ACID PRODUCING ROCK MANAGEMENT PLAN

HCPP PIPELINE

Prepared For:

HOMER CITY GENERATION LP
1750 POWER PLANT ROAD
HOMER CITY, PENNSYLVANIA 15748

Prepared By:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
4350 NORTHERN PIKE, SUITE 141
MONROEVILLE, PENNSYLVANIA 15146

CEC Project 354-010

September 24, 2025

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

On behalf of Homer City Generation LP (HCG), Civil & Environmental Consultants, Inc. (CEC) presents this Acid Producing Rock (APR) Management Plan for the proposed HCPP Pipeline located in Burrell and Black Lick Townships, Indiana County, Pennsylvania. The purpose of this narrative is to provide an overview of the risks associated with APR and provide direction on how to handle APR. This document describes soil sampling and testing in previously strip mined areas. Approximate strip mine areas are indicated on the attached Figures to this APR Plan, as well as the alignment plans as part of this permit package. The APR Management Plan is part of the earthwork disturbance permit package and is consistent with the Notice of Intent (NOI) and additional package documents.

APR generally consists of coal or black, carbonaceous shale and potentially the soils/rock immediately above and below coal seams. Not all coal and black shale materials have the potential to produce acidic runoff. It is important to note this determination cannot be made by visual inspection of the material. Refer to the Handling and Testing Procedures section of this narrative for further information on how this should be determined.

2.0 PROXIMITY TO POTENTIAL APR

The project was designed to minimize the potential for APR to be encountered; however, APR may be encountered, particularly at/near coal outcrop locations and at strip mined areas. Refer to the exhibits appended to this report for further information on the extents of known strip mining activities.

Coal Outcrops/Strip Mining

According to the U.S. Geological Survey (USGS) Mineral Resources Report 98, "Coal Resources of Indiana County, Pennsylvania, Bolivar and Indiana Quadrangles," the proposed pipeline is not documented to cross any intact coal outcrops based on the references reviewed by CEC.

However, CEC notes that strip mined portions of the Pittsburgh Coal seam are documented to be encountered along the proposed alignment.

Based on review of published references, the Pittsburgh Coal seam was strip mined and reclaimed at the following approximate stations:

- Stations 117+00 to 128+00;
- Stations 137+50 to 138+00;
- Stations 139+00 to 151+50; and
- Stations 172+50 to 175+00.

Trenching operations in the previously strip-mined areas will encounter mine spoil (i.e., soil and rock overburden above the extracted coal) and may have increased potential for generation of APR.

3.0 SAMPLING, TESTING, AND HANDLING

Per the Pennsylvania Department of Environmental Protection (PADEP) Fact Sheet included in Appendix B, the acid producing potential of soils and rock can be estimated by the Total Sulfur (S%) percentage. This value can be estimated by laboratory testing. It is important to note the determination of APR cannot be made by visual inspection of the material.

3.1 SAMPLING, TESTING, AND HANDLING AT STRIP MINE LOCATIONS

CEC subcontracted Absolute Reclamation Services (ARS) to excavate 22 test pits within or near previously strip mined locations. The approximate test pit locations are indicated on the alignment sheets that make up the permit set, and test pit logs are provided in Appendix C. Samples were obtained from select test pits at a frequency which exceeds that noted in the PADEP Fact Sheet and delivered to Conti Testing Laboratories, Inc. (Conti) for total S% testing per the PADEP Fact Sheet. The testing indicated two (2) samples (TP-9, TP-17) exceeded 0.5% total sulfur, which is the noted threshold for acid producing materials in the PADEP Fact Sheet. CEC notes that the pipeline alignment has been shifted off of TP-17. CEC estimated the amount of agent required to neutralize the APR based on the test result from TP-9 using the following equation. CEC understands that the proposed trench for one (1) 30-inch diameter pipeline with the following approximate dimensions: 5-foot wide trench at the bottom of the ditch, 16-foot wide at the top, and 6 feet deep. CEC has conservatively assumed a unit weight of reclaimed strip mine material at approximately 130 pounds per cubic foot.

1. CEC estimated the volume of Quicklime® around Test Pit TP-9 (Stations 141+00 to 147+00) assuming a 0.14-acre (600 feet long by 10 feet wide) in the following equation:

$$(0.14\ \text{acre}) * (6\ \text{feet thick}) * \frac{2{,}832\ \text{Tons APR}}{\text{Acre} - \text{Ft}} * 0.519\ \%\text{S} * \frac{62.5\ \text{Tons}}{1{,}000\ \text{Tons}} = 77\ \text{Tons of LS}$$

As such, 85 tons of 90% $CaCO_3$ (569 tons * 1.1 adjustment factor for 90% $CaCO_3$) should be blended with trench spoils on each side of TP-9 and then used as backfill around the pipe. This has been added to the alignment plans.

CEC notes the amount of neutralizing agent may be adjusted in the field based on additional sampling and testing in accordance with the PADEP Fact Sheet.

3.2 SAMPLING, TESTING, AND MANAGING APR AT INTACT COAL SEAMS

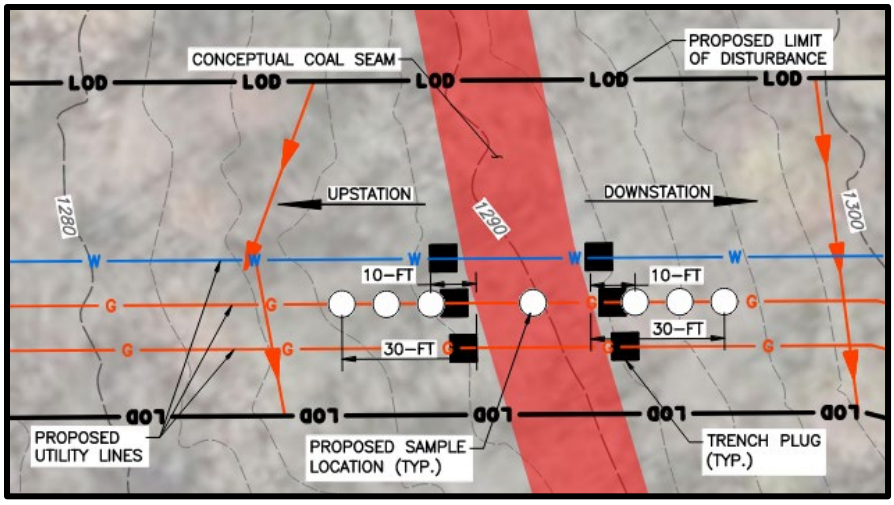
CEC does not anticipate intact coal seams will be encountered during construction operations. However, in the event that intact coal seams are encountered during construction, CEC recommends these areas be identified, sampled, and managed in accordance with the direction below.

Schedule of Sampling

HCG or their selected contractor shall obtain representative samples via test pits if intact coal and/or carbonaceous shale is observed during pipeline trenching outside of the strip mine areas identified on the alignment sheets. If coal and/or carbonaceous shale is encountered, collect and submit samples for laboratory testing in accordance with the sampling procedures listed below. Test pits shall extend to the expected depth of the pipeline trench (generally 6 to 7 feet below existing grade). Test pits shall be excavated, sampled, and backfilled within the same work day.

Sampling, Testing, and Treatment

- At intact coal outcrop locations, obtain one (1), 5-gallon bucket of material from the coal seam and additional 5-gallon buckets at 10-foot intervals to 30 feet upstation and downstation of the encountered coal seam as conceptualized below.



- Each bucket should be analyzed separately to estimate the acid producing potential in accordance with the PADEP Fact Sheet.

- If the material averages more than 0.5% sulfur, it must be segregated and mixed with a sufficient amount of neutralizing materials, such as lime. The amount of lime (LS) needed shall be calculated utilizing the following (the same which was utilized above):

$$(\text{Acres of APR}) * (\text{Thickness in ft}) * \frac{\text{Tons APR}}{\text{Acre} - \text{Ft}} * \%\text{S} * \frac{62.5 \text{ Tons}}{1{,}000 \text{ Tons}} = \text{Tons of LS}$$

- It should be noted the equation above assumes pure calcium carbonate ($CaCO_3$) will be utilized to neutralize the acidic materials. Typical Quicklime® or similar products are typically 90% $CaCO_3$. As such, the amount of LS should be increased by 10% assuming a 90% $CaCO_3$ material is utilized.

- The neutralized APR shall be placed back in the trench around the pipeline to create a buffer from other potential APR materials.

- Areas where neutralized APR material is replaced in the pipeline trench shall be noted on the E&S and Site Restoration (SR) Plans.

- Place a minimum of 2 feet of non-APR cap material in the trench on top of the neutralized APR material. The cap material shall consist of soils with fines content greater than 20 percent (minimum 20 percent passing the No. 200 sieve), and a plasticity index greater than 3 percent (minimum 3 percent for fraction passing No. 40 sieve). Non-plastic silts are prohibited.

