BE MINIMIZED DURING THE PROJECT.
- 9. IF TOPSOIL PILES ARE EXPOSED FOR GREATER THAN 4 DAYS, THEY SHALL BE SEEDED WITH AN ANNUAL SEED MIXTURE AND MULCHED WITH STRAW.
- 10. NO EROSION CONTROL BLANKET SHALL BE INSTALLED IN AGRICULTURAL AREAS EXCEPT AS REQUIRED TO CONSTRUCT AT STREAM CROSSINGS.
- 11. HYDRAULICALLY APPLIED EROSION CONTROL BLANKETS MAY BE USE IN LIEU OF EROSION CONTROL BLANKETS WITH PRIOR APPROVAL FROM THE COUNTY CONSERVATION DISTRICT.
- 12. LOCATION AND SPACING OF THE WATERBARS ARE SHOWN ON THE PLAN. WATERBARS MAY BE ADJUSTED IN THE FIELD DUE TO ACTUAL SITE CONDITIONS. HOWEVER, INSTALLATION AND SPACING MUST CONFORM TO THE DETAILS PROVIDED AND APPROVAL MUST BE OBTAINED FROM FROM THE LOCAL CONSERVATION DISTRICT OR PA DEP.
- 13. SEDIMENT REMOVED FROM PUBLIC ROADS OR BMPS WILL BE REUSED ON SITE OR DISPOSED OF AT A SITE WITH AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE LOCAL CONSERVATION DISTRICT OR DEP.
- 14. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITIES WILL EXCEED 4 DAYS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED E&S PENDING FUTURE EARTH DISTURBANCE ACTIVITIES FOR AN EARTH DISTURBANCE ACTIVITY OR ANY STAGE OF AN ACTIVITY TO BE CONSIDERED TEMPORARILY STABILIZED, THE DISTURBED AREAS SHALL BE COVERED WITH ONE OF THE FOLLOWING: A MINIMUM UNIFORM COVERAGE OF MULCH AND SEED, WITH A DENSITY CAPABLE OF RESISTING ACCELERATED E&S, OR AN ACCEPTABLE BMP WHICH TEMPORARILY MINIMIZES ACCELERATED E&S. TEMPORARY STABILIZATION WILL NOT OCCUR ON ACTIVE VEHICULAR TRAVEL WAYS WITHIN THE ROW. THE ON-SITE ENVIRONMENTAL INSPECTOR WILL LOG ACTIVITY WITH THE PROJECT LIMITS OF DISTURBANCE AND NOTIFY THE CONTRACTOR OF AREAS REQUIRING TEMPORARY STABILIZATION.
- 15. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BMP TO MINIMIZE THE POTENTIAL FOR EROSION AND SEDIMENT POLLUTION AND NOTIFY THE LOCAL COUNTY CONSERVATION DISTRICT AND/OR PADEP.
- 16. MAINTAIN TEMPORARY SOIL STOCKPILES.
- 17. NO EARTH DISTURBANCE ACTIVITIES WITHIN 50 FEET OF STREAM SWALES WILL BE PERFORMED UNTIL MATERIALS NEEDED TO COMPLETE THE CROSSING ARE AT THE NEAREST AVAILABLE LOCATION.
- 18. THE CONTRACTOR IS REQUIRED TO PROVIDE CONTINUOUS MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES WITHIN DISTURBED AREAS.
- 19. FOLLOW THE CONTRUCTION/EROSION CONTROL IMPLEMENTATION PLAN AS OUTLINED ON THE DRAWINGS.
- 20. THE STAGING OF EARTHMOVING ACTIVITIES FOR THIS PROJECT IS A GENERAL DESCRIPTION OF THE WORK REQUIRED. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH PROJECT OWNER STANDARDS, THE PADEP REGULATIONS, AND ALL OTHER APPLICABLE FEDERAL STATE OR LOCAL REQUIREMENTS.
- 21. SCHEDULE WORK TO BE PERFORMED IN A MANNER THAT MINIMIZES THE LENGTH OF TIME THAT BARE SOIL WILL BE EXPOSED TO THE ELEMENTS.
- 22. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE, EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED, CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE IMPLEMENT EROSION CONTROL MEASURES AS SPECIFIED; HOWEVER, THE CONTRACTOR MAY INSERT ADDITIONAL CONSTRUCTION PHASES IN ORDER TO EXPEDITE HIS WORK WHILE MAINTAINING THE SAME LEVEL OF PROTECTION ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL COUNTY CONSERVATION DISTRICT. CONSTRUCTION MUST BE IN ACCORDANCE WITH THE SEQUENCE OF BMP INSTALLATION INDICATED ON SITE SPECIFIC DETAIL SHEETS. THIS SEQUENCE IS DESIGNED TO MINIMIZE SOIL EROSION AND SEDIMENTATION. THE CONTRACTOR MAY DEVIATE SLIGHTLY FROM THE STAGING OF PERMANENT SITE IMPROVEMENTS, BUT NO DEVIATION FROM THE RELATIVE ORDER OF EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE LOCAL COUNTY CONSERVATION DISTRICT OR PADEP.
- 23. THE FLOODWAY/FLOODPLAIN LINE SHOWN ON THE PLANS WAS DEVELOPED FROM AVAILABLE FEMA FLOODWAY MAPPING, FEMA FLOODPLAIN MAPPING, AND THE PA CHAPTER 105 FLOODWAY DEFINITION.
- 24. ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN PLAN APPROVED BY THE LOCAL COUNTY CONSERVATION DISTRICT OR DEP AND BE FULLY IMPLEMENTED PRIOR TO BEING ACTIVITIED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND TO DEVELOP A PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102, NPDES PERMIT CONDITIONS, AND/OR OTHER STATE AND FEDERAL REGULATIONS.
- 25. ALL COMPOST FILTER SOCK SHOWN AT ROAD CROSSINGS IS INTENDED FOR USE DURING RESTORATION ACTIVITIES.
- 26. PLACE SPOIL AT LEAST 10 FEET FROM THE EDGE OF WATERCOURSE. SPOIL WILL BE CONTAINED WITH EROSION AND SEDIMENT CONTROL BARRIERS (BMPs) TO PREVENT SPOIL MATERIALS OR HEAVILY SILT-LADEN WATER FROM TRANSFERRING INTO WATERCOURSES AND WETLANDS OR OFF CWA.
- 27. ANY RESTORATION ACTIVITIES WHICH ENTAIL A POST CONSTRUCTION CHANGE IN LAND USE SHALL BE EVALUATED FOR POST CONSTRUCTION STORMWATER IMPACTS, APPROVED BY PA DEP AND/OR THE APPROPRIATE CONSERVATION DISTRICT, AND MAY REQUIRE THE INSTALLATION OF PCSM BMPS TO MANAGE STORMWATER RATE, VOLUME AND WATER QUALITY IMPACTS.

ADDITIONAL COUNTY CONSERVATION DISTRICT NOTES:

- 1. STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET; STOCKPILE SLOPES MUST NOT EXCEED 2:1.
- 2. THE OPERATOR/RESPONSIBLE PERSON (O/RP) ON SITE SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
- 3. IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/ OR SEDIMENT POLLUTION, THE O/PR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES (BMPS) TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- 4. ALL PUMPING OF SEDIMENT-LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP SUCH AS A PUMPED WATER FILTER BAG DISCHARGES OVER AN UNDISTURBED AREA.
- 5. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.
- 6. EROSION AND SEDIMENT BMPS MUST BE CONSTRUCTED, STABILIZED AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPS.
- 7. AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING THE REMOVAL OF THE BMPS MUST BE STABILIZED IMMEDIATELY.
- DISTURBED AREAS THAT ARE AT A FINISHED GRADE OR WHICH WILL NOT BE RE-DISTURBED WITHIN ONE YEAR MUST BE STABILIZED IN ACCORDANCE WITH PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- SEDIMENT REMOVED FROM BMPS SHALL BE DISPOSED OF ON-SITE IN LANDSCAPED AREAS
 OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND
 IMMEDIATELY STABILIZED OR PLACED I SOIL STOCKPILES AND STABILIZED.
- 10. IN THE EVENT OF SINKHOLE DISCOVERY A PROFESSIONAL GEOLOGIST OR ENGINEER WILL BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, PADEP WILL BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.
- 11. THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
- 12. THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25 PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
- 13. THE E&S CONTROL PLAN MAPPING MUST DISPLAY A PA ONE CALL SYSTEM INCORPORATED SYMBOL INCLUDING THE SITE IDENTIFICATION NUMBER. (THIS IS A NUMBERED SYMBOL NOT A
- 14. AT STREAM CROSSINGS, 50' BUFFER AREAS SHOULD BE MAINTAINED. ON BUFFERS, CLEARING, SOD DISTURBANCES, EXCAVATION AND EQUIPMENT TRAFFIC SHOULD BE MINIMIZED. ACTIVITIES SUCH AS STACKING LOGS, BURNING CLEARED BRUSH, DISCHARGING RAINWATER FROM TRENCHES, WELDING PIPE SECTIONS, REFUELING AND MAINTAINING EQUIPMENT SHOULD BE ACCOMPLISHED OUTSIDE OF BUFFERS.
- 15. ALL WETLANDS MUST BE DELINEATED AND PROTECTED WITH ORANGE SAFETY FENCE PRIOR TO ANY EARTHMOVING ACTIVITY.
- 16. STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.

NOTICES TO CONTRACTOR:

- 1. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO WORK.
- THE CONTRACTOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
- 3. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE COORDINATED WITH THE AGENCY HAVING JURISDICTION.
- 4. FURNISH & INSTALL SWALES WHENEVER CONCENTRATED FLOWS HAVE THE POTENTIAL TO RUN ONTO OR THROUGH THE CONSTRUCTION AREA. DIRECT THE SWALE DISCHARGE TO A RIPRAP ENERGY DISSIPATER AND VEGETATED AREA.
- 5. THE CONTRACTORS SHALL BE ADDED AS CO-PERMITEES TO THE ESCGP PERMIT.
- CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SOIL EROSION AND SEDIMENT CONTROL NARRATIVE AND ENVIRONMENTAL CONSTRUCTION PLAN.
- 7. CONTRACTOR SHALL MINIMIZE THE TOTAL AREA OF DISTURBANCE.
- CONTRACTOR SHALL INSTALL SEED MIXTURE AS DIRECTED BY PENNEAST. SEED MIXTURE USE WILL VARY ACCORDING TO PROJECT, LANDOWNER REQUEST AND ENVIRONMENTAL REQUIREMENTS.
- 9. ONCE ANY EROSION CONTROL MEASURES ARE INSTALLED, THE MAINTENANCE AND INSPECTION PROCEDURES SHALL BEGIN. THE CONTRACTOR SHOULD BE AWARE THAT THE INSPECTION FORMS BECOME AN INTEGRAL PART ESCP AND SHALL BE MADE READILY AVAILABLE TO THE GOVERNMENT INSPECTION OFFICIALS. THE PROJECT OWNER'S ENGINEER, AND THE PROJECT OWNER FOR REVIEW UPON REQUEST DURING VISITS TO THE PROJECT SITE.





