

February 4, 2021

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Sr. Right of Way Specialist

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RE: Center Valley Materials
Non-Coal Surface Mining Operation
Springfield Township, Bucks County
Springfield Street/Mine Road

To Whom It May Concern:

PPL Electric Utilities Corporation (“PPL”) is aware that H&K Group, Inc. submitted a Conditional Use Application for G-7 Quarry Use to the Springfield Township Board of Supervisors, as the “tenant” in support of the establishment of Center Valley Materials, a proposed non-coal surface mining operation, to be located in Springfield Township, Bucks County, upon four tracts of land owned by Liberty Home Development Corporation, Ltd.

PPL was granted transmission line easements (collectively, the “ROW”) in perpetuity, as noted within your Conditional Use Application. The ROW crosses the subject premises and the area of the proposed mining operations. Please be advised that, as a public utility, PPL must protect its ability to operate and maintain its facilities by ensuring unencumbered access to said facilities while also protecting the safety of the public and utility workers. All proposed landowner/tenant improvements and activities within the ROW must be reviewed and approved in writing by PPL’s Transmission Right of Way and Engineering Departments, *prior to* any activities commencing within the ROW. In addition, PPL maintains specific blasting requirements, which must be strictly adhered to, in order to ensure the safety of PPL’s assets and the public. Enclosed please find PPL’s Right of Way Use Guidelines, Blasting Requirements and Encroachment Application for your reference and use.

If you wish to proceed with any grade changes, road, or facility installations within or through PPL’s ROW, an encroachment application must first be submitted to and approved in writing by PPL, as per the enclosed documentation.

Should you have any questions regarding PPL’s policies, requirements or encroachment application process, please do not hesitate to contact me at 610-633-7300 or CMHuber@pplweb.com

Sincerely,

Chad Huber

Enclosures: Right of Way Use Guidelines
Blasting Standards
Encroachment Application

cc: Liberty Home Development Corporation, Ltd. (Landowner)
H&K Group, Inc. (Conditional Use Applicant and Equitable Interest Tenant)
Springfield Township Board of Supervisors



PPL Right of Way Use Guidelines

This list of Right of Way Use Guidelines addresses the most common requests received by PPL Electric Utilities Corporation (PPL). It is not exhaustive and does not address all restrictions and possible situations. This list is intended to protect PPL's ability to operate and maintain its facilities, without interference, consistent with its right of way rights; to reduce the risk of damage to PPL facilities; to allow unencumbered access to PPL right of way; and to protect the safety of the public and utility line workers. This list is subject to change at any time and without notice. This list and allowing encroachments in no way waives any of the rights PPL reserved in the right of way and/or building restriction area grants applicable to each property. All proposed improvements and activities within the PPL transmission right of way and/or building restriction area shall be reviewed by the Transmission Right of Way Department and approved in writing prior to any activities within the right of way and/or building restriction area. PPL requires that property owners submit the attached encroachment application and applicable fee with the required documentation before the review process will begin. Contact the Transmission Right of Way Department with any additional questions concerning the rights of way. It is the Applicant's responsibility to apply to other utilities that may exist within the right of way.