APPENDIX A

FIGURES

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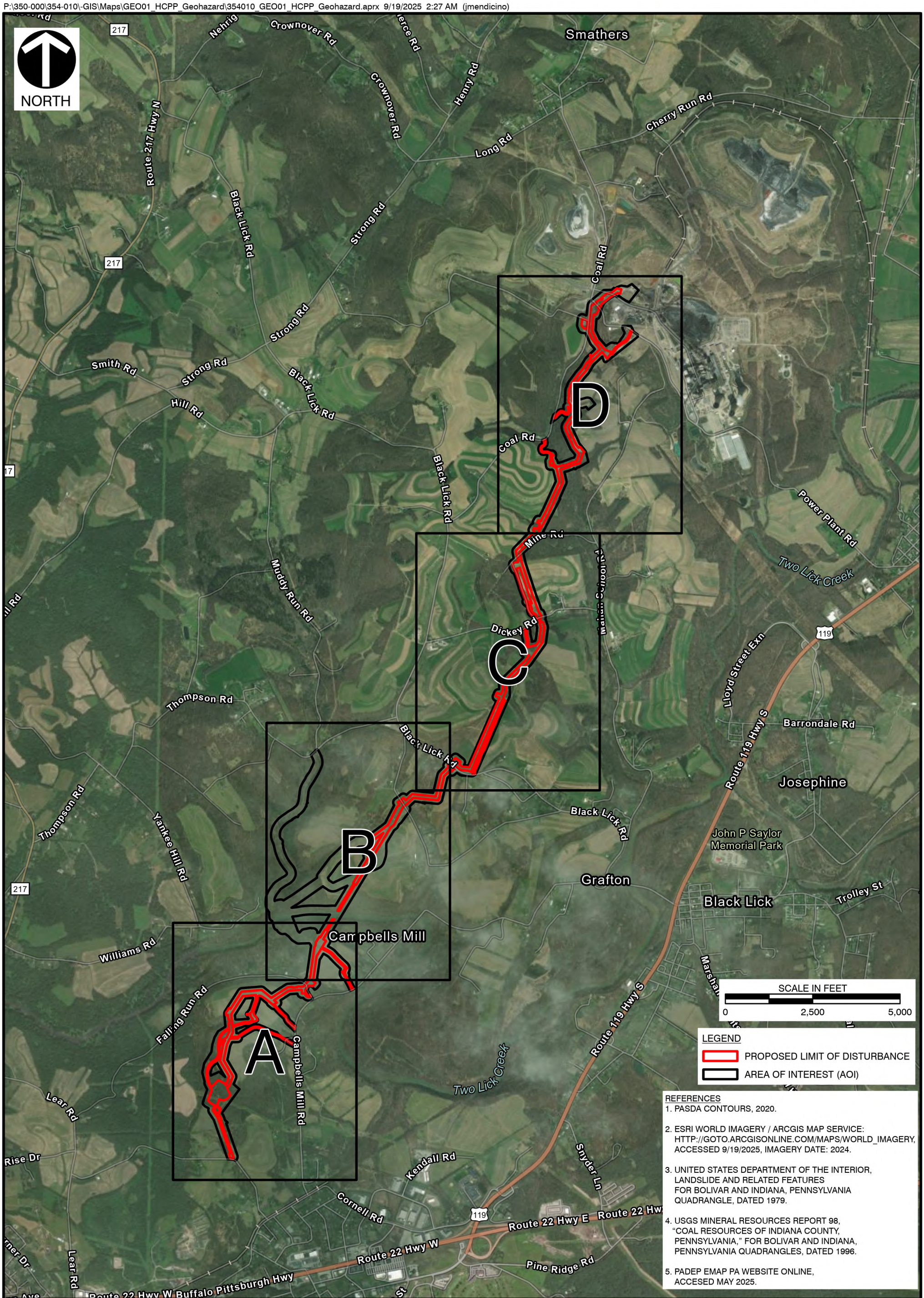

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3. UNITED STATES DEPARTMENT OF THE INTERIOR, LANDSLIDE AND RELATED FEATURES FOR BOLIVAR AND INDIANA, PENNSYLVANIA QUADRANGLE, DATED 1979.
4. USGS MINERAL RESOURCES REPORT 98, "COAL RESOURCES OF INDIANA COUNTY, PENNSYLVANIA," FOR BOLIVAR AND INDIANA, PENNSYLVANIA QUADRANGLES, DATED 1996.
5. PADEP EMAP PA WEBSITE ONLINE, ACCESED MAY 2025.

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BLACKLICK AND BURELL TOWNSHIPS
INDIANA COUNTY, PENNSYLVANIA

GENERAL OVERVIEW MAP

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NORTH

Two Lick Creek

Falling Run Rd

Campbells Mill Rd

Pine Ln

75+00
70+00
65+00
60+00
55+00
50+00
45+00
40+00
35+00
30+00
25+00
20+00
15+00
10+00
5+00

SCALE IN FEET
0 500 1,000

LEGEND
- PROPOSED ACCESS ROAD CENTERLINE
- PROPOSED PIPELINE
- PROPOSED POWERLINE
- SLOPES LESS THAN 33%
- SLOPES BETWEEN 33 - 50%
- SLOPES GREATER THAN 50%
- PROPOSED LIMIT OF DISTURBANCE
- INDEX CONTOUR (REF NO. 1 ON INDEX SHEET)

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TOPOGRAPHIC MAP

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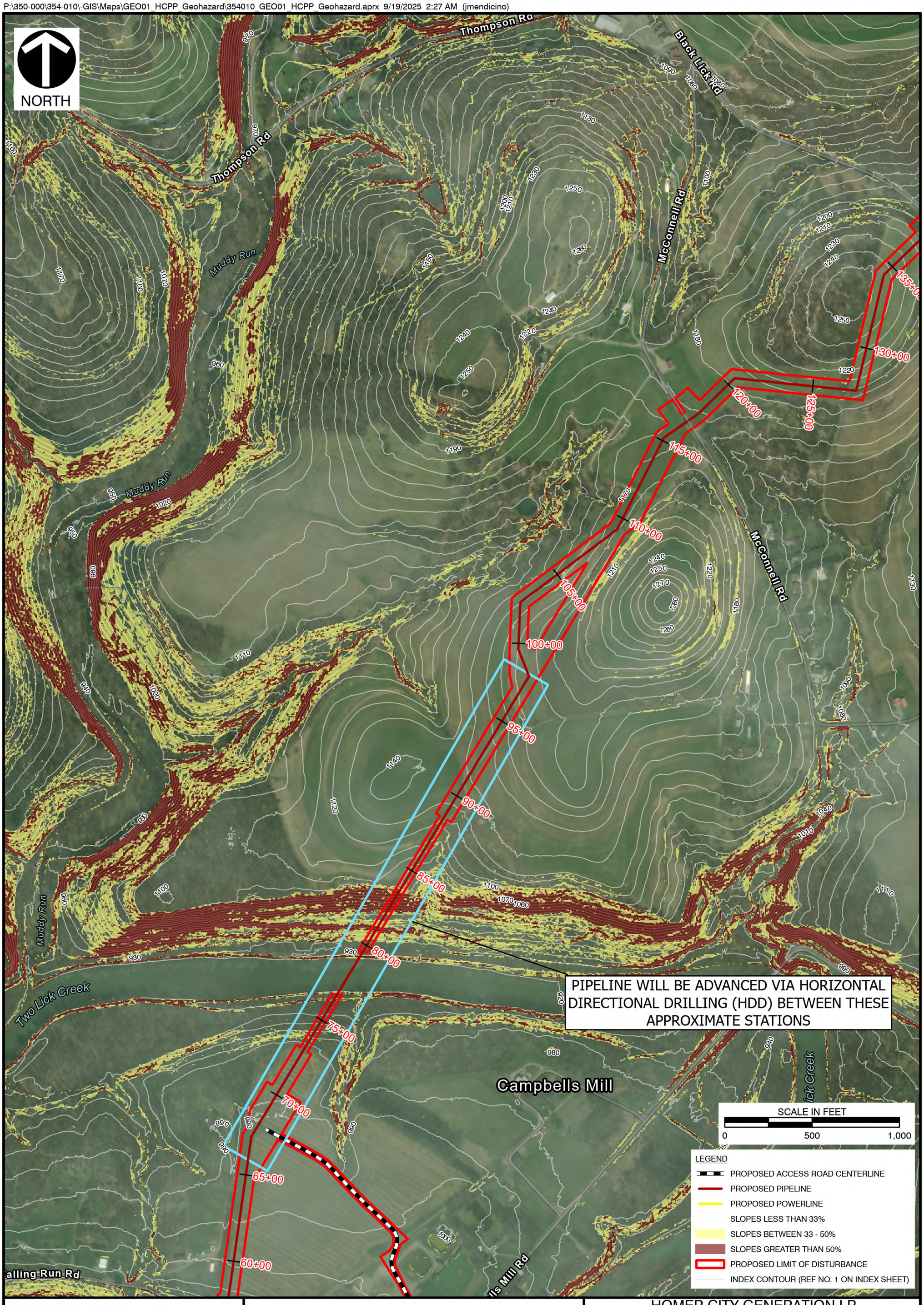