PENNEAST PIPELINE PROJECT

SOIL EROSION AND SEDIMENTATION CONTROL PLAN

E & S GENERAL NOTES

SCALE DRAWING NO. REVISION
AS SHOWN 000-01-01-003A B



ENVIRONMENTAL NOTES

PENNEAST'S ENVIRONMENTAL INSPECTOR(S) SHALL BE RESPONSIBLE FOR:

- INSPECTING CONSTRUCTION ACTIVITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THIS E&SCP, THE CONSTRUCTION DRAWINGS, THE ENVIRONMENTAL CONDITIONS OF THE FERC'S ORDERS (IF APPLICABLE), PROPOSED MITIGATION MEASURES, OTHER FEDERAL OR STATE ENVIRONMENTAL PERMITS AND APPROVALS, AND ENVIRONMENTAL REQUIREMENTS IN LANDOWNER EASEMENT AGREEMENTS.
- 2. IDENTIFYING, DOCUMENTING, AND OVERSEEING CORRECTIVE ACTIONS, AS NECESSARY TO BRING AN ACTIVITY BACK INTO COMPLIANCE.
- 3. VERIFYING THAT THE LIMITS OF AUTHORIZED CONSTRUCTION WORK AREAS AND LOCATIONS OF ACCESS ROADS ARE VISIBLY MARKED BEFORE CLEARING, AND MAINTAINED THROUGHOUT CONSTRUCTION.
- 4. VERIFYING THE LOCATION OF SIGNS AND HIGHLY VISIBLE FLAGGING MARKING THE BOUNDARIES OF SENSITIVE RESOURCE AREAS, WATERCOURSES, WETLANDS, OR AREAS WITH SPECIAL REQUIREMENTS ALONG THE CONSTRUCTION WORK AREA.
- 5. IDENTIFYING EROSION/SEDIMENT CONTROL AND STABILIZATION NEEDS IN ALL AREAS.
- 6. VERIFYING THAT THE LOCATION DESIGN OF WATERBARS WILL NOT CAUSE EROSION OR DIRECT WATER INTO SENSITIVE ENVIRONMENTAL RESOURCE AREAS, INCLUDING CULTURAL RESOURCES SITES, WETLANDS, WATERCOURSES, AND SENSITIVE SPECIES HABITAT.
- 7. VERIFYING THAT DEWATERING ACTIVITIES ARE PROPERLY MONITORED AND DO NOT RESULT IN THE DEPOSITION OF SAND, SILT, AND/OR SEDIMENT INTO A SENSITIVE ENVIRONMENTAL RESOURCE AREAS, INCLUDING WETLAND OR WATERCOURSE, CULTURAL RESOURCE SITES, AND SENSITIVE SPECIES HABITATS; STOPPING DEWATERING ACTIVITIES IF SUCH DEPOSITION IS OCCURRING AND CHECKING THAT THE DESIGN OF THE DISCHARGE IS CHANGED TO PREVENT REOCCURRENCE; AND VERIFYING THAT DEWATERING STRUCTURES ARE REMOVED AFTER COMPLETION OF DEWATERING ACTIVITIES.
- 8. VERIFYING THAT SUBSOIL AND TOPSOIL ARE TESTED IN AGRICULTURAL AREAS TO MEASURE COMPACTION AND DETERMINE THE NEED FOR CORRECTIVE ACTION.
- 9. ADVISING THE CHIEF INSPECTOR WHEN ENVIRONMENTAL CONDITIONS (SUCH AS WET WEATHER OR FROZEN SOIL) MAKE IT ADVISABLE TO RESTRICT OR DELAY CONSTRUCTION ACTIVITIES TO AVOID TOPSOIL MIXING OR EXCESSIVE COMPACTION.
- 10. CHECKING RESTORATION OF CONTOURS AND TOPSOIL.
- 11. VERIFYING THAT THE SOILS IMPORTED FOR AGRICULTURAL OR RESIDENTIAL USE HAVE BEEN CERTIFIED AS FREE OF NOXIOUS WEEDS AND SOIL PESTS, UNLESS OTHERWISE APPROVED BY THE LANDOWNER.
- 12. VERIFYING THAT EROSION CONTROLS ARE PROPERLY INSTALLED TO PREVENT SEDIMENT FLOW INTO ENVIRONMENTAL RESOURCE (E.G., WETLANDS, WATERCOURSES, CULTURAL RESOURCE SITES, AND SENSITIVE SPECIES HABITATS) AND ONTO ROADS AND DETERMINING THE NEED FOR ADDITIONAL EROSION CONTROL DEVICES.
- 13.INSPECTING TEMPORARY EROSION CONTROL MEASURES AT LEAST:
- a) ON A DAILY BASIS IN AREAS OF ACTIVE CONSTRUCTION OR EQUIPMENT OPERATION; b) ON A WEEKLY BASIS IN AREAS WITH NO CONSTRUCTION OR EQUIPMENT OPERATION; AND c) WITHIN 24 HOURS OF EACH 0.5 INCH OF RAINFALL.
- NOTE: THIS RESPONSIBILITY MAY BE TRANSFERRED TO FIELD OPERATIONS AFTER CONSTRUCTION IS COMPLETE BUT BEFORE RESTORATION IS SUCCESSFUL.
- 14. CHECKING THE REPAIR OF ALL INEFFECTIVE TEMPORARY EROSION AND CONTROL MEASURES WITHIN 24 HOURS OF IDENTIFICATION, OR AS SOON AS CONDITIONS ALLOW IF COMPLIANCE WITH THIS TIMEFRAME WOULD RESULT IN GREATER ENVIRONMENTAL IMPACTS.
- 15.IDENTIFYING AREAS THAT SHOULD BE GIVEN SPECIAL ATTENTION TO VERIFY STABILIZATION AND RESTORATION AFTER THE CONSTRUCTION PHASE.
- 16. VERIFYING THAT THE CONTRACTOR IMPLEMENTS AND COMPLIES WITH PENNEAST'S

PREPAREDNESS, PREVENTION, AND CONTINGENCY (PPC) PLAN.

- 17.KEEPING RECORDS OF COMPLIANCE WITH THE ENVIRONMENTAL CONDITIONS OF THE FERC'S ORDERS, PROPOSED MITIGATION MEASURES, AND OTHER FEDERAL OR STATE ENVIRONMENTAL PERMITS DURING ACTIVE CONSTRUCTION AND RESTORATION.
- 18. VERIFYING THAT LOCATIONS FOR ANY DISPOSAL OF EXCESS CONSTRUCTION MATERIALS FOR BENEFICIAL REUSE.
- 19. TAKING NEW PRE-CONSTRUCTION PHOTOS AT EACH OF THE CROSSING AREAS DEPICTING THE EXISTING CONDITIONS. PREPARING AND MAINTAINING RECORD OF PRE- AND POST-CONSTRUCTION CONDITIONS OF EACH STREAM CROSSING.
- THE INDIVIDUAL(S) RESPONSIBLE FOR POST-STORM AND STORM EVENT BMP INSPECTIONS, AND THE QUALIFIED PERSON(S) ASSIGNED RESPONSIBILITY TO ENSURE FULL COMPLIANCE WITH THE PERMIT AND IMPLEMENTATION OF ALL ELEMENTS OF THE ESCP, INCLUDING THE PREPARATION OF THE ANNUAL COMPLIANCE EVALUATION AND THE ELIMINATION OF ALL UNAUTHORIZED DISCHARGES ARE:

NAME:	
	_EMERGENCY PHONE #:
COMPANY:	
NAME:	
PHONE NUMBER:	_EMERGENCY PHONE #:
COMPANY:	
RESPONSIBILITIES:	

MAINTENANCE PROGRAM

THE FOLLOWING INSPECTION AND MAINTENANCE PRACTICES WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS AND STABILIZATION MEASURES. REFER TO BMP DETAILS FOR SPECIFIC OPERATION AND MAINTENANCE REQUIREMENTS.

- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED ONCE EVERY SEVEN DAYS AND AFTER EACH RUNOFF EVENT. A WRITTEN REPORT MUST ALSO BE COMPLETED DOCUMENTING EACH INSPECTION AND, IF NECESSARY, ANY REPAIR, REPLACEMENT OR MAINTENANCE ACTIVITY.
- 2. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF REPAIRS OR ADDITIONAL MEASURES ARE FOUND TO BE NECESSARY, THEY WILL BE INITIATED WITHIN 24 HOURS OF THE INSPECTION REPORT.
- 3. BUILT UP SEDIMENT WILL BE REMOVED FROM PERIMETER BMPS WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE BMP.
- 4. PERIMETER BMPS WILL BE INSPECTED FOR DEPTH OF SEDIMENT, DAMAGE, ETC., TO ENSURE THE MEASURE IS IN PROPER WORKING ORDER, AND THAT ANY POSTS/WOOD STAKES ARE SECURELY IN THE GROUND.
- 5. TEMPORARY SEDIMENT TRAPS, IF PRESENT, WILL BE INSPECTED FOR DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES THE DESIGN CLEANOUT DEPTH
- 6. TEMPORARY AND PERMANENT SEEDING, AND OTHER STABILIZATION MEASURES, WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
- 7. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. COPIES OF THE REPORT FORMS TO BE COMPLETED BY THE INSPECTOR ARE INCLUDED IN THIS ESCP.
- 8. THE INSPECTOR WILL IMPLEMENT INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS THAT ARE USED ON THE SITE IN GOOD WORKING ORDER. THE INSPECTOR WILL ALSO BE TRAINED IN THE COMPLETION OF, INITIATION OF ACTIONS REQUIRED BY, AND THE FILING OF THE INSPECTION FORMS.
- 9. DISTURBED AREAS AND MATERIALS STORAGE AREAS WILL BE INSPECTED FOR EVIDENCE OF OR POTENTIAL FOR POLLUTANTS ENTERING THE STORMWATER.

SUMMARY MAINTENANCE SCHEDULE FOR TEMPORARY BMPS:

ACTIVITY	FREQUENCY
Clean Water Diversions	
Maintain channel dimensions	Constantly
Inspect trench inlets and check watersheds for erosion.	Weekly and after each runoff event
Repair as needed.	,
Check channel linings for damage and repair or replace	Weekly and after each runoff event
lining within 48 hours of discovery.	
Remove accumulated sediment from channel	When total channel depth is reduced by 25%
Remove trash and debris	Monthly / as needed.
Level Spreader	
Maintain good condition at all times	Weekly and after each runoff event
Culverts	,
Inspect culverts and remove accumulated debris	Weekly and after each runoff event
immediately	Weekly and after each fullon event
Remove accumulated sediment and accumulated	Every spring and fall and after stormwater events over
organic matter	1-inch of rainfall
Inspect culvert inlet and sediment control barriers,	Weekly and after each runoff event
clean and replace as needed.	·
Inspect riprap aprons. Replace displaced riprap within	Weekly and after each runoff event
the apron immediately.	
Rock Construction Entrance	
Inspect rock construction entrance	Weekly and after each runoff event
Add rock to maintain specified dimensions and	As needed
capacity to remove sediment from the tires	
Remove sediment deposited on paved roadways and	Immediately, as needed
return to the construction site	
Broad-based Dips	
Inspect broad-based dips. Repair damaged or non-	Daily
functioning dips as needed.	
Inlet Filter Bags	
Inspect inlet filter bags and make necessary repairs	Weekly and after each runoff event
immediately after the inspection Clean or replace the filter bag	When bag is 1/2 full or flow capacity has been reduce
Creation reprace the litter bag	so as to cause flooding or bypassing of inlet
Pumped Water Filter Bag	30 d3 to cause mooding of bypassing of finet
Inspect filter bag. Cease pumping if any problem is	Daily
detected.	Daily
Replace filter bag	When filter bag becomes 1/2 full of sediment or fails
Sediment Barriers	
Inspect sediment barriers. Repair according to	Weekly and after each runoff event
manufacturer's specifications or replace within 24	
Remove accumulated sediment	When accumulations reach half the aboveground
	height of the compost filter sock or silt fence
Install a rock filter outlet where a sediment barrier	As needed
fails due to unanticipated concentrated flow	
Damassa a accomplished and mont from real filter authors	When accumulations reach 1/3 of the height of the
Remove accumulated sediment from rock filter outlets	outlet
Waterbars	
Waterbars Inspect waterbars. Repair waterbars and remove	Weekly and after each runoff event
Waterbars Inspect waterbars. Repair waterbars and remove debris and obstructions from channels as needed.	
Waterbars Inspect waterbars. Repair waterbars and remove debris and obstructions from channels as needed. Hydrostatic Dewatering Structure	Weekly and after each runoff event
Waterbars Inspect waterbars. Repair waterbars and remove debris and obstructions from channels as needed.	
Waterbars Inspect waterbars. Repair waterbars and remove debris and obstructions from channels as needed. Hydrostatic Dewatering Structure	Weekly and after each runoff event