Topic	Design Criteria
Burning - yard waste, bon fires, etc.	Not permitted
Debris/Waste - including piles, landfills, refuse and garbage etc.	Not permitted
Decks - above ground	Not permitted
Decks and Patios - at grade	<ul style="list-style-type: none"> • May not violate NESC, OSHA and PPL clearances as determined by PPL, pose a safety concern, inhibit access or otherwise effect PPL's use of the right of way. • Vertical elements may not exceed 3 feet above grade. • No roofs or permanent awnings permitted. • May not extend more than 15 feet into the right of way.
Driveways	<ul style="list-style-type: none"> • Must not be located closer than 25 feet to PPL facilities. • Design for HS 25 loading. • Designed to cross as close to perpendicular to the right of way as practical. • Approved for PPL access.
Farming - annual crops	<ul style="list-style-type: none"> • Irrigation - refer to "Irrigation System" below. • Activities must not cause erosion within the right of way. • Using farm equipment under high voltage lines (especially 500 kV), special operating conditions will be required for the equipment to reduce or eliminate static voltages induced by these lines. • Farmer shall be responsible for maintaining all required clearances including NESC, OSHA and PPL clearances as determined by PPL, from PPL facilities (poles, towers, guy wires, conductors, etc.) and shall be responsible for all damage to PPL facilities.
Farming - trees and orchards	<ul style="list-style-type: none"> • Must be a compatible species (see "Vegetation" below), planted in the border zone (10 feet outside the outer most conductor) and may not exceed 10' in height at maturity. • Must not prevent access to PPL's facilities or interfere with safe, reliable operation/maintenance of PPL's facilities. • Vegetation that is not in compliance is subject to removal without notice or compensation. • Refer to PPL vegetation specs.
Fences and Gates	<ul style="list-style-type: none"> • Shall not exceed 10 feet in height. • All metallic parts must be grounded to industry standards to eliminate static buildup. • Shall not impede access to PPL's facilities. • Must be of the semi-solid variety to permit visibility. • Single strand (one cable or chain) is not acceptable. • Shall have 14 foot gated opening or removable sections as required to maintain access to PPL's facilities. • No fences shall be constructed parallel under the conductors. • Gates must have a 50 lock supplied by PPL.
Flammable or Explosive Material Storage	Not permitted
Fueling of Vehicles	Not permitted
General Grading	<ul style="list-style-type: none"> • Grading must be at least 25 feet from any PPL facility and meet PPL approval. • Grading slope may not be steeper than 4:1. • Grading may not violate NESC, OSHA and PPL clearances as determined by PPL, pose a safety concern, inhibit access or otherwise effect PPL's use of the right of way. • Grade changes in excess of 1 foot require PPL approval.
Grazing of Livestock	<ul style="list-style-type: none"> • No permanent feeding or water facilities are allowed within the right of way (no foundations).

Topic	Design Criteria
Irrigation Systems - Agricultural and/or Landscape	<ul style="list-style-type: none"> • Water shall not discharge onto the right of way and/or building restriction area. • All irrigation heads must be located outside the right of way. • All irrigation piping crossing the right of way shall not terminate in such a manner as to allow the water to surface within the right of way and/or building restriction area, shall be designed to withstand HS 25 loading and shall be located at least 25 feet from any PPL facility. • All facilities shall be visibly marked where they enter and leave the right of way. • No irrigation spray or drip will be permitted within the wire zone (the wire zone is the area directly under the conductors plus 10 feet). • All pumping locations will have emergency shut off valves or switches for use by PPL and their contractors. Emergency shut off valve or switch shall be clearly marked in the field. • No irrigated water will directly or indirectly spray any structure, overhead conductors, access road or any PPL facilities. • Irrigation shall not cause erosion or ponding of water within the right of way. • Shall not restrict access to PPL facilities. • May not violate NESC, OSHA and PPL clearances as determined by PPL, pose a safety concern, inhibit access or otherwise effect PPL's use of the right of way.
Lighting	<ul style="list-style-type: none"> • Lighting structures may not violate NESC, OSHA and PPL clearances as determined by PPL, pose a safety concern, inhibit access or otherwise effect PPL's use of the right of way. • Lighting structures shall be adequately grounded per code. • Lighting structure shall not exceed 15 feet in height and must be 25 feet horizontally from the outer most conductor.
Logging	<ul style="list-style-type: none"> • Trucks must remain a minimum of 25 feet from all PPL facilities, including but not limited to poles, towers, guy wires, conductors. • All logging staging/loading areas must be located outside the right of way to allow adequate clearance to PPL facilities. • Logging activities shall not cause erosion or damage PPL's facilities or access roads. • Loggers shall be responsible for maintaining appropriate clearances from PPL facilities including conductors/wires.
Mining and Quarrying	Not permitted
Parking - cars, vans and SUVs	<ul style="list-style-type: none"> • Paved parking areas/lots shall be designed for HS 25 loading. • Parking within 25 feet of PPL facilities shall have PPL approved bollards or protective barriers. • Parking shall not restrict access to PPL's facilities. • Curb cuts shall be installed where requested by PPL to maintain access to PPL facilities.
Parking - large vehicles including tractor trailers, commercial vehicles, trailered boats, buses and RVs, etc.	Not permitted
Paths - equestrian, biking and walking	<ul style="list-style-type: none"> • Must not prevent access to PPL facilities. • Paved paths shall be designed to withstand HS 25 loading. • No path shall be constructed within 25 feet of any PPL facility.
Permanent Buildings -manufactured/mobile homes, pole barns and sheds on foundations	Not permitted
Playground Equipment - jungle gyms, sliding boards, swing sets, trampolines, etc.	<ul style="list-style-type: none"> • Equipment must be 25 feet horizontally from the outer-most conductors. • Shall not exceed 10 feet in height. • All metallic parts shall be adequately grounded to industry standards to eliminate static buildup. • All equipment must meet or exceed NESC, OSHA and PPL clearances determined by PPL. • Prohibited in 230 kV and greater right of way corridors. • All equipment must be moveable.
Ponds, Lakes and Wetlands - man made	Not permitted