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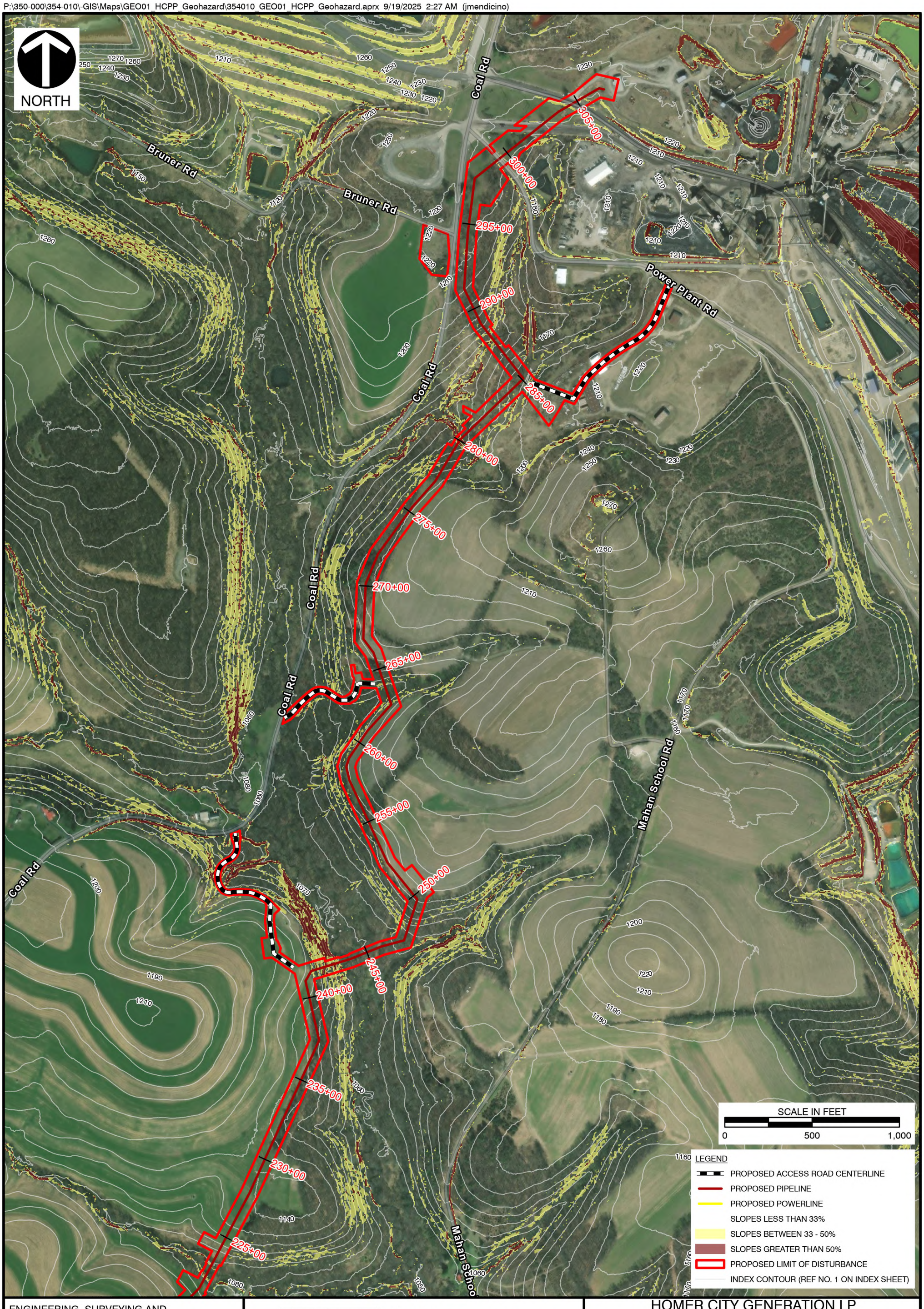

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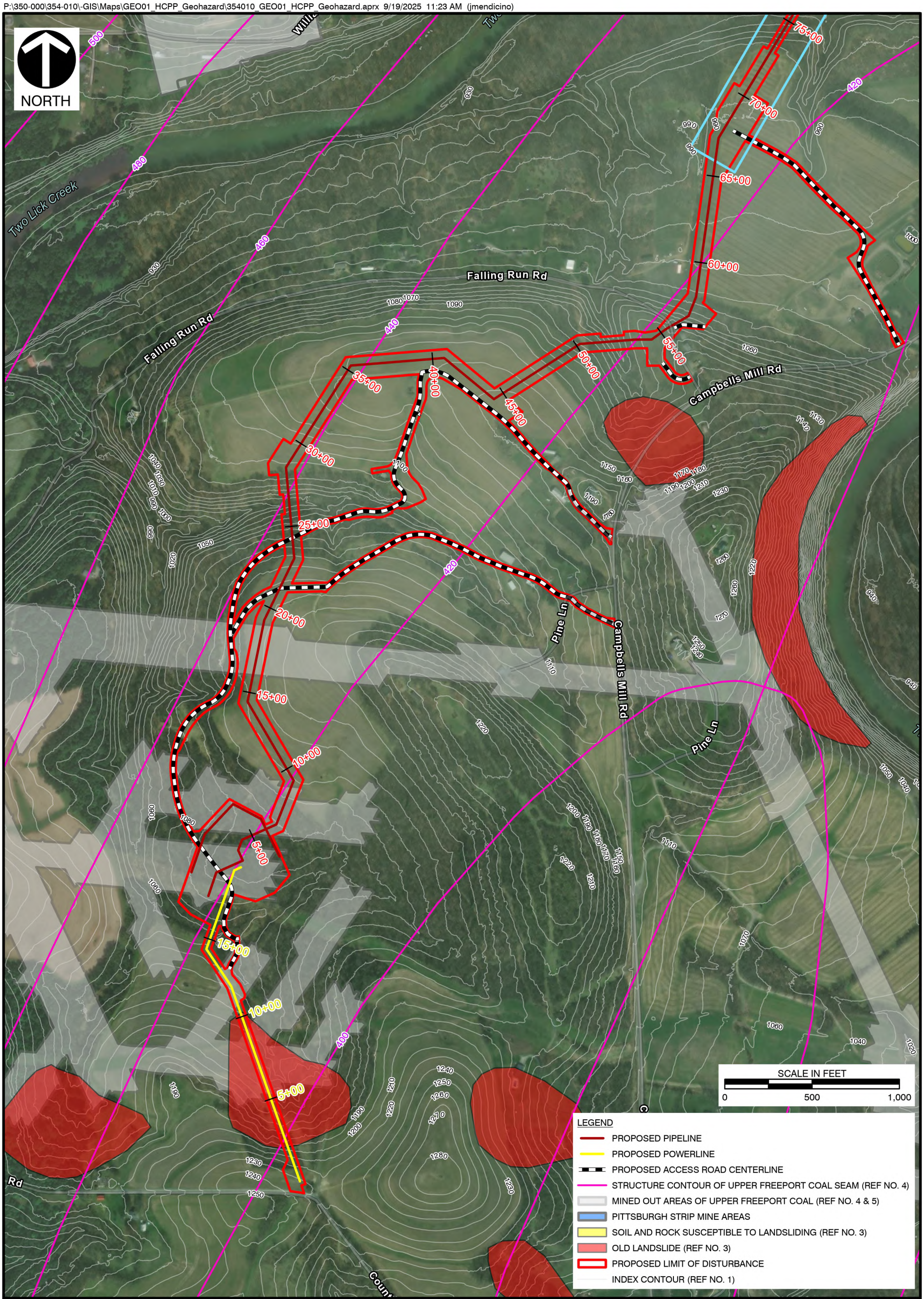

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GEOHAZARD OVERVIEW MAP

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NORTH

PITTSBURGH COAL SEAM IS DOCUMENTED TO HAVE BEEN DEEP MINED BETWEEN APPROXIMATE STATIONS 128+00 AND 137+50

PIPELINE WILL BE ADVANCED VIA HORIZONTAL DIRECTIONAL DRILLING (HDD) BETWEEN THESE APPROXIMATE STATIONS

Thompson Rd
Black Lick Rd
McConnell Rd
Muddy Run
Two Lick Creek
Campbells Mill
Falling Run Rd

