ENVIRONMENTAL NOTES

GENERAL NOTES:

1. THE MERCER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED 48 HOURS PRIOR TO STARTING LAND DISTURBANCE ACTIVITY. NOTICE MAY BE MAILED, FAXED OR EMAILED TO:
   MCSCD, 590 HUGHES DRIVE, HAMILTON SQUARE, NJ 08690
   PHONE: 609-586-9603 FAX: 609-586-1117EMAIL: PAULS1MERCER@AOL.COM

2. IF APPLICABLE TO THIS PROJECT, THE OWNER SHOULD BE AWARE OF HIS OR HER OBLIGATION TO FILE FOR A NJPDES CONSTRUCTION ACTIVITY STORMWATER 5G3 PERMIT (NJG0088323) VIA THE NJDEP ONLINE PERMITTING SYSTEM (WWW.NJ.GOV/DEP/ONLINE) AND TO MAINTAIN THE ASSOCIATED BEST MANAGEMENT PRACTICES AND STORMWATER POLLUTION PREVENTION PLAN SELF-INSPECTION LOGBOOK ONSITE AT ALL TIMES. THIS PERMIT MUST BE FILED PRIOR TO THE START OF SOIL DISTURBANCE. THE ONLINE APPLICATION PROCESS WILL REQUIRE ENTRY OF AN SCD CERTIFICATION CODE, WHICH IS PROVIDED BY THE SOIL CONSERVATION DISTRICT UPON CERTIFICATION OF THE SOIL EROSION AND SEDIMENT CONTROL PLAN.

3. THE MERCER COUNTY SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP.

4. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INCLUDING AN INCREASE IN THE LIMIT OF DISTURBANCE, WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RECERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS.

5. A COPY OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON SITE AT ALL TIMES.

6. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AS OUTLINED WITHIN THE SEQUENCE OF CONSTRUCTION ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.

7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NJ. IF LANGUAGE CONTAINED WITHIN ANY OTHER PERMIT FOR THIS PROJECT IS MORE RESTRICTIVE THAN (BUT NOT CONTRADICTORY TO) WHAT IS CONTAINED WITHIN THESE NOTES OR ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, THEN THE MORE RESTRICTIVE PERMIT REQUIREMENTS SHALL BE FOLLOWED.

8. THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A 1½" TO 2½" CLEAN STONE TRACKING PAD AT ALL CONSTRUCTION DRIVEWAYS IMMEDIATELY AFTER INITIAL SITE DISTURBANCE, WHETHER IDENTIFIED ON THE CERTIFIED PLAN OR NOT. THE WIDTH SHALL SPAN THE FULL WIDTH OF EGRESS, AND LENGTH SHALL BE 50 FT. OR MORE, DEPENDING ON SITE CONDITIONS AND AS REQUIRED BY THE STANDARD. THIS SHALL INCLUDE INDIVIDUAL LOT ACCESS POINTS WITHIN RESIDENTIAL SUBDIVISIONS. IF THE EGRESS IS TO A COUNTY ROAD, THEN A 20 FT. LONG PAVED TRANSITION SHALL BE PROVIDED BETWEEN THE EDGE OF PAVEMENT AND THE STONE ACCESS PAD.

9. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OF PRELIMINARY GRADING, PROVIDED THAT ALL OTHER REQUIREMENTS RELATED TO DETENTION BASINS, SWALES AND THE SEQUENCE OF CONSTRUCTION HAVE BEEN MET.

10. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 14 DAYS AND NOT SUBJECT TO CONSTRUCTION ACTIVITY WILL IMMEDIATELY RECEIVE TEMPORARY STABILIZATION. IF THE SEASON PREVENTS ESTABLISHMENT OF A TEMPORARY VEGETATIVE COVER, OR IF THE AREA IS NOT TOPSOILED, THEN THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO STATE STANDARDS. SLOPED AREAS IN EXCESS OF 3H:1V SHALL BE PROVIDED WITH EROSION CONTROL BLANKETS. CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES, ROADWAY EMBANKMENTS, ENVIRONMENTALLY SENSITIVE AREAS) WILL RECEIVE TEMPORARY STABILIZATION IMMEDIATELY AFTER INITIAL DISTURBANCE OR ROUGH GRADING.

11. ANY STEEP SLOPES (I.E. SLOPES GREATER THAN 3:1) RECEIVING PIPELINE OR UTILITY INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS.

12. PERMANENT VEGETATION SHALL BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING AND TOPSOILING. ALL AGRONOMIC REQUIREMENTS CONTAINED WITHIN THE STANDARDS AND ON THE CERTIFIED PLAN SHALL BE EMPLOYED. MULCH WITH BINDER, IN ACCORDANCE WITH THE STANDARDS, SHALL BE USED ON ALL SEEDED AREAS. SAVE ALL TAGS AND/OR BAGS USED FOR SEED, LIME AND FERTILIZER, AND PROVIDE THEM TO THE DISTRICT INSPECTOR TO VERIFY THAT MIXTURES AND RATES MEET THE STANDARDS.

13. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, THEN NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.