Topic	Design Criteria
Railroads	<ul style="list-style-type: none"> •Must meet NESC, OSHA and PPL clearances as determined by PPL, railroad shall be responsible for costs associated with additional clearances. •Shall not impede access to PPL facilities. •New communication and signal systems shall utilize insulated cable. •Appropriate remedial actions are required for open wire systems. Railroad shall be responsible for all studies and remediation costs. •PPL shall not be responsible for any electrical or communication interferences due to our facilities. •PPL shall not be responsible for any fees associated with crossing of or performing work near any railroads within PPL rights of way.
Recreational Areas and Athletic Fields - including golf courses and ski slopes	<ul style="list-style-type: none"> •Equipment (including permanent and temporary goals, score boards, nets, backstops, fencing, etc.) shall not exceed 10 feet in height and must meet NESC, OSHA and PPL clearances as determined by PPL. •All metallic parts shall be grounded to industry standards to eliminate static buildup. •Shall not restrict access to PPL facilities. •Ski slope equipment and apparatus must be situated so as to avoid interference or contact with PPL facilities and meet NESC, OSHA and PPL clearances as determined by PPL. •Ski slopes must meet PPL clearances. •Runs parallel to transmission lines are prohibited. •Non-utility facilities associated with ski runs are regulated under Rule 385 of the Department of Labor and Industry, and the ski run developer is responsible for coordinating the review. •Snow making equipment should be situated outside the right of way and positioned to blow away from PPL facilities.
Septic Systems and Tanks - tile drains, sand mounds, leach fields, etc.	Not permitted
Sheds - without foundations	<ul style="list-style-type: none"> •Must meet NESC, OSHA and PPL clearances as determined by PPL, requirements. •Shall not exceed 10 feet in height. •Shall not restrict access to PPL facilities. •May not be more than 15 feet into the right of way. •Must not be on a foundation.
Signs - including commercial billboards and monument signs	<ul style="list-style-type: none"> •Must meet NESC, OSHA or PPL clearances as determined by PPL. •Shall be adequately grounded to industry standards to eliminate static buildup. •Shall not exceed 10 feet in height. •Shall not restrict access to PPL facilities. •Shall not be more than 10 feet into the ROW. •Billboard signs are not permitted.
Signs - street and traffic signs	<ul style="list-style-type: none"> •Must meet NESC, OSHA and PPL clearances as determined by PPL, requirements. •Shall be adequately grounded to industry standards to eliminate static buildup. •Shall not exceed 10 feet in height. •Shall not restrict access to PPL facilities.
Solar Cells and Panels	Not permitted
Stockpiling of Material -temporary or permanent	Not permitted