SCALE IN FEET
0 500 1,000

LEGEND
- PROPOSED PIPELINE
- PROPOSED POWERLINE
- PROPOSED ACCESS ROAD CENTERLINE
- STRUCTURE CONTOUR OF UPPER FREEPORT COAL SEAM (REF NO. 4)
- MINED OUT AREAS OF UPPER FREEPORT COAL (REF NO. 4 & 5)
- PITTSBURGH STRIP MINE AREAS
- SOIL AND ROCK SUSCEPTIBLE TO LANDSLIDING (REF NO. 3)
- OLD LANDSLIDE (REF NO. 3)
- PROPOSED LIMIT OF DISTURBANCE
- INDEX CONTOUR (REF NO. 1)

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NORTH

PITTSBURGH COAL SEAM IS DOCUMENTED TO HAVE BEEN DEEP MINED BETWEEN APPROXIMATE STATIONS 151+50 AND 172+50

SCALE IN FEET
0 500 1,000

LEGEND
- PROPOSED PIPELINE
- PROPOSED POWERLINE
- PROPOSED ACCESS ROAD CENTERLINE
- STRUCTURE CONTOUR OF UPPER FREEPORT COAL SEAM (REF NO. 4)
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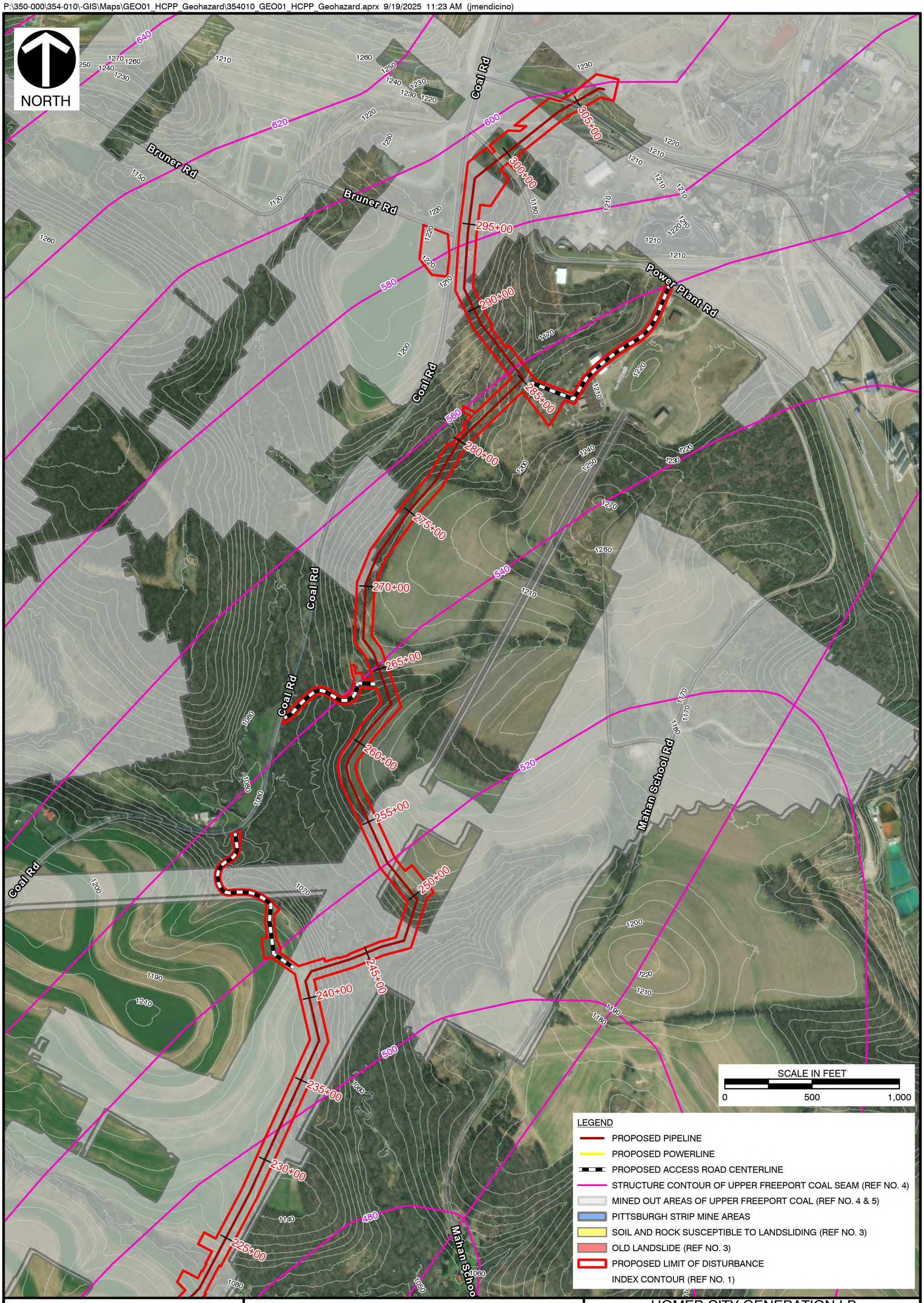

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APPENDIX B

HOW TO AVOID AND HANDLE ACID-PRODUCING ROCK FORMATIONS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES

FACT Sheet

Encountering acid-producing rock during construction activities

Many areas of Pennsylvania are underlain by rock types (typically associated with coal) that contain pyrite – a mineral composed of iron and sulfur. When exposed to air or water, pyrite weathers, producing sulfuric acid and iron minerals. The sulfuric acid can also free other undesirable metals from the rock that may result in acid drainage that pollutes nearby groundwater and streams. Rocks containing significant pyrite are referred to as *acid-producing rock* (APR), which can include coal.

Persons excavating rock for construction projects should be aware of the possibility of APR as part of their earth disturbance plans to avoid delays or potential pollution incidents. Excavation exposes the pyritic material to the environment and requires extra planning for handling to prevent the potential for water pollution. This fact sheet explains the best management practices for when APR or coal may be encountered while carrying out earth disturbance for construction activity. The most important step in avoiding project delays or potential pollution is diligence during site characterization and a plan to properly address APR material or encountered coal.

The information in this fact sheet is not an adjudication or regulation but provides a general discussion of typical situations and the most common responses. The necessary permits and approvals depend on the type of activity undertaken (construction project, well pad, surface mining permit, etc.). Additionally, the plans and approvals depend on consideration of site-specific circumstances (e.g., size of area, amount of material, pollution potential).

The Pennsylvania Clean Streams Law imposes obligations on persons not to engage in conduct that allows pollutants to be released into the waters of the Commonwealth, or that creates a danger of pollution to surface waters and groundwater.

Site characterization

Due diligence during the planning phase by the land developer should include a check for the presence of APR and coal seams/waste coal. Use eMapPA, Pennsylvania Mine Map Atlas and other resources to conduct an initial desktop assessment. A qualified licensed professional should also conduct site-specific testing to characterize the site material. Planning ahead will lessen the potential extra costs and time that may be incurred to properly address the APR material encountered.

Bedrock geologic maps will give a general idea of where pyrite-rich rock and coal are located. The areas of known APR are shown on Ref. 2 below. Sources of site-specific data also include DEP permit files, records maintained by the Pennsylvania Geologic Survey, or mine maps. Site specific data should be obtained or supplemented by test pits or drilling the site to determine if and where APR is present.

Site specific details for removal, handling, storage, and management of APR should be included in the erosion and sedimentation plans and material handling plans for the construction activity. If incidental coal mining or removal of coal for offsite disposal will occur, these plans should also be included with appropriate detail.

Testing and Management of APR

The best practice to avoid creating pollution is to not disturb APR. If it is known that APR will be encountered, the DEP recommends excavating in a different location, or managing the APR in a way that reduces the risk of pollution.

Streams and groundwater may be affected by acid drainage that could develop subsequently if APR is not properly managed. Soil, fill, and unconsolidated material from historically coal-mined lands, and consolidated rock within 25 feet of the surface, are not as likely to produce acid drainage, except for in-place coal seams and some unglaciated regions of Pennsylvania. In these situations, percent sulfur should be the default test to determine if a potential concern exists.

All soil handling and environmental management plans are approved by the County Conservation District or DEP Regional Office as part of the construction permit review. DEP District Mining Offices do not issue authorizations or approve plans for construction activities that encounter APR. However, upon request of a conservation district, the District Mining Offices will provide technical support to the conservation district by reviewing and providing comments on plans that reference APR or encountered coal.

To determine if rock has the potential to cause acid drainage, it should be analyzed for total percent sulfur. The testing procedures may vary depending on the size of the site. The methods for testing should be explained in the soil management plans. For a small area, a 5-gallon bucket full of material should be collected for every 2,000 tons of potential APR. Each

bucket should represent a different area of the site and analyzed separately, not combined. Reference no. 3 below provides details on sampling and testing methods. If a sample contains more than 0.5 percent sulfur, it constitutes APR and should be segregated and handled appropriately. See Ref. 3.