14. DURING THE COURSE OF CONSTRUCTION, SOIL COMPACTION MAY OCCUR WITHIN HAUL ROUTES, STAGING AREAS AND OTHER PROJECT AREAS. IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING, COMPACTED SURFACES SHOULD BE SCARIFIED 6" TO 12" IMMEDIATELY PRIOR TO TOPSOIL APPLICATION. THIS WILL HELP ENSURE A GOOD BOND BETWEEN THE TOPSOIL AND SUBSOIL. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

15. PRIOR TO SEEDING, TOPSOIL SHALL BE WORKED TO PREPARE A PROPER SEEDBED. THIS SHALL INCLUDE RAKING OF THE TOPSOIL AND REMOVAL OF DEBRIS AND STONES, ALONG WITH OTHER REQUIREMENTS OF THE STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION.

16. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE BURIED WITH LIMESTONE IN ACCORDANCE WITH THE STANDARD AND BE COVERED WITH A MINIMUM OF 12" OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO TOPSOIL APPLICATION AND SEEDBED PREPARATION. IF THE AREA IS TO RECEIVE TREE OR SHRUB PLANTINGS, OR IS LOCATED ON A SLOPE, THEN THE AREA SHALL BE COVERED WITH A MINIMUM OF 24" OF SOIL HAVING A PH OF 5 OR MORE.

17. MULCHING TO THE STANDARDS IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONAL ROC'S ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING. PERMANENT STABILIZATION MUST THEN BE COMPLETED DURING THE OPTIMUM SEEDING SEASON IMMEDIATELY FOLLOWING THE CONDITIONAL ROC, OR THE COMPLETION OF WORK IN A GIVEN AREA.

18. HYDROSEEDING IS A TWO-STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER, LIME, ETC., ALONG WITH MINIMAL AMOUNTS OF MULCH TO PROMOTE CONSISTENCY, GOOD SEED-TO-SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE. UPON COMPLETION OF THE SEEDING OPERATION, HYDROMULCH SHOULD BE APPLIED AT A MINIMUM RATE OF 1500 LBS. PER ACRE IN SECOND STEP. THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE STANDARDS. THE USE OF HYDROMULCH ON SLOPED AREAS IS DISCOURAGED.

19. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF THE CONSTRUCTION PROJECT. ALL SEDIMENT WASHED, DROPPED, TRACKED OR SPILLED ONTO PAVED SURFACES SHALL BE IMMEDIATELY REMOVED.

20. THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION, AND FOR EMPLOYING ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES AT THE REQUEST OF THE MERCER COUNTY SOIL CONSERVATION DISTRICT.

21. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.

22. ALL DETENTION / RETENTION BASINS MUST BE FULLY CONSTRUCTED (INCLUSIVE OF ALL STRUCTURAL COMPONENTS AND LINERS) AND PERMANENTLY STABILIZED PRIOR TO PAVING OR PRIOR TO THE ADDITION OF ANY IMPERVIOUS SURFACES. PERMANENT STABILIZATION INCLUDES, BUT MAY NOT BE LIMITED TO: TOPSOIL, SEED, STRAW MULCH AND BINDERS OR EROSION CONTROL BLANKETS ON ALL SEEDING, ALL AGRONOMIC REQUIREMENTS AS SPECIFIED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN, INSTALLATION OF THE OUTFLOW CONTROL STRUCTURES AND DISCHARGE STORM DRAINAGE PIPING, LOW FLOW CHANNELS, CONDUIT OUTLET PROTECTION, EMERGENCY SPILLWAYS, AND LAP RING PROTECTION.

23. THE RIDING SURFACE OF ALL UTILITY TRENCHES WITHIN PAVED AREAS SHALL BE 3/4" CLEAN STONE OR BASE PAVEMENT UNTIL SUCH TIME AS FINAL PAVEMENT HAS BEEN INSTALLED. TEMPORARY SOIL RIDING SURFACES ARE PROHIBITED.

24. ALL CONSTRUCTION DEWATERING (TRENCHES, EXCAVATIONS, ETC.) MUST BE DONE THROUGH AN INLET OR OUTLET FILTER IN ACCORDANCE WITH THE STANDARD FOR DEWATERING OR AS DEPICTED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN. DISCHARGE LOCATIONS FOR THE DEWATERING OPERATION MUST CONTAIN PERENNIAL VEGETATION OR SIMILAR STABLE SURFACE.

25. ALL SWALES OR CHANNELS THAT WILL RECEIVE RUNOFF FROM PAVED SURFACES MUST BE PERMANENTLY STABILIZED PRIOR TO THE INSTALLATION OF PAVEMENT. IF THE SEASON PROHIBITS THE ESTABLISHMENT OF PERMANENT STABILIZATION, THE SWALES OR CHANNELS MAY BE TEMPORARILY STABILIZED IN ACCORDANCE WITH THE STANDARDS.

26. NJSA 4:24-39 ET SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY BE ISSUED BY THE MUNICIPALITY BEFORE THE PROVISIONS OF THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN HAVE BEEN SATISFIED. THEREFORE, ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS MUST BE COMPLETED BEFORE THE DISTRICT ISSUES A REPORT OF COMPLIANCE OR CONDITIONAL REPORT OF COMPLIANCE, WHICH MUST BE FORWARDED TO THE MUNICIPALITY PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY OR TEMPORARY CERTIFICATE OF OCCUPANCY, RESPECTIVELY.

NOTICES TO CONTRACTOR:

1. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO WORK.

2. THE CONTRACTOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.

3. WATERBARS IN AGRICULTURAL OR RESIDENTIAL AREAS ARE TEMPORARY AND SHALL BE REMOVED AS PART OF FINAL SITE GRADING. SEEDING IS NOT REQUIRED IN CULTIVATED CROPLANDS UNLESS REQUESTED BY THE LANDOWNER.

4. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE COORDINATED WITH THE AGENCY HAVING JURISDICTION.

5. 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.

6. CONTRACTOR SHALL MINIMIZE THE TOTAL AREA OF DISTURBANCE.

7. CONTRACTOR SHALL INSTALL SEED MIXTURE AS DIRECTED BY PENNEAST. SEED MIXTURE USE WILL VARY ACCORDING TO PROJECT, LANDOWNER REQUEST AND ENVIRONMENTAL REQUIREMENTS.

8. 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.

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05078700

SIGNATURE DATE 08/01/2019

Know what's below. Call before you dig.

REVISIONS

	REVISIONS	DATE	DRAWN	CK	APPR
A	SUBMITTAL TO SOIL CONSERVATION DISTRICT	07/2019	DOW (MM)	AJD (MM)	MJD (MM)

PREPARED FOR
PennEast PIPELINE

PREPARED BY
MOTT MACDONALD
111 WOOD AVENUE SOUTH, ISELIN, NJ, 08830
CERTIFICATE NO. 24GA28016600

PENNEAST PIPELINE PROJECT
SOIL EROSION AND SEDIMENTATION CONTROL PLAN
E & S GENERAL NOTES
MERCER COUNTY

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

ENVIRONMENTAL NOTES

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

1. 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.

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:_____

PHONE NUMBER:_____EMERGENCY PHONE #:_____

COMPANY:_____

RESPONSIBILITIES:_____

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
Culverts	
Inspect culverts and remove accumulated debris immediately	Weekly and after each runoff event
Remove accumulated sediment and accumulated organic matter	Every spring and fall and after stormwater events over 1-inch of rainfall
Inspect culvert inlet and sediment control barriers, clean and replace as needed.	Weekly and after each runoff event
Inspect riprap aprons. Replace displaced riprap within the apron immediately.	Weekly and after each runoff event
Rock Construction Entrance	
Inspect rock construction entrance	Weekly and after each runoff event
Add rock to maintain specified dimensions and capacity to remove sediment from the tires	As needed
Remove sediment deposited on paved roadways and return to the construction site	Immediately, as needed
Inlet Filter Bags	
Inspect inlet filter bags and make necessary repairs immediately after the inspection	Weekly and after each runoff event
Clean or replace the filter bag	When bag is 1/2 full or flow capacity has been reduced so as to cause flooding or bypassing of inlet
Pumped Water Filter Bag	
Inspect filter bag. Cease pumping if any problem is detected.	Daily
Replace filter bag	When filter bag becomes 1/2 full of sediment or fails
Sediment Barriers	
Inspect sediment barriers. Repair according to manufacturer's specifications or replace within 24	Weekly and after each runoff event
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 fails due to unanticipated concentrated flow	As needed
Remove accumulated sediment from rock filter outlets	When accumulations reach 1/3 of the height of the outlet
Waterbars	
Inspect waterbars. Repair waterbars and remove debris and obstructions from channels as needed.	Weekly and after each runoff event
Hydrostatic Dewatering Structure	
Monitor dewatering structure	During dewatering activities
Remove sediment	When accumulations reach 1/3 the aboveground height of the barrier.
Replace damaged or deteriorated bales	Immediately, as needed

EXISTING CONDITION NOTES:

1. THE CONTOURS AND IMAGERY SHOWN WERE PROVIDED BY PICTOMETRY, 2015. ADDITIONAL CONTOURS AND IMAGERY SUPPLEMENTED FROM PASDA AND USG
2. NORTH ARROW AND COORDINATES ARE BASED UPON THE NEW JERSEY STATE PLANE COORDINATE SYSTEM (NAD83) AND VERTICAL DATUM IS THE NORTH AMERICAN DATUM OF 1988 (NAVD88).
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 PS&S 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.
6. 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:

1. 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 NJDEP AND FERC.
4. 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.

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05078700

SIGNATURE 08/01/2019 DATE

Know what's below. Call before you dig.

REVISIONS

	REVISIONS	DATE	DRAWN	CK	APPR
A	SUBMITTAL TO SOIL CONSERVATION DISTRICT	07/2019	DOW (MM)	AJD (MM)	MJD (MM)

PREPARED FOR PennEast PIPELINE

PREPARED BY MOTT MACDONALD
111 WOOD AVENUE SOUTH, ISELIN, NJ, 08830
CERTIFICATE NO. 24GA28016600

PENNEAST PIPELINE PROJECT
SOIL EROSION AND SEDIMENTATION CONTROL PLAN
E & S GENERAL NOTES
MERCER COUNTY

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

SEEDING & VEGETATIVE NOTES

TOPSOIL STRIPPING AND STOCKPILING

1. FIELD EXPLORATION SHOULD BE MADE TO DETERMINE WHETHER QUANTITY AND/OR QUALITY OF SURFACE SOIL JUSTIFIES STRIPPING.
2. A 6-INCH STRIPPING DEPTH IS TYPICAL, BUT MAY VARY DEPENDING ON THE PARTICULAR SOIL STRUCTURE OR PRE-EXISTING USE.
3. STOCKPILES SHOULD BE LOCATED SO AS NOT TO OBSTRUCT NATURAL DRAINAGE OR CAUSE OFF-SITE ENVIRONMENTAL DAMAGE, AND SHALL BE DELINEATED ON THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN AND BE CONSTRUCTED IN ACCORDANCE WITH THE TOPSOIL STOCKPILE DETAIL.
4. STOCKPILES SHOULD BE TEMPORARILY STABILIZED ACCORDING TO THE STANDARDS.