Topic	Design Criteria
<p>Storm Water - infiltration systems including spray and drip irrigation, etc.</p>	<ul style="list-style-type: none"> • Water shall not discharge onto the right of way and/or building restriction area. • All irrigation heads must be located outside the right of way and/or building restriction area. • All irrigation piping crossing the right of way shall not terminate in such a manner as to allow the water to surface within the right of way and/or building restriction area, shall be designed to withstand HS 25 loading and shall be located at least 25 feet from any PPL facility. • All facilities shall be visibly marked where they enter and leave the right of way and/or building restriction area. • No irrigation spray or drip will be permitted within the wire zone (the wire zone is the area directly under the conductors plus 10 feet). • All pumping locations will have emergency shut off valves or switches for use by PPL and their contractors. Emergency shut off valve or switch shall be clearly marked in the field. • No irrigated water will directly or indirectly spray any structure, overhead conductors, access road or any PPL facilities. • Irrigation shall not cause erosion or ponding of water within the right of way and/or building restriction area. • Shall not restrict access to PPL facilities. • May not violate NESC, OSHA and PPL clearances as determined by PPL, pose a safety concern, inhibit access or otherwise effect PPL's use of the right of way and/or building restriction area.
<p>Storm Water - rain gardens</p>	<ul style="list-style-type: none"> • Sized to accommodate storm water from no more than a single residential dwelling. • Must not create wetlands or cause erosion. • Shall not restrict access to PPL facilities.
<p>Storm Water - retention ponds, detention ponds, wet ponds, etc.</p>	<ul style="list-style-type: none"> • Standing water in the right of way and/or building restriction area is not permitted. • High water mark of any basin may not be more than 10 feet into the right of way and/or building restriction area and must be a minimum of 40 feet from any PPL facility. • Creation of wetlands is not permitted in the right of way and/or building restriction area. • Must meet NESC clearance requirements. • Shall not restrict access to PPL facilities. • Any portion of basins within PPL right of way and/or building restriction area must fully drain within 72 hours. • Must not create any erosion.
<p>Streets and Roads</p>	<ul style="list-style-type: none"> • Must not be located closer than 25 feet to PPL facilities. • Designed for HS 25 loading. • Designed to cross as close to perpendicular to the right of way as practical. • Curb cuts shall be installed where needed to maintain access to PPL facilities. • No intersections within the right of way.
<p>Swimming Pools - including associated facilities and structures</p>	<p>Not permitted</p>
<p>Utilities - water, sewer, gas, electric, communications, oil, steam, etc.</p>	<ul style="list-style-type: none"> • Facilities must be located a minimum of 25 feet horizontally from the outer most conductor/facilities and as close to the edge of the right of way as possible. • When performing maintenance on existing co-linear lines, special procedures shall be employed to reduce the risk of shock from induced voltages. • Responsibility of the Developer to ensure all EMFs and induced voltage are considered. • Must cross perpendicular to right of way and the piping shall not terminate in such a manner as to allow the water to surface within the right of way and/or building restriction area. • Required studies must be performed for cathodic protection. Applicant required to pay for study and mitigate impacts to PPL facilities. • Collinear parallel pipelines are prohibited within the right of way and/or building restriction area. • All facilities crossing the right of way shall be designed to withstand HS 25 loading and be located at least 25 feet from any PPL facility. All facilities shall be visibly marked where they enter and leave the right of way and at each turn with carsonite markers. • Fire Hydrants not permitted.

Topic	Design Criteria
Vegetation - private gardens and landscaping	<ul style="list-style-type: none"> •Native grasses, ferns and herbaceous plants are allowed in the wire zone (the wire zone is the area directly under the conductors plus 10 feet). •Approved species of small trees, large shrubs and small shrubs are allowed within the border zone (edge of wire zone to edge of right of way as long as there is adequate clearance to the conductors). •All proposed vegetation must be reviewed by PPL Transmission Right of Way and Vegetation Management. •A list of approved species can be found at the following link: www.pplelectric.com/master-pages/vegetation-management/compatible-species.aspx
Vehicles - disabled or abandoned including junk and salvage yards	Not permitted
Wells	Not permitted
Zip Lines	Not permitted



**PPL Electric Utilities T&S Specification
EU00503877
Blasting Requirements**

Revision: 01
Effective Date: 10/31/2019
Sheet 1 of 13

Blasting Requirements

Contributing Parties:

	Name	Department	Date
	<i>Primary Group</i>		
Preparer:	<u>Allan Case / Newville Construction</u>	<u>T&S Standards</u>	<u>10/14/2019</u>
Reviewer:	<u>Galliance Abou Jaoude</u>	<u>T&S Standards</u>	<u>10/14/2019</u>
Approver:	<u>Joseph Lookup</u>	<u>T&S Standards</u>	<u>10/31/2019</u>
	<i>Interfacing Groups</i>		
Group 1:	<u>Olivia Jurewicz</u>	<u>Substation Engineering</u>	<u>10/20/2019</u>
Group 2:	<u> </u>	<u> </u>	<u> </u>
Group 3:	<u> </u>	<u> </u>	<u> </u>
Group 4:	<u> </u>	<u> </u>	<u> </u>

Document Information:

Location Code:	<u>S001</u>	<u>S014</u>	<u> </u>
Discipline:	<u>C</u>	<u> </u>	<u> </u>
Supersedes:	<u> </u>	<u> </u>	<u> </u>

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Record of All Issued Revisions:

Revision	Fusion ECN Number	Issue Date
00	Document Issued	12/01/2013
01	Review "ECN-11860 Release Letter" for all the changes.	10/31/2019



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1. General

1.1. Scope

1.1.1. This document covers key issues related to blasting activities in the vicinity of PPL Electric Utilities (PPL EU) Transmission line facilities and right-of-way, and substations/switchyard facilities.