When potential APR is encountered unexpectedly, this material should be segregated, preferably covered, and tested for sulfur to determine if it needs special handling.

Off-Site Disposal of APR

In instances where APR cannot be appropriately managed or neutralized on-site, APR may be taken to a permitted landfill that is authorized by DEP in writing to accept this material, or to a permitted coal refuse disposal area that agrees to accept it. All records of off-site disposal should be retained.

On-Site Management and Neutralization of APR

On-site handling and neutralization of APR (excavation, treatment, encapsulation, and/or burying) may be suitable only where a plan can be developed that prevents pollution or potential pollution to waters of the Commonwealth. In those situations, experienced personnel may design, construct, implement, and monitor site-specific soil management plans that could include alkaline addition to neutralize APR, or to encapsulate the material, to reduce the risk of pollution. A licensed engineer or professional geologist should certify that the APR material was placed according to the site-specific soil management plan.

Incidental Coal Extraction Permit

When coal is extracted for commercial use incidental to another activity, DEP will require a permit under the Pennsylvania Surface Mining Conservation and Reclamation Act before coal is removed. Extracting coal is also contingent upon having the rights to the mineral.

A streamlined Incidental Coal Extraction permit is available for coal extraction that is secondary to a primary activity, such as housing developments, large building construction, oil and gas well pads, landfills, or correction of a safety or environmental problem. This is a streamlined process whereby the DEP District Mining Office issues a coal mining permit to conduct minimal disturbance to mine coal as part of the approved plans for the primary activity. Acres authorized to be disturbed under the Incidental Coal Extraction permit are limited to the necessary coal extraction and support area. Requirements for public notice and bonding will apply, and the Incidental Coal Extraction operation must be conducted in compliance with all statutory and regulatory requirements pertaining to surface coal mining under the Surface Mining Conservation and Reclamation Act (52 P.S. § 1396 *et seq.*) and 25 Pa. Code Chapters 86, and 87 (bituminous) or 88 (anthracite). See the application and instructions for Incidental Coal Extraction (5600-PM-BMP0165) for additional details on using this permit type.

Off-Site Disposal of Coal

The owner of the coal rights or their designee can also choose to dispose of any coal encountered during development. The material can be taken to a landfill or coal refuse disposal area that is authorized by DEP in writing to accept coal/APR for disposal. Proof of off-site disposal should be retained. Each facility's ability to accept the material should be verified prior to transportation.

References

1. *Coal Mine Drainage Prediction and Pollution Prevention in Pennsylvania*. Available at files.dep.state.pa.us/mining/bureauofminingprograms/bmpportalfiles/coal_mine_drainage_prediction_and_pollution_prevention_in_pennsylvania.pdf
2. *Geologic Units Containing Potentially Significant Acid-Producing Sulfide Minerals*, PA Geologic Survey Open- File Report OFMI-05-01.1. Available at maps.dcnr.pa.gov/publications/Default.aspx?id=636
3. *Overburden Sampling and Testing Manual* (1988) D.A. Noll, et al., Available at files.dep.state.pa.us/Mining/BureauOfMiningPrograms/BMPPortalFiles/Overburden_Sampling_and_Testing_Manual.pdf

For more information, contact RA-EPMININGPERMITS@pa.gov. visit www.dep.pa.gov.

APPENDIX C

TEST PIT LOGS

Rock Types

Rock Name	Characteristics	Symbol
Claystone	Clay sized particles that are consolidated, lacking fissility.	
Coal	Black and shiny, can break into cubes or conchoidally.	
Conglomerate	Gravel sized grains and larger held together by finer material, called a breccia if clasts are angular.	
Limestone	Effervesses w/ diluted HCl, can be composed of clay up to gravel particles (fossils).	
Sandstone	Primarily sand sized particles modified w/ the descriptor fine, medium, or coarse.	
Shale	Clay sized particles, shale has fissility which is a horizontal sheet-like or laminated feature.	
Siltstone	Composed of silt, normally breaks as irregular chunks.	

Rock Quality Descriptions

Weathering

Completely Weathered: All rock material is decomposed and/or disintegrated. The original rock structure may still be intact.

Highly Weathered: More than half of the rock material is decomposed. Fresh rock is present only as a discontinuous framework or as corestones.

Moderately Weathered: Less than half of the rock material is decomposed. Fresh rock is present at a discontinuous framework or as corestones.

Slightly Weathered: Discoloration or staining indicates weathering of rock material on discontinuity surfaces. Rock may be discolored and softened.

Fresh: No visible signs of rock material weathering.

RQD

Descriptor	%
Very Poor	<25
Poor	25-50
Fair	50-75
Good	75-90
Excellent	>90

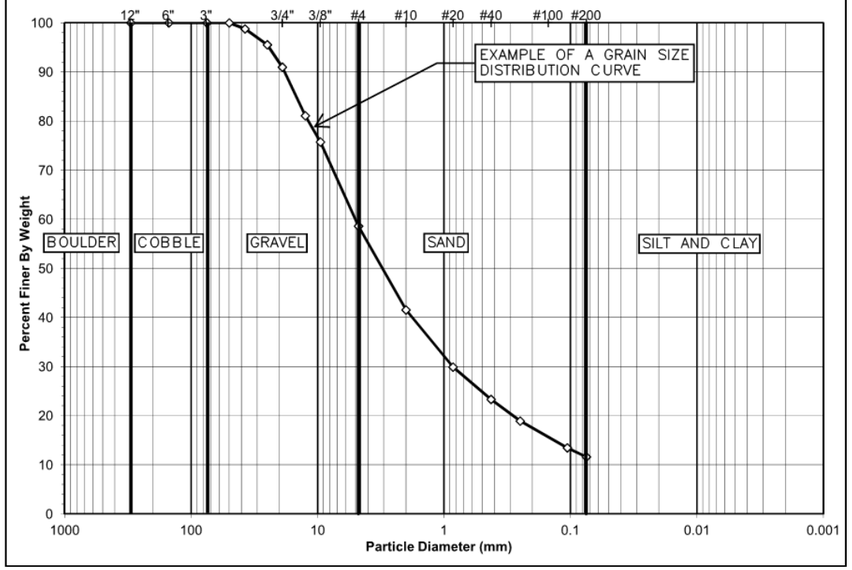
Brokenness

Descriptor	Fracture Spacing (in & ft)
Very Broken	<1 (<0.08)
Broken	1-3 (0.08-0.25)
Moderately Broken	3-6 (0.25-0.5)
Slightly Broken	>6 (>0.5)

Rock Hardness

Descriptor	Field Criterion	Relative Unconfined Compressive Strength
Very Hard	Difficult to break w/ Hammer	> 30,000 psi
Hard	Hand-held sample breaks w/ Hammer	8,000 to 30,000 psi
Medium Hard	Cannot scrape surface w/ knife	2,000 to 8,000 psi
Soft	Cutting or scraping w/ knife difficult	500 to 2,000 psi
Very Soft	Can be cut w/ knife	< 500 psi

Grain Size Distribution Curve



UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

COARSE-GRAINED SOILS
(more than 50% of material is larger than No. 200 sieve size.)

Clean Gravels (Less than 5% fines)

GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size

GW	Well-graded gravels, gravel-sand mixtures, little or no fines
GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines

Gravels with fines (More than 12% fines)

GM	Silty gravels, gravel-sand-silt mixtures
GC	Clayey gravels, gravel-sand-clay mixtures

Clean Sands (Less than 5% fines)

SANDS 50% or more of coarse fraction smaller than No. 4 sieve size

SW	Well-graded sands, gravelly sands, little or no fines
SP	Poorly graded sands, gravelly sands, little or no fines

Sands with fines (More than 12% fines)

SM	Silty sands, sand-silt mixtures
SC	Clayey sands, sand-clay mixtures

FINE-GRAINED SOILS
(50% or more of material is smaller than No. 200 sieve size.)

SILTS AND CLAYS Liquid limit less than 50%

ML	Inorganic silts and very fine sands, rock flour, silty of clayey fine sands or clayey silts with slight plasticity
CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
OL	Organic silts and organic silty clays of low plasticity

SILTS AND CLAYS Liquid limit 50% or greater

MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
CH	Inorganic clays of high plasticity, fat clays
OH	Organic clays of medium to high plasticity, organic silts

HIGHLY ORGANIC SOILS

PT	Peat and other highly organic soils

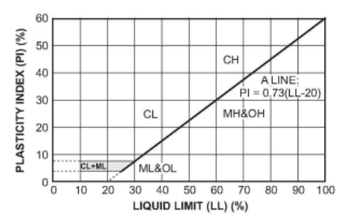
LABORATORY CLASSIFICATION CRITERIA

GW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3	
GP	Not meeting all gradation requirements for GW	
GM	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
GC	Atterberg limits above "A" line with P.I. greater than 7	
SW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3	
SP	Not meeting all gradation requirements for GW	
SM	Atterberg limits below "A" line or P.I. less than 4	Limits plotting in shaded zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols.
SC	Atterberg limits above "A" line with P.I. greater than 7	

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

Less than 5 percent ..... GW, GP, SW, SP
More than 12 percent ..... GM, GC, SM, SC
5 to 12 percent ..... Borderline cases requiring dual symbols

PLASTICITY CHART



Glossary

Alluvial Soil or Alluvium: Soil deposited by water in a river, stream, floodplain, or delta.