SITE PREPARATION

1. INSTALL EROSION CONTROL MEASURES AND FACILITIES SUCH AS SILT FENCE, DIVERSIONS, SEDIMENT BASINS, AND CHANNEL STABILIZATION.
2. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, TACKING, AND MAINTENANCE. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING, 19-1.

SEEDBED PREPARATION

1. TOPSOIL REQUIRED

   MIN. DEPTH: 5" (UNSETTLED)

   PH: 6.0 TO 8.0

   ORGANIC MATTER CONTENT: 2.75% MIN.

   NITRATE N2: 50 LBS/ACRE (50% WATER INSOLUBLE)

   PHOSPHOROUS: 100 LBS/ACRE

   POTASSIUM: 50 LBS/ACRE
2. THE CONTRACTOR SHOULD BE AWARE OF THE POSSIBILITY, DEPENDING UPON THE SITE CONDITIONS, THAT ALL TOPSOIL MAY HAVE TO BE PROVIDED FROM AN OFF-SITE SOURCE.
3. TOPSOIL SHOULD BE HANDLED ONLY WHEN DRY ENOUGH TO WORK WITHOUT DAMAGING SOIL STRUCTURE.
4. APPLY A UNIFORM 5 INCHES (UNSETTLED) OF TOPSOIL ON ALL DISTURBED AREAS. SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM DEPTH OF 12 INCHES OF SOIL HAVING A PH OF 5.0 OR MORE AND THE TOP 5 INCHES SHALL CONFORM TO THE TOPSOIL STANDARD AND SHALL BE LIMED ACCORDING TO THE SPECIFICATIONS.
5. IF THE TOPSOIL BECOMES COMPACTED, THE SURFACE MUST BE SCARIFIED 6" TO 12" TO PROVIDE GOOD SEED-TO-SOIL BOND.
6. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS THOSE OFFERED BY RUTGERS UNIVERSITY COOPERATIVE EXTENSION. IF SOIL TESTING IS NOT FEASIBLE, FERTILIZER (10-20-10) WITH 50% WATER INSOLUBLE NITROGEN SHOULD BE APPLIED AT THE TYPICAL RATE OF 500 LBS/ACRE OR 11 LBS/1,000 SQUARE FEET.
7. APPLY LIMESTONE EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDES (PULVERIZED DOLOMITIC LIMESTONE IS PREFERRED FOR MOST SOILS SOUTH OF THE NEW BRUNSWICK - TRENTON FALL LINE) AS FOLLOWS:

SOIL TEXTURE	TONS/ACRE	LBS/1,000 SQ. FT.
CLAY, CLAY LOAM, HIGH ORGANIC	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

8. WORK LIME AND FERTILIZER INTO THE SOIL TO A DEPTH OF 4 INCHES. THE FINAL HARROWING OR DISC OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A UNIFORM, FINE SEEDBED IS PREPARED.
9. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION, AND OTHER OBJECTIONABLE STONES OR DEBRIS SUCH AS WIRE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS, OR OTHER UNSUITABLE MATERIAL.

SEEDING

1. SELECT A SEED MIXTURE APPROVED BY THE MERCER COUNTY SCD.
2. APPLY SEED UNIFORMLY BY HAND, CYCLONES, DROP SEEDER, DRILL CULTIPACKER, OR HYDROSEEDER*. THE LATTER MAY BE JUSTIFIABLE FOR LARGE, STEEP AREAS WHERE CONVENTIONAL APPLICATIONS ARE NOT FEASIBLE. HYDROSEEDING SHALL BE A TWO- STEP PROCESS: MULCH SHALL NOT BE MIXED WITH THE SEED; THE SEED MUST BE APPLIED FIRST TO ASSURE PROPER SEED TO SOIL CONTACT. THE HYDROMULCH IS THEN SPRAYED OVER THE SEEDING. FOR OPTIMUM RESULTS, THE SEED SHOULD BE INCORPORATED INTO THE SOIL TO A DEPTH OF ¼ TO ½ INCH DEPENDING UPON SPECIES.

   THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE STANDARDS.
3. AFTER SEEDING, THE SOIL SHOULD BE PACKED WITH A CORRUGATED ROLLER. WHEN PERFORMED ON THE CONTOUR, ROLLING WILL MINIMIZE SHEET EROSION AND MAXIMIZE WATER CONSERVATION.

MULCHING

1. UNROTTED STRAW, HAY FREE OF SEEDS, OR SALT HAY IS REQUIRED ON ALL SEEDING AT A RATE OF 1.5 TO 2 TONS/ACRE, (70 TO 90 LBS./1,000 SQUARE FEET), EXCEPT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER, THEN THE RATE OF APPLICATION IS 3 TONS PER ACRE.
2. MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS DUE TO WIND OR WATER. THIS MAY BE DONE ACCORDING TO THE FOLLOWING METHODS:
   - 2.1. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 LBS/ACRE APPLIED BY THE HYDROSEEDER. USE IS LIMITED TO ONLY THE OPTIMUM SEEDING SEASON.
   - 2.2. SYNTHETIC OR ORGANIC BINDERS
   - 2.3. PEG AND TWINE, MULCH NETTING, AND MECHANICAL CRIMPING.
   - 2.4. CRIMPING REQUIRES A HIGHER MULCH RATE (3 TONS/ACRE).