Immediately, as needed

Replace damaged or deteriorated bales

TEMPORARY AND PERMANENT STABILIZATION

TEMPORARY STABILIZATION

- A. CESSATION OF ACTIVITY FOR 4 DAYS OR LONGER REQUIRES TEMPORARY STABILIZATION. TEMPORARY SEEDING WITH STRAW MULCH COVER FOR INTERIM STABILIZATION IS A TYPE OF BMP THAT CAN USUALLY BE PROVIDED FOR TEMPORARY STABILIZATION UNLESS DIRECTED BY THE PROJECT OWNER, PADEP, OR CONSERVATION DISTRICT.
- B. THE INSTALLATION OF AN EROSION CONTROL BLANKET OR APPLICATION OF STRAW MULCH UPON SEEDBED CAN BE UTILIZED TO PROTECT THE SEEDBED UNTIL VEGETATION IS ESTABLISHED. EROSION CONTROL BLANKETS ARE RECOMMENDED IN AREAS OF STEEP SLOPES OR CONCENTRATED FLOW.
- 2. PERMANENT STABILIZATION
- A. UPON COMPLETION OF ANY EARTH DISTURBANCE ACTIVITY, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION.
- B. EROSION & SEDIMENTATION CONTROLS SHALL BE LEFT IN PLACE UNTIL SUCH TIME AS THE DISTURBED AREAS HAVE PERMANENT STABILIZATION. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON--VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.
- C. WHEN EROSION & SEDIMENTATION CONTROLS ARE TO BE REMOVED IN AGRICULTURAL NON--SENSITIVE AREAS (STREAMS/WETLANDS), AGRICULTURAL LANDOWNERS SHALL MAINTAIN AGRICULTURAL BMPS PER PADEP REGULATIONS.
- 3. STABILIZATION DURING NON-GROWING SEASONS
- A. WHEN UTILITY CONSTRUCTION MUST BE DONE AND IS COMPLETED DURING A NON--GROWING SEASON. INTERIM STABILIZATION BMPS MUST BE IMPLEMENTED AND ADEQUATELY MAINTAINED. THE APPLICATION OF STRAW MULCH AT THE RATE OF 3.0 TONS PER ACRE IS REQUIRED. THE BMPS SHOULD BE INSPECTED WEEKLY (UNLESS SNOW COVERED) AND AFTER EACH RUNOFF EVENT TO IDENTIFY AREAS THAT BECOME BARE.
- B. BARE AREAS SHOULD BE COVERED WITH A PROPERLY INSTALLED EROSION CONTROL BLANKET. ALL TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROLS MUST BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
- 4. WHERE REQUIRED. STRAW MULCH MUST BE APPLIED AT A MINIMUM OF 3.0 TONS PER ACRE.
- 5. STRAIN MULCH SHALL BE APPLIED IN LONG STRANDS. NOT FINELY CHOPPED OR BROKEN.
- 6. LIME AND FERTILIZER MAY BE APPLIED WHERE APPROPRIATE IN RESIDENTIAL AND AGRICULTURAL AREAS. NO LIME OR FERTILIZERS SHALL BE USED IN WETLAND AREAS.
- 7. LIME, FERTILIZED, SEED, AND MULCH DISTURBED AREAS PER THE EROSION AND SEDIMENT CONTROL PLANS. IN AREAS OF STEEP SLOPES OR OBVIOUS AREAS WHERE POTENTIAL EROSION MAY OCCUR, AND EROSION CONTROL MAT OR FLEXIBLE GROWTH MEDIUM (FGM) SHALL BE USED. FGM SHALL BE APPLIED PER MANUFACTURER SPECIFICATIONS. NO LIME OR FERTILIZERS SHALL BE USED IN WETLAND OR STREAM AREAS.
- 8. WATERBARS WITHIN AGRICULTURAL OR RESIDENTIAL AREAS SHALL BE USED AS TEMPORARY FEATURES. WATERBARS MAY BE REMOVED AS PART OF FINAL SITE GRADING. SEEDING IS NOT REQUIRED IN CULTIVATED CROPLANDS UNLESS REQUESTED BY THE LANDOWNER. TEMPORARY STABILIZATION MAY BE REQUIRED ON CULTIVATED CROPLANDS WITHIN THE RIGHT-OF-WAY SHOULD CONSTRUCTION CEASE FOR 4 CONSECUTIVE DAYS OR LONGER. IN SUCH INSTANCES, MULCH MAY BE USED AS AN ACCEPTABLE TEMPORARY STABILIZATION METHOD.

EXISTING CONDITION NOTES:

- 1. THE CONTOURS AND IMAGERY SHOWN WERE PROVIDED BY PICTOMETRY, 2015. ADDITIONAL CONTOURS AND IMAGERY SUPPLEMENTED FROM PASDA AND USGS
- 2. NORTH ARROW AND COORDINATES ARE BASED UPON UNIVERSAL TRANSVERSE MERCATOR WITH NORTH AMERICAN DATUM OF 1983, ZONE 18, U.S. FOOT, CENTRAL MERIDIAN 75' WEST (LITM83-18F)
- 3. ELEVATIONS ARE BASED UPON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- 4. WETLAND AND WATERBODY DELINEATIONS ARE BASED ON ENVIRONMENTAL SURVEY DATA PROVIDED BY AECOM AND LIMITED TO THE AREAS WITHIN OR IN CLOSE PROXIMITY TO THE ACCESS ROADS CORRIDORS, PROPOSED FACILITIES, AND PIPELINES.
- 5. APPROXIMATE PROPERTY LINES ARE BASED ON GIS TAX MAP DATA AND/OR FIELD LOCATED PROPERTY EVIDENCE AND ARE DEPICTED FOR GENERAL INFORMATION ONLY.
- LAND OWNER IDENTIFICATION IS BASED ON INFORMATION PROVIDED BY PENNEAST AND IS FOR GENERAL INFORMATION ONLY.
- 7. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY PENNEAST AND ITS ENGINEER OF ANY CONDITIONS THAT VARY FROM WHAT IS DEPICTED ON THIS PLAN.

AGRICULTURAL / RESIDENTIAL RESTORATION NOTES:

- GRAZING DEFERMENT PLANS WILL BE COORDINATED WITH LANDOWNERS TO MINIMIZE GRAZING DISTURBANCE OF REVEGETATED AREAS TO THE EXTENT PRACTICABLE.
- 2. THE MIXING OF TOPSOIL WITH SUBSOIL SHALL BE PREVENTED BY STRIPPING TOPSOIL FROM THE WORK AREA WITHIN DESIGNATED AREAS AND IN COORDINATION WITH THE APPLICABLE ACCESS AGREEMENTS.
- 3. SPECIAL RESTORATION CONDITIONS MAY BE COORDINATED WITH THE LANDOWNERS FOR AGRICULTURAL FIELDS, WHICH SHALL TAKE PRECEDENCE TO THE PROPOSED STABILIZATION PROCEDURES, ONLY IF THE SPECIAL CONDITIONS MEET THE MINIMUM REQUIREMENTS OF PADEP AND FERC.
- 4. PER PA CHAPTER102 REGULATIONS, ALL FARMS ARE REQUIRED TO DEVELOP AND IMPLEMENT A WRITTEN PLAN TO REDUCE EROSION WHEN PLOWING AND TILLING (INCLUDES NO-TILL CROPPING).
- 5. AGRICULTURAL AREAS WITHIN 100-FT OF A STREAM MUST MAINTAIN A MINIMUM OF 25% PLANT COVER OR CROP RESIDUE
- 6. ADDITIONAL BMP'S MAY BE NEEDED TO MINIMIZE ACCELERATED EROSION AND SEDIMENTATION FOR AGRICULTURAL FIELDS WITH LESS THAN 25% PLANT COVER OR CROP RESIDUE COVER AND WITHIN 100-FT OF A RIVER OR PERENNIAL OR INTERMITTENT STREAM.

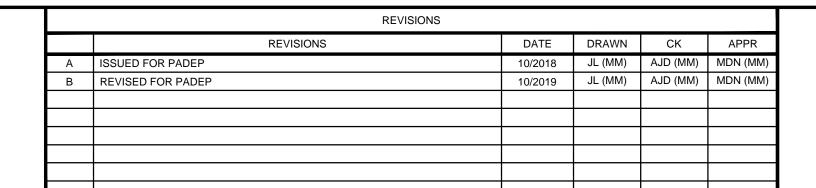
THERMAL IMPACT ANALYSIS:

IN ORDER TO AVOID THERMAL IMPACTS, THE LIMIT OF DISTURBANCE WITHIN THE PIPELINE RIGHT-OF-WAY HAS BEEN MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE. ADDITIONALLY, ALL DISTURBED AREA WILL BE RESTORED TO AN EXISTING, VEGETATIVE CONDITION FOLLOWING CONSTRUCTION.

THE FOLLOWING PROVISIONS RELATED TO THERMAL IMPACTS ARE INCLUDED IN THE E&S PLAN:

- THE MINIMUM PERMANENT CHANGES IN LAND COVER, NECESSARY TO CONSTRUCT THE REQUIRED FACILITIES ARE BEING PROPOSED.
- THE REMOVAL OF VEGETATION, ESPECIALLY TREE COVER, WILL BE LIMITED TO ONLY THAT NECESSARY FOR CONSTRUCTION.
- THE IMPACTS TO EXISTING RIPARIAN CORRIDORS WILL BE LIMITED TO ONLY THAT NECESSARY FOR CONSTRUCTION.
- THE AMOUNT OF IMPERVIOUS SURFACES WILL BE LIMITED TO ONLY THAT NECESSARY TO SUPPORT THE CONSTRUCTION OF THE PIPELINE AND/OR OPERATION OF THE PIPELINE.
- ALL DISTURBED AREAS WILL BE RESTORED TO AN EXISTING, VEGETATIVE CONDITION
 FOLLOWING CONSTRUCTION AND IN ACCORDANCE WITH CHAPTER 102 AND ESCGP PERMIT
 REQUIREMENTS FOR LINEAR OIL AND GAS PROJECTS.







PENNEAST PIPELINE PROJECT

SOIL EROSION AND SEDIMENTATION CONTROL PLAN

E & S GENERAL NOTES

 SCALE
 DRAWING NO.
 REVISION

 AS SHOWN
 000-01-01-003B
 B



SEEDING & VEGETATIVE TABLES

STANDARD UPLAND ROW MIX^{1,2,3}

MIX COMPOSITION 20% ORCHARDGRASS 20% CLIMAX TIMOTHY 15% PERENNIAL RYEGRASS 10% ANNUAL RYEGRASS 10% RED FESCUE 10% MEDIUM RED CLOVER 10% LADINO CLOVER 5% BIRDSFOOT TREFOIL

SEEDING RATE: 40 LB PER ACRE OR AS RECOMMENDED BY SEED VENDOR

- 1. AN ALTERNATIVE SEED MIXTURE MAY BE REQUESTED BY THE LANDOWNER(S).
- 2. FESCUE MUST BE ENDOPHYTE-FREE.
- 3. LEGUMES SHOULD BE TREATED WITH A SPECIES SPECIFIC INOCULATE PRIOR TO SEEDING. LEGUME SEED AND SOIL SHOULD BE SCARIFIED.

RESIDENTIAL MIX^{1,2}

MIX COMPOSITION

33% PENLAWN CREEPING RED FESCUE 25% 98/85 KENTUCKY BLUEGRASS 14% FIJI PERENNIAL RYEGRASS

14% ASP0112 PERENNIAL RYEGRASS 14% ASP6004 PERENNIAL RYEGRASS

SEEDING RATE: 40 LB PER ACRE OR AS RECOMMENDED BY SEED VENDOR

1. AN ALTERNATIVE SEED MIXTURE MAY BE REQUESTED BY THE LANDOWNER(S). 2. FESCUE MUST BE ENDOPHYTE-FREE.

CLOVER/FOOD PLOT WITH ROW MIX^{1,2,3}

MIX COMPOSITION

- 10% STANDARD ROW MIX (FOR SOIL STABILIZATION)
- 30% MEDIUM RED CLOVER
- 33% LADINO CLOVER 20% PINNACLE (JUMBO) LADINO CLOVER
- 7% WHITE DUTCH CLOVER

SEEDING RATE: 40 LB PER ACRE OR AS RECOMMENDED BY SEED VENDOR

- 1. AN ALTERNATIVE SEED MIXTURE MAY BE REQUESTED BY THE LANDOWNER(S).
- 2. FESCUE MUST BE ENDOPHYTE-FREE. 3. LEGUMES SHOULD BE TREATED WITH A SPECIES SPECIFIC INOCULATE PRIOR TO SEEDING. LEGUME SEED AND SOIL SHOULD BE SCARIFIED.

WETLAND SEED MIX (ERNMX-122 FACW MEADOW MIX)1,2,3,4

AVAILABLE FROM ERNST SEEDS AT HTTP://WWW.ERNSTSEED.COM/CATALOG/

MIX COMPOSITION
32.7% CAREX VULPINOIDEA, PA ECOTYPE (FOX SEDGE, PA ECOTYPE)
20.0% <i>ELYMUS RIPARIUS, PA ECOTYPE</i> (RIVERBANK WILDRYE, PA ECOTYPE)
17.0% CAREX LURIDA, PA ECOTYPE (LURID (SHALLOW) SEDGE, PA ECOTYPE)
7.9% CAREX LUPULINA, PA ECOTYPE (HOP SEDGE, PA ECOTYPE)
4.0% <i>VERBENA HASTATA, PA ECOTYPE</i> (BLUE VERVAIN, PA ECOTYPE)
3.0% CAREX SCOPARIA, PA ECOTYPE (BLUNT BROOM SEDGE, PA ECOTYPE)
2.5% JUNCUS EFFUSUS (SOFT RUSH)
2.0% CINNA ARUNDINACEA, PA ECOTYPE (WOOD REEDGRASS, PA ECOTYPE)
1.0% ASCLEPIAS INCARNATA, PA ECOTYPE (SWAMP MILKWEED, PA ECOTYPE)
1.0% ASTER NOVAE-ANGLIAE (SYMPHYOTRICHUM N.), PA ECOTYPE (NEW ENGLAND ASTER, PA ECOTYPE)
1.0% GLYCERIA CANADENSIS, PA ECOTYPE (RATTLESNAKE GRASS, PA ECOTYPE)
1.0% ONOCLEA SENSIBILIS (SENSITIVE FERN)
1.0% SCIRPUS CYPERINUS, PA ECOTYPE (WOOLGRASS, PA ECOTYPE)
0.8% HELENIUM AUTUMNALE, PA ECOTYPE (COMMON SNEEZEWEED, PA ECOTYPE)
0.5% <i>ALISMA SUBCORDATUM (A. PLANTAGO-AQUATICA), PA ECOTYPE</i> (MUD PLANTAIN (WATER PLANTAIN), PA
ECOTYPE)
0.5% ASTER PUNICEUS (SYMPHYOTRICHUM PUNICEUM), PA ECOTYPE (PURPLESTEM ASTER, PA ECOTYPE)
0.5% ASTER UMBELLATUS (DOELLINGERIA UMBELLATA), PA ECOTYPE (FLAT TOPPED WHITE ASTER, PA ECOTYPE)
0.5% EUPATORIUM FISTULOSUM, PA ECOTYPE (JOE PYE WEED, PA ECOTYPE)
0.5% EUPATORIUM PERFOLIATUM, PA ECOTYPE (BONESET, PA ECOTYPE)
0.5% JUNCUS TENUIS, PA ECOTYPE (PATH RUSH, PA ECOTYPE)
0.5% LUDWIGIA ALTERNIFOLIA, PA ECOTYPE (SEEDBOX, PA ECOTYPE)
0.5% MIMULUS RINGENS, PA ECOTYPE (SQUARE STEMMED MONKEYFLOWER, PA ECOTYPE)
0.5% SISYRINCHIUM ANGUSTIFOLIUM (NARROWLEAF BLUE EYED GRASS)