Bedrock: Materials underlying soil or other unconsolidated surficial materials in which refusal is consistently encountered on lithified, undisturbed, natural bedrock.

Colluvial Soil or Colluvium: Incoherent soil on or at the base of a slope deposited by gravity or slope movement.

Fill: Soil derived from natural soil, rock, or processed materials that was placed by artificial methods, such as construction, waste disposal, or dumping.

Glacial Outwash: Soil, typically sand and gravel, deposited by glacial streams or meltwater in a preexisting valley or over a plain.

Glacial Till: Soil deposited by and underneath a glacier, generally consisting of a heterogeneous, unstratified mixture of clay, sand, gravel, and boulders.

N-Value: The blow count representation of the penetration resistance of the soil determined by the Standard Penetration Test (SPT). It is the sum of the number of blows required to drive the sampler the second and third 6-inch increments (sample depth interval of 6 to 18 inches) and is recorded in blows per foot (bpf). The N-value is considered to be an indication of the relative density of coarse-grained soils (sand and gravel) or consistency of fine-grained soils (silt and clay).

Pocket Pen (PP): Field penetration test performed using a hand-held penetrometer that estimates unconfined compressive strength of cohesive soil in tons per square foot (tsf).

Recovery %: Total length of rock core or soil sample retrieved divided by the total length of the core run or sample interval, expressed as a percentage.

Refusal: The depth at which greater than 50 SPT hammer blows are required to drive the sampling spoon 6 inches or less.

Residual Soil or Residuum: Soil derived from the physical or chemical weathering of the underlying parent bedrock, generally with N-values less than 30 and 50 bpf in cohesive and cohesionless materials, respectively.

Rock Quality Designation (RQD): The sum of the length of intact rock core pieces longer than 4 inches (excluding mechanical breaks) divided by the total length of the core run, expressed as a percentage.

Shelby Tube: A 2" to 3" diameter, thin walled sampling tube that is pushed into the soil to obtain a relatively undisturbed soil sample for geotechnical laboratory tests.

Split Spoon Sampler: A soil sampling tube which is driven, retrieved, and split-open lengthwise for removal and visual inspection, and testing of the soil obtained.

Standard Penetration Test (SPT) ASTM D1586 : Field penetration test consisting of driving a 2-inch outside diameter split-spoon sampler 18 inches using a 140-pound hammer free falling a distance of 30 inches. The number of blows required to advance the spoon through successive 6-inch increments is recorded to determine the N-value.

Weathered Rock: Materials derived from lithified, undisturbed, natural bedrock which are able to be sampled with a split-spoon. Cohesive and cohesionless materials generally have N-values greater than 30 and 50 bpf, respectively.

N-Value Rating

Fine-Grained Soils (Silt and Clay)

Consistency	Blows/ft	PP (tsf)
Very Soft	0-2	<0.25
Soft	3-4	0.25-0.5
Medium Stiff	5-8	0.5-1
Stiff	9-15	1-2
Very Stiff	16-32	2-4
Hard	>32	>4

Coarse-Grained Soils (Sand and Gravel)

Relative Density	Blows/ft
Very Loose	0-4
Loose	5-10
Medium Dense	11-30
Dense	31-50
Very Dense	>50

Unconsolidated Material

Term	Grain Size in mm (in)	Approximate Example Size
Clay and Silt	<.075	can't see grains to barely visible
Fine Sand	0.075 – 0.4	table salt to sugar
Med. Sand	0.4-2.0 (~<1/16)	openings in a window screen
Coarse Sand	2.0 - 4.75 (~1/16 – 1/8)	sidewalk salt
Gravel	4.75 – 75 (~1/8 – 3)	pea to tennis ball
Cobble	75 – 300 (3 – 12)	tennis ball to basketball
Boulder	>300 (>12)	larger than a basketball

Other Features – Used to describe other identifiable, pertinent features (e.g., angularity of coarse-grained soils, organics, construction debris, etc.)

Term	%
Trace	< 5
Few	5-15
Some	15-45

Moisture Content
Dry: Sample is dusty or obviously dry.
Moist: Anything that does not fit the definition of dry or wet.
Wet: Sample contains free water.

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Definitions of Standard Terms and Symbols

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Monroeville, PA 15146

TEST PIT NUMBER TP-1

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/8/25 **COMPLETED** 5/8/25
GROUND ELEVATION 1216 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487					
		Topsoil - 12 in.	0.0				
1215.0		Dark Brown and Black, Gravelly Lean Clay, CL, Derived from Carbonaceous Shale and Coal Fragments, Moist **(FILL)**					
			2.5				
1212.5		*Bag sample obtained from excavated materials from approximately 1.0 to 6.2 ft.*					
			5.0				
1210.0		Black, Silty Gravel, GM, Derived from Carbonaceous Shale and Coal Fragments, Moist **(FILL)**					
		Two bag samples obtained from excavated materials from approximately 6.3 to 7.7 ft.					
			7.5				
		Bottom of test pit at 7.7 feet.					

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TEST PIT NUMBER TP-2

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/8/25 **COMPLETED** 5/8/25
GROUND ELEVATION 1261 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)
		Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487				
		Topsoil - 14 in.	0.0			
1260.0		Orangish Brown and Light Gray, Lean Clay, CL, Moist **(FILL)** *Trace roots and organic material observed throughout stratum.*	2.5			
1257.5		*Bag sample obtained from excavated materials from approximately 1.2 to 6.8 ft.*	5.0			
1255.0		Light Gray, Completely to Highly Weathered Clayey Limestone, Very Soft to Soft **(WEATHERED ROCK)** *Bag sample obtained from excavated materials from approximately 6.8 to 8.0 ft.*	7.5			
		Bottom of test pit at 8.0 feet.				

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
☐ FINES CONTENT (%) ☐
20 40 60 80

CEC CUSTOM LOG 202405_346-002 APR TEST PIT LOGS.GPJ CEC.GDT 7/31/25

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TEST PIT NUMBER TP-3

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/8/25 **COMPLETED** 5/8/25
GROUND ELEVATION 1253 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)
		Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487				
1252.5		Topsoil - 12 in.	0.0			
		Tan, Lean Clay with Sand, CL, Moist **(RESIDUUM)**				
1250.0		Orangish Brown, Clayey Sand, SC, Moist **(RESIDUUM)** *Bag sample obtained from excavated materials from approximately 1.0 to 5.8 ft.*	2.5			
1247.5		Dark Gray to Black, Completely Weathered Carbonaceous Shale, Very Soft **(WEATHERED ROCK)** *Two bag samples obtained from excavated materials from approximately 5.8 to 7.5 ft.*	5.0			
		Bottom of test pit at 7.5 feet.	7.5			

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
☐ FINES CONTENT (%) ☐
20 40 60 80

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TEST PIT NUMBER TP-4

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/8/25 **COMPLETED** 5/8/25
GROUND ELEVATION 1216 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Topsoil - 9 in.	0.0				
1215.0		Brown, Lean Clay with Gravel, CL, Moist **(RESIDUUM)** *Trace tree stumps and organic material observed throughout stratum.*					
		Bag sample obtained from excavated materials from approximately 0.8 to 3.6 ft.	2.5				
1212.5		Tan to Dark Gray, Completely to Highly Weathered Clayey Carbonaceous Shale, Very Soft to Soft **(WEATHERED ROCK)**					
			5.0				
1210.0		*Bag sample obtained from excavated materials from approximately 3.6 to 7.8 ft.*					
			7.5				
		Bottom of test pit at 7.8 feet.					

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TEST PIT NUMBER TP-5

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/8/25 **COMPLETED** 5/8/25
GROUND ELEVATION 1246 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487					
		Topsoil - 13 in.	0.0				
1245.0		Orangish Brown to Light Gray, Lean Clay, CL, Moist **(RESIDUUM)**					
		Bag sample obtained from excavated materials from approximately 1.1 to 4.0 ft.	2.5				
1242.5		Tan to Dark Gray, Completely to Highly Weathered Clayey Carbonaceous Shale, Very Soft to Soft **(WEATHERED ROCK)**					
		Bag sample obtained from excavated materials from approximately 4.0 to 7.1 ft.	5.0				
1240.0		Bottom of test pit at 7.1 feet.					