NOTE: 1) ONE BALE OF HAY WEIGHS 40-60 LBS DEPENDING ON HOW IT WAS BALED.
2) 1,500 GALLON TANK OF HYDROMULCH COVERS .5 ACRES.

PLEASE NOTE: *THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-3 OF THE STANDARDS ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. (UP TO 50% REDUCTION IS APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING.* ***ESTABLISHING PERMANENT VEGETATION MEANS 80% EVENLY DISTRIBUTED VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE.)***

TEMPORARY SEEDING MIXES

MIX: EARLY SPRING/ LATE SUMMER TO EARLY FALL
100% PERENNIAL RYEGRASS
RATE: 100 LBS/ ACRE

MIX: LATE FALL
100% CEREAL RYE
RATE: 112 LBS/ ACRE

MIX: MID-SUMMER
40% PEARL MILLET
40% MILLET (GERMAN OR HUNGARIAN)
20% WEEPING LOVEGRASS
RATE: 100 LBS/ ACRE

REFER TO THE PENNEAST PIPELINE PROJECT "NJDEP - RESTORATION PERMIT PLANS" DATED 08/01/2019 FOR ADDITIONAL INFORMATION ON RESTORING WETLAND TRANSITION AREAS, RIPARIAN ZONES, WETLANDS AND WATERBODIES.

RECOMMENDED PERMANENT SEEDING MIXES

OPTIMUM SEEDING DATES: MARCH 1 TO MAY 15 AND AUGUST 15 TO OCTOBER 15

A. LAWNS (RATE: 200 LBS/ACRE)

MERCER CO. SCD PREFERRED MIXES FOR LAWNS AND DETENTION BASINS
70% TURF TYPE TALL FESCUE*#
20% PERENNIAL RYEGRASS
10% KENTUCKY BLUEGRASS

MIX: LAWNS - LOW MAINTENANCE, DROUGHTY & HEAVY TRAFFIC
80% TALLFESCUETURFTYPE(LOWGROWINGVARIETIES)*#
10% PERENNIAL RYEGRASS (LOW GROWING VARIETIES)

MIX: SHADE
65% HARD, CHEWINGS, OR CREEPING RED FESCUE*
20% KENTUCKY BLUEGRASS
15% PERENNIAL RYEGRASS

MIX: LAWNS - QUALITY SUN AND SHADE
20% PERENNIAL RYEGRASS
30% CHEWINGS FESCUE
35% CREEPING RED FESCUE
15% KENTUCKY BLUEGRASS

MIX: MOIST DETENTION BASIN BOTTOMS
40% FLAT PEA (WITH PROPER INOCULANT)
25% PERENNIAL RYEGRASS
25% TALL FESCUE OR STRONG CREEPING RED FESCUE
10% REDTOP
+ USE THE ABOVE MIX FOR INFREQUENT MOWING. FOR A REGULAR MOWING REGIME, SUBSTITUTE ROUGH BLUEGRASS AND/OR TALL FESCUE FOR THE FLAT PEA.

*INCLUDE AT LEAST THREE VARIETIES IN MIX
#EXCLUDE K31

B. CONSERVATIVE PLANTINGS

MIX: RECLAMATION, EROSION CONTROL& ACID SOILS
RATE: 150 LBS/ ACRE
40 % SWITCHGRASS
25% SERECIA LESPEDEZA OR FLAT PEA
15% TALL FESCUE OR CREEPING RED FESCUE
15% DEERTONGUE
5% BIRDSFOOT TREFOIL

MIX: WILDFLOWER MEADOW
RATE: 50 LBS/ACRE
72% HARD OR SHEEPS FESCUE
22% NORTHEAST/ MID-ATLANTIC WILDFLOWER MIXTURE
6% BIRDSFOOT TREFOIL

MIX: WILDLIFE HABITAT ENHANCEMENT
RATE: 100 LBS/ACRE
40% SWITCHGRASS OR COASTAL PANICGRASS
30% CANADA BLUEGRASS OR SMOOTH BROMEGRASS
10% ORCHARDGRASS
10% WHITE CLOVER
5% JAPANESE MILLET
5% BIRDSFOOT TREFOIL

MIX: WATERWAYS & WET BASINS*
RATE: 100 LBS/ACRE
40% SWITCHGRASS
30% CANADA BLUEGRASS OR SMOOTH BROMEGRASS
15% ROUGHBLUEGRASS(SHADE)ORTALLFESCUE(OPEN)
10% ALSIKE CLOVER OR LADINO WHITE CLOVER 10%
BIRDSFOOT TREFOIL OR CREEPING FOXTAIL
4% JAPANESE MILLET
1% RED TOP
(*SHOULD NOT BE MOWED LESS THAN 6 INCHES)

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05078700

SIGNATURE — DATE 08/01/2019

Know what's below. Call before you dig.

REVISIONS

	REVISIONS	DATE	DRAWN	CK	APPR
A	SUBMITTAL TO SOIL CONSERVATION DISTRICT	07/2019	DOW (MM)	AJD (MM)	MJD (MM)

PREPARED FOR
PennEast PIPELINE

PREPARED BY
MOTT MACDONALD
111 WOOD AVENUE SOUTH, ISELIN, NJ, 08830
CERTIFICATE NO. 24GA28016600

PENNEAST PIPELINE PROJECT
SOIL EROSION AND SEDIMENTATION CONTROL PLAN
E & S GENERAL NOTES
MERCER COUNTY

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

PROJECT CONSTRUCTION SEQUENCING

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 SUBDIVIDED INTO CATEGORIES AND PERFORMED BY SPECIALIZED CREWS (E.G, SITE PREPARATION/CLEARING, TRENCHING, PIPE CONSTRUCTION, 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 FINAL STABILIZATION SHALL BE MINIMIZED TO THE EXTENT PRACTICABLE. NO ONE SEGMENT OF AREA OF THE PIPELINE ALIGNMENT SHALL GO WITHOUT STABILIZATION (TEMPORARY OR PERMANENT) FOR A PERIOD GREATER THAN 30 DAYS.

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.

5. 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

6. TEMPORARY WATERBARS SHALL BE INSTALLED AT THE END OF EACH WORKDAY AS DETERMINED BY PENNEAST ENVIRONMENTAL INSPECTORS.

7. 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.

8. 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:

1. 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 NEW JERSEY ONE CALL SYSTEM INC. SHALL BE NOTIFIED AT 1-800-272-1000 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.

11. BRUSH HOG/MOW EXISTING VEGETATION TO FACILITATE INSTALLATION OF TEMPORARY EROSION AND SEDIMENT CONTROLS.

12. INSTALL VEHICULAR TEMPORARY STREAM CROSSING (E.G., BRIDGE OR MULTIPLE PIPE CROSSING).

13. INSTALL VEHICULAR TEMPORARY TIMBER MAT WETLAND CROSSING. GRUBBING SHALL NOT TAKE PLACE WITHIN WETLAND AREAS TO BE USED FOR TEMPORARY ACCESS ROADS.

SITE CLEARING (TREE CUTTING) & GRUBBING:

1. INITIATE CLEARING AND GRUBBING OF CONSTRUCTION WORK AREA (CWA) AND ACCESS ROADS AS NEEDED. LIMIT CLEARING AND GRUBBING TO CUTTING EXISTING VEGETATION RATHER THAN BULLDOZING THE VEGETATION.

1. ALL BRUSH AND TREES WILL BE FELLED INTO THE CWS TO MINIMIZE DAMAGE TO TREES AND STRUCTURES ADJACENT TO THE CWS. TREES THAT INADVERTENTLY FALL BEYOND THE EDGE OF THE CWS WILL BE IMMEDIATELY MOVED ONTO THE CWS AND DISTURBED AREAS WILL BE IMMEDIATELY STABILIZED.

2. INSTALL TEMPORARY ACCESS ROADS.

3. 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.

4. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THIS PLAN. 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.

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.

SITE GRADING:

1. RE-STAKE THE CWA TO REPLACE ANY SIGNAGE OR FLAGGING THAT WAS REMOVED OR DAMAGED DURING CLEARING ACTIVITIES.

2. INSTALL ROCK CONSTRUCTION ENTRANCES WHERE VEHICLES WILL ENTER CONSTRUCTION AREAS FROM ACCESS ROADS.

3. CLEAR, GRADE AND IMPROVE ACCESS ROAD AS NEEDED AS THEIR USE BECOMES REQUIRED.

4. STOCKPILE TOPSOIL ALONG THE EDGE OF THE CWA AND TEMPORARILY STABILIZED.

5. ROUGH GRADE SITE, REMOVE AND STOCKPILE TOPSOIL AS APPROPRIATE. INSTALL SILT FENCE AROUND STOCKPILED TOPSOIL AS SHOWN ON E&S DRAWINGS.

6. 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.

7. 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.

8. INSTALL TEMPORARY 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.

9. INSTALL TEMPORARY FLOW DIVERSION, FLUME STRUCTURES AND TEMPORARY BRIDGES AT STREAM CROSSINGS AS STREAM CROSSINGS ARE ENCOUNTERED.

10. INSTALL APPROPRIATE TRENCH DEWATERING FILTER BAG AND SURROUNDING SEDIMENT BARRIERS (STRAW BALES, SILT FENCE AND/OR COMPOST FILTER SOCKS AS DETERMINED IN THE FIELD) IN PREPARATION OF DEWATERING ACTIVITIES. THIS SHALL BE COMPLETED PRIOR TO PERFORMING EXCAVATION ACROSS WATERBODIES.

11. INSTALL TIMBER MATS FOR EQUIPMENT ACCESS AS SHOWN ON E&SCP DRAWINGS AS WETLANDS / STREAMS ARE ENCOUNTERED.

12. UTILIZE WOOD CHIPS IN HEAVILY TRAFFICKED AREAS TO REDUCE THE POTENTIAL FOR RUTTING. WOOD CHIPS WILL NOT BE SPREAD IN WETLANDS OR STREAMS.

PIPELINE CONSTRUCTION:

UPLAND LOCATIONS:

1. ENSURE THE APPROPRIATE UPLAND EROSION AND SEDIMENT CONTROLS ARE IN PLACE.

2. GRADE CONSTRUCTION WORK AREA; EXCAVATE PIPELINE TRENCH. LIMIT TRENCH WIDTH TO WHAT IS NECESSARY TO INSTALL PIPE. FLAG DRAINAGE TILES DAMAGED DURING DITCHING ACTIVITIES FOR REPAIR.