0.2% CHELONE GLABRA, PA ECOTYPE (TURTLEHEAD, PA ECOTYPE) SEEDING RATE: 20 LB PER ACRE, OR 1/2 LB PER 1,000 SQ FT

- 1. THIS WETLAND SEED MIX IS TO BE USED TO REVEGETATE WORKSPACE WITHIN WETLANDS, LIMITS OF WHICH
- ARE SHOWN ON THE E&SCP DRAWINGS 2. AN ALTERNATIVE SEED MIXTURE MAY BE REQUESTED BY THE LANDOWNER(S).
- 3. AN ALTERNATIVE CONSERVATION WETLAND SEED MIXTURE THAT CONTAINS SIMILAR SPECIES IS ACCEPTABLE. IF AN ALTERNATIVE SEED MIX IS USED, FOLLOW MANUFACTURER'S SEED RATE
- 4. CHANGES TO THE SPECIFIED SEED MIXES ARE SUBJECT TO APPROVAL BY PA DEP AND/OR THE LOCAL

0.4% CAREX INTUMESCENS, PA ECOTYPE (BLADDER (STAR) SEDGE, PA ECOTYPE)

RIPARIAN BUFFER MIX (ERNMX-178) 1,2,3,4 AVAILABLE FROM ERNST SEEDS AT HTTP://WWW.ERNSTSEED.COM/CATALOG/

AVAILABLE I ROW ERNOT SEEDS AT ITTE J/WWW.ERNOTSEED.COM/CATALOG/
MIX COMPOSITION
30.0% PANICUM CLANDESTINUM (DICHANTHELIUM C.), 'TIOGA' (DEERTONGUE, 'TIOGA')
16.0% SORGHASTRUM NUTANS, PA ECOTYPE (INDIANGRASS, PA ECOTYPE)
15.0% ELYMUS RIPARIUS, PA ECOTYPE (RIVERBANK WILDRYE, PA ECOTYPE)
11.0% ANDROPOGON GERARDII, 'NIAGARA' (BIG BLUESTEM, 'NIAGARA')
8.0% PANICUM VIRGATUM, 'CARTHAGE', NC ECOTYPE (SWITCHGRASS, 'CARTHAGE', NC ECOTYPE)
3.0% CHAMAECRISTA FASCICULATA (CASSIA F.), PA ECOTYPE (PARTRIDGE PEA, PA ECOTYPE)
3.0% RUDBECKIA HIRTA, COASTAL PLAIN NC ECOTYPE (BLACKEYED SUSAN, COASTAL PLAIN NC ECOTYPE)
3.0% VERBENA HASTATA, PA ECOTYPE (BLUE VERVAIN, PA ECOTYPE)
2.0% ASTER NOVAE-ANGLIAE (SYMPHYOTRICHUM N.), PA ECOTYPE (NEW ENGLAND ASTER, PA ECOTYPE)
2.0% JUNCUS EFFUSUS (SOFT RUSH) 2.0% JUNCUS TENUIS, PA ECOTYPE (PATH RUSH, PA ECOTYPE)
1.2% ASCLEPIAS INCARNATA, PA ECOTYPE (SWAMP MILKWEED, PA ECOTYPE)
1.2% ASCELPIAS INCARNATA, PA ECOTYPE (SWAMP MIERWELD, PA ECOTYPE)
0.8% EUPATORIUM PERFOLIATUM, PA ECOTYPE (BONESET, PA ECOTYPE)
0.8% VERNONIA NOVEBORACENSIS, PA ECOTYPE (NEW YORK IRONWEED, PA ECOTYPE)
0.7% HELENIUM AUTUMNALE. NORTHERN VA ECOTYPE (COMMON SNEEZEWEED. NORTHERN VA ECOTYPE)
0.5% MONARDA FISTULOSA, FORT INDIANTOWN GAP-PA ECOTYPE (WILD BERGAMOT, FORT INDIANTOWN GAP-PA ECOTYPE)
0.2% SOLIDAGO PATULA, PA ECOTYPE (ROUGHLEAF GOLDENROD, PA ECOTYPE)
SEEDING RATE: 20 LB PER ACRE WITH A COVER CROP AT 30 LB PER ACRE (DRY SITES - GRAIN OATS, JAN 1-AUG 1; OR,

- GRAIN RYE, AUG 1-JAN 1; MOIST SITES GRAIN RYE YEAR-ROUND) 1. THIS RIPARIAN BUFFER SEED MIX IS TO BE USED TO REVEGETATE WORKSPACE WITHIN 150-FEET OF PERENNIAL AND INTERMITTENT STREAMS, WHERE SLOPES ARE LESS THAN 10%. IF THE SLOPE EXCEEDS 10% IN A RIPARIAN BUFFER,
- THE STANDARD UPLAND ROW MIX SHOULD BE USED. 2. AN ALTERNATIVE SEED MIXTURE MAY BE REQUESTED BY THE LANDOWNER(S).
- 3. AN ALTERNATIVE CONSERVATION RIPARIAN SEED MIXTURE THAT CONTAINS SIMILAR SPECIES IS ACCEPTABLE. IF AN
- 4. CHANGES TO THE SPECIFIED SEED MIXES ARE SUBJECT TO APPROVAL BY PA DEP AND/OR THE LOCAL CONSERVATION
- ALTERNATIVE SEED MIX IS USED, FOLLOW MANUFACTURER'S SEED RATE RECOMMENDATIONS.

TABLE 11.2 Soil Amendment Application Rate Equivalents

	Permanent Seeding Application Rate			
Soil Amendment	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	Notes
Agricultural lime	6 tons	240 lb.	2,480 lb.	Or as per soil test; may not be required in agricultural fields
10-10-20 fertilizer	1,000 lb.	25 lb.	210 lb.	Or as per soil test; may not be required in agricultural fields
	Tempe	orary Seeding Appl	ication Rate	
Agricultural lime	1 ton	40 lb.	410 lb.	Typically not required for topsoil stockpiles
10-10-10 fertilizer	500 lb.	12.5 lb.	100 lb.	Typically not required for topsoil stockpiles

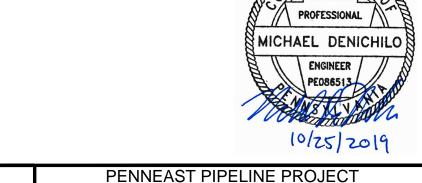
Adapted from Penn State, "Erosion Control and Conservation Plantings on Noncropland"

NOTE: A compost blanket which meets the standards of Chapter 11 may be substituted for the soil amendments shown in Table 11.2.

TABLE 11.6 Mulch Application Rates

Mulch Type	Per Acre	Per 1,000 sq. ft.	Per 1,000 sq. yd.	Notes
Straw	3 tons	140 lb.	1,240 lb.	Either wheat or oat straw, free of weeds, not chopped or finely broken
Hay	3 tons	140 lb.	1,240 lb.	Timothy, mixed clover and timothy or other native forage grasses
Wood Chips	4 - 6 tons	185 - 275 lb.	1,650 - 2,500 lb.	May prevent germination of grasses and legumes
Hydromulch	1 ton	47 lb.	415	See limitations above

- 1. STRAW AND HAY MULCH SHOULD BE ANCHORED OR TACKIFIED IMMEDIATELY AFTER APPLICATION TO PREVENT BEING WINDBLOWN. A TRACTOR-DRAWN IMPLEMENT MAY BE USED TO "CRIMP" THE STRAW OR HAY INTO THE SOIL - ABOUT 3 INCHES. THIS METHOD SHOULD BE LIMITED TO SLOPES NO STEEPER THAN 3H:1V. THE MACHINERY SHOULD BE OPERATED ON THE CONTOUR. CRIMPING OF HAY OR STRAW BY RUNNING OVER IT WITH TRACKED MACHINERY IS NOT RECOMMENDED.
- 2. POLYMERIC AND GUM TACKIFIERS MIXED AND APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS MAY BE USED TO TACK MULCH. AVOID APPLICATION DURING RAIN AND ON WINDY DAYS. A 24-HOUR CURING PERIOD AND A SOIL TEMPERATURE HIGHER THAN 45°F ARE TYPICALLY REQUIRED. APPLICATION SHOULD GENERALLY BE HEAVIET AT EDGES OF SEEDED AREAS AND AT CRESTS OF RIDGES AND ON BANKS TO PREVENT LOSS BY WIND. THE REMAINDER OF THE AREA SHOULD HAVE BINDER APPLIED UNIFORMLY. BINDERS MAY BE APPLIED AFTER MULCH IS SPREAD OR SPRAYED INTO THE MULCH AS IT IS BEING BLOWN ONTO THE SOIL. APPLYING STRAW AND BINDER TOGETHER IS GENERALLY MORE EFFECTIVE.
- 3. SYNTHETIC BINDERS, OR CHEMICAL BINDERS, MAY BE USED AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH PROVIDED SUFFICIENT DOCUMENTATION IS PROVIDED TO SHOW THEY ARE NON-TOXIC TO NATIVE PLANT AND ANIMAL SPECIES.
- 4. MULCH ON SLOPES 8% OR STEEPER SHOULD BE HELD IN PLACE WITH NETTING. LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETS MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- 5. SHREDDED PAPER HYDROMULCH SHOULD NOT BE USED ON SLOPES STEEPER THAN 5% WOOD FIBER HYDROMULCH MAY BE APPLIED ON STEEPER SLOPES PROVIDED A TACKIFIER IS USED. THE APPLICATION RATE FOR ANY HYDROMULCH SHOULD BE 2,000 LB/ACRE AT A MINIMUM.
- 6. HYDRAULICALLY APPLIED BLANKETS CAN BE AN EFFECTIVE METHOD OF STABILIZING STEEP SLOPES WHEN USED PROPERLY. THEY MAKE USE OF A CROSS-LINKED HYDROCOLLOID TACKIFIER TO BOND THERMALLY PROCESSED WOOD FIVERS. APPLICATION RATES VARY ACCORDING TO SITE CONDITIONS. IN ANY CASE, MANUFACTURER'S RECOMMENDATIONS SHOULD BE FOLLOWED. SHOULD NOT BE USED IN AREAS OF CONCENTRATED FLOW (E.G. SWALES).
- 7. NO MULCH MAY BE APPLIED IN WETLANDS.



	REVISIONS					
	REVISIONS	DATE	DRAWN	СК	APPR	
Α	ISSUED FOR PADEP	10/2018	JL (MM)	AJD (MM)	MDN (MM)	
В	REVISED FOR PADEP	10/2019	JL (MM)	AJD (MM)	MDN (MM)	



SOIL EROSION AND SEDIMENTATION CONTROL PLAN E & S GENERAL NOTES

AS SHOWN 000-01-01-003C



GENERAL CONDITIONS:

- 1. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND IMMEDIATELY STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING, GRUBBING AND TOPSOIL STRIPPING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE. ANY DEVIATION FROM THE FOLLOWING SEQUENCE MUST BE APPROVED IN WRITING FROM THE JURISDICTIONAL COUNTY CONSERVATION DISTRICT.
- 2. CONSTRUCTION WILL TAKE PLACE IN SEVERAL SPREADS. WITHIN EACH SPREAD, PIPELINE CONSTRUCTION CREWS WILL BE IN CLOSE PROXIMITY TO EACH OTHER AND WILL BE ABLE TO EFFICIENTLY COMMUNICATE DURING THE ENTIRE CONSTRUCTION PHASE OF THE PROJECT. THE MINIMAL LENGTH OF EACH CONSTRUCTION SPREAD WILL NOT REQUIRE CONSTRUCTION CREWS TO BE SEPARATED BY SIGNIFICANT DISTANCES DURING PIPELINE CONSTRUCTION.
- 3. WORK EFFORT WILL BE SUB DIVIDED INTO CATEGORIES AND PERFORMED BY SPECIALIZED CREWS (E.G., SITE PREPARATION/CLEARING, TRENCHING, PIPE CONSTRUCTION, TOPSOILING, SEEDING, ETC.) EACH CREW WILL PROGRESS IN A LOGICAL MANNER, GENERALLY FROM THE BEGINNING TO END OF THE PIPELINE. THE TIME PERIOD BETWEEN TRENCH EXCAVATION AND THE START OF SITE STABILIZATION SHALL NOT EXCEED 30 CALENDAR DAYS. RESTORATION WILL BE COMPLETED AS SOON AS POSSIBLE AFTER GRADING. CESSATION OF ACTIVITY FOR 4 DAYS OR LONGER REQUIRES TEMPORARY STABILIZATION.
- 4. SOIL DISTURBANCE (E.G., GRUBBING, AND TOPSOIL STRIPPING) SHALL BE MINIMIZED PRIOR TO INSTALLING EROSION AND SEDIMENT CONTROLS IN THE VICINITY OF THE DISTURBANCE IN ACCORDANCE WITH THIS EROSION & SEDIMENT CONTROL PLAN (E&SCP). SIGNIFICANT DEVIATION FROM THE FOLLOWING SEQUENCE OF CONSTRUCTION MUST BE APPROVED IN WRITING (E.G. VIA E-MAIL) BY THE COUNTY CONSERVATION DISTRICT.
- MINIMIZE TOTAL AREA OF DISTURBANCE. MAINTAIN TEMPORARY SOIL STOCKPILES WITHIN EXISTING SOIL EROSION AND SEDIMENT CONTROLS. SHOULD EXCAVATION ENTER STREAMS, FOLLOW SPECIFIC DETAILS FOR THESE AREAS SHOWN ON THE DRAWINGS AND INCLUDE THE STEPS DETAILED IN THE SPECIFIC SECTIONS BELOW. PULLBACK AREAS FOR HDDS WILL BE CLEARED AND PREPARED AS NEEDED TO SUPPORT STAGING, WELDING AND TESTING OF THE HDD PIPE SECTIONS. AREAS NOT UTILIZED FOR CONSTRUCTION ACTIVITIES SHOULD BE AVOIDED TO MINIMIZE IMPACTS
- 5. TEMPORARY WATERBARS/BROAD-BASED DIPS SHALL BE INSTALLED AT THE END OF EACH WORKDAY AS DETERMINED BY PENNEAST ENVIRONMENTAL INSPECTORS.
- STAGING AREAS, ASSEMBLY AREAS, TEMPORARY EQUIPMENT AND NON-HAZARDOUS MATERIAL STORAGE AREAS SHALL BE LOCATED A MINIMUM OF 50 FEET BACK FROM THE TOP OF THE STREAM BANK, WATER BODY, OR WETLAND AND OUTSIDE OF THE 100 YEAR FLOODWAY. HAZARDOUS OR POLLUTIVE MATERIAL STORAGE AREAS SHALL BE LOCATED A MINIMUM OF 100 FEET BACK FROM THE TOP OF THE STREAM BANK, WATER BODY, OR WETLAND AND OUTSIDE OF THE 100-YEAR FLOODWAY.
- THE GENERAL CONTRACTOR SHALL BE IDENTIFIED TO BECOME A CO-PERMITTEE IN THE EROSION AND SEDIMENT CONTROL GENERAL PERMIT (ESCGP) AND ARE RESPONSIBLE FOR THE DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY. THE GENERAL CONTRACTOR SHALL BE JOINTLY AND INDIVIDUALLY RESPONSIBLE TOGETHER WITH PENNEAST (PERMITTEE) FOR COMPLIANCE WITH ALL CONDITIONS OF THIS PERMIT AND APPLICABLE LAWS. PRIOR TO CONSTRUCTION, PENNEAST AND THE GENERAL CONTRACTOR SHALL NOTIFY THE PADEP OR THE CONSERVATION DISTRICT BY SUBMITTING AN APPLICATION FOR "CO-PERMITTEE ADDITION TO THE ESCGP AUTHORIZATION".
- 9. FOR OPEN-CUT AREAS, THE LENGTH OF TIME REQUIRED TO EXCAVATE THE TRENCH, INSTALL THE PIPELINES, AND BACKFILL THE TRENCH WILL NOT EXCEED 30 CALENDAR DAYS FOR MOST INSTALLATIONS. LONGER TIME PERIODS MAY BE APPROVED ON A CASE-BY-CASE BASIS.

CONSTRUCTION PREPARATION ACTIVITIES:

- AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES (INCLUDING CLEARING AND GRUBBING), THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&SCP PREPARER, AND A REPRESENTATIVE FROM THE APPLICABLE COUNTY CONSERVATION DISTRICT TO AN ON-SITE PRECONSTRUCTION MEETING.
- 2. UPON INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMP'S AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT
- 3. AT LEAST 3 DAYS PRIOR TO START ANY EARTH DISTURBANCE ACTIVITIES, OR EXPANDING INTO AN AREA PREVIOUSLY UNMARKED, THE PENNSYLVANIA ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-242-1776 FOR THE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- 4. ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCE PROVIDED ON THE PLAN DRAWINGS. DEVIATION FROM THE SEQUENCE MUST BE APPROVED BY THE APPLICABLE COUNTY CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION. EACH STEP OF THE SEQUENCE SHALL BE COMPLETED BEFORE PROCEEDING TO THE NEXT STEP, EXCEPT WHERE NOTED.
- 5. ESTABLISH CONSTRUCTION SUPPORT FACILITIES.
- 6. IDENTIFY UTILITIES AND OTHER CRITICAL SITE FEATURES TO BE PROTECTED
- 7. FLAG AND/OR STAKE WETLANDS AND OTHER SENSITIVE AREAS TO BE PROTECTED.
- 8. FLAG AND/OR STAKE PROPOSED CONSTRUCTION LIMITS OF DISTURBANCE.
- 9. ORANGE CONSTRUCTION FENCE WILL BE PROVIDED AND INSTALLED AT WETLAND AREAS ADJACENT TO THE LOD AND NOT PLANNED TO BE IMPACTED TO IDENTIFY AND DETER CONSTRUCTION EQUIPMENT, VEHICLES AND PERSONNEL FROM ENTERING WETLAND.
- 10. INSTALL ROCK CONSTRUCTION ENTRANCES AND INSTALL TEMPORARY ACCESS ROADS. THE INSTALLATION OF TEMPORARY ACCESS ROADS MAY REQUIRE SELECTIVE TREE LIMB CLEARING AND PLACEMENT OF TEMPORARY STONE.

SITE CLEARING (TREE CUTTING) & GRUBBING:

- 1A. INITIATE CLEARING OF THE CONSTRUCTION WORK AREA (CWA). INSTALL ALL PERIMETER CONTROLS AND CLEAN WATER DIVERSIONS IN ACCORDANCE WITH THIS PLAN AS PART OF SITE CLEARING. EROSION AND SEDIMENT CONTROL INSTALLATION, SIMILAR TO OTHER ACTIVITIES, MAY BE CONDUCTED AS PIPELINE CONSTRUCTION ACTIVITIES PROGRESS, HOWEVER, SOIL DISTURBANCE SHALL BE MINIMIZED UNTIL THE APPROPRIATE TEMPORARY EROSION AND SEDIMENT CONTROLS HAVE BEEN INSTALLED IN THE PROPOSED WORK AREA.
- 1B. ONCE PERIMETER CONTROLS HAVE BEEN INSTALLED, INITIATE GRUBBING OF CWA AS NEEDED. LIMIT CLEARING AND GRUBBING TO CUTTING EXISTING VEGETATION RATHER THAN BULLDOZING THE VEGETATION.
- 1C. ALL BRUSH AND TREES WILL BE FELLED INTO THE CWA TO MINIMIZE DAMAGE TO TREES AND STRUCTURES ADJACENT TO THE CWA. TREES THAT INADVERTENTLY FALL BEYOND THE EDGE OF THE CWA WILL BE IMMEDIATELY MOVED ONTO THE CWA AND DISTURBED AREAS WILL BE IMMEDIATELY STABILIZED.
- 2. BRUSH HOG/MOW EXISTING VEGETATION TO FACILITATE INSTALLATION OF TEMPORARY EROSION AND SEDIMENT CONTROLS.
- 3. AS CLEARING PROGRESSES, INSTALL VEHICULAR TEMPORARY EQUIPMENT BRIDGES AT STREAMS AND TEMPORARY TIMBER MATS AT WETLANDS AS SHOWN ON THE E&S PLANS. GRUBBING SHALL NOT TAKE PLACE WITHIN WETLAND AREAS TO BE USED FOR TEMPORARY ACCESS ROADS.
- 4. WOODY VEGETATION CLEARING OF THE CWA AND STAGING AREAS WILL TAKE PLACE IN A SINGLE PASS WITHIN EACH SPREAD. CONTRACTOR/PENNEAST TO DETERMINE WHETHER TIMBER WILL BE HAULED OFF SITE OR CHIPPED AND SPREAD EVENLY WITHIN THE CWA, REMOVED FROM SITE, STOCKPILED AT STAGING AREAS OR BLOWN OFF-SITE WITH LANDOWNER APPROVAL. WOOD CHIPS WILL NOT BE LEFT WITHIN AGRICULTURAL LANDS, WETLANDS, OR WITHIN 50 FEET OF WETLANDS. WOOD CHIPS WILL NOT BE STOCKPILED IN A MANNER THAT THEY MAY BE TRANSPORTED INTO A WETLAND.
- 5. GRUB TREE STUMPS IN CLEARED CWA. GRIND STUMPS AND REMOVE FROM ROW AND HAUL OFF SITE OR STOCKPILE AT STAGING AREAS FOR USE AS MULCH STABILIZATION AFTER EARTH DISTURBING ACTIVITIES ARE COMPLETED.
- 6. IN WETLANDS, CUT VEGETATION JUST ABOVE GROUND LEVEL AND GRIND STUMPS TO GROUND LEVEL, LEAVING EXISTING ROOT SYSTEMS IN PLACE. IMMEDIATELY REMOVE ALL CUT TREES, CHIPS FROM GRINDING OPERATIONS AND BRANCHES FROM THE WETLANDS.
- 7. LIMIT PULLING OF TREE STUMPS AND GRADING ACTIVITIES TO DIRECTLY OVER TRENCH LINE. DO NOT GRADE OR REMOVE STUMPS OR ROOT SYSTEMS FROM THE REST OF THE CWA IN WETLANDS UNLESS THE CHIEF INSPECTOR AND EI DETERMINE THAT SAFETY-RELATED CONSTRUCTION CONSTRAINTS REQUIRE REMOVAL OF TREE STUMPS FROM UNDER THE WORKING SIDE OF THE CWA.
- 8. GRUBBING SHALL NOT TAKE PLACE WITHIN 10 FEET OF TOP OF STREAM BANKS UNTIL ALL MATERIALS REQUIRED TO COMPLETE THE CROSSING ARE ON SITE AND PIPE IS READY FOR INSTALLATION.
- 9. NOTIFY THE COUNTY CONSERVATION DISTRICT AFTER INSTALLATION OR STABILIZATION OR ALL PERIMETER SEDIMENT CONTROL BMPS (INCLUDING TOPSOIL PILES) WITHIN EACH WORK AREA AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH BULK EARTH DISTURBANCE ACTIVITIES.
- 10. TREE CLEARING ESTIMATED TO BE IN ALL "UF" CLASSIFICATION AREAS AS SHOWN ON THE LAND USE BAND AND ALL PFO WETLANDS.
- 11. EXISTING SURFACE DRAINAGE PATTERNS WILL NOT BE ALTERED BY THE PLACEMENT OF TIMBER OR BRUSH PILES AT THE EDGE OF THE CONSTRUCTION ROW.

ROUGH GRADING AND STOCKPILING:

- 1. RE-STAKE THE CWA TO REPLACE ANY SIGNAGE OR FLAGGING THAT WAS REMOVED OR DAMAGED DURING CLEARING ACTIVITIES.
- 2A. STRIP TOPSOIL. STOCKPILE TOPSOIL ALONG THE EDGE OF THE CWA AND TEMPORARILY STABILIZE.
- 2B. ROUGH GRADE SITE. VERIFY COMPOST FILTER SOCK AROUND STOCKPILED TOPSOIL.
- 3. THE MIXING OF TOPSOIL WITH SUBSOIL SHALL BE PREVENTED BY STRIPPING TOPSOIL FROM THE WORK AREA WITHIN DESIGNATED AREAS AND IN COORDINATION WITH THE APPLICABLE ACCESS AGREEMENTS.
- 4. SEGREGATE AT LEAST 12 INCHES OF TOPSOIL IN DEEP SOILS WITH MORE THAN 12 INCHES OF TOPSOIL. IN SOILS WITH LESS THAN 12 INCHES OF TOPSOIL, MAKE EVERY EFFORT TO SEGREGATE THE ENTIRE TOPSOIL LAYER.
- . INSTALL WATERBARS AS SHOWN ON E&S DRAWINGS. WATERBARS SHALL BE ALIGNED SO THAT DISCHARGES DO NOT FLOW BACK ONTO THE RIGHT-OF-WAY OR INTO THE OPEN TRENCH. RUNOFF SHOULD BE DIRECTED TO THE DOWNSLOPE SIDE OF THE DISTURBED AREA MAINTAINING A 2% MAXIMUM GRADIENT. INSTALL A SUMP AND COMPOST FILTER SOCK AT THE OUTLET END OF EACH WATERBAR.
- 6. UTILIZE WOOD CHIPS IN HEAVILY TRAFFICKED AREAS TO REDUCE THE POTENTIAL FOR RUTTING. WOOD CHIPS WILL NOT BE SPREAD IN WETLANDS OR STREAMS.

THE FOLLOWING SECTIONS FURTHER DEFINE THE WORK TO BE PERFORMED FOR CERTAIN ACTIVITIES AND ASSUMES THAT CONSTRUCTION PREPARATION ACTIVITIES, SITE CLEARING (TREE CUTTING) & GRUBBING, AND ROUGH GRADING AND STOCKPILING WORK HAS BEEN COMPLETED.

PROJECT CONSTRUCTION SEQUENCING

PIPELINE CONSTRUCTION:

UPLAND LOCATIONS:

- 1. VERIFY THE APPROPRIATE UPLAND EROSION AND SEDIMENT CONTROLS ARE IN PLACE.
- 2. EXCAVATE PIPELINE TRENCH. LIMIT TRENCH WIDTH TO WHAT IS NECESSARY TO INSTALL PIPE. STOCKPILE SUITABLE SUBSOIL MATERIAL ADJACENT TO TOPSOIL STOCKPILE AND ENSURE NO MIXING. FLAG DRAINAGE TILES DAMAGED DURING DITCHING ACTIVITIES FOR REPAIR.
- 3. DELIVER PIPE TO SITE, STRING PIPE, BEND PIPE AND PREPARE THE PIPE JOINTS FOR WELDING.
- 4. WELD PIPE JOINTS AND PERFORM NDT (NON-DESTRUCTIVE TESTING).
- 5. DISCHARGE ALL WATER FROM TRENCH USING PUMPED WATER FILTER BAGS. PUMPED WATER FILTER BAGS TO BE LOCATED ON THE DOWNSLOPE SIDE OF THE CWA, PREFERABLY ADJACENT TO A WELL VEGETATED AREA. DOUBLE CONTAINMENT WILL BE REQUIRED IN HQ/EV AREAS AS SHOWN IN THE DETAILS.
- 6. INSTALL THE PIPELINE IN THE TRENCH.
- 7. INSTALL TRENCH PLUGS.
- 8. BACKFILL THE PIPELINE TRENCH. BACKFILL MATERIAL SHOULD BE MOUNDED OVER THE TRENCH TO ALLOW FOR SETTLING EXCEPT IN AGRICULTURAL FIELDS AND MANICURED LAWNS. RESTORE TEMPORARY AND PERMANENT WATERBARS.
- 9. GRADE AREAS AS CLOSELY AS POSSIBLE TO ORIGINAL CONTOURS. TEMPORARY WATERBARS WILL BE REMOVED AT THIS POINT.
- 10. REPLACE TOPSOIL.
- 11. PERFORM PERMANENT STABILIZATION, INCLUDING:
- A. APPLY PERMANENT SEEDING, SOIL AMENDMENTS AND MULCH OR EROSION CONTROL BLANKET. **ROADWAY. DRIVEWAYS AND RAILROADS CROSSINGS:**
- 1. STRING PIPE OUTSIDE OF ROAD/DRIVEWAY AND PREPARE THE PIPE JOINTS FOR WELDING AND NON-DESTRUCTIVE TESTING.
- 2. EXCAVATE PIPELINE TRENCH FOR THE OPEN TRENCH CROSSING OR EXCAVATE BORE PITS FOR CONVENTIONAL BORED CROSSING.
- 3. DISCHARGE ALL WATER FROM TRENCH USING PUMPED WATER FILTER BAGS. PUMPED WATER FILTER BAGS TO BE LOCATED ON THE DOWNSLOPE SIDE OF THE CWA, PREFERABLY ADJACENT TO A WELL VEGETATED AREA. DOUBLE CONTAINMENT WILL BE REQUIRED IN HQ/EV AREAS AS SHOWN IN THE DETAILS.
- 4. MOVE THE PIPE SECTIONS TO THE TRENCH OR PERFORM CONVENTIONAL BORE.
- 5. INSTALL THE PIPELINE IN THE TRENCH.
- 6. INSTALL TRENCH PLUGS.
- 7. BACKFILL THE PIPELINE TRENCH.

STREAM, RIVER, OR OTHER WATERBODY UTILITY CROSSINGS THAT WILL BE OPEN CUT:

- 1. NO WORK SHALL COMMENCE THROUGH A STREAM, RIVER, OR OTHER WATERBODY DURING INCLEMENT WEATHER. PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES FOR A STREAM CROSSING INSTALLATION, AN ASSESSMENT OF CURRENT WEATHER CONDITIONS, WEATHER FORECAST, AND FLOWS OF THE STREAM CHANNEL FOR CROSSING FEASIBILITY WILL BE CONDUCTED. THIS DETERMINATION WILL BE CAPTURED IN A DOCUMENT REQUIRING SIGN-OFF FROM THE ENVIRONMENTAL INSPECTOR, CONTRACTOR, AND PENNEAST REPRESENTATIVE THAT A CROSSING CAN BE ACHIEVED IN THE PROJECTED TIMEFRAME. WATERBODIES WILL BE CROSSED ACCORDING TO APPROVED CONSTRUCTION WINDOWS IF OUTSIDE OF TIMING RESTRICTIONS.
- 2. A UTILITY LINE CROSSING OF A STREAM CHANNEL 10 FEET IN WIDTH OR LESS SHALL BE COMPLETED WITHIN 24 HOURS FROM START TO FINISH INCLUDING TRENCH BACKFILL, STABILIZATION OF STREAM BANKS AND STABILIZATION OF THE AREA 50 FEET (100 FEET IN HQ / EV WATERSHEDS) BACK FROM THE TOP OF EACH STREAM BANK.
- 3. A UTILITY LINE CROSSING OF A STREAM CHANNEL BETWEEN 10 FEET AND 100 FEET IN WIDTH SHALL BE COMPLETED WITHIN 48 HOURS FROM START TO FINISH INCLUDING TRENCH BACKFILL, STABILIZATION OF STREAM BANKS AND STABILIZATION OF THE AREA 50 FEET (100 FEET IN HQ / EV WATERSHEDS) BACK FROM THE TOP OF EACH STREAM BANK UNLESS OTHERWISE APPROVED BY PADEP/USACE.
- 4. BMPS (I.E. PUMPED WATER FILTER BAGS) FOR REMOVING SEDIMENT FROM PUMPED WATER SHOULD BE AVAILABLE AT THE STREAM CROSSING SITE BEFORE TRENCHING COMMENCES AND MAINTAINED UNTIL TRENCH BACKFILLING IS COMPLETED. ASSEMBLY AREAS, TEMPORARY EQUIPMENT AND NON-HAZARDOUS MATERIAL STORAGE AREAS SHALL BE LOCATED AT LEAST 50 FEET BACK FROM THE TOP OF ANY BANK.
- 5. FOR DRY STREAM CROSSINGS INSTALL DAM AND PUMP, DRY FLUME, OR COFFERDAM IN ACCORDANCE WITH NOTES AND DETAILS.
- 6. DEWATER WORK AREA; WATER FROM THE EXCAVATION SHALL BE PUMPED TO A SEDIMENT FILTER BAG. WHERE POSSIBLE, EXCAVATION SHALL BE FROM THE TOP OF THE STREAM BANK, WHERE TECHNICALLY FEASIBLE.
- 7. REMOVE EXISTING STREAMBED MATERIAL AND STOCKPILE SEPARATELY.
- 8. INSTALL THE PIPELINE IN THE TRENCH WITH SADDLE BAGS OR OTHER NEGATIVE BUOYANCY MEASURES (CONCRETE WEIGHT COATING). CONCRETE WEIGHT COATING TO BE APPLIED AT PIPEYARD OR OTHER APPROVED LOCATION.
- 9. INSTALL TRENCH PLUGS.
- 10. ONCE PIPELINE IS INSTALLED, REPLACE SUBSTRATE BACK IN STREAMBED AND RESTORE TO EXISTING CONDITION.
- 11. INSTALL EROSION CONTROL BLANKETS AS SHOWN ON THE E&S PLANS, FROM TOP OF BANK OUTWARD 50 FEET (100 FEET IN HQ/EV).
- 12. STABILIZE CHANNEL EXCAVATION AND STREAM BANKS PRIOR TO REDIRECTING STREAM FLOW.
 REFER TO E&S TYPICAL DETAILS FOR STREAMBED AND BANK STABILIZATION WITH REINFORCEMENT BLANKET.

WETLAND CROSSINGS:

- . LOCATE STAGING AREA AND ACCESS POINTS. STAGING AREAS SHOULD BE LOCATED AT LEAST 50 FEET FROM THE EDGE OF THE WETLAND. VERIFY PLACEMENT OF SEDIMENT BARRIERS DOWN SLOPE OF THESE AREAS.
- 2. VERIFY ORANGE FLAGGING AROUND PERIMETER OF WETLAND AND SEDIMENT BARRIERS ALONG THE PERIMETERS OF THE SITE AS SHOWN ON THE CONSTRUCTION DRAWINGS.
- 3. TIMBER MATS SHALL BE USED DURING THE CROSSINGS OF WETLANDS. ORIGINAL GRADES THROUGH WETLANDS MUST BE RESTORED AFTER TRENCHING AND BACKFILLING. ANY EXCESS FILL MATERIALS MUST BE REMOVED FROM THE WETLAND AND NOT SPREAD ON-SITE.
- 4. EXCAVATE TRENCH. CAREFULLY REMOVE SOIL FROM WETLAND WITH THE ROOTS INTACT. THIS SOIL SHOULD BE PLACED IN A SEPARATE STOCKPILE TO BE REUSED DURING THE WETLAND SURFACE RESTITUTION.
- 5. DEWATER WORK AREA; WATER FROM THE EXCAVATION SHALL BE PUMPED TO A FILTER BAG.
- INSTALL THE PIPELINE IN THE TRENCH WITH SADDLE BAGS OR OTHER NEGATIVE BUOYANCY MEASURES (CONCRETE WEIGHT COATING). CONCRETE WEIGHT COATING TO BE APPLIED AT PIPEYARD OR OTHER APPROVED LOCATION.
- 7. INSTALL TRENCH PLUGS AT WETLAND BOUNDARIES AND AT 100-FT INTERVALS WITHIN THE WETLAND, WHERE APPLICABLE, TO PREVENT THE TRENCH FROM DRAINING THE WETLAND OR CHANGING IT'S HYDROLOGY.
- 8. BACKFILL PIPE TRENCH. BACKFILL THE TOP 12-INCHES OF THE EXCAVATED TRENCH WITH THE STOCKPILED WETLAND SOIL TO MATCH ORIGINAL SURFACE GRADES. ELEVATION OF WETLAND WILL BE SURVEYED. AFTER POST CONSTRUCTION SURVEY ELEVATION HAS BEEN CONFIRMED TO MATCH PRE-CONSTRUCTION CONDITIONS, THE WETLAND WILL BE SEEDED USING THE WETLAND SEED MIX.
- 9. NO SOIL AMENDMENTS SUCH AS AGRICULTURAL LIME, FERTILIZER, ETC. WILL BE USED WITHIN WETLAND AREAS.
- 10. MAINTAIN ALL EROSION SEDIMENTATION CONTROL DEVICES UNTIL SITE WORK IS COMPLETE AND A UNIFORM 70% VEGETATIVE COVER OVER THE DISTURBED AREA. RE-GRADE AND REVEGETATE AREAS DISTURBED DURING THE REMOVAL OF THE SOIL AND SEDIMENT CONTROLS.

FOR CONVENTIONAL BORE AND HDD CROSSINGS:

CONVENTIONAL BORES

- 1. VERIFY PLACEMENT OF COMPOST FILTER SOCKS DOWNGRADIENT OF THE BORE AND RECEIVING PITS.
- 2. EXCAVATE PITS. STOCKPILE MATERIAL FROM THE PIT EXCAVATION IN THE CWA.
- 3. BORE BENEATH STREAMS WHERE INDICATED ON THE CONSTRUCTION DRAWINGS.
- 4. WATER FROM THE BORE PITS AND WORK AREAS SHALL BE PUMPED TO A PUMPED WATER FILTER
- 5. UPON COMPLETION, BACKFILL ALL PITS

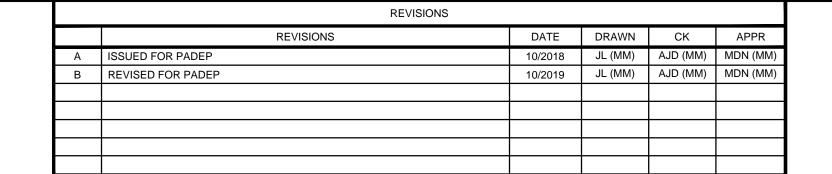
HDD

- INSTALL COMPOST FILTER SOCKS AT STAGING AND PULLBACK AREAS IN ACCORDANCE WITH E&S PLAN SHEETS. WHERE APPLICABLE TEMPORARY GRADING IS PROVIDED ON HDD EXHIBIT PLAN SHEETS
- 2. BORE AND PULLBACK AREAS SHALL BE LOCATED A MINIMUM OF 50 FT BACK FROM EACH TOP OF STREAM BANK UNLESS AUTHORIZED BY PADEP.
- 3. THE HDD BORE ALIGNMENT SHALL BE MONITORED FOR INADVERTENT RETURNS. AN INADVERTENT RETURN PLAN HAS BEEN DEVELOPED FOR THIS PROJECT. THIS PLAN IS TO BE REVIEWED ON SITE, AND IMPLEMENTED FOR EACH DRILL CONDUCTED.
- 4. UPON COMPLETION OF HDD BORE, RESTORE BORE AND PULLBACK AREAS TO PRE-CONSTRUCTION CONDITIONS IN ACCORDANCE WITH E&S PLANS AND DETAILS.