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TEST PIT NUMBER TP-6

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/8/25 **COMPLETED** 5/8/25
GROUND ELEVATION 1239 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Topsoil - 11 in.	0.0				
1237.5		Orangish Brown, Gravelly Lean Clay, CL, Moist **(RESIDUUM)** *Trace shale fragments observed throughout stratum.* *Bag sample obtained from excavated materials from approximately 0.9 to 1.5 ft.*					
		Reddish Brown to Dark Gray, Completely to Highly Weathered Carbonaceous Shale, Very Soft to Soft **(WEATHERED ROCK)**	2.5				
1235.0		*Bag sample obtained from excavated materials from approximately 1.5 to 6.6 ft.*	5.0				
1232.5		*Excavator bucket refusal at approximately 6.6 ft.* Bottom of test pit at 6.6 feet.					

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TEST PIT NUMBER TP-7

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/8/25 **COMPLETED** 5/8/25
GROUND ELEVATION 1218 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	0.0				
1217.5		Topsoil - 13 in.					
		Brown, Gravelly Lean Clay, CL, Moist **(FILL)** *Some carbonaceous shale fragments observed throughout stratum.* *Bag sample obtained from excavated materials from approximately 1.1 to 2.9 ft.*	2.5				
1215.0		Dark Gray, Silty Gravel, GM, Derived from Carbonaceous Shale and Coal Fragments, Dry to Moist **(FILL)** *Bag sample obtained from excavated materials from approximately 2.9 to 7.5 ft.*	5.0				
1212.5		Bottom of test pit at 7.5 feet.	7.5				

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TEST PIT NUMBER TP-8

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/8/25 **COMPLETED** 5/8/25
GROUND ELEVATION 1208 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
▽ **AT END OF EXCAVATION** 5.8 ft / Elev 1202.2 ft
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
1207.5		Topsoil - 8 in.	0.0				
		Brown, Sandy Lean Clay with Gravel, CL, Moist **(FILL)** *Trace roots, tree stumps, and carbonaceous shale fragments observed throughout stratum.* *Bag sample obtained from excavated materials from approximately 0.7 to 3.5 ft.*	2.5				
1205.0		Dark Brown, Gravelly Silt with Sand, ML, Moist to Wet **(FILL)** *Trace tree stumps, organic material, carbonaceous shale fragments, and coal fragments observed throughout stratum.*	5.0				
1202.5		▽ *Bag sample obtained from excavated materials from approximately 3.5 to 7.0 ft.*					
		Bottom of test pit at 7.0 feet.					

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TEST PIT NUMBER TP-9

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/7/25 **COMPLETED** 5/7/25
GROUND ELEVATION 1194 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
▽ **AT END OF EXCAVATION** 4.9 ft / Elev 1189.1 ft
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	0.0				
		Topsoil - 7 in.					
1192.5		Orangish Brown, Lean Clay, CL, Moist **(FILL)**					
		Black, Completely to Highly Weathered Coal, Very Soft **(WEATHERED ROCK)**	2.5				
1190.0		*Two bag samples obtained from excavated materials from approximately 2.1 to 4.9 ft.*					
		▽	5.0				
1187.5		*Two bag samples obtained from excavated materials from approximately 4.9 to 7.3 ft.*					
		Bottom of test pit at 7.3 feet.					

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TEST PIT NUMBER TP-10

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/7/25 **COMPLETED** 5/7/25
GROUND ELEVATION 1200 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
1200.0		Topsoil - 7 in.	0.0				
		Brown, Silty Gravel, GM, Moist **(FILL)** *Some carbonaceous shale fragments observed throughout stratum.* *Bag sample obtained from excavated materials from approximately 0.6 to 2.8 ft.*					
1197.5			2.5				
		Tannish to Dark Gray, Poorly-Graded Gravel with Clay, GP-GC, Derived from Coal and Carbonaceous Shale Fragments, Moist **(FILL)**					
1195.0		*Two bag samples obtained from excavated materials from approximately 2.8 to 7.2 ft.*	5.0				
		Bottom of test pit at 7.2 feet.					

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TEST PIT NUMBER TP-11

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/7/25 **COMPLETED** 5/7/25
GROUND ELEVATION 1205 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
1205.0		Topsoil - 8 in.	0.0				
		Brown, Gravelly Silt with Sand, ML, Moist **(FILL)** *Trace carbonaceous shale fragments and cobbles observed throughout stratum.*					
1202.5			2.5				
		Bag sample obtained from excavated materials from approximately 0.7 to 6.1 ft.					
1200.0			5.0				
		Dark Gray and Black, Clayey Gravel, GC, Derived from Carbonaceous Shale and Coal Fragments, Moist **(FILL)** *Bag sample obtained from excavated materials from approximately 6.1 to 7.2 ft.*					
		Bottom of test pit at 7.2 feet.					

Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487

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TEST PIT NUMBER TP-12

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/7/25 **COMPLETED** 5/7/25
GROUND ELEVATION 1245 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
1245.0		Topsoil - 11 in.	0.0				
		Tannish Brown to Gray, Sandy Lean Clay with Gravel, CL, Moist **(RESIDUUM)**					
1242.5		*Bag sample obtained from excavated materials from approximately 0.9 to 4.1 ft.*	2.5				
		Dark Gray to Black, Clayey Gravel, GC, Moist **(RESIDUUM)** *Some carbonaceous shale fragments observed throughout stratum.*					
1240.0		*Bag sample obtained from excavated materials from approximately 4.1 to 5.3 ft.*	5.0				
		Two bag samples obtained from excavated materials from approximately 5.3 to 7.5 ft.					
1237.5		Bottom of test pit at 7.5 feet.	7.5				

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TEST PIT NUMBER TP-13

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/7/25 **COMPLETED** 5/7/25
GROUND ELEVATION 1209 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Topsoil - 11 in.	0.0				
1207.5		Brown, Clayey Gravel, GC, Moist **(RESIDUUM)** *Bag sample obtained from excavated materials from approximately 0.9 to 2.4 ft.*	2.5				
1205.0		Tan and Dark Gray, Completely to Highly Weathered Clayey Shale, Very Soft to Soft **(WEATHERED ROCK)** *Bag sample obtained from excavated materials from approximately 2.4 to 5.1 ft.*	5.0				
		Excavator bucket refusal at approximately 5.1 ft. Bottom of test pit at 5.1 feet.					

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TEST PIT NUMBER TP-14

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/7/25 **COMPLETED** 5/7/25
GROUND ELEVATION 1192 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Topsoil - 15 in.	0.0				
1190.0		Dark Brown, Gravelly Silt with Sand, ML, Moist **(FILL)** *Some carbonaceous shale fragments and red discolorations observed throughout stratum.*	2.5				
1187.5		*Bag sample obtained from excavated materials from approximately 1.3 to 4.9 ft.*	5.0				
1185.0		Brown, Gravelly Lean Clay with Sand, CL, Moist **(FILL)** *Trace carbonaceous shale fragments observed throughout stratum.* *Bag sample obtained from excavated materials from approximately 4.9 to 8.1 ft.*	7.5				
		Bottom of test pit at 8.1 feet.					

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TEST PIT NUMBER TP-15

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/7/25 **COMPLETED** 5/7/25
GROUND ELEVATION 1174 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
▽ **AT END OF EXCAVATION** 6.9 ft / Elev 1167.1 ft
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Topsoil - 9 in.	0.0				
1172.5		Grayish to Orangish Brown, Sandy Lean Clay with Gravel, CL, Moist **(FILL)** *Trace coal and carbonaceous shale fragments observed throughout stratum.*					
		Bag sample obtained from excavated materials from approximately 0.8 to 3.9 ft.	2.5				
1170.0		Gray, Completely to Highly Weathered Clayey Shale, Very Soft to Soft **(WEATHERED ROCK)**					
		Bag sample obtained from excavated materials from approximately 3.9 to 5.7 ft.	5.0				
1167.5		Dark Gray to Black, Completely to Highly Weathered Carbonaceous Shale, Very Soft **(WEATHERED ROCK)**					
		Bag sample obtained from excavated materials from approximately 5.7 to 7.2 ft. ▽					
		Bottom of test pit at 7.2 feet.					

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TEST PIT NUMBER TP-16

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/6/25 **COMPLETED** 5/6/25
GROUND ELEVATION 1178 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
1177.5		Topsoil - 8 in.	0.0				
		Brown, Lean Clay with Gravel, CL, Moist **(RESIDUUM)**					
		Bag sample obtained from excavated materials from approximately 0.7 to 2.2 ft.	2.5				
1175.0							
		Bag sample obtained from excavated materials from approximately 2.2 to 7.5 ft.	5.0				
1172.5							
		Bottom of test pit at 7.5 feet.	7.5				

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TEST PIT NUMBER TP-17

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/6/25 **COMPLETED** 5/6/25
GROUND ELEVATION 1190 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
▽ **AT END OF EXCAVATION** 2.3 ft / Elev 1187.7 ft
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)
1190.0		Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487	0.0			
		Topsoil - 9 in.				
		Dark Brown, Gravelly Lean Clay, CL, Moist to Wet **(FILL)** *Some coal and carbonaceous shale fragments observed throughout stratum.*				
1187.5		▽ *Bag sample obtained from excavated materials from approximately 0.8 to 3.8 ft.*	2.5			
1185.0		*Bag sample obtained from excavated materials from approximately 3.8 to 5.7 ft.*	5.0			
		Black, Completely to Highly Weathered Coal, Very Soft **(WEATHERED ROCK)**				
1182.5		*Two bag samples obtained from excavated materials from approximately 5.7 to 8.0 ft.*	7.5			
		Bottom of test pit at 8.0 feet.				