3. SEGREGATE TOPSOIL IN AGRICULTURAL FIELDS AND MANICURED LAWNS FOR RESTORATION ACTIVITIES DURING FINAL CLEAN UP.

4. STRING PIPE AND PREPARE THE PIPE JOINTS FOR WELDING.

5. WELD PIPE JOINTS AND PERFORM NDT (NON-DESTRUCTIVE TESTING).

6. DISCHARGE ALL WATER FROM TRENCH USING FILTER BAGS.

7. INSTALL THE PIPELINE IN THE TRENCH.

8. INSTALL TRENCH PLUGS.

9. BACKFILL THE PIPELINE TRENCH. BACKFILL MATERIAL SHOULD BE MOUNDED OVER THE TRENCH TO ALLOW FOR SETTLING EXCEPT IN AGRICULTURAL FIELDS AND MANICURED LAWNS.

10. PERFORM PERMANENT STABILIZATION, INCLUDING:

A. GRADE AREAS AS CLOSELY AS POSSIBLE TO ORIGINAL CONTOURS.

B. REPLACE TOPSOIL.

C. 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 FILTER BAGS OR COMPOST SOCK SEDIMENT TRAP.

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

1. NO WORK SHALL COMMENCE THROUGH A STREAM, RIVER, WETLANDS, OR OTHER WATERBODY DURING INCLEMENT WEATHER.

2. A UTILITY LINE CROSSING OF A STREAM CHANNEL 10 FEET IN BOTTOM 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 BACK FROM THE TOP OF EACH STREAM BANK.

3. A UTILITY LINE CROSSING OF A STREAM CHANNEL BETWEEN 10 FEET AND 100 FEET IN BOTTOM 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 BACK FROM THE TOP OF EACH STREAM BANK.

4. WETLAND CROSSINGS ARE TO BE COMPLETED ALONG WITH THE MAINLINE INSTALLATION AND WILL BE DEPENDENT UPON THE LENGTH OF THE CROSSING.

5. FACILITIES 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.

6. INSTALL TEMPORARY EQUIPMENT CROSSINGS AT STREAMS AND TEMPORARY TIMBER MATS AT WETLAND CROSSINGS IN ACCORDANCE WITH NOTES AND DETAILS.

7. FOR DRY STREAM CROSSINGS INSTALL DAM AND PUMP, DRY FLUME, OR COFFERDAM IN ACCORDANCE WITH NOTES AND DETAILS.

8. DEWATERING 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.

9. STABILIZE CHANNEL EXCAVATION AND STREAM BANKS PRIOR TO REDIRECTING STREAM FLOW.

WETLAND CROSSINGS:

1. LOCATE STAGING AREA AND ACCESS POINTS. STAGING AREAS SHOULD BE LOCATED AT LEAST 50 FEET FROM THE ENDGE OF THE WETLAND. INSTALL SEDIMENT BARRIERS DOWN SLOPE OF THESE AREAS.

2. INSTALL ROCK CONSTRUCTION ENTRANCE AS NEEDED. REFER TO THE ROCK CONSTRUCTION ENTRANCE DETAIL ON DRAWINGS FOR SUGGESTED DIMENSIONS.

3. INSTALL ORANGE FLAGGING AROUND PERIMETER OF WETLAND AND SEDIMENT BARRIERS ALONG THE PERIMETERS OF THE SITE AS SHOWN ON THE CONSTRUCTION DRAWINGS.

4. 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.

5. SOIL EXCAVATED FROM WETLAND AREAS SHALL BE CAREFULLY REMOVED WITH THE ROOTS INTACT. THIS SOIL SHOULD BE PLACED IN A SEPARATE STOCKPILE TO BE REUSED DURING THE WETLAND SURFACE RESTITUTION.

6. DEWATER WORK AREA; WATER FROM THE EXCAVATION SHALL BE PUMPED TO A FILTER BAG.

7. INSTALL PIPE.

8. 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.

9. BACKFILL PIPE TRENCH. BACKFILL THE TOP 12-INCHES OF THE EXCAVATED TRENCH WITH THE STOCKPILED WETLAND SOIL TO MATCH ORIGINAL SURFACE GRADES.

10. NO SOIL AMENDMENTS SUCH AS AGRICULTURAL LIME, FERTILIZER, ETC. WILL BE USED WITHIN WETLAND AREAS.

11. COMPACT BACKFILL AND GRADE THE SURFACE OF THE TRENCH AREA TO ALLOW FOR POSITIVE DRAINAGE TO SOIL EROSION AND SEDIMENT CONTROLS AND TO PREPARE DISTURBED AREA FOR PERMANENT TRENCH RESTORATIONS. 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.

12. 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. CONVENTIONAL BORES WILL BE CONDUCTED ALONG WITH MAIN LINE INSTALLATION TO LIMIT THE TIME OF DISTURBANCE IN THOSE AREAS.

2. INSTALL SILT FENCE DOWNGRADIENT OF THE BORE AND RECEIVING PITS.

3. EXCAVATE PITS.

4. BORE BENEATH STREAMS WHERE INDICATED ON THE CONSTRUCTION DRAWINGS.

5. WATER FROM THE BORE PITS AND WORK AREAS SHALL BE PUMPED TO A PUMPED WATER FILTER BAG.

6. UPON COMPLETION, BACKFILL ALL PITS.

HDD

7. INSTALL SILT FENCE AT STAGING AND PULLBACK AREAS IN ACCORDANCE WITH E&S PLAN SHEETS. WHERE APPLICABLE TEMPORARY GRADING OF STAGING AREAS IS PROVIDED ON PLAN SHEETS.

8. BORE AND PULLBACK AREAS SHALL BE LOCATED A MINIMUM OF 50 FT BACK FROM EACH TOP OF STREAM BANK UNLESS AUTHORIZED BY NJDEP.