1.1.2. The following items will be covered by this document:

- A. General and Site-Specific Blasting Plan Requirements
- B. PPL EU Kick-off Meeting, Risk Mitigation & Notification Plan Coordination
- C. Contractor General Blasting Plan Requirements
- D. Contractor Site Specific Blasting Plan Template
- E. Surveys and Documentation
- F. Attachment 1 – PPL EU Substation Risk Assessment Review [Substation/Switchyard Only]

1.2. Abbreviations, Acronyms and Definitions

1.2.1. The following words, acronyms and abbreviations shall have the meaning defined herein when used within this specification:

- A. **Air Blast** – An airborne shock wave resulting from an explosion, also known as air overpressure, which may or may not be audible.
- B. **Blast Area** – The area around the blast site that must be cleared and secured to prevent injury to persons and damage to property.
- C. **Blast Site** - The specific location where the Explosives charges are loaded into the blast holes.
- D. **Blaster** – An individual who is licensed to detonate Explosives and supervise blasting activities.
- E. **Blaster-in-charge** - The Blaster designated to have supervision and control over all blasting activities related to a blast.
- F. **Blast Mat**- Suitable substance that is placed over the blasting area to contain the blast, suppress noise and dust as well as prevent high velocity rock fragments from damaging structures, people or the environment in proximity to the Blast Site.
- G. **DEP**- Department of Environmental Protection
- H. **Explosives**- Any chemical compound, mixture or device, the primary or common purpose of which is to function by explosion. The term includes dynamite and other high Explosives, black powder, pellet powder, initiating Explosives, detonators, safety fuses, squibs, detonating cord, igniter cord and igniters.

- I. ***Flyrock*** – Overburden, stone, clay or other material cast from the Blast Site through the air or along the ground, by the force of a blast, and which travels beyond the Blast Area.
 - J. **MSHA** - The United States Department of Labor, Mine Safety and Health Administration.
 - K. ***Responsible Civil Engineer*** - The party responsible for the civil design aspects of the project. This may be either a PPL EU employee, a consultant hired by PPL EU or a sub-contractor to the Contractor
 - L. ***SDS*** – Safety Data Sheets
 - M. **OSHA** - The United States Department of Labor, Occupational Safety and Health Administration.
 - N. ***Overburden*** – Material of any nature, consolidated or unconsolidated, that overlies a deposit of useful materials or ores that are to be mined
 - O. **PA**- Pennsylvania
 - P. ***Particle Velocity*** – A measure of the intensity of ground vibration, specifically the time rate of change of the amplitude of ground vibration
 - Q. ***Peak Particle Velocity (PPV)*** – The maximum intensity of Particle Velocity
 - R. **PPL EU** - PPL Electric Utilities or owner
 - S. ***Scaled Distance (Ds)*** – A value calculated by using actual distance (D) in feet, measured in a horizontal line from the Blast Site to the nearest building or structure, neither owned nor leased by the blasting activity permittee or its customer, divided by the square root of the maximum weight of Explosives (W) in pounds, that is detonated per delay period of less than 8 milliseconds
- 1.3. References, Codes and Standards
- 1.3.1. Bureau of Mines Criteria from Report RI-8507
 - 1.3.2. Code of Federal Regulations ATF Title 27
 - 1.3.3. Directive 495 of the National Fire Protection Association (NFPA)
 - 1.3.4. Exceptions DEP, Bureau of Mining and Reclamations Document Number 562-2112-503, Section II.
 - 1.3.5. The United States Department of Labor, Mine Safety and Health Administration(MSHA) 30 CFR Part 56.000, 30 CFR 57.2
 - 1.3.6. Occupational Safety and Health Administration (OSHA) standard, 29 CFR 1910.109
 - 1.3.7. Occupational Safety and Health Administration (OSHA) Standards, 29 CFR 1926.900-1926.914

- 1.3.8. PA Code, Title 25, Chapter 210 Use of Explosives and Chapter 211 Storage, Handling and Use of Explosives.

2. Materials and Equipment

2.1. General

- 2.1.1. Contractor shall be responsible for specifying the equipment and material necessary for blasting. All equipment, including seismographs, shall be per PA Code title 25, chapter 210 and 211.
- 2.1.2. Blasting Mat can be rubber, steel or soil.