▲ SPT N VALUE ▲
20 40 60 80
PL MC LL
20 40 60 80
☐ FINES CONTENT (%) ☐
20 40 60 80

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TEST PIT NUMBER TP-18

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/6/25 **COMPLETED** 5/6/25
GROUND ELEVATION 1198 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Soil classifications were derived using the general methodologies presented in ASTM D2488, except where capitalized USCS group names are indicated hereon, if any. Capitalized USCS group names denote the classifications were derived using the general methodologies presented in ASTM D2487					
		Topsoil - 6 in.	0.0				
1197.5		Dark Brown, Gravelly Silt, ML, Moist **(FILL)** *Trace coal and carbonaceous shale fragments observed throughout stratum.* *Bag sample obtained from excavated materials from approximately 0.5 to 3.0 ft.*	2.5				
1195.0		Brown, Clayey Gravel, GC, Moist **(FILL)** *Trace carbonaceous shale fragments observed throughout stratum.* *Bag sample obtained from excavated materials from approximately 3.0 to 7.0 ft.*	5.0				
1192.5		Bottom of test pit at 7.0 feet.					

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TEST PIT NUMBER TP-19

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/6/25 **COMPLETED** 5/6/25
GROUND ELEVATION 1206 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Topsoil - 7 in.	0.0				
1205.0		Dark Brown, Sandy Silt with Gravel, ML, Moist **(FILL)** *Trace coal and carbonaceous shale fragments observed throughout stratum.* *Bag sample obtained from excavated materials from approximately 0.6 to 2.7 ft.*	2.5				
1202.5		Orange and Dark Gray, Clayey Gravel with Sand, GC, Derived from Coal and Carbonaceous Shale Fragments, Moist **(FILL)** *Bag sample obtained from excavated materials from approximately 2.7 to 6.7 ft.*	5.0				
1200.0		Bottom of test pit at 6.7 feet.					

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TEST PIT NUMBER TP-20

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/6/25 **COMPLETED** 5/6/25
GROUND ELEVATION 1231 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Topsoil - 8 in.	0.0				
1230.0		Orangish Brown, Gravelly Lean Clay, CL, Moist **(FILL)** *Some cobbles observed throughout stratum.* *Bag sample obtained from excavated materials from approximately 0.7 to 3.5 ft.*	2.5				
1227.5		Orangish Tan and Dark Gray, Completely Weathered Sandy Carbonaceous Shale, Very Soft **(WEATHERED ROCK)**	5.0				
1225.0		*Bag sample obtained from excavated materials from approximately 3.5 to 8.0 ft.*	7.5				
		Bottom of test pit at 8.0 feet.					

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TEST PIT NUMBER TP-21

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/6/25 **COMPLETED** 5/6/25
GROUND ELEVATION 1232 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
AT END OF EXCAVATION --- / Dry
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Topsoil - 5 in.	0.0				
		Orangish Brown to Dark Gray, Gravelly Lean Clay, CL, Moist **(FILL)** *Trace cobbles observed throughout stratum.*					
1230.0		*Bag sample obtained from excavated materials from approximately 0.4 to 3.6 ft.*	2.5				
		Tan and Dark Gray, Completely Weathered Sandy Shale, Very Soft **(WEATHERED ROCK)**					
1227.5			5.0				
		Bag sample obtained from excavated materials from approximately 3.6 to 7.1 ft.					
1225.0		Bottom of test pit at 7.1 feet.					

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TEST PIT NUMBER TP-22

CLIENT Homer City Generation LP
PROJECT NAME HCPP Pipeline
PROJECT NUMBER 354-010
PROJECT LOCATION Burrell and Blacklick Townships, Indiana County, PA
DATE STARTED 5/6/25 **COMPLETED** 5/6/25
GROUND ELEVATION 1237 ft **BACKFILL** Excavated Materials
EXCAVATION CONTRACTOR Absolute Reclamation Services
WATER LEVELS:
EXCAVATION METHOD Excavator
▽ **AT END OF EXCAVATION** 6.8 ft / Elev 1230.2 ft
CEC REP AFP **CHECKED BY** TJR
NOTES
24hrs AFTER EXCAVATION --- / Backfilled Immediately

ELEVATION (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	▲ SPT N VALUE ▲ 20 40 60 80 / PL MC LL 20 40 60 80 / ☐ FINES CONTENT (%) ☐ 20 40 60 80
		Topsoil - 13 in.	0.0				
1235.0		Red and Tan, Lean Clay with Gravel, CL, Moist **(FILL)** *Some carbonaceous shale fragments observed throughout stratum.* *Bag sample obtained from excavated materials from approximately 1.1 to 2.1 ft.*					
		Light Brown and Gray, Sandy Lean Clay with Gravel, CL, Moist to Wet **(FILL)**	2.5				
1232.5		*Bag sample obtained from excavated materials from approximately 2.1 to 7.1 ft.*	5.0				
1230.0		▽					
		Bottom of test pit at 7.1 feet.					

APPENDIX D

LABORATORY TEST RESULTS

Conti Testing Laboratories

PO Box 174, Bethel Park, PA 15102
412-833-7766 (o), 412-854-0373 (f)
contilab@contitesting.com
PA DEP Reg 02-00869, EPA PA01711, ISO/IEC 17025:2017-97677, SBA ID KS8JWRGVKEK9

Civil & Environmental Consultants, Inc.
Mr. Tyler Reynolds
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Monroeville, PA 15146
412-849-1787 (m)
treynolds@cecinc.com
AccountsPayable@cecinc.com

Received: 5/9/2025
Sampled by: client

HCPP Pipeline

			DRY			
			Total	Forms of Sulfur		
wt. lbs received	CTL ID	SAMPLE ID	Sulfur (wt%)	Pyritic (wt%)	Organic (wt%)	Sulfate (wt%)
8.2	351466	TP-1, 1.0-6.2' 5/9/2025	0.092	---	---	---
7.7	351467	TP-3, 5.8-7.5' 5/9/2025	0.316	0.00	0.19	0.13
8.4	351468	TP-4, 3.6-7.8' 5/9/2025	0.040	---	---	---
9.1	351469	TP-5, 4.0-7.1' 5/9/2025	0.028	---	---	---
7.8	351470	TP-6, 1.5-6.6' 5/9/2025	<0.01	---	---	---
9.0	351471	TP-7, 1.1-2.9' 5/9/2025	0.050	---	---	---
9.2	351472	TP-7, 2.9-7.5' 5/9/2025	0.114	0.04	0.05	0.03
6.2	351473	TP-8, 3.5-7.5' 5/9/2025	0.143	0.01	0.11	0.02
5.9	351474	TP-9, 4.9-7.3' 5/9/2025	0.519	0.21	0.28	0.03
8.3	351475	TP-10, 2.8-7.2' 5/9/2025	0.151	0.00	0.14	0.01
9.8	351476	TP-11, 0.7-6.1' 5/9/2025	0.126	0.00	0.10	0.02
7.6	351477	TP-12, 5.3-7.5' 5/9/2025	0.260	0.00	0.24	0.02
7.6	351478	TP-14, 1.3-4.9' 5/9/2025	0.139	0.00	0.10	0.04
7.5	351479	TP-14, 4.9-8.1' 5/9/2025	0.040	---	---	---
7.2	351480	TP-15, 5.7-7.2' 5/9/2025	0.051	---	---	---
8.5	351481	TP-17, 0.8-3.8' 5/9/2025	0.156	0.02	0.12	0.01
5.9	351482	TP-17, 5.7-8.0 5/9/2025	0.520	0.16	0.35	0.02
8.0	351483	TP-18, 0.5-3.0 5/9/2025	0.094	---	---	---
6.9	351484	TP-19, 2.7-6.7' 5/9/2025	0.033	---	---	---
8.4	351485	TP-20, 3.5-8.0' 5/9/2025, received 5-12-25	<0.01	---	---	---
8.9	351486	TP-21, 3.6-7.1' 5/9/2025	<0.01	---	---	---
6.2	351487	TP-22, 1.1-2.1' 5/9/2025	0.148	0.00	0.10	0.05

Dry Basis

Total Sulfur	D 4239
Pyrtic Sulfur	D 8214

Approved by: P.Conti Otroba
Chemist