

Appendix A - Item 14

PPL Bell Bend Nuclear Power Plant
Salem Township, Luzerne County, PA

ACOE Information Requirement:

"Describe the method of work; equipment access, staging areas, restoration of pre-construction contours, stream diversion, and sequence of construction."

Applicant Response:

Methods of Work

During BBNPP construction activities, the Applicant will adhere to the regulations for erosion and sediment control provided in 25 PA Code §102. These regulations contain Best Management Practices (BMPs) installation instructions and typical construction activities which require and specify use of BMPs. Visual monitoring of construction effluents and stormwater runoff will be performed as required by the PADEP and Luzerne Conservation District per the conditions in the NPDES Individual Permit for Stormwater Associated with Construction Activities. Environmental control systems installed to minimize impacts related to construction activities will comply with all federal, state and local environmental regulations and requirements. Long-term maintenance of construction-phase BMPs is described in the NPDES Stormwater permit application materials.

Site preparation activities will include the installation or establishment of environmental controls to assist in controlling construction impacts to jurisdictional features. These environmental controls include:

- Cofferdams,
- Spill containment control,
- Silt screens,
- Settling basins,

- Infiltration basins, and
- Dust suppression systems.

The following pre-construction activities will take place in the development of BBNPP:

- Clearing, grubbing, and rough/finish grading,
- Removal of vegetative debris and stumps/wood chips,
- Establishment of stockpile areas for backfill (common fill) and topsoil,
- Establishment of stockpile areas for imported/specialty fills,
- Preparation of laydown yards and modular assembly areas,
- Construction of support buildings and facilities, including the concrete batch plant,
- Medium and long-term temporary stabilization of slopes and graded surfaces, and
- Installation of dewatering wells for ESWEMS pond and pumphouse construction.

Clearing and grubbing of the site will be initiated with tree harvesting, vegetation removal, and stump grinding and/or disposal. Topsoil will be moved to a storage area (for later use) in preparation for excavation. The general plant area including the cooling tower areas will be brought to plant grade in preparation for foundation excavation and installation. Approximately 700 acres of land will be cleared for road, facility construction, laydown and parking uses.

Clearing and grubbing will be accomplished using tracked or wheeled, heavy engineering machinery and hand- or power-felling equipment. Acreage to be cleared, type and density of vegetation, terrain, and mechanical/personnel availability will dictate the specific type of equipment to be used in site preparation.

Bulldozers, scrapers, graders and excavators will be the primary equipment used in land clearing activities. Heavy equipment working in or near wetland areas will utilize rubber tracks to minimize compaction to soils and limit impact to tree roots. A chain mower will be used for general clearing of brush and woody vegetation.

Water use during the pre-construction period will consist of piped water provided by a licensed water supply company. Utility lines to deliver potable and construction support water and

municipal sewer services will be installed at the BBNPP site prior to pre-construction activities such as clearing and grading.

Equipment Access

As shown on the attached Figure 1, a number of access roads to construction areas will be upgraded or constructed to support BBNPP construction. These roadways will generally be located along the paths of roads included in the final design of BBNPP or within laydown areas and along portions of the site perimeter to support heavy machinery and the transportation of loaded waste containers to the main, paved roads. Current double-track dirt paths will be upgraded by grading and installation of a suitable road base and gravel top.

The development of the access road system will be executed with the goal of minimizing environmental impacts to the greatest extent possible based on the proposed site plan development. Access road systems will focus on employing existing roads wherever possible and will locate new roads to minimize crossing of wetlands and environmentally sensitive areas. Access roads will allow for equipment access and development of construction lay down areas as shown on project plans.

The roadway base will be laid down in discrete lifts and compacted to sufficient density to provide adequate bearing capacity for the heavy truck loading expected. It is anticipated that there are areas where the existing ground is quite soft. The roadway base at those locations may need to be constructed almost entirely of larger diameter crushed rock. Where necessary, a synthetic geotechnical material can be laid down under crushed rock to bridge the soft underlying material.

Heavy equipment and reactor components will be transported by rail and highway to the new construction site and lay down areas. A new access road, approximately 0.8 mi long, will be constructed from US Route 11 to the construction site providing access to the construction areas without impeding traffic to the existing Susquehanna SES units. A site perimeter road system and access road around the cooling towers area and the power block will also be built. An access driveway will be constructed to connect the proposed water intake structure to an existing road.

A rail spur will be built from the existing Susquehanna rail to the BBNPP Site. It will connect with the existing rail east of the Susquehanna Steam Electric Station (SSES) and travel south past the current SSES parking lot and north of the BBNPP batch plant area. From here it will

travel west and parallel the heavy haul road towards the Bell Bend Site. The rail continues north on Bridge # 5 over the wetlands and past the east side of the Combined Wastewater Retention Pond. Then it turns west and passes the north side of the Water Treatment Building and finishes north of the power block. (See Appendix A, Item 4, Figures 6, 6A, and 7A for routing details.)

Parking, Laydown, Fabrication, and Shop Preparation Areas (Staging Areas)

The parking, laydown, fabrication and shop areas include preparation of the parking and laydown areas by grading and stabilizing the surface with gravel with a layer of geotextile between the soil and the gravel. The shop and fabrication areas include the concrete slabs for formwork, laydown, module assembly, equipment parking and maintenance, and fuel and lubricant storage. Concrete pads for cranes and crane assembly will be installed.