3. Execution

3.1. General

- 3.1.1. When blasting is deemed necessary, all blasting operations will adhere to applicable Federal, Commonwealth of Pennsylvania statutes and local regulations governing the use of Explosives. All pertinent safety regulations and standards shall be applied as required for safety, security and other related details for any blasting deemed necessary. The Contractor shall prepare a Blasting Plan (Plan) in support of proposed blasting activities.
- 3.1.2. During the excavation of structure foundations where hard rock or large boulders are encountered and after it is determined that material cannot be removed either by hand or when traditional methods of rock excavation have been exhausted; blasting may be permitted to allow the excavation to be completed.
- A. It is the right of PPL EU to accept or reject blast plans based on job specific conditions and if it is deemed that the other means and methods or excavations may have not been exhausted.
- B. Where blasting is required the minimum effective charge necessary to loosen or break up the rock shall be used so materials which are to remain in place are not disturbed.

3.2. General and specific blast plan

- 3.2.1. The Blasting Contractor General Blasting Plan and the Site-Specific Plan shall conform to the following language and apply when blasting occurs within 200 feet of any PPLEU facility:
- A. PA Code, Title 25, Chapter 211.182. (c) "When blasting within 200 feet of a utility line, blast holes may not exceed 3 inches in diameter."
- B. PA Code, Title 25, Chapter 211.151
- C. A maximum Peak Particle Velocity (PPV) of 2.0 inches/second, at the nearest facility structure is required for any blasting.

- D. All blasting will be performed in compliance with Federal, state, and local regulations, including transportation and storage of Explosives. Blasting, explosive-handling, and monitoring operations will be conducted in accordance with the latest:
 - D.1 Occupational Safety and Health Administration (OSHA) standards, 29 CFR 1926.900–1926.914
 - D.2 Occupational Safety and Health Administration (OSHA) standard, 29 CFR 1910.109
 - D.3 PA Code, Title 25, Chapter 210 Use of Explosives and Chapter 211 Storage, Handling and Use of Explosives.
- E. A minimum of two calibrated seismographs shall be utilized to monitor the Peak Particle Velocity, acceleration and frequency at the nearest facilities. Seismograph locations shall be per the site-specific blast plan. Documentation shall be provided showing all results.
- F. The Contractor shall notify utilities within the Blast Area after a PA one call is completed. Utility personnel must be contacted prior to blasting, so they can be on-site, as needed.
- G. Blasts shall be designed and conducted so that they provide the greatest relief possible in a direction away from the utility facility and to keep the resulting vibration and actual ground movement to the lowest possible level.
- H. Blasting shall use a type of explosive specifically designed to minimize the likelihood of propagation between explosive charges.
- I. A blasting plan for each location shall be provided to the Responsible Civil Engineer for review.
- J. Access roads shall be blocked a minimum of 500 feet from the Blast Area.
- K. A Blast Mat shall be placed over the Blast Area prior to blasting, whenever fly-rock or overpressure over 133dbL may be possible
- L. Parallel lines should be de-energized prior to blasting whenever possible. If parallel lines cannot be de-energized, then they shall be inspected by a line contractor for the integrity to ensure it can withstand the blast. They shall also be inspected after the blast for signs of damage.
- M. Non-electrical and nonconventional electrical detonation methods are recommended near transmission lines.
- N. If conventional electrical detonation methods must be employed, federal, state and local codes shall be followed to check for stray currents, signage, etc., and to ensure compliance.
- O. Entire blast zone in all directions shall be inspected and personnel posted to keep general public and other contractors away from the site if line-of-site is blocked from the Blaster-in-charge viewpoint.
- P. All personnel on the site shall be made aware of the blasting hazards and procedures and must be warned properly prior to the actual blasting.

- Q. Identify all utilities and structures within the blasting area that need to be monitored during the blast.
- R. For blasting and mining operations outside the PPL EU right-of-way, blasting shall be done in a manner which shall allow for continuous access to PPLEU facilities. No access roads shall be altered or blocked without PPL EU approval. Mine reclamation is requested to ensure the stability of the PPL EU right-of-way and facilities.