9. 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.

10. 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.

10. HYDROSTATIC TEST WATER DISCHARGE LOCATIONS HAVE BEEN PERMITTED THROUGH THE DELAWARE RIVER BASIN COMMISSION (DRBC). THESE LOCATIONS WILL BE PROVIDED TO THE SOIL COUNTY CONSERVATION DISTRICTS ONCE THE PERMIT IS RECEIVED FROM THE DRBC.

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05078700

SIGNATURE 08/01/2019 DATE

Know what's below. Call before you dig.

REVISIONS

	REVISIONS	DATE	DRAWN	CK	APPR
A	SUBMITTAL TO SOIL CONSERVATION DISTRICT	07/2019	DOW (MM)	AJD (MM)	MJD (MM)

PREPARED FOR
PennEast PIPELINE

PREPARED BY
MOTT MACDONALD
111 WOOD AVENUE SOUTH, ISELIN, NJ, 08830
CERTIFICATE NO. 24GA28016600

PENNEAST PIPELINE PROJECT

SOIL EROSION AND SEDIMENTATION CONTROL PLAN
E&S GENERAL NOTES

MERCER COUNTY

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

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 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.
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.
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 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 STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, JANUARY 2014.
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.

SOIL DE-COMPACTION NOTES

SOIL COMPACTION TESTING REQUIREMENTS

1. SUBGRADE SOILS PRIOR TO THE APPLICATION OF TOPSOIL (SEE PERMANENT SEEDING AND STABILIZATION NOTES FOR TOPSOIL REQUIREMENTS) SHALL BE FREE OF EXCESSIVE COMPACTION TO A DEPTH OF 6.0 INCHES TO ENHANCE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. A COPY OF THE PLAN OR PORTION OF THE PLAN SHALL BE USED TO MARK LOCATIONS OF TESTS, AND ATTACHED TO THE COMPACTION REMEDIATION FORM, AVAILABLE FROM THE LOCAL SOIL CONSERVATION DISTRICT. THIS FORM MUST BE FILLED OUT AND SUBMITTED PRIOR TO RECEIVING A CERTIFICATE OF COMPLIANCE FROM THE DISTRICT.
3. IN THE EVENT THAT TESTING INDICATES COMPACTION IN EXCESS OF THE MAXIMUM THRESHOLDS INDICATED FOR THE SIMPLIFIED TESTING METHODS (SEE DETAILS BELOW), THE CONTRACTOR/OWNER SHALL HAVE THE OPTION TO PERFORM EITHER (1) COMPACTION MITIGATION OVER THE ENTIRE MITIGATION AREA DENOTED ON THE PLAN (EXCLUDING EXEMPT AREAS), OR (2) PERFORM ADDITIONAL, MORE DETAILED TESTING TO ESTABLISH THE LIMITS OF EXCESSIVE COMPACTION WHEREUPON ONLY THE EXCESSIVELY COMPACTED AREAS WOULD REQUIRE COMPACTION MITIGATION. ADDITIONAL DETAILED TESTING SHALL BE PERFORMED BY A TRAINED, LICENSED PROFESSIONAL.

COMPACTION TESTING METHODS

A. PROBING WIRE TEST (SEE DETAIL)
B. HAND-HELD PENETROMETER TEST (SEE DETAIL)
C. TUBE BULK DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED
D. NUCLEAR DENSITY TEST (LICENSED PROFESSIONAL ENGINEER REQUIRED)

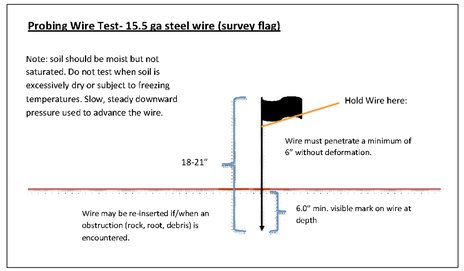
NOTE: ADDITIONAL TESTING METHODS WHICH CONFORM TO ASTM STANDARDS AND SPECIFICATIONS, AND WHICH PRODUCE A DRY WEIGHT, SOIL BULK DENSITY MEASUREMENT MAY BE ALLOWED SUBJECT TO DISTRICT APPROVAL.

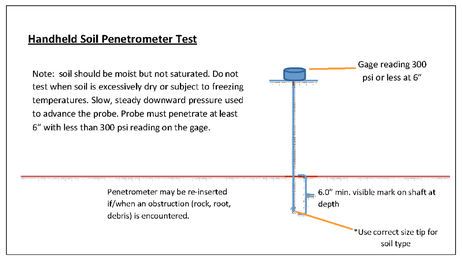
SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) OR SIMILAR) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

PROCEDURES FOR SOIL COMPACTION MITIGATION

1. PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. RESTORATION OF COMPACTED SOILS SHALL BE THROUGH DEEP SCARIFICATION/TILLAGE (6" MINIMUM DEPTH) WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.). IN THE ALTERNATIVE, ANOTHER METHOD AS SPECIFIED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAYBE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.

SIMPLIFIED TESTING METHODS





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 THE MANUFACTURER.
   - MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
   - INSPECTIONS WILL BE PERFORMED TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS.
   - 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 IMPLEMENTED PRIOR TO BEING ACTIVATED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY EXCESS MATERIAL.

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
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PREPARED FOR PennEast PIPELINE

PREPARED BY MOTT MACDONALD
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