Dewatering

During plant construction, dewatering activities will occur in support of foundation construction due to current groundwater levels. Dewatering allows for stability of excavated areas to support construction, but it also minimizes land area disturbance by reducing excavation size and prevents inadvertent groundwater contamination. A passive dewatering system will be used for the construction of the powerblock and cooling tower areas, while an active dewatering system (pumping of groundwater from extraction wells) will be used for the ESWEMS Pumphouse construction. A temporary water storage reservoir will be built east of the ESWEMS Pumphouse to handle extracted water and stormwater during foundation construction. This basin is included in the Erosion and Sedimentation Plan included in the NPDES Individual Permit for Stormwater Associated with Construction Activities application and will be removed when construction is complete.

Restoration of Pre-Construction Contours

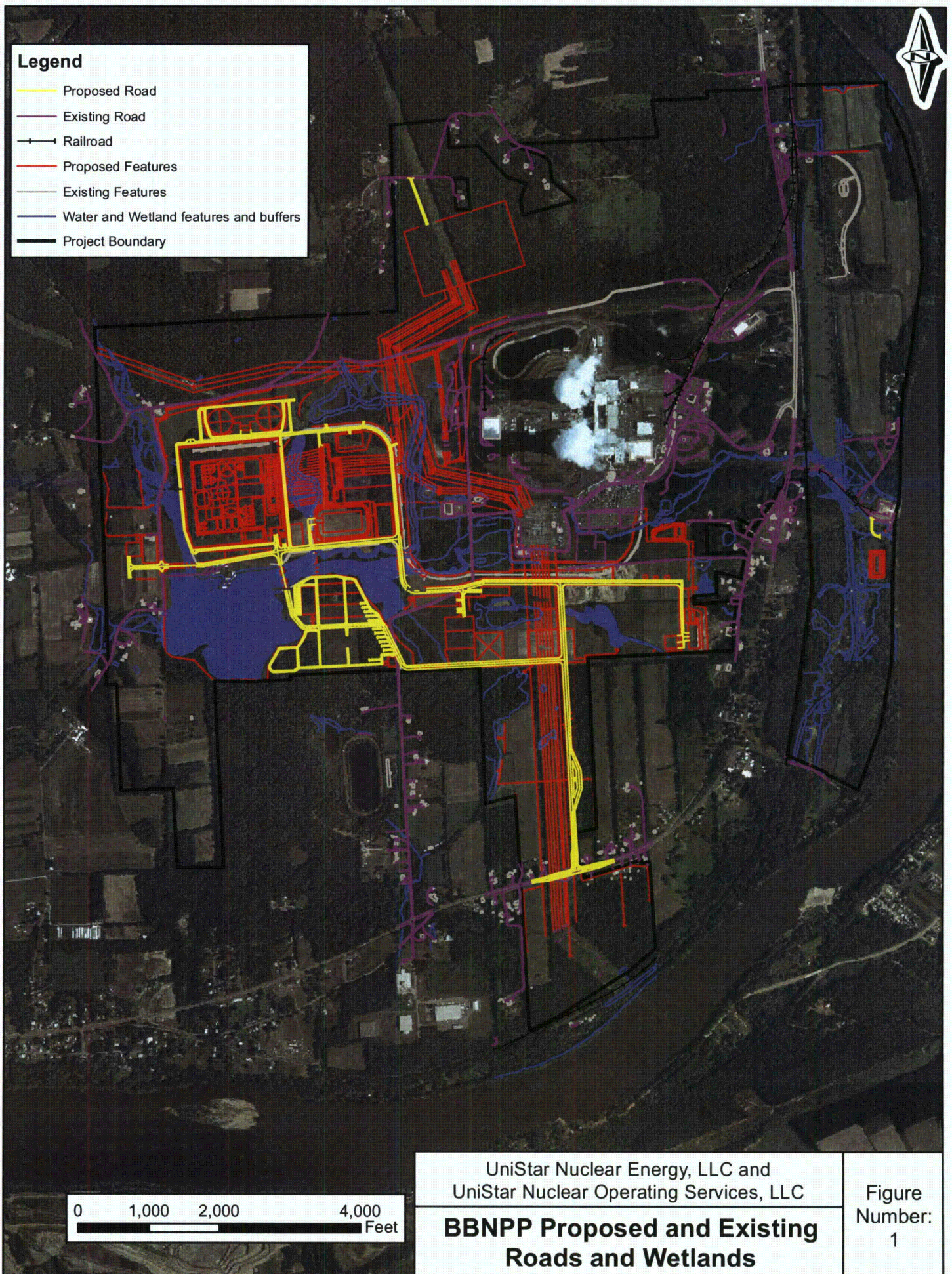
The BBNPP has been extensively surveyed using digital aerial contour mapping with in-field QA/QC by a state licensed surveyor. Location crews, as a part of their preliminary engineering activity, will locate ties to all monuments in the vicinity of the proposed work, and will install permanent benchmarks nearby the site. Just prior to any clearing or construction activities, the surveyor will install construction stakes marking important locations for clearing and construction purposes. Grade stakes will also be utilized recording existing grade and demonstrating grade to be achieved for construction and site development.

On completion of BBNPP construction and at several steps in the pre-construction process, "as built" plans will be prepared to demonstrate construction activities are completed as they are designed and permitted. All permanent bench marks shall be checked for elevation and have brass or aluminum caps marked with the proper elevation and recorded in the proper field book and on the as-built plans.



Legend

- Proposed Road
- Existing Road
- Railroad
- Proposed Features
- Existing Features
- Water and Wetland features and buffers
- Project Boundary



UniStar Nuclear Energy, LLC and
UniStar Nuclear Operating Services, LLC

BBNPP Proposed and Existing Roads and Wetlands

Figure
Number:
1