3.3. PPL EU Risk Mitigation & Notification Plan

- 3.3.1. All utilities are to be notified within the Blast Area. The Blasting Contractor, prior to blasting in the vicinity of a PPL EU Transmission Line right-of-way or Substation/Switchyard facility shall comply with the following:
 - A. Identify blasting locations, schedule and Blasting Plan technical details.
 - B. Review the General and Site-Specific Blasting Plans.
 - C. For a substation or switchyard facility where blasting is planned to be within 200 feet of operating facilities, a review by PPL EU to identify any risk to the facility or the operation of the facility must occur. See section 6.1 of this document.
 - D. Five business days shall be allowed for the review and identification of special precautions to be taken to mitigate risks to the PPL EU facilities.

4. Inspection, Testing and Quality Assurance

4.1. Inspection

- 4.1.1. All inspection shall be per the post blast plan per PA Code, title 25, Chapter 211.

4.2. Testing

- 4.2.1. All testing shall be per the post blast plan per PA code, title 25, Chapter 211.

4.3. Quality Assurance

- 4.3.1. All Blasters need a valid license from the state of PA from the DEP.
- 4.3.2. The competence of adjacent rock must be evaluated by qualified personnel.
 - A. All loose material must be evaluated within Blast Site till the contractor reaches an area of competent soil. This area must be compared to the original Blast Site from the blast plan. All incompetent material can be removed, replaced with fill per the parameters of the excavation or foundation in question and compacted. The fill's material and compaction shall be per the Responsible Civil Engineer's guidance

5. Submissions



PPL Electric Utilities T&S Specification
EU00503877
Blasting Requirements

Revision: 01
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5.1. General Blasting Plan

5.1.1. The General Blasting Plan shall be filled out by the Blaster and sent to the Responsible Civil Engineer.

5.1.2. The General Blasting Plan shall include the following requirements:

- A. Company Information
- B. Statement of Compliance with Federal, state and local regulations
- C. Insurance
 - C.1 General Liability
 - C.2 Excess Liability Insurance
- D. Permitted Periods for Blasting
- E. Locations
 - E.1 Blast Area
 - E.2 Blast site
- F. Blaster (Name)
- G. License Number
- H. Impact to Utilities
 - H.1 Direction
 - H.2 Explosives
 - H.3 Distance
- I. Air Blast
- J. Peak Particle Velocity
- K. Blast Loading/Design
- L. Monitoring Equipment
 - L.1 Model, Serial number, Last Tested
- M. Test Blasting
- N. Formation Detail
- O. Blasting Products
 - O.1 SDS



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- O.2 Technical Documents
 - P. Type of Initiation/ Detonating System
 - Q. Precautionary Measures
- 5.2. Site-Specific Blasting Plan
 - 5.2.1. The site-specific blasting plan shall be filled out by the Blaster and sent to the Responsible Civil Engineer.
 - 5.2.2. The Site-Specific Blasting Plan shall include the following requirements:
 - A. Locations
 - A.1 Blast Area
 - A.2 Blast site
 - B. Name of Blasting Contractor
 - C. Blasting Contractor Address
 - D. Names of Blasting Personnel
 - E. License
 - F. Required Contractor Obtained Permits (List)
 - F.1 Federal, State, and Local
 - G. Audible Signal Requirements
 - G.1 Pre-warning
 - G.2 Warning
 - G.3 Blast
 - G.4 All Clear
 - H. Air Blast overpressure monitoring requirement
 - I. Seismograph Requirement
 - I.1 Manufacturer
 - I.2 Model Number
 - I.3 Calibration Date (provide certificate)

- J. Blasting Mat Requirement: Mats shall always be used except where Blasting Contractor provides a technical reason in writing in sufficient time to permit evaluation by the Utility to not use blasting mats.
 - K. Drilling Equipment
 - L. Hole Diameter
 - M. Drilling Patterns
 - N. Sequence Timer (Y/N)
 - O. Type of Explosive
 - 0.1 Manufacturer
 - 0.2 Product Type
 - 0.3 Dimensions
 - 0.4 Weight per stick
 - P. Loading parameters
 - Q. Maximum and/or Average
 - R. Weight of Explosives per volume of rock
 - S. Maximum weight of Explosives per delay
 - T. Blasting Cap delay pattern
 - U. Actions in the Event of a Thunderstorm
 - V. Actions in the event of a Misfire
 - W. Signage
 - X. Vehicles with Radio Transmitters (100 feet from Site or increased as dictated by charge)
- 5.3. Pre-Blast Survey (For Each Site)
- 5.3.1. Prior to the beginning of blasting at each site, a pre-blast survey shall be conducted. The pre-blast survey shall inspect the area of, and adjacent to, the Blast Area. The surveyor shall submit the following to the Responsible Civil Engineer:
- A. Per Site Environmental Analysis
 - B. Per Site Activity Hazard Analysis (AHA)
 - C. Document existing conditions
 - D. Written as well as Photographic