HYDROSTATIC TESTING:

- 1. THE EI SHALL NOTIFY THE AGENCIES OF THE INTENT TO USE SPECIFIC TEST WATER SOURCES AT LEAST 48 HOURS BEFORE TESTING ACTIVITIES.
- 2. PUMPS USED FOR HYDROSTATIC TESTING WITHIN 100 FEET OF ANY WATERBODY OR WETLAND SHALL BE OPERATED AND REFUELED IN ACCORDANCE WITH THE SPCC PLAN.
- 3. USE ONLY THE WATER SOURCES IDENTIFIED IN THE CLEARANCE PACKAGE/PERMIT BOOK.
- 4. LOCATE HYDROSTATIC TEST MANIFOLDS OUTSIDE WETLANDS AND RIPARIAN AREAS TO THE GREATEST EXTENT PRACTICAL.
- 5. FOR AN OVERLAND DISCHARGE OF TEST WATER, DEWATER INTO AN ENERGY DISSIPATION DEVICE CONSTRUCTED OF STRAW BALES AND ABSORBENT BOOMS.
- 6. DEWATER ONLY AT THE LOCATIONS SHOWN ON THE CONSTRUCTION DRAWINGS OR LOCATIONS IDENTIFIED IN THE HYDROSTATIC TEST PACKAGE.
- 7. LOCATE ALL DEWATERING STRUCTURES IN A WELL-VEGETATED AND STABILIZED AREA, IF PRACTICAL, AND ATTEMPT TO MAINTAIN AT LEAST A 50-FOOT VEGETATED BUFFER FROM ADJACENT WATERBODY/WETLAND AREAS. IF AN ADEQUATE BUFFER IS NOT AVAILABLE, BMPS OR SIMILAR EROSION CONTROL MEASURE MUST BE INSTALLED.
- 8. REGULATE DISCHARGE RATE, USE ENERGY DISSIPATION DEVICE(S), AND INSTALL BMPS, AS NECESSARY, TO PREVENT EROSION, STREAMBED SCOUR TO AQUATIC RESOURCES, SUSPENSION OF SEDIMENTS, FLOODING OR EXCESSIVE STREAM FLOW.
- 9. THE EI SHALL SAMPLE AND TEST THE SOURCE WATER AND DISCHARGE WATER IN ACCORDANCE WITH THE PERMIT REQUIREMENTS.







PENNEAST PIPELINE PROJECT

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PROJECT CONSTRUCTION SEQUENCING (CONTINUED)

DEMOBILIZATION AND SITE CLEAN UP:

- 1. COMPLETE PERMANENT STABILIZATION OF ALL REMAINING AREAS OF DISTURBANCE, INCLUDING:
 - A. GRADE AREAS AS CLOSELY AS POSSIBLE TO ORIGINAL CONTOURS.
 - B. REPLACE TOPSOIL
 - C. APPLY PERMANENT SEEDING, SOIL AMENDMENT, AND MULCH OR EROSION CONTROL BLANKET.
- 2. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER OR OPERATOR SHALL CONTACT THE COUNTY CONSERVATION DISTRICT AND PADEP FOR AN INSPECTION PRIOR TO THE REMOVAL/CONVERSION OF THE EROSION AND SEDIMENT CONTROL BMPS.
- 3. REMOVE TEMPORARY CONTROL MEASURES UPON APPROVAL OF THE COUNTY CONSERVATION DISTRICT AGENT OR PADEP.
- 4. ANY AREA THAT USED STONE AND/OR TIMBER MATS FOR TEMPORARY STABILIZATION AND/OR ACCESS WILL BE COMPLETELY REMOVED AND SOIL WILL BE DE-COMPACTED BY USING TRACKED EQUIPMENT MAKING MULTIPLE PASSES OVER AREAS. REESTABLISH PRECONSTRUCTION CONTOURS AND REPLACE TOPSOIL TO A MINIMUM OF 4-8 INCHES DEEP AND SEED AND MULCH AREAS. VEHICULAR TRAFFIC SHOULD BE RESTRICTED FROM AREAS TO PREVENT SOIL COMPACTION.
- 5. UPON COMPLETION OF ALL EARTH DISTURBANCE ACTIVITIES, REMOVAL OF ALL TEMPORARY BMPS, INSTALLATIONS OF ALL PERMANENT PCSM BMPS, AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, THE OWNER AND/OR OPERATOR SHALL CONTACT THE COUNTY CONSERVATION DISTRICT FOR A FINAL INSPECTION. TEMPORARY WORKSPACE WILL BE RESTORED AS CLOSELY AS POSSIBLE TO ORIGINAL CONTOURS.
- 6. ANY MATERIALS NOT INCORPORATED AS TRENCH BACKFILL OR GENERAL GRADING (E.G. UNCONTAMINATED SOIL, ROCK, STONE, GRAVEL, BRICK AND BLOCK, CONCRETE AND USED ASPHALT; AND WASTE FROM LAND CLEARING, GRUBBING AND EXCAVATION, INCLUDING TREES, BRUSH, STUMPS AND VEGETATIVE MATERIAL) WILL BE REUSED, RECYCLED OR REMOVED FROM THE CONSTRUCTION WORK LIMITS IN ACCORDANCE WITH PADEP " SOLID WASTE MANAGEMENT AT 25 PA CODE.260.1 ET SEQ., 271.1 AND 287.1 ET SEQ.
- 7. CONTRACTOR DEMOBILIZATION.

POST-CONSTRUCTION:

- 1. CONTINUE TO CONDUCT INSPECTIONS UNTIL THE SITE HAS REACHED PERMANENT STABILIZATION.
- 2. PERMANENT STABILIZATION IS DEFINED AS A MINIMUM UNIFORM, PERENNIAL 70% VEGETATIVE COVER OR OTHER NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED EROSION. CUT AND FILL SLOPES SHALL BE CAPABLE OF RESISTING FAILURE DUE TO SLUMPING, SLIDING, OR OTHER MOVEMENTS.
- 3. TEMPORARY WATERBARS WILL BE REMOVED AS PART OF THE REGRADING BACK TO ORIGINAL CONTOURS STAGE. ALL OTHER TEMPORARY E&S BMPS MAY BE REMOVED AFTER THE ENTIRE CONTRIBUTORY AREA TO EACH BMP REACHES PERMANENT STABILIZATION.
- 4. REMOVE ANY REMAINING TEMPORARY WATERBODY AND WETLAND EQUIPMENT CROSSINGS.
- 5. REMOVE ANY REMAINING STABILIZED CONSTRUCTION ENTRANCES.
- 6. PRIOR TO APPLICATION OF THE SEED IN ALL SUPPORT & STAGING AREAS, THE SEEDBED WILL BE PREPARED TO A DEPTH OF 3 TO 4 INCHES USING APPROPRIATE EQUIPMENT TO PROVIDE A FIRM, SMOOTH SEEDBED THAT IS FREE OF DEBRIS AND SCARIFIED TO ENSURE SEEDS LODGE AND GERMINATE. THE SEED MIXTURE WILL BE APPLIED UNIFORMLY PER PADEP EROSION AND SEDIMENT POLLUTION CONTROL PROGRAM MANUAL, MARCH 2012, CHAPTER 11 STABILIZATION FOR SEEDING RECOMMENDATIONS.
- 7. IN ACCORDANCE WITH 25 PA CODE 102.7, UPON COMPLETION OF ALL CONSTRUCTION ACTIVITIES, A NOTICE OF TERMINATION FORM WILL BE SUBMITTED TO TERMINATE THE AUTHORIZATION OF COVERAGE INDICATING ALL ACTIVITIES UNDER THIS PERMIT HAVE BEEN COMPLETED.

SITE RESTORATION AND POST CONSTRUCTION STORMWATER MANAGEMENT:

FOR MAINLINE PIPELINE SITE RESTORATION REFER TO THE SITE RESTORATION PLAN PACKAGE. FOR POST CONSTRUCTION STORMWATER MANAGEMENT OF PERMANENT FACILITY SITES REFER TO EACH POST CONSTRUCTION STORMWATER MANAGEMENT PLAN PACKAGE.





RECYCLING AND DISPOSAL METHODS

RECYCLING AND DISPOSAL METHODS

THE RESTORATION OF THE PIPELINE RIGHT-OF-WAY WILL REQUIRE THE REMOVAL OF THE TEMPORARY MATERIALS. THE TEMPORARY MATERIALS INCLUDE, BUT MAY NOT BE LIMITED TO, STONE SURFACES AND ASSOCIATED GEOTEXTILES. THE CONTRACTORS ARE REQUIRED TO DISPOSE OF THE MATERIALS AT SUITABLE DISPOSAL OR RECYCLING SITES AND IN COMPLIANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

CONTRACTORS ARE REQUIRED TO INVENTORY AND MANAGE THEIR CONSTRUCTION SITE MATERIALS. THE GOAL IS TO BE AWARE OF THE MATERIALS ON-SITE, ENSURE THEY ARE PROPERLY MAINTAINED, USED, AND DISPOSED OF, AND TO MAKE SURE THE MATERIALS ARE NOT EXPOSED TO STORMWATER.

MATERIALS COVERED

THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON-SITE DURING CONSTRUCTION (NOTE: THIS LIST IS NOT AN ALL-INCLUSIVE LIST AND THE MATERIALS MANAGEMENT PLAN CAN BE MODIFIED TO ADDRESS ADDITIONAL MATERIALS USED ON-SITE):

- ACIDS
- DETERGENTS
- FERTILIZERS (NITROGEN/PHOSPHORUS)
- HYDROSEEDING MIXTURES
- PETROLEUM BASED PRODUCTS
- SANITARY WASTES
- SOIL STABILIZATION ADDITIVES
- SOLDER
- SOLVENTS
- OTHER (LIST HERE):_

THESE MATERIALS MUST BE STORED AS APPROPRIATE AND SHALL NOT CONTACT STORM OR NON-STORMWATER DISCHARGES. CONTRACTOR SHALL PROVIDE A WEATHER PROOF CONTAINER TO STORE CHEMICALS OR ERODIBLE SUBSTANCES THAT MUST BE KEPT ON THE SITE. CONTRACTOR IS RESPONSIBLE FOR READING, MAINTAINING, AND MAKING EMPLOYEES AND SUBCONTRACTORS AWARE OF MATERIAL SAFETY DATA SHEETS (MSDSs).

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORMWATER RUNOFF.

1. GOOD HOUSEKEEPING PRACTICES

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ON SITE DURING CONSTRUCTION:

- STORE ONLY ENOUGH MATERIAL REQUIRED TO DO THE JOB.
- STORE MATERIALS IN A NEAT, ORDERLY MANNER.
- STORE CHEMICALS IN WATERTIGHT CONTAINERS OR IN A STORAGE SHED, UNDER A ROOF, COMPLETELY ENCLOSED, WITH APPROPRIATE SECONDARY CONTAINMENT TO PREVENT SPILL OR LEAKAGE. DRIP PANS SHALL BE PROVIDED UNDER DISPENSERS.
- SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY
- MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
- INSPECTIONS WILL BE PERFORMED TO ENSURE PROPER USE AND DISPOSAL OF
- COVER AND BERM LOOSE STOCKPILED CONSTRUCTION MATERIALS THAT ARE NOT ACTIVELY BEING USED (I.E. SOIL, SPOILS, AGGREGATE, ETC.).
- MINIMIZE EXPOSURE OF CONSTRUCTION MATERIALS TO PRECIPITATION.
- MINIMIZE THE POTENTIAL FOR OFF-SITE TRACKING OF LOOSE CONSTRUCTION AND LANDSCAPE MATERIALS.

2. HAZARDOUS PRODUCTS

THESE PRACTICES WILL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS. MSDSs FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE(S) WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. A MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN A FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.

- PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS WITH THE ORIGINAL LABELS IN LEGIBLE CONDITION.
- ORIGINAL LABELS AND MSDSs WILL BE PRODUCED AND USED FOR EACH MATERIAL.
- IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL/STATE/FEDERAL RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

3. HAZARDOUS WASTES

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF BY THE CONTRACTOR IN THE MANNER SPECIFIED BY LOCAL, STATE, AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. SITE PERSONNEL WILL BE INSTRUCTED.

4. CONCRETE AND OTHER WASH WATERS

PREVENT DISPOSAL OF RINSE, WASH WATERS, OR MATERIALS ON IMPERVIOUS OR PERVIOUS SURFACES, INTO STREAMS, WETLANDS, OR OTHER WATERBODIES.

CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE, BUT ONLY IN EITHER (1) SPECIFICALLY DESIGNATED DIKED AREAS WHICH HAVE BEEN PREPARED TO PREVENT CONTACT BETWEEN THE CONCRETE AND/OR WASHOUT AND SOIL AND STORMWATER HAVING THE POTENTIAL TO BE DISCHARGED FROM THE SITE OR (2) IN LOCATIONS WHERE WASTE CONCRETE CAN BE POURED INTO FORMS TO MAKE RIPRAP OR OTHER USEFUL CONCRETE PRODUCTS

THE HARDENED RESIDUE FROM THE CONCRETE WASHOUT DIKED AREAS WILL BE DISPOSED OF IN THE SAME MANNER AS OTHER NON-HAZARDOUS CONSTRUCTION WASTE MATERIALS OR MAY BE BROKEN UP AND USED ON THE SITE AS DEEMED APPROPRIATE BY THE CONTRACTOR AND GEOTECHNICAL ENGINEER. THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

ALL CONCRETE WASHOUT AREAS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE AREA CONTRIBUTING TO STORMWATER DISCHARGE IS NEGLIGIBLE. IF REQUIRED, ADDITIONAL BMPs MUST BE IMPLEMENTED TO PREVENT CONCRETE WASTES FROM CONTRIBUTING TO STORMWATER DISCHARGES. THE LOCATION OF THE CONCRETE WASHOUT AREA(S) MUST BE INDENTIFIED BY THE CONTRACTOR/JOB SITE SUPERINTENDENT, ON THE JOB SITE COPY OF THE EROSION AND SEDIMENT CONTROL PLAN(S) IN THIS ESCP.

5. SANITARY WASTES

ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER DISCHARGES IS NEGLIGIBLE.

6. SOLID AND CONSTRUCTION WASTES

ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL COMPLY WITH ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER/CONTAINER LIDS SHALL BE CLOSED AT THE END OF EVERY BUSINESS DAY AND DURING RAIN EVENTS. APPROPRIATE MEASURES SHALL BE TAKEN TO PREVENT DISCHARGES FROM WASTE DISPOSAL CONTAINERS TO THE RECEIVING WATER.

7. CONSTRUCTION ACCESS

A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED ROADS ADJACENT TO THE SITE ENTRANCE WILL BE INSPECTED DAILY AND SWEPT AS NECESSARY TO REMOVE ANY EXCESS OF MUD, DIRT, OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN AS NECESSARY.

8. PETROLEUM PRODUCTS

ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINENANCE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. PETROLEUM STORAGE TANKS ON SITE WILL HAVE A DIKE OR BERM CONTAINMENT STRUCTURE CONSTRUCTED AROUND IT TO CONTAIN SPILLS WHICH MAY OCCUR (CONTAINMENT VOLUME TO BE 110% OF VOLUME STORED). THE DIKE OR BERMED AREA SHALL BE LINED WITH AN IMPERVIOUS MATERIAL SUCH AS A HEAVY-DUTY PLASTIC SHEET. DRIP PANS SHALL BE PROVIDED FOR ALL DISPENSERS. ANY ASPHALT SUBSTANCES USED ON THE SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

9. FERTILIZERS AND LANDSCAPE MATERIALS

FERTILIZERS WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO MINIMIZE THE POTENTIAL FOR EXPOSURE TO STORMWATER. STORAGE WILL BE UNDER COVER. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO MINIMIZE THE POTENTIAL FOR SPILLS. THE BIN SHALL BE LABELED APPROPRIATELY.

CONTAIN STOCKPILED MATERIALS, SUCH AS BUT NOT LIMITED TO, MULCHES, TOP SOIL, ROCKS AND GRAVEL, AND DECOMPOSED GRANITE, WHEN THEY ARE NOT ACTIVELY BEING USED.

APPLY ERODIBLE LANDSCAPE MATERIAL AT QUANTITIES AND APPLICATION RATES ACCORDING TO MANUFACTURER RECOMMENDATIONS OR BASED ON WRITTEN SPECIFICATIONS BY KNOWLEDGEABLE AND EXPERIENCED FIELD PERSONNEL. DISCONTINUE THE APPLICATION OF ANY ERODIBLE LANDSCAPE MATERIAL WITHIN TWO DAYS PRIOR TO A FORECASTED RAIN EVENT OR DURING PERIODS OF PRECIPITATION.

10. PAINTS, PAINT SOLVENTS AND CLEANING SOLVENTS

CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT IN USE. EXCESS PAINT AND SOLVENTS WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR LOCAL/STATE/FEDERAL REGULATIONS.

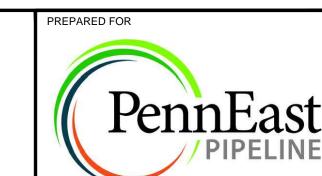
11. CONTAMINATED SOILS

ANY CONTAMINATED SOILS (RESULTING FROM SPILLS OF MATERIALS WITH HAZARDOUS PROPERTIES) WHICH MAY RESULT FROM CONSTRUCTION ACTIVITIES WILL BE CONTAINED AND CLEANED UP IMMEDIATELY IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS.

12. OFF-SITE WASTE AND BORROW AREAS

ALL OFF-SITE WASTE AND BORROW AREAS MUST HAVE AN E&S PLAN APPROVED BY THE LOCAL COUNTY CONSERVATION DISTRICT OF PADEP FULLY IMPLEMENTED PRIOR TO BEING ACTIVATED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL AND TO DEVELOP A PLAN THAT MEETS THE CONDITIONS OF CHAPTER 102, NPDES PERMIT CONDITIONS, AND/OR OTHER STATE AND FEDERAL REGULATIONS.

	REVISIONS				
	REVISIONS	DATE	DRAWN	CK	APPR
Α	ISSUED FOR PADEP	10/2018	JL (MM)	AJD (MM)	MDN (MM)
В	REVISED FOR PADEP	10/2019	JL (MM)	AJD (MM)	MDN (MM)



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SMALL WATERSHED CLASSIFICATIONS

BEGIN MP*	END MP*	WATERSHED NAME	CLASSIFICATION
PENNEAST	MAINLINE	PIPELINE	
0.0R1	1.6R2	TROUT BROOK	CWF, MF
1.6R2	2.0	ABRAHAMS CREEK	CWF, MF
2.0	3.1	ABRAHAMS CREEK	CWF,MF
3.1	3.4	TOBY CREEK	CWF, MF
3.4	3.7	ABRAHAMS CREEK	CWF, MF
3.7	3.9R2	TOBY CREEK	TSF, MF
3.9R2	6.5R2	ABRAHAMS CREEK	CWF, MF
6.5R2	6.9	UNT SUSQUEHANNA RIVER	CWF, MF
6.9	9.1R2	SUSQUEHANNA RIVER	WWF, MF
9.1R2	9.5R3	MILL CREEK	CWF, MF
9.5R3	9.9R2	GARDNER CREEK	CWF, MF
9.9R2	14.4	MILL CREEK	CWF, MF
14.4	15.4	LITTLE BEAR CREEK	HQ-CWF, MF
15.4	16.6	BEAR CREEK	HQ-CWF, MF
16.6	17.3	MEADOW RUN	HQ-CWF, MF
17.3	19.6	LITTLE SHADES CREEK	HQ-CWF, MF
19.6	20.9	SHADES CREEK	HQ-CWF, MF
20.9	21.3	STONY RUN	HQ-CWF, MF
21.3	21.6	BEAR CREEK	HQ-CWF, MF
21.6	21.7	STONY RUN	HQ-CWF, MF
21.7	22.1	BEAR CREEK	HQ-CWF, MF
22.1	22.8	STONY RUN	HQ-CWF, MF
22.8	24.0	LEHIGH RIVER	HQ-CWF, MF
24.0	24.8	LIME HOLLOW	HQ-CWF, MF
24.8	25.1	PORTER RUN	HQ-CWF, MF
25.1	28.0R2	BLACK CREEK	HQ-CWF, MF
28.0R2	28.8R2	FOURTH RUN	HQ-CWF, MF
28.8R2	30.1R2	HICKORY RUN	HQ-CWF, MF
30.1R2	30.6R2	HAWK RUN	HQ-CWF, MF
30.6R2	31.4R2	LAUREL RUN	HQ-CWF, MF
31.4R2	31.9R2	HAWK RUN	HQ-CWF, MF
31.9R2	32.0R2	LAUREL RUN	HQ-CWF, MF
32.0R2	34.2R3	MUD RUN	HQ-CWF, MF
34.2R3	34.4R3	PANTHER CREEK	HQ-CWF, MF
34.4R3	35.5	STONY CREEK	EV, MF
35.5	37.1R3	YELLOW RUN	EV, MF
37.1R3	39.2	WILD CREEK	EV, MF
39.2	40.6R2	PINE RUN	EV, MF
40.6R2	41.8	WHITE OAK RUN	EV, MF

BEGIN MP*	END MP*	WATERSHED NAME	CLASSIFICATION
PENNEAST	MAINLINE	PIPELINE	
41.8	42.5R2	WILD CREEK	EV, MF
42.5R2	42.6R2	POHOPOCO CREEK	CWF,MF
42.6R2	43.7R3	WILD CREEK	EV, MF
43.7R3	44.6R2	POHOPOCO CREEK	CWF, MF
44.6R2	46.6	HUNTER CREEK	HQ-CWF, MF
46.6	46.8	BORGER CREEK	CWF, MF
46.8	47.2	HUNTER CREEK	CWF, MF
47.2	47.3	BORGER CREEK	CWF, MF
47.3	48.6R2	BUCKWHA CREEK	CWF, MF
48.6R2	51.7R3	AQUASHICOLA CREEK	HQ-CWF, MF
51.7R3	55.3	INDIAN CREEK	CWF, MF
55.3	57.9R2	HOKENDAUQUA CREEK	CWF, MF
57.9R2	61.1	MONOCACY CREEK	HQ-CWF, MF
61.1	62.0R3	EAST BRANCH MONOCACY CREEK	HQ-CWF, MF
62.0R3	65.1	EAST BRANCH MONOCACY CREEK	HQ-CWF, MF
65.1	65.6	MONOCACY CREEK	HQ-CWF, MF
65.6	66.4	SHOENECK CREEK	WWF, MF
66.4	67.3	MONOCACY CREEK	HQ-CWF, MF
67.3	68.0R3	BUSHKILL CREEK	HQ-CWF, MF
68.0R3	69.5R4	NANCY RUN	CWF, MF
69.5R4	70.7	UNT LEHIGH RIVER	CWF, MF
70.7	71.2	LEHIGH RIVER	WWF, MF
71.2	71.9	UNT LEHIGH RIVER	CWF, MF
71.9	73.1	BULL RUN	CWF, MF
73.1	75.5	FRYA RUN	HQ-CWF, MF
75.5	75.8	COOKS CREEK	EV, MF
75.8	77.7	DELAWARE RIVER	WWF, MF
LUE MOUNT	AIN LATERA	L	
0.0R3	0.51R3	AQUASHICOLA CREEK	HQ-CWF, MF
ELLERTOW	N LATERAL		
0.0	0.0	UNT LEHIGH RIVER	CWF, MF
0.0	0.8	BULL RUN	CWF, MF
0.8	2.14R2	EAST BRANCH SAUCON CREEK	CWF, MF

*MILEPOSTS ARE APPROXIMATE. ALL ROUTE DEVIATIONS IMPLEMENTED AFTER THE SEPTEMBER 2015 FERC FILING ARE DENOTED WITH AN "R" AND INDICATE A MILEPOST EQUATION. MILEPOSTS WITH AN "R1" INDICATE ROUTE DEVIATIONS IMPLEMENTED AND PROVIDED TO FERC PRIOR TO THE ISSUANCE OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT.

MILEPOSTS WITH AN "R2" INDICATE ROUTE DEVIATIONS IMPLEMENTED AS PART OF THE SEPTEMBER 2016 SUPPLEMENTAL FILING. MILEPOSTS WITH AN "R3" INDICATE ROUTE DEVIATIONS IMPLEMENTED POST-FERC CERTIFICATE ISSUANCE. MILEPOSTS WITH AN "R4" INDICATE ROUTE DEVIATIONS IMPLEMENTED SINCE THE PREVIOUS PADEP SUBMISSION. ALL MILEPOSTS WITHOUT AN "R" INDICATE THAT THE ROUTE HAS NOT CHANGED SINCE THE SEPTEMBER 2015 APPLICATION.





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