- E. Site Specific Safety Information
 - E.1 Permit Listing
 - E.2 Location of sensitive facilities (list)
 - E.3 Location of nearby utilities (list)
- 5.4. Post-Blast Survey (For Each Site)
 - 5.4.1. After the blasting at each site, a post-blast survey shall be conducted. The post-blast survey shall inspect the area of, and adjacent to, the Blast Area for:
 - A. Flyrock
 - B. Verify no occupancy in blast zone
 - C. Differences pre & post blast will be communicated to Owner and Owner's Engineer
- 5.5. Blast inspection and Documentation
 - 5.5.1. The Blaster shall document all of the following items:
 - A. Inspector to monitor and observe all blasting operations
 - B. Type of Material to be Blasted
 - C. Diagram of Shot
 - D. Drill Log
 - E. Seismograph Recordings (PPV and Frequency) and Air Blast Overpressure
 - F. Verification that all charges went off

6. Attachments

- 6.1. Attachment 1 – PPL EU Risk Assessment Requirements
 - 6.1.1. As noted in section 3.3.1.C, of this document, the impacted facility should be assessed
 - 6.1.2. In the case of the substation/switchyard PPL EU requires sufficient time to assess the facility pre-blast, document facility pre-blast, identify risk to equipment and operation of the facility and take appropriate steps to mitigate identified riskto:
 - A. Seismic Response of Protective Relays
 - B. Low inertia / small gap relay contacts
 - C. Breaker Failure Relaying



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- D. High Speed Ground Switches (HSGS)
 - E. Power Transformer Sudden Pressure (Fault Pressure) Relays in air or oil
 - F. Circuit Breaker Trip Latches
 - G. Relays with no potential restraint
 - H. Foundations / Structures
 - I. Control Cubicle wall mounted equipment (ex: battery chargers)
 - J. Control Cubicle Battery
 - K. SCADA Relays
- 6.1.3. In general, the safety survey of the control cubicle shall also include a visual sweep of non-permanent material and equipment stored in the control cubicle in order to evaluate risk as a result of shifting or movement of stored equipment.



PPL Electric Utilities Right of Way Encroachment Application

Date _____

Applicant _____

Address _____

Home Phone _____ Daytime Phone _____ E-mail _____

Requestor _____

Address _____

Home Phone _____ Daytime Phone _____ E-mail _____

Property Owner _____

Address _____

Home Phone _____ Daytime Phone _____ E-mail _____

Equitable Owner _____

Address _____

Home Phone _____ Daytime Phone _____ E-mail _____

Address/Location of Site _____

Township/Borough _____

County _____ Subdivision Name _____

Tax Map Parcel Number _____ Deed Book _____

Deed Book/Instrument No. _____ Page Number _____

Deed Date _____

Nearest PPL Structure _____

Description of the Proposed Encroachment

Provide a detailed sketch of property and proposed work or full set of plans.

PPL Contact _____ Phone _____ E-mail _____

Mailing Address _____

Instructions & Additional Information for Completing and Processing Application

- > **Applicant** is the person and/or engineering, architectural, construction or similar firm acting for the requestor.
- > **Requestor** is the signature element that will appear on the encroachment agreement.
- > **Property Owner** is the current owner of record as shown on the deed.
- > Applicant must submit **one full set of drawings** which show all existing and proposed conditions in and around the PPL right of way, property boundaries, easements & utilities (including PPL's structure locations and ID numbers), existing conditions and all proposed improvements within and around the easement
- > A copy of the current deed must be submitted with the application.
- > See Table for list of Prohibited uses and those that are potentially allowed.
- > Return application and supporting information to: Transmission Right of Way Department, PPL Electric Utilities – GENN4, 2 N. 9th Street, Allentown, PA 18101 or Recipients email: transmissionencroachments@pplweb.com
- > A review fee, based on the complexity of the improvements, will be charged for processing a request. Upon review of the plans, PPL will determine the